Meet the Live Well Collaborative

The Live Well Collaborative (LWC) is a nonprofit founded in 2007 by the University of Cincinnati (UC) and Procter and Gamble (P&G). LWC specializes in user-centered research that translates into the development of products, services and system solutions for living well across the lifespan. 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. During the course of a 15 week semester, LWC uses a proven design thinking process to translate user centered research into innovative products and services. To date the LWC has worked with 15+ corporate and institutional partners on greater than 80 studio projects, gaining expertise in healthcare, consumer goods, and air travel.

What sets our project outcomes apart from others? Our ability to use a design thinking approach to translate user insights into comprehensive visualizations of future alternatives that are executable and economically feasible. Examples of our work can be found at: [www.livewellcollaborative.org](http://www.livewellcollaborative.org).

Collaboration with Cincinnati Children’s Hospital Medical Center

Our partnership with Cincinnati Children’s Hospital Medical Center (CCHMC) began with the introduction to Dr. Jim Heubi, pediatric gastroenterologist and Director of the CCTST. Dr. Heubi recommended we test our process and methodologies with Dr. Lori Crosby and her team on our first CCHMC sponsored studio project “i-Transition”. The project identified a system to help sickle cell patient’s transition from pediatric to adult care. A case study of this work can be found on pages 11 & 12. This project provided proof of capability of the LWC process and outcomes, as well as Dr. Crosby’s team integrating design thinking methodologies into their daily practices. The CCTST joined the Live Well as a strategic member in 2013. As a next step it was identified that CCHMC principle investigators needed a funding mechanism to support their project work. As a result the CCTST developed a “Design Thinking Award” for CCHMC PI’s that awards researchers $10,000 toward a studio project with the Live Well. An application can be found on CCTST’s website: [https://cctst.uc.edu/funding/designthinking](https://cctst.uc.edu/funding/designthinking).

As the Live Well’s work has evolved in healthcare, we have begun to work consistently with Dr. John Perentesis, Director of the Division of Oncology and Cancer Programs. The Liberty Campus has become an innovation lab, testing concepts that will enhance patients and families’ treatment journeys.

During the past six years the Live Well has partnered with CCHMC researchers on over 40 studio projects. The purpose of the following book of one page, case studies is to give an overview of this work.

Live Well has also developed a “Design Thinking for Healthcare Module” specifically for CCHMC researchers that want to learn more about design thinking methodologies and how to integrate them into their practice. Live Well hosts half day workshops for teams that are interested in this.

We are continually grateful for all those that have worked with us and are applying our design methodologies in their daily work.

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15 Weeks = 1 University of Cincinnati semester

How it works
Each project follows our proven process model. Projects are a minimum of 15 weeks (University of Cincinnati semester) and divided into three phases: research, ideation and refinement. During the process, the team incorporates experimentation of unique design strategies with cutting-edge technology to expose studio sponsors to new methods of problem solving.

A semester prior to the beginning of a project the PI and the Collaborative co-develop a one page design brief. An introductory design thinking for healthcare workshop session is available to assist your team in framing your brief.

1. Research
The studio project team takes a deep dive into the identified design challenge by gaining insights from patient and family interviews, as well as clinical stakeholder interviews and observations. The team then synthesizes these insights and forms themes to provide direction for future work.

2. Ideation
The team draws on insights and key themes from the research phase to rapidly develop visualizations of service and product opportunities. These initial opportunities are co-developed and vetted with patients, families, and clinicians.

3. Refinement
Final deliverables and actionable implementation strategies are co-developed through a process of stakeholder feedback and refinement. Patients, families, and clinicians are re-engaged for initial testing and validation of final deliverables. These final deliverables become prototypes for further testing by PI’s through studies, clinical trials, and pilot programs.
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How does the Live Well Collaborative educate their partners about integrating design methodologies into their daily work?

The Overview
The Live Well Collaborative knows that collaboration and teamwork are keys to success. Live Well has created a studio model that drives implementable and financially feasible solutions, combining the skills of designers across all fields and the insights of healthcare professionals. To support this, the LWC hosts workshops which are designed specifically for healthcare and engage CCHMC research teams with students in all of the design fields to introduce new ways of thinking and creative problem-solving.

The Process
The LWC invites CCHMC teams to come to the studio space and explore creative solutions to problems they encounter in their workplace. Teams are paired with a “superpower,” a design student from the College of Design Architecture Art and Planning, who will guide them through the process. Each team member will identify problems and discuss the potential outcomes of resolving these issues. Through teamwork and collaboration, the group is able to generate short-term milestones and viable solutions to their problems using the design thinking process.

The Outcome
Live Well has developed a “Design Thinking for Healthcare Module.” Through this module, CCHMC teams are able to participate in the inner workings of the design thinking process, and consequently expand their understanding of how the Live Well Collaborative leverages design to solve problems. Participants are able to take design thinking materials from the module to use in their workplaces.

Where is it now?
CCHMC teams have engaged in over 20 workshop sessions hosted by Live Well in 2016, enabling teams to integrate design thinking methodologies into their daily practices.

Workshop in Session
A team from Cincinnati Children’s Hospital Medical Center takes part in a workshop, guided by a “superpower” (a graphic communication design student).

Successful Journey Map
The team is guided through the design solution process using a journey map. Along the way they assess workplace problems, identify activators and inhibitors, and explore possible outcomes.
How can we make the end of life experience at CCHMC more comfortable for families?

Cincinnati Children’s Hospital Medical Center
Palliative Care
Sponsored by: Rachel Thienprayoon, MD, Melisa Mark, MD, Daniel Grossoehme, DMin, and Julie Fugazzi
When: Fall 2017

The Opportunity
Live Well was tasked to improve the end of life (EOL) experience for patients, families and staff at CCHMC. The LWC team was asked to design a new patient and family-centered, culturally sensitive process and space for EOL and postmortem care.

The Challenge
The LWC team conducted interactions with clinicians, staff and families who have been involved in the EOL journey at CCHMC to gain a fuller understanding of the process. Through insights from these collaborations, three areas of opportunity were identified: legacy building, privacy and parental control. Spatial considerations were also investigated simultaneously through secondary research and stakeholder interactions with mood boards.

The Impact
Spatial considerations and six concepts were created and refined. These concepts and considerations were crafted to not only help empower parents and humanize the EOL process, but also to accommodate the emotional needs of staff and the work flow at the hospital.

1 Privacy Lights are a system of indicator lights that provides a tool for standardize communication of privacy.
2 Little Reminders are strategically placed messages to remind CCHMC’s clinicians of self-care and empower families.
3 Remembrance Garden acts as a public/private space to remember those lives lost at Cincinnati Children’s.
4 Alert Lights light up the staff corridors along the walk to the morgue and are an indicator to staff to be respectful.
5 Spatial Considerations identified that an attached family space, provided necessities, and a soothing color palette are musts in the process.
6 Spiritual Lights are soft lighting in the shape of natural shapes that follow the staff and families during the walk to the morgue.
7 Comfort Quilt is used as a tool in the EOL process for clinicians, and as a keepsake for families.

Where is it now?
The CCHMC team has met with development representatives and are actively seeking funding opportunities for various concepts. The work was presented at the 2018 Pedi-Hope Texas Pediatric Palliative Care Consortium and will be presented at the Annual Assembly of the American Academy of Hospice and Palliative Medicine in March 2019. A paper is in progress.
Can we design an optimal pain management experience for Spinal Fusion and Pectus Excavatum?

Cincinnati Children’s Hospital Medical Center
Spine Center and Chest Wall Center
Sponsored by: Victor Garcia, MD, and Peter Sturm, MD
When: Fall 2017

The Opportunity
Cincinnati Children’s Hospital approached Live Well Collaborative to design an optimal pain management system (pre-op, post-op and home care) that bridges an easy to understand patient/family education system with rehabilitation efforts.

The Challenge
The surgeries for Pectus Excavatum and Scoliosis are the most painful surgeries performed at Cincinnati Children’s Hospital. When redesigning the pain management system the LWC team took into account the wide variation of patients and their families.

The Approach
Over the course of fifteen weeks, this multi-disciplinary studio focused on understanding every step in the perioperative journey, from the surgery referral to the post-op surgeon follow-up. The team interviewed a multitude of clinicians and families to better understand their entire experience with these surgeries. The LWC team also interacted with stakeholders to receive insight and feedback on concepts throughout the process.

The Results
The team presented a thorough analysis of the perioperative journey for Pectus Excavatum, Spinal Fusion, and created the AIM system that not only educates families but also empowers patient's in their recovery. To contextualize the AIM System, while highlighting the transformative experience a patient goes through, a Hero's Journey Video was developed through a Gen Z lens.

1. The Website is a one-stop resource hub providing customized education and has the ability to connect stakeholders.
2. The Pocket guides are a quick reference tool that provides information on the go.
3. The App is an engagement and motivational tool that is integrated into the users life.
4. The Wearable tracks the patient’s recovery process.
5. The Hero’s Journey was created to mimic a digital magazine to better understand the mindset of the current generation of patients.

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
How might we empower Pectus Excavatum patients to manage physical challenges and minimize surgical anxiety?

Cincinnati Children’s Hospital Medical Center
Chest Wall Center
Sponsored by: Victor Garcia, MD, Rebecca Brown, MD
When: Fall 2018

The Opportunity
Cincinnati Children’s Hospital approached the Live Well Collaborative to design an empowerment tool to enable patients to take charge of their pain journey while reducing anxiety. The tool must be personalized, interactive, and follow the Hero’s Journey narrative.

The Challenge
Pectus Excavatum surgeries are the most painful surgeries performed at Cincinnati Children’s Hospital. The fear of pain and lack of education on pain management tools causes heightened anxiety for patients and caregivers.

The Approach
Through the lens of the Hero’s Journey, this multi-disciplinary studio focused on understanding every step in the perioperative experience from the surgery referral to the post-op follow-up. The team interviewed clinicians and families to understand their entire experience of this surgery. The LWC team also interacted with stakeholders to receive insight and feedback on concepts throughout the process.

The Impact
The LWC team created a system of analogue and interactive empowerment tools which provide patients and caregivers education on various anxiety and pain management tools. These tools are used at different points in the Pectus Excavatum journey depending on the situation and individual preferences.

1 The Hero’s Journey Video
This animation introduces patients and caregivers to the patient journey in an adventure context.

2 Empowerment Cards
QR codes connect patients and caregivers to outside resources like apps and videos while providing condensed information on the tools.

3 WebApp
Patients build a custom toolkit and save it to their phone.

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
Can we design an ideal anesthesia induction experience for children?

Cincinnati Children’s Hospital Medical Center
Optimal Anesthesia Intervention
Sponsored by: Abby Hess, Anna Varughese, John Brophy, Lauren Hill
When: Spring 2017

The Opportunity
Cincinnati Children’s Hospital approached Live Well to create a fun, interactive and sustainable method for providing distraction to children during the anesthesia induction process. The innovation should have the potential to expand to other demographics and other healthcare facilities in the future.

The Challenge
Anesthesia induction for children is a time of high stress and anxiety that can be a traumatic experience, with negative effects lasting up to a year following the procedure.

The Approach
Over the course of fifteen weeks, this multi-disciplinary studio focused on understanding every step in the induction experience. The team took multiple visits to the hospital and observed a number of patients going through the anesthesia induction journey. They also interacted with professionals in the field to receive insight and feedback on ideas throughout this process.

The Results
The team presented a thorough analysis of the anesthesia induction process and revealed the final concepts that were developed as interventions for the hospital. Here are the approaches the team took for the project:

Where is it now?
As of January 2019, the CCHMC team has:
- Received a 2nd innovation grant for further development and applied for additional funding
- Completing feasibility testing of the device with patients in the operating room
- Working with Kinetic Vision & CCHMC clinical engineering on developing the next generation prototype
- Conducted a survey with outside institutions to assess interest in testing/using the device
- Accepted to present feasibility testing data at Society for Pediatric Anesthesia in March 2019
- Manuscript in progress

1. Zoo Journey App Design
   The App is an interactive educational breathing game designed to turn the child’s time at the hospital into a fun learning experience.

2. Breathing Device Design
   The device is an interactive product that visually and audibly engages the patient by providing feedback on his or hers breathing.

3. Functional Prototypes
   The team created working prototypes of both the app and the device to test and develop patient interaction.
How can we improve the parent/patient engagement during the informed consent process?

Cincinnati Children’s Hospital Medical Center
Informed Consent
Sponsored by: Todd Florin, MD and Lilliam Ambroggio, PhD
When: Spring 2017

The Opportunity
The overall objective of this studio project is to use design thinking methodologies to develop and test a novel ICD in the emergency department. It should reduce the length, decrease the complexity, improve the visual appearance, and increase participant understanding and recall of the ICD.

The Challenge
50% of prospective research participants find the current ICD difficult to understand. The emergency department (ED) offers unique challenges to clinical research, including the acute nature of illnesses, associated stress and the time-sensitive nature.

The Approach
The team considered all stakeholders in developing the new ICD, which included members of the IRB, MDs, Clinical Research Coordinators, and family members who have experience with research studies.

The Results
The team found through research that informed consent is a much bigger process beyond the document itself. The creation of the ICD and explanation of research all had to be considered. The team presented a toolbox of seven solutions.

3. Door Sign: Used by CRCs to help prevent interruptions.
5. Shortened ICD: Redesigned ICD, condensed from 8 to 2 pages.
6. ICD App: Interactive version of the ICD
7. Study Brochure: Supplemental handout with additional information.

Where is it now?
The CCHMC team will begin implementing the kit in the informed consent process. Todd Florin, MD, is seeking additional grant money for further development of the Research Portal.

ICD redesign
The ICD is now two pages long and incorporates color and iconography.

“What is Research?” Video
A video explaining research can be shown in the patient’s room.

Research Portal
The Research Portal is an easy to use website to help principal investigators create ICDs.
How can we improve patient and caretaker understanding of their Asthma Action Plan and discharge instructions?

Cincinnati Children’s Hospital Medical Center
Asthma Center Tailored Video Discharge Instructions

In collaboration with: Melinda Butsch Kovacic MPH, PhD and Carolyn Kercsmar, MD
When: Fall 2016

The Opportunity
Cincinnati Children’s Hospital approached Live Well to understand why so many children were returning to the hospital within 30 days of discharge. CCHMC also wanted to further develop and improve their Tailored Video Discharge Instructions to help solve this problem.

The Challenge
Evidence suggests that high-risk, hospitalized pediatric asthma patients and their caregivers are not engaging with and/or do not fully understand the information and instructions provided in their Asthma Action Plan at discharge. As a consequence, they fail to correctly perform health care practices or take the prescribed medications necessary to prevent future attacks and hospitalization.

The Approach
The LWC team conducted physician and caregiver/patient interviews to determine problem areas throughout the discharge process. The team found that patients did not have an understanding of types of medications, symptoms, and the severity of the disease. Further research showed that there is not one single solution but rather a system of solutions provided throughout the patient’s journey in the hospital. The team explored opportunities for education and instructions throughout this patient journey.

The Results
After research, iteration, and refinement, LWC came up with multiple concepts that address educational issues. Deliverables include:

1. Ideal Patient Journey Map
   Gives staff an idea of how they can help educate the patient during their time in the hospital.

2. Animated overview of Asthma
   Fun and informative video about what asthma is and how it is affecting the patient’s body.

3. Video Guide and instructions
   A standardized approach for provider/caregiver/child educator about care management that the entire healthcare team is educated on and can administer.

Where is it now?
The CCHMC team will be using the new video guide as part of the discharge process. Dr. Kovacic is pursuing additional funding to continue the work.
Cincinnati Children’s Hospital Medical Center
General and Community Pediatrics
Pediatric Primary Care Clinic Redesign
In collaboration with: Robert Kahn, MD, MPH, Adrienne Henize, JD, John Morehous, MD
When: Summer Semester 2014

The Opportunity
LWC was charged with designing a waiting room layout that provides simple ways for families to access community resources. This may include designated “zones” for job training, quality preschool, child activities, and child care.

The Challenge
Cincinnati Children’s three primary care clinics see 25,000 low-income children each year. The families of these children often struggle to achieve their educational, employment, and parenting goals. Cincinnati Children’s goal is to help connect these families more effectively to community resources.

The Approach
The Live Well team focused on prioritizing and recommending affordable, executable strategies for short term implementation and long term transformation. These strategies connect families to appropriate resources, and ensure successful follow up from community partners.

The Impact
The team developed five design strategies for the Pediatric Primary Care Clinic: hospitality is essential, provide visual access, personalize the space, produce positive distractions for children, and create flexible spaces. By shifting parents’ attention away from stressors and distractions, the waiting room can function as a productive space for parents to focus their attention on community resources.

Where is it now?
Parent surveys show significant improvement in overall parent experience in the waiting room. Families report better connections to community resources and easier access to support and assistance while they wait. The new Community Resource Liaison has helped more than 300 families with issues relating to public benefits, housing, jobs, and child care. The Liaison has helped create a highly reliable, interconnected system of care for patients and families. There is also a paper about the waiting room redesign currently under review for publication.
Cincinnati Children’s Hospital Medical Center
Heart Institute Cardiac Home Care Education
In collaboration with: Drs. Sandra Stavetski, PhD, RN, APRN, CPNP-AC, Sam Hanke, MD, Nicolas Madsen MD, MHP, Barbie Giambra, PhD, APRN, CPNP
When: Summer and Fall Semesters 2016

The Opportunity
CCHMC asked the Live Well Collaborative to develop a formal, structured home care education program for parents of children with congenital heart disease. The proposed home care education program will foster a safe transition from hospital to home and be utilized throughout the entire treatment process.

The Challenge
The guide must be general enough for all CHD types, but specific enough that it provides parents with pertinent information at the right time. The guide must also be easy to understand and accessible to all parents regardless of literacy level.

The Approach
The LWC team worked with parent and clinician focus groups to gain a better understanding of their needs. The initial sessions focused on developing a working knowledge of the CHD treatment process and parent-clinician communication. The team then worked to understand the types of products that are comfortable for parents and clinicians. These results led to the final development and testing of a booklet and mobile website. The LWC team worked closely with CCHMC to develop content for the booklet, keeping literacy and ease of use in mind.

The Results
The team designed a 50-page quick reference guide with 4 pockets, as well as a mobile website.

1. Pictograms & Iconography
   Key content is represented through illustrations and icons to aid lower literacy families.

2. Quick Reference Guide + Mobile Website
   The guide encourages family/clinician interaction and allows for easy access to important documents.

3. Recovery Pathway
   Surgical pathways comfort families by providing immediate post surgery expectations.

Where is it now?
CCHMC will be testing the mobile website and Quick Reference Guide beginning in Spring 2017.
Cincinnati Children’s Hospital Medical Center
Pediatric Ventricular Assist Device (VAD)
Educational Materials
Sponsored by: Advanced Cardiac Therapies Outcomes Network (Action) CCHMC: Angela Lorts, MD, Chet Villa, MD, Katrina Fields, Ryan Moore, MD, Lauren Burkhart
When: Fall 2018-Spring 2019

The Opportunity
The Action Learning Network, led by CCHMC cardiologists, approached Live Well to design age and developmentally appropriate VAD education materials for pediatric patients, families, and staff members. The materials should be innovative and accessible for digital and analog use.

The Challenge
Many types of VADs exist and most are used “off-label” in pediatric settings; this means the industry is not required to produce pediatric specific education. Improving and standardized pediatric VAD education is a modifiable risk factor. Appropriately designed modules would greatly reduce the educational burdens at institutions across the country.

The Approach
The LWC team conducted numerous patient/family and clinician interviews to create learning module content. The team developed a unified style and tone of voice for the modules branded for Action.

The Impact
The LWC team delivered the three learning modules across two semesters. They cover VAD basics, continual flow VADs, pre- and post-surgery, transitioning to home, and the ABCs of VADs.

How VADs work
Graphic interchange format (GIFs) and click through animations were used throughout the module to show key content.

Main character
The main character is always shown with her VAD bag which contains the device’s controller and electronics.

Education samples
The team created 22 courses across four units.

Where is it now?
The courses have been handed off to the Action Network/CCHMC and will be made accessible for patients and families on the learning management system Joomla.
How can we improve the transition from pediatric to adult care for youth with sickle cell disease?

Cincinnati Children’s Hospital Medical Center
Division of Behavioral Medicine
iTransition I
In collaboration with: Lori Crosby, PsyD
When: Summer Semester 2012

The Opportunity
This project addressed patient/provider tools to improve the transition from pediatric to adult Sickle Cell Disease care. This project leveraged the skills of the clinical team and the Live Well Collaborative to develop ways to improve this transition process by creating a co-inventive, hands-on experience using LWC’s design thinking model.

The Challenge
Sickle Cell Disease creates various complications within the body. It is a complex disorder because it affects each individual differently. The transition from adolescence to adult care for these patients occurs at a time when young people are making many other changes in life, and it is therefore crucial to ease this process.

The Approach
The team worked to understand the transition process more fully, as well as stakeholder involvement with patients, and the effect of the disease on a person’s life. Interviews at CCHMC and the adult clinic revealed areas of opportunity. This research was used to create visualizations identifying common themes across patients’ experiences, leading to potential areas for improvement.

The Impact
This co-creative approach helped to develop three main concepts to improve the transition: 1) the transition process should be standardized but flexible enough to meet individual patient needs; 2) patients and providers need a shared vision of the transition and a way to communicate throughout the process; 3) patients need a way to tie transition goals to more general developmental milestones.

Where is it now?
This project served as the basis for an R21 funded by NICHD April, 2016.

“The advantage of using designers for this research synthesis is that they can develop user-friendly materials that visually communicate a large amount of information.”
- Dr. Lori Crosby

1. **Patient Profiles**
These profiles are a tool that patients can create and customize, and they inspire learning about how SCD affects patients’ bodies.

2. **Transition Step, Milestone, and Power-Up Cards**
This card series helps hospital staff individualize and facilitate the transition process for each patient.

3. **Patient-Provider Interface**
Patients can use this journal to keep track of learned skills and tips as they transition to adult care.
What self-management tools can be created to ease the transition from pediatric to adult care for sickle cell disease patients?

Cincinnati Children’s Hospital Medical Center
Division of Behavioral Medicine
iTransition II
In collaboration with: Lori Crosby, PsyD
When: Summer Semester 2013

The Opportunity
As an extension to a previous collaboration, Cincinnati Children’s Hospital Medical Center and Live Well established a studio to develop patient self-management tools for those with Sickle Cell Disease, and improve their transition from pediatric care to adult care.

The Challenge
The transition from pediatric care to adult care for people who are diagnosed with Sickle Cell Disease (SCD) is often confusing. Patients struggle with finding ways to self-manage and adhere to healthy lifestyles.

The Approach
Three possible solutions to the problem of adhering to treatment emerged as a result of the research done by the Live Well team. These solutions comprised of a “buddy system” competition with other patients, a “goals first” t-shirt campaign, and a group monitoring system. Co-creation sessions with patients helped to refine these concepts.

Where is it now?
After 11 weeks two separate phone applications were created that promoted a “buddy system” of engaging patients with a support network of other patients. A guide was also created for the self-management of SCD. Four journal publications have been published in 2013, 2015, 2016, and 2017.

1. Treatment Adherence Solutions
One final solution resulted in a buddy system that allows teens to engage with other patients in order to keep each other on track. This encourages self-management among teens with Sickle Cell Disease.

2. Daily Self-Management Chart
A guide was developed to help ease the transition between pediatric care and adult care for SCD. It covers information for parents and patients, including daily self-management, doctor’s visits, pain management, and future self-management.
How do we educate and inspire the public to learn more about sickle cell trait?

Cincinnati Children’s Hospital Medical Center
Division of Hematology
Sickle Cell Trait Awareness
In collaboration with: Charles Quinn, MD, Lisa Shook, MA
When: Fall Semester 2014

The Opportunity
This project focused on improving education and information in the community on sickle cell trait through an online presence. Over the course of 15 weeks the LWC team reached out to the local community to investigate what is currently understood about sickle cell trait.

The Challenge
Sickle cell trait has little to no symptoms or side effects. However, the child of two people who are carriers of the sickle cell trait has a 25% chance of ending up with the disease. Consequently, the disease leads to a relatively short life with extremely painful symptoms. The Live Well Collaborative was tasked with developing a digital educational platform to promote discussion about sickle cell trait.

The Approach
The LWC team attended sickle cell community events, recruiting teens and young adults to help understand their knowledge of the topic and gain input. The team researched their digital habits and preferences, which guided the development of an effective online tool. This research contributed to the creation of various communication strategies and website prototypes ready for further testing.

The Impact
The team used continual feedback from the public to create one cohesive resource across multiple platforms. The site provides a single resource that answers any questions sickle cell trait carriers may have about the disease, and encourages them to approach pregnancy and family planning in a responsible way.

Where is it now?
Over 7,600 individual users visited the site, and 22% returned within the first year of activity. The Sickle Cell Disease Association of America and the Region 4 Genetics Collaborative in the Midwest have noted the website. The team is currently working to add another tab for “Providers.”

Website Visualizations
www.sicklecelltrait.org
The team developed a logo and brand visualization for the website, including a genetic probability graphic which shows the different probabilities of inheriting sickle cell trait or disease, and provide dynamic support for users.

Illustrating Sickle Cell Disease
Illustrations show how sickle cell disease causes red blood cells to become misshapen crescents and block blood flow in the limbs and organs.

Sickle Cell Video
http://sicklecelltrait.org
The site is formatted for desktop, smart phone, and tablet.
Cincinnati Children’s Hospital Medical Center
Division of Hematology
Hydroxyurea Toolkit
In collaboration with: Russel Ware, MD, Lori Crosby, PsyD, Lisa Shook, MA, and Christina Farrell, MPH
When: Fall Semester 2015

The Opportunity
The Hematology Division sought to create an educational toolkit for providers that focuses on sickle cell disease and hydroxyurea treatment education.

The Challenge
Many providers that have sickle cell disease patients are not hematology specialists and are not well educated in hydroxyurea treatment protocol and National Heart Lung and Blood Institute guidelines.

The Approach
Over the span of 15 weeks, the Live Well team interviewed 20 providers and specialists, hosted a co-creation session with 30 participants, and developed an arsenal of tools that provide hydroxyurea education treatment.

The Impact
The LWC team concluded that the best platform for a toolkit would be web based. The HELP SCD website was therefore designed to be interactive at patient appointments so that providers can easily access tools that fit the patients needs. The team also designed supplemental tools such as a Pocket Guide and Pamphlets for use alongside the website. These tools enhanced communication between provider and patient, and optimized treatment methods.

Where is it now?
This website is currently being coded. The launch is slated for Spring 2017.
How can we educate foster care youth on the importance of preventative healthcare and help them make decisions regarding their own healthcare?

Cincinnati Children’s Hospital Medical Center
Division of Behavior Medicine & Clinical Psychology

Healthcare for Transitioning Foster Youth
In collaboration with: Mary Greiner, MD, Sarah Beal, PhD
When: Fall Semester 2014

The Opportunity
The LWC research team collaborated with CCHMC to explore solutions for helping youth in Hamilton County transitioning from Child Services to the adult healthcare system. This endeavor presents an opportunity for young adults transitioning out of foster care to learn about preventative healthcare, make better decisions about their health, and lower medical costs.

The Challenge
Most post-transitioned youth, considered adults by Child Services, are uninformed about their healthcare. When medical situations arise, whether minor or urgent, most youth lack the knowledge to make an educated decision about their health. This results in countless emergency room visits, which waste the patient’s time and money. Many of the existing resources available to post-transitioned youth are unapproachable, leading to a lack of communication with healthcare professionals.

The Approach
Conversations with pre- and post-transitioned youth revealed how they respond to guidance from healthcare professionals, and how trust affects their decision-making process. The team identified parallels in youth experiences, which revealed an understanding of what the average journey looks like for foster youth. The team then identified key points throughout the journey where design could help to solve healthcare problems.

The Impact
An 80 page healthcare guide was created through a co-creation approach with healthcare providers. These booklets are intended to help spark the conversation between teens and their healthcare providers, and to serve as a quick, accessible reference for healthcare information while at home.

Where is it now?
Currently 100 participants, of 200 anticipated, have been recruited, have received the guide, and are being monitored for 12 months to examine their healthcare use. The team anticipates having all data collected by January of 2018. Multiple teens who have received the guide now claim it is one of their most prized possessions, taking it with them even after moving to other states and leaving the study.
How can we continue to educate youths in foster care regarding their health and wellness?

Cincinnati Children’s Hospital Medical Center
Division of Behavior Medicine & Clinical Psychology

Foster Care Website
In collaboration with: Mary Greiner, MD, Sarah Beal, PhD
When: Spring Semester 2015

The Opportunity
Currently, there are no systematic educational materials that teach youth in foster care about healthcare, how to access healthcare, and how to utilize and navigate the healthcare system. The Cincinnati Children’s CHECK Center wanted to co-create a healthcare website with the Live Well Collaborative that built upon the existing I Care Guide project completed in the fall semester of 2014. This healthcare website is an education tool for youth in foster care to access information regarding their health and better prepare youth in foster care to transition to independent living or emancipation.

The Challenge
Various stakeholders are eager to implement training and educational materials that will assist youth in foster care. Their hope is to help youth develop the knowledge base and skill-set needed to maintain their health and appropriately engage in the healthcare system.

The Approach
The Live Well team developed four phases for this project, interacting with 49 youths that have been involved or are currently involved in the foster care system. The team created a website focused on the implementation and distribution of health and wellness education. These initial phases included interviews, group sessions, preparation, and synthesizing data.

The Impact
The team created a website prototype that includes easily navigable tabs, that is also compatible with the previously developed “I Care” Guide.

Where is it now?
The website was officially launched in January 2016, and has been visited 660 times by 546 users within the first six months. The “Where do I go?” and “Sensitive Subjects” pages for caregivers are the most popular pages.

1. Pediatrics Page
   The pediatrics section of the website includes information on finding pediatric care and immunization.

2. Branding Ideation
   The team developed and refined different approaches to branding.

3. Final Website Design
   www.icare2check.org
   The final website includes information regarding insurance, physicians, and dentists, among other important information.
What does a web portal that shares placement and medical information of youth in protected custody look like?

Cincinnati Children’s Hospital Medical Center
In collaboration with Hamilton County Job and Family Services
Sponsored by: Sarah Beal and Mary Greiner
When: Summer 2017

The Opportunity
The Live Well Collaborative team was tasked with designing an interface for a web portal that creates a comprehensive look at foster youths’ medical records and case background for both CCHMC and HCJFS stakeholders.

The Challenge
Create an interface that unifies data from two sources in a cohesive manner, through which all stakeholders can intuitively access information.

The Approach
53 Interviews were conducted with 9 individuals from CCHMC and 18 from HCJFS in 3 interaction cycles. Stakeholders participated in activities that identified the optimal way to organize data. Then stakeholders participated in a wireframe activity to give insight into ways that they would efficiently navigate through information. Finally, user testing was conducted with digital prototypes. To obtain feedback on the final screen layout and navigation.

The Results
The team presented the design of the IDENTITY web portal using a digital prototype, animated video and screen still shots.

Main portal
The IDENTITY portal expertly executes the tangible and intangible insights, creating a dynamic layout that satisfies all stakeholder needs. The portal consists of pages organized under the following categories: Primary contacts, HCJFS summary, Health information, Referrals and appointments, and Medical background.

Admin portal
The administrative portal is a space where admin can add or search users, but also allows for data discrepancies to be resolved.

Navigation
Dropdown sections are primarily used to obtain a clean layout and give users information in digestible chunks.

Where is it now?
The web portal has been created and a pilot study is projected to start in February 2018.
How do we empower emancipated foster youth to be the champions of their own health?

Cincinnati Children’s Hospital Medical Center
Electronic Health Record for Foster Youth
In collaboration with: Judith Dexheimer, Mary Greiner, Sarah Beal, Lisa Vaughn, Darius Johnson, Andrea Kachelmeyer, Jeremy Nix
When: Spring 2019

The Opportunity
As youth transition from foster care, they fail to receive appropriate healthcare in part due to the lack of access to their own health information. With records lost and their healthcare disrupted, how do we connect the emancipated foster youth directly to their own health data?

The Challenge
The Live Well team was tasked to design a portable, electronic health record (EHR) to address the needs of emancipated foster youth. The project goal was to empower youth to take ownership of their own health data and improve health outcomes while they transition from pediatric to adult healthcare.

The Approach
The team relied on past projects with foster youth, such as IDENTITY, as well as interactions with foster youth. The team conducted secondary research, benchmarked existing EHRs, and studied responsive websites. Next, the team developed potential aesthetic directions, information architecture, preliminary wireframes, and icon explorations. This content was reviewed by focus groups and refined throughout the semester.

The Results
The Live Well team presented the final, web-based application. The site is broken into four main sections — personal information, health information, custody information, and life skills. Each section is framed to help the emancipated foster youth better understand their health and custody history, and prepare them for living on their own.

1. Brand Identity
The brand, HealthHero, plays off the idea of the foster youth being the champions of their own health.

2. Sample Screens
The app opens up to a homepage to address privacy concerns many users expressed when testing this site. This site is a historic record, with the health information pulled from EPIC and the custody information from HCJFS. The life skills section was suggested by youth who felt there were basic life concepts that should be included in the portal.

Where is it now?
The project has been handed off to CCHMC for backend development and testing will begin in the Fall of 2019.
How can we create a device to aid in medication adherence as well as capture data to improve patient outcomes?

Cincinnati Children’s Hospital Medical Center
Division of Behavioral Medicine and Clinical Psychology
Medication Adherence Device
In collaboration with: Kevin Hommel, PhD
When: Summer Semester 2014 - Spring Semester 2016

The Opportunity
The goal of this project was to develop an innovative electronic medication adherence monitoring device that is designed for the user’s needs, and results in a more comprehensive data capture. Users may include patients, clinicians, and researchers.

The Challenge
Non-adherence leads to feeling unwell, frequent doctor visits, increases in medical expenses, and death. Non-adherence results in approximately $300 billion in extra expenses, and is estimated to cause 125,000 deaths per year. If this issue is addressed properly, it could save thousands of lives and billions of dollars each year.

The Approach
Over the course of several semesters, the Live Well team comprehensively explored the challenges of creating a medical adherence device. The team conducted extensive interviews and gathered the observations of users to understand their needs. The rapid prototyping phase required the devices to go through alpha and beta testing with end users. The Live Well team then produced a low resolution functional prototype.

Where is it now?
This project is still currently in mechanic testing and is being continually refined. The results thus far include an improved prototype with a basic cloud-based interface. Further funding is needed to produce prototypes for user testing.

On March 6, 2018, design patents were issued for the dispenser and dispenser module.

Adherence Device Prototype
This prototype includes an expandable design and a built-in screen.

Website
A cloud-based interface accompanies the device to allow patients and doctors to monitor adherence.

Phone App
The cloud-based interface allows easy access for patients to monitor their adherence.

This project is confidential. For more information, contact kevin.hommel@cchmc.org
How can remote patient monitoring be utilized to improve the patient experience throughout treatment?

Cincinnati Children’s Hospital Medical Center
Remote Patient Care
In collaboration with: John P. Perentesis, MD
When: Summer Semester 2015

The Opportunity
The LWC utilized the emerging trend of fitness and nutrition tracking for medically-driven purposes to explore uses of fitness trackers for in-home patient monitoring. LWC aimed to map out CCHMC's current working model provide focus areas that could be further explored.

Challenge
Children and their families often leave the hospital with questions and concerns that arise once at home. This is especially prevalent if the child develops unexplained symptoms at home. To allow doctors to optimize time with patients, remote patient monitoring can be an effective way to check vitals and track the child's nutrition. Remote monitoring could allow the medical team to check on the patient without an inconvenient visit to the hospital.

Approach
Through meetings with CCHMC, the LWC team was able to develop an understanding of the hospital’s current research process and what steps are being taken to test current fitness and nutritional device trackers. LWC explored CCHMC’s current connections and research plans and mapped out opportunities that CCHMC could further explore.

The Impact
The LWC team also identified other monitoring opportunities for CCHMC. By mapping out benchmarking investigations, the team was able to organize a system that best met hospital’s needs.

Where is it now?
A QI project for Remote Patient Monitoring (RPM) is underway and actively enrolling participants. Early goals are focused on process measures, offering RPM to everyone who would be considered eligible. Future goals will be clinical outcome measures including early identification and intervention of treatment associated weight loss.

Device + Service Benchmarking
The LWC team used benchmarking to look at existing fitness and nutritional tracking systems. The team then mapped out companies and devices that supported HIPAA compliance along with other device features.

Organizational Mapping for CCHMC
The LWC team established areas that CCHMC could explore further by creating a system comparing various devices and their capabilities.

Possibilities for Exploration
After benchmarking and comparing existing systems, the team created a grid to summarize findings.

“There’s a huge need for validation of remote monitoring devices in pediatrics.”
- Dr. Perentesis
How can we improve the patient therapy calendar for staff and the patient?

Cincinnati Children’s Hospital Medical Center
Electronic Treatment Calendar Hub
In collaboration with: John P. Perentesis, MD, Marianne Torontali and Jen Pomales
When: Summer Semester 2015

The Opportunity
LWC was tasked with improving the existing Patient Therapy Plan used in the Cancer and Blood Disease Institute (CBDI) at Cincinnati Children’s Hospital Medical Center (CCHMC). The current Patient Therapy Plan is handed out as a calendar print out created in Microsoft Word. This format does not provide sufficient information for families and is inefficient for care teams to manage. In collaboration with the CBDI, the LWC team enhanced the Patient Therapy Plan to provide a more holistic solution.

The Challenge
Cancer treatment for a child spans months, if not years. It can also change several times in a short period based on the patient’s condition. The current process for updating Patient Therapy Plans leads to unnecessary mistakes, causing confusion and uncertainty for families.

Approach
The LWC developed two important research questions: 1) What are the crucial issues that stakeholders have with the current plan? 2) What information does the plan need to convey? The LWC team used an iterative process to develop improvements to CBDI’s plan. The team identified opportunity and refined these by building upon concepts from previous research, conducting in-depth professional interviews, and facilitating feedback sessions with parents and care managers. This research helped establish a new calendar system for the Patient Therapy Plan.

The Impact
The LWC team created a new electronic therapy plan calendar system, ETCH, which includes two provider portals and three patient/parent portals. The team designed three distinct interfaces: Patient-Specific Treatment Plan, Read Only Calendar, and Family Printout to ensure usability and efficiency.

Where is it now?
In June 2017, ETCH was implemented for use with select disease team care managers. The application is currently used to create patient specific treatment calendars; patients and families are provided a printed copy. As of January 2019, three pilot users have been enrolled with the goal of adding one more by February 2019. The initial pilot users represent an equal mix of pediatric and AYA patients from Solid Tumor and Leukemia/Lymphoma disease teams.

1. Original Concept
   The new interface allows providers to plan a patient specific treatment plans from basic protocols.

2. Provider Interface
   Providers can print a hard copy for the family and patient. Families also have access to information online.

3. Patient Treatment Calendar (Read only)
   A read-only patient portal offering patients secure, real-time access to their treatment calendar and drug information.
How can we combat the feeling of uncertainty parents get when their child is diagnosed with cancer?

Cincinnati Children’s Hospital Medical Center
IMPACT Combating Parent Uncertainty
In collaboration with: Ahna Pai, PhD
When: Summer Semester 2015

The Opportunity
Dr. Ahna Pai is leading a diagnosis uncertainty study in collaboration with LWC. This study aims to create an educational app that helps parents who are suffering from the initial shock of learning that their child has cancer. The app will introduce information currently presented to the parents in a less intimidating manner, empowering them to be more supportive for their children.

The Challenge
Currently, at diagnosis parents receive a large, intimidating binder filled information about the treatment process. Most parents do not use the binder after they receive it, causing them to feel uncertain about the process. This can affect their child, making them feel more stressed.

The Approach
The Live Well team created a wireframe for an app that delivers information from the binder in a digital, less intimidating form. This app will serve as a reference for parents whenever they feel uncertain about the treatment process, and will empower them to be supportive for their children.

The Impact
This app allows parents to easily and quickly answer questions about the treatment process, medical terms, care providers, and doctor availability.

Where is it now?
Currently, a five-year randomized clinical trial testing is being conducted on the app. Participating parents of children newly diagnosed with cancer will be randomly assigned to one of two conditions - both conditions will have access the mobile application. Sixty patients are currently enrolled with recruiting scheduled to end May 2019. Preliminary results are expected in May 2020.

“In the beginning, the parents are in so much shock that you have to repeat the education process over and over again.”
- Father of 8 year old child diagnosed with cancer

App Prototype
The home screen of the app brings the user to six options. The navigation is simple so that the distressed parent is not confused.

My Treatment Process
Parents can follow their child’s personal treatment plan through the app to track their journey and see what steps lie ahead.

Interactive Functions
The app synchronizes to both the patient’s and care team’s calendar so that parents can always stay up to date and connected. There are also teaching tools to help parents stay informed.
How can we re-imagine the cancer patient hospital experience in order to nurture comfort, education, and entertainment?

Cincinnati Children’s Hospital - Liberty Campus
The Family Connection Center
In collaboration with: John P. Perentesis, MD
When: Fall Semester 2015

The Opportunity
The LWC team was challenged to conduct a spatial utilization analysis of the hospital’s new Liberty Campus. The team was asked to analyze the area and conceptualize physical and digital installations designed to augment the hospital experience.

The Challenge
A cancer diagnosis is frightening and overwhelming for anyone involved. Between numerous treatment options to consider and frequent hospital visits, the life of a cancer patient is hectic. CCHMC hoped to create a new digitally integrated physical space designed to alleviate some of this stress.

The Approach
The team hosted co-creation sessions with Cincinnati Children’s Hospital staff regarding the name of the new space, overall goals, functionalities, form, target audience, and stakeholders.

The Impact
The team presented a thorough storyboard scenario of the conceptual design system, which integrates digital and physical experiences during proton treatments and in-patient stays. This presentation highlighted opportunity areas that allow for better comfort, education, and entertainment.

Where is it now?
Google cardboard was catalyst for a web based virtual reality tour of the Liberty Campus that is under development. See page 16 for further work.

1 Google Cardboard
The team designed a conceptual system that utilizes virtual reality hardware and software.

2 Future Site of the Family Connection Center
Cincinnati Children’s staff gave the team multiple tours of the Liberty Campus so that the team could determine potential design directions of the Family Connection Center.

3 Co-Creation Session
The team facilitated an activity with Cincinnati Children’s staff to better understand the Family Connection Center.
How can we engage patients and families to become familiar with the Liberty Campus before their first visit?

Cincinnati Children’s Hospital - Liberty Campus
Virtual Reality Tour
In collaboration with: John P. Perentesis, MD
When: Spring Semester 2016

The Opportunity
The Live Well team was tasked with investigating innovative and immersive ways to introduce the new Cincinnati Children’s Hospital Liberty Campus. Their goal was to present the space to patients and families in a way that was fun to younger audiences but still engaged people of all ages.

The Challenge
When patients and families first arrive at Liberty Campus they are unfamiliar with the new environment and the new procedures of the hospital. This causes uncertainty for patients and their families and can be a source of anxiety.

The Approach
The LWC team looked at current virtual reality technology and its effectiveness in the current market. The team benchmarked scholarly articles and research relating to the use of virtual reality in healthcare systems. The team created concepts for a virtual tour of the campus and how it would affect the patient’s journey.

The Impact
The team developed several concepts for a virtual reality tour of the Liberty Campus. They conceptualized a three-dimensional environment of the space that is controlled by a smartphone and a Google Cardboard or other VR headset. They also developed the concept for a virtual environment comprised of 360 degree images. The user navigated this environment along-side a character of their choosing. The team chose the latter concept, which was then refined for later work.

Where is it now?
The VR tour is complete and the CCHMC team is integrating it into the CBDI domain of CCHMC’s website.

“VR allows greater control over stimulus presentation; variety in response options; presentation of stimuli in three dimensions; and the creation of complex scenarios.”
- The Use of Virtual Reality in Psychology: A Case Study in Visual Perception

1 Benchmarking and Research
The team gathered information to understand the current virtual reality market and what benefit these products had in creating immersive, learning environments.

2 Concept Development
They explored ideas and solutions which they sketched out to create basic concepts.

3 Concept Creation and Refinement
These concepts were then developed into workable proof of concepts before selecting a final concept to develop further.
Cincinnati Children’s Hospital Medical Center

ADL 1-2-3 Adherence Device
In collaboration with: John P. Perentesis, MD, Christopher Dandoy, MD, Victoria Hickey, John Huber
When: Spring - Fall Semester 2016

The Opportunity
The 1-2-3 initiative was started within the BMT unit in an effort to cut down on infection rates. This initiative was an incentivized program that awarded stickers to patients who completed 3 daily tasks (bathing once, doing physical activity twice and doing oral care three times). Stickers were exchanged for “BMT Bucks” which could be used to buy toys from Child Life. This system was very effective and increased patient adherence from 25% to 75% among young children and teens.

The Challenge
While this system improved patient adherence, it was difficult and time consuming for nurses to manage. LWC was challenged to automate this system, create a device that would effortlessly collect and log points, while also engaging the parent or caregiver.

The Approach
The team investigated ways to automate the point collection process. They developed a touch free device that allowed maximum freedom for all users while taking into account the constraints of current hospital protocols. The team created initial sketches and 3D concepts, and tested them with families and key stakeholders. After numerous rough electronic models were user tested, a working 3D case was developed and further refined with input from clinical engineering.

The Impact
The current prototype is a device that tracks patient bathing, teeth brushing, and physical activity through an integrated system monitored by hospital staff.

Where is it now?
CCHMC Equipment & Standards Committee has approved the device and IRB approval has been obtained. Six devices are currently being tested at the Liberty Campus. Initial results are very promising. An additional 24 devices will be tested through a randomized trial at base campus beginning Q1 FY18. A second iteration of the project will begin at Live Well in summer 2019.
Cincinnati Children’s Hospital Medical Center
Oncology Handbook 2.0
In collaboration with Dr. John Perentesis
When: Spring & Summer 2017–Spring 2018

The Opportunity
Cincinnati Children’s approached Live Well to redesign their Oncology Parent/Patient Handbook. New patients admitted to the CBDI use the handbook’s wealth of knowledge to help them navigate their journey and better understand their treatment.

The Challenge
The handbook’s vast amount of information made the binder a bulky document that most parents didn’t want to carry or reference. Some admitted to forgetting about it in the backseat of their cars.

The Approach
A Live Well team conducted user research with caregivers and patients during the spring semester to discover what content they used the most. Using their insights they condensed the handbook down to its vital information. During the summer, a second team explored the concept of a “Smaller and Precious Handbook” with four redesign options of varying layouts, shapes, materials and binding methods. Caregivers and staff at Cincinnati Children’s selected the most successful ideas which Live Well used to create a high fidelity prototype that was shared internally at Children’s for final refinements.

The Results
Live Well created two versions of the pocket handbook, one targeting young children and their parents, and one for young adults. The new handbook emphasizes visual communication and uses tabs for rapid navigation.

1 Targeted Audience
Two versions were developed to make the verbiage less confusing for both populations and tackle their specific needs.

2 Visual Communication
The new binder uses tools such as icons, diagrams and infographics to raise interest and aid low literacy readers.

3 Tabular Navigation
Color-coded tabs were implemented in order to allow users easy access to every section of the handbook.

Where is it now?
Handbooks are being given to every patient with a new oncology diagnosis by their care managers. Both the Pediatric and AYA Handbooks are available in English, Spanish and Arabic and online: https://www.cincinnatichildrens.org/service/c/cancer-blood/cancer/oncology-handbook
How might we increase time savings through digital rounds scheduling while still capturing the unique needs of each patient/family?

Cincinnati Children’s Hospital Medical Center
Rounds Notification System
In collaboration with: John P. Perentesis, MD, Patrick Brady, MD
When: Spring - Fall 2018

The Opportunity
The Rounds Notification project grew out of four months of contextual inquiry with the HEMONC unit at Cincinnati Children’s Hospital. Rounds is perceived as a valuable, collaborative tool for clinicians and families; however, this collaborative planning only occurs if all the stakeholders are in the same place, at the same time.

The Challenge
The projects goals were to: (1) to create a system to allow clinicians to schedule a time for each patient during morning rounds and (2) alert patients/families of a time window using a SMS notifications. The solution should interact with existing protocols, systems, and technology to improve overall process quality without being redundant or adding complexity.

The Approach
The LWC team worked closely with CBDI and the Internal Medicine yellow team to understand the complexities of rounds, develop a rounds scheduling system for clinicians, and gain project buy-in from key stakeholders. Over the two semesters, the team spent over 100 hours shadowing rounds and conducting two proof-of-concept pilots.

The Impact
The LWC team delivered a tested, minimal viable product with API spec and style guide to CCHMC for internal development. The pilots saw early success in improving clinician communication and tracking the rounds team during rounds. SMS notification will be incorporated at CCHMC during the next development phase.

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
How can we help immunocompromised patients better understand their fever readmission?

Cincinnati Children’s Hospital Medical Center
F&I Readmission
Sponsored by: John P. Perentesis, MD
When: Fall 2017

The Opportunity
Readmitted cancer patients are immunocompromised and are at risk of being neutropenic. Despite their best efforts to prevent infections, patients are very likely to have a fever after returning home post-treatment. At the first sign of a fever, patients must contact their care team so they can be treated immediately.

The Challenge
We needed to make sure the patient needs to know that it is not their fault. A fever happens because the patient is immunocompromised. The video gives the patient accurate expectations about their admission to better understand their situation.

The Approach
The video explains what an infection is: when a germ, either a microscopic bacterial, viral, or fungal organism enters your body and multiplies, causing your body to become weakened. Immunocompromised patients are more likely to have infections. One common sign of an infection is a fever. Patients must act immediately at the first sign of a fever. The video explains what needs to be accomplished prior to discharge, and ways to reduce the risk of future infections at home.

The Impact
The video introduces the concept of fever readmission to the patient, so they can be prepared and familiar with the process before it happens. The patient is reassured that although they are trying their best to reduce their risk, fevers are a very common for immunocompromised patients, and immediate action is necessary.

1 Explaining infection helps the patient understand why a fever happens and how it affects them
2 EMLA cream should be applied right before the admission so that the patient can be treated immediately upon arrival to the clinic or ER
3 Blood cultures must be negative for 2-3 days in a row to make sure there are no infectious germs in the body
4 At home, eliminate infectious germs that can build up and enter the body through your mouth and skin
5 Avoid crowded places to reduce the exposure to germs when blood counts are low

Where is it now?
The video is available to view on CCHMC’s website and YouTube channel: https://www.youtube.com/watch?v=nU5HHs2LlrI

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
CBDI

How can cancer patients engage in their own treatment and care?

Cincinnati Children’s Hospital Medical Center
ADL 1-2-3 Video
Sponsored by: Dr. John Perentesis
When: Summer 2017

The Opportunity
Live Well was asked by Cincinnati Children’s to create an animation for CBDI’s growing video library. The 1-2-3 device allows patients a way to log the progress of their everyday activities as they are completed. The animation serves as an explanatory video introducing the device and the concept of Activities of Daily Living (ADL’s).

The Challenge
The video not only needs to introduce the device, but explain why it is important for a patient to be engaged in their treatment, explain what an infection is, demonstrate the risks of catching infection, introduce the ADL’s, clarify how the device works, and ultimately reaffirm that the patient is now an active member of their own care team.

The Approach
Live Well worked alongside doctors and caregivers to develop a script that explained the importance of completing activities of daily living in a firm yet empathetic tone. Storyboards were then developed to create strong visuals complimenting and illustrating the concepts being introduced in the script.

An animatic was then created to evaluate the length and flow of the video. This evaluation led to shortening and rearranging of the script to create the most comprehensive flow of information.

The Results
The final video shows a young cancer patient choosing to take a proactive stance in her treatment and complete her ADL’s everyday in an attempt to decrease the chance of infection.

1 What is an infection?
Infectious germs can enter your body in many ways, including through your mouth and open wounds in your skin.

2 Activities of Daily Living
It is important to get out of bed at least two times per day to keep your body active.

3 Team Sport
Infection prevention is a team sport and the patient is now an active member of their very own support system.

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
**Cincinnati Children’s Hospital Medical Center**  
**Cancer Survivorship Video**  
Sponsored by: Dr. John Perentesis  
When: Summer 2017

**The Opportunity**  
Live Well was asked by Cincinnati Children’s to create an animation on CDI’s Cancer Survivorship Center for their growing video library. The Survivorship Center offers preventative medicine services to children, adolescents and adults to help them cope or prevent potential late effects from their childhood cancer treatment.

**The Challenge**  
The video needs a narrative that can bridge the needs of young adults with those of children and their parents, while simultaneously finding a way to remain relevant in an age of declining membership in survivorship programs across the nation.

**The Approach**  
Live Well worked alongside doctors and caregivers to develop a script that acknowledged the reality of being a cancer survivor while maintaining a bright, positive outlook. The narrative was crafted to empower members to be proactive and advocate for their health. The teams then developed storyboards to find imagery that was sensitive to survivors but also complimented the narration appropriately. A kinematic was then created to evaluate then rhythm and length of the video, and assess the tone of the narration. This evaluation led team to shorten the script and pivot to focus on what the program can offer to survivors.

**The Results**  
The final video tells the story of a young survivor who goes to join the Survivorship Center to be a part of a community that help him stay healthy for a lifetime.

1. **Proactive Team**  
The video focuses on the Survivorship Center helping a patient navigate their survivorship journey to show they’re part of a caring community.

2. **Lifelong Wellness**  
The narrative follows a young childhood cancer survivor throughout their life to highlight the importance of survivorship programs for a lifetime of wellness.

3. **Late Effects Synopsis**  
Late effects, health problems caused by cancer therapy, are introduced to urge patients to seek survivorship care.

For more information regarding this project visit: http://livewellcollaborative.org/member-login/
How can we engage patients undergoing treatment in order to offer them better care while outside of the hospital?

Cincinnati Children’s Hospital Medical Center
Remote Patient Care Video
In collaboration with: John Perentesis, MD, FAAP
When: Summer 2017

The Opportunity
CCHMC has a new program called “Remote Patient Care” that allows patients to send health updates to their care team while outside of the hospital.

The Challenge
The program was originally called “Remote Patient Monitoring,” and focused on the extension of the hospital’s care during cancer treatment. After research, the focus of the program needed to be from the patient’s perspective to offer a more empowering experience for the patient. An important benefit of this new program is that it can reduce the chance of unexpected hospital visits and clinical stays, which is extremely important to the patient. Reiterating the advantage of reduced chances of hospital visits, without being redundant, was necessary because it is extremely important to the patient.

The Impact
This video starts the conversation between the patient and healthcare team on how they might use this program to take a more active role in their care. It will also help patients establish stronger communication with their healthcare team, making them feel even more connected.

1 Care Anywhere
Cincinnati Children’s team is here to help, in and out of the hospital.

2 Patient Perspective
This video gives the viewer an idea of how Remote Patient Care may be integrated into the patient’s daily routine.

3 Medical Kit
Identifies possible health factors that may be shared with your healthcare team.

4 Reduce Chances of Hospitalization
Keeping track of any changes in the patient’s health allows the care team to keep the patient healthy and reduce the chance of a simple ailment, like a cold, from developing into something that may interrupt treatment.

For more information regarding this project visit:
http://livewellcollaborative.org/member-login/
What is the optimal journey in pediatric oncology for patients, families and caregivers?

Cincinnati Children’s Hospital
Ideal Pediatric Cancer Journey
In collaboration with: John P. Perentesis, MD
When: Spring Semester 2015

The Opportunity
Children’s Hospital is expanding their Liberty campus, introducing a new form of cancer treatment called Proton Therapy. To support this initiative, Live Well partnered with Children’s to envision a patient/family experience within the Cancer and Blood Disease Institute, which could then function as a model of care across CCHMC.

The Challenge
Caregivers are overwhelmed during the diagnosis of their child, and find it difficult to process the complex and detailed information given to them regarding their care plan. This communication breakdown leads to continual misunderstandings throughout the entire patient experience.

The Approach
Over the course of several weeks, the Live Well team conducted interviews with 41 staff and 9 families for a collective 25 hours of analyzed and coded recorded documentation. The team presented their findings regarding aspirational benchmarks and product concepts to CCHMC stakeholders. With feedback from the stakeholders, the team focused attention on designing concepts that would solve the reoccurring issue concerning the information needs of families and patients throughout their care journeys. Right Information. Right Place. Right Time.

The Impact
The Live Well team established and prioritized strategies for the Cancer and Blood Disease Institute to ensure an improved cancer journey for all stakeholders involved with CCHMC.

Where is it now?
This project has inspired various models of care at CCHMC including virtual reality tours and remote patient monitoring systems.

“I was in shock when I heard my child had cancer, then all this information came at me and I missed so much of it because I couldn’t process it.”
- Father of 8 year old child diagnosed with cancer

1 Katie’s Treasure Box
A clever packaging system that strategically introduces families and patients to tools to help them throughout their journey.

2 Blue Band
An all-in-one device that effortlessly connects patients, family, and staff to relevant information. It also records and stores vitals, permits instant access to patient medical records and sends notifications of upcoming appointments and treatments.

3 Oasis Portal
This portal is an inpatient room access point to all necessary information specific to the patient, allowing families to control and retrieve the information they need. It also facilitates correspondence between medical staff, families, patients, and their friends through video messaging.

4 Oasis App
This application acts as a virtual buddy or assistant that helps families adjust to the new care patterns of their child after returning home.
Cincinnati Children’s Hospital Medical Center
What is Leukemia & The New Normal
In collaboration with: John P. Perentesis, MD
When: Summer Semester 2015

The Opportunity
Live Well collaborated with CCHMC to expand their video presence after the re-design of their website. When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource.

The Challenge
When a child is diagnosed with cancer families are often left feeling overwhelmed and confused. After receiving a diagnosis, they go through an “information overload.” They are in need of a supplemental source of information that they can access both at the hospital and once they return home.

The Approach
The LWC team used various methods to design videos for CCHMC’s new website. The team benchmarked current video strategies and styles, benchmarked character styles, and interviewed CCHMC staff and patients and their families. The LWC team used an interactive research technique called the “Draw-It,” where they asked patients to draw what came to mind when given certain prompts. This proved to be a very successful method of communication, bridging the gap between the demographic of patients in diverse age ranges.

The Impact
The team created two final animated videos. “What is Leukemia” focuses on explaining leukemia to patients and their families. “The New Normal” highlights different ways parents can ensure their child’s health and wellbeing throughout the treatment process.

Where is it now?
The video can be found at the link below. A survey to measure patient satisfaction with video vs. print educational videos is being developed.

“My daughter would feel support to see others going through the same thing.”
- Mother of 12 year old leukemia patient

1 Video Survey + Benchmarking
Online surveys were a beneficial tool in collecting family and patient input and analyzing data. Benchmarking enabled the LWC team to look at existing video models for testing.

2 Character Styles
The team created character styles after synthesizing results from benchmarking and surveys. The styles were then tested with children and their families for verification and selection.

3 Final Outputs
The team produced two final animated videos. (http://www.cincinnatichildrens.org/service/l/leukemia-lymphoma/default/)

How can video animations effectively communicate diagnoses and procedures to patients?
Cincinnati Children’s Hospital Medical Center
Nutrition and Fertility Preservation
In collaboration with: John P. Perentesis, MD
When: Fall Semester 2015

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource for reference before and after receiving information. The LWC team had the opportunity to continue the cancer journey video experience by designing materials regarding nutrition and fertility preservation for CCHMC to implement.

The Challenge
Guided by the previous semester’s animation work, the LWC team focused on creating an animation style that was simple and easily replicable. The team aimed to create and implement this style while still explaining specific information communicated by the CCHMC staff clearly.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations, to ensure that these videos would become a valuable tool for both patients and their medical teams.

The Impact
The team created two final introductory videos on nutrition and fertility preservation. The nutritional video describes the basics of what patients may experience with their diet as they go through treatment, and interventions to help them along the way. The fertility preservation video details the importance of fertility preservation as a possible resource, and the different types of procedures available to patients.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

“Animations can serve as effective multimedia tools to engage one’s audience while facilitating and enhancing the learning experience.”
- Dr. Perentesis

Benchmarking + Family Feedback
Benchmarking allowed the LWC team to look at existing character styles and narrow down options. The family feedback session enabled the patients and family to give feedback on the style of the videos.

Character Style
The characters were created using simple body forms that can be replicated for characters in other videos.

Final Outputs
The LWC team built assets and solidified video development. Two final animated videos were produced.
How can we continue to effectively communicate with patients through the creation of videos?

Cincinnati Children’s Hospital Medical Center
Feeding Tubes & Sperm Banking
In collaboration with: John P. Perentesis, MD
When: Spring Semester 2016

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to feeding tube use, sperm banking, and general information about a patient's care team.

The Challenge
The LWC team created sub-videos relating to the general topics of Fertility Preservation and Nutrition to create an individualized play-list. The team was tasked with introducing the different people and resources families encounter when undergoing treatment.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
The first video describes feeding tubes, and why they are a more natural form of intervention. The second video covers sperm banking and its importance in fertility preservation. The videos were designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The videos could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.
How can we continue to effectively communicate with patients through the creation of videos?

Cincinnati Children’s Hospital Medical Center
Female Fertility and Cancer Survivorship & TPN Feeding
In collaboration with: John P. Perentesis, MD
When: Summer Semester 2016

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to feeding tube use, sperm banking, and general information about a patient’s care team.

The Challenge
The LWC team created sub-videos relating to the general topics of Fertility Preservation and Nutrition to create an individualized play-list. The team was tasked with introducing the different people and resources families encounter when undergoing treatment.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
The first video describes female fertility preservation and cancer survivorship. The second video covers TPN feeding and nutrition. The videos were designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The videos could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

Script Writing and Storyboards
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

Visual Style
The character style was created by replicating the previous semester’s work.

Final Outputs
The LWC team built assets and solidified video development. Two final animated videos were produced.
How can we continue to effectively communicate with patients through the creation of videos?

Cincinnati Children’s Hospital Medical Center
HPV Vaccine & Cryopreservation
In collaboration with: John P. Perentesis, MD
When: Fall Semester 2016

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to feeding tube use, sperm banking, and general information about a patient’s care team.

The Challenge
The LWC team created sub-videos relating to the general topics of Fertility Preservation and HPV to create an individualized play-list. The team was tasked with introducing the different people and resources families encounter when undergoing treatment.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
These videos describe the importance of the HPV vaccine as well as Cryopreservation. The videos were designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The videos could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

The video is available to view on CCHMC’s website and YouTube channel: https://www.youtube.com/watch?v=yJPlGsYU3WM

1. Script Writing and Storyboards
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

2. Visual Style
The character style was created by replicating the previous semester’s work.

3. Final Outputs
The LWC team built assets and solidified video development. Two final animated videos were produced.
Cincinnati Children’s Hospital Medical Center
Digital Navigation Suite
In collaboration with: John P. Perentesis, MD
When: Summer Semester 2018

The Opportunity
Since Spring 2015, Live Well has completed thirteen consecutive semester projects with the Cancer and Blood Diseases Institute. The LWC team had the opportunity to create a video showcases the suite of digital products and services available to patients and families.

The Challenge
The LWC team created a video showing the expanding services as a means of providing a oncology patients with seamless end-to-end navigation of their journey from diagnosis, through treatment, and into survivorship.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
This video introduces patients and families to CBDI as a network of world-class experts in clinical care and cancer research. The video was designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The videos could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

Script Writing and Storyboards
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

Visual Style
The character style was created by replicating the previous semester’s work.

Final Outputs
The LWC team built assets and solidified video development. Two final animated videos were produced.

The video is available to view on CCHMC’s website and YouTube channel: https://www.youtube.com/watch?v=t3duL9gKxs8M
Cincinnati Children’s Hospital Medical Center

What is proton therapy?
In collaboration with: John P. Perentesis, MD
When: Summer Semester 2018

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to proton therapy benefits, technology, and treatment process.

The Challenge
The LWC team created a holistic video on proton therapy. It begins by describing how protons travel from the cyclotron to the body before releasing radiation at the tumor site. Next, it details treatment process and what to expect at each appointment.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
This video describes the benefits of proton therapy over traditional types of radiation and prepares the patient to begin treatment. The video was designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The video could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

The video is available to view on CCHMC’s website and YouTube channel: https://www.youtube.com/watch?v=t3duL9gKx8M

1 Script Writing and Storyboards
   The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

2 Visual Style
   The character style was created by replicating the previous semester’s work.

3 Final Outputs
   The LWC team built assets and solidified video development. One final animated video was produced.
**Cincinnati Children’s Hospital Medical Center**

**Patient Reported Outcomes**
In collaboration with: John P. Perentesis, MD, Ahna Pai, PhD
When: Fall Semester 2018

**The Opportunity**
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to patient reported outcomes and the importance of asking questions.

**The Challenge**
The LWC team created a video on patient reported outcomes. The team was asked to explain the direct benefits of routinely asked questions such as more personalized care and connection to hospital and community resources.

**The Approach**
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

**The Impact**
This video describes the importance of asking questions and the direct impact this has on patient care. The video was designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The video could also be available for patients and families after their appointments, to re-watch at their leisure.

### Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

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**CBDI**

*How can we continue to effectively communicate with patients through the creation of videos?*

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**Script Writing and Storyboards**
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

**Visual Style**
The character style was created by replicating the previous semester’s work.

**Final Outputs**
The LWC team built assets and solidified video development. Two final animated videos were produced.
Cincinnati Children’s Hospital Medical Center

What is research?
In collaboration with: John P. Perentesis, MD, Robin Norris, MD
When: Fall Semester 2018

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to the value and goals of clinical research.

The Challenge
The LWC team created a general video about the topic of research. The team chose to remove specific topics like cancer research to account for viewing before diagnosis.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
This video describes the importance of research as a way of finding new treatments and impacting patients around the world. The video was designed to allow patients to learn about topics before talking with their medical team, so that they are able to ask more informed and important questions. The video could also be available for patients and families after their appointments, to re-watch at their leisure.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

1 Script Writing and Storyboards
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

2 Visual Style
The character style was created by replicating the previous semester’s work.

3 Final Outputs
The LWC team built assets and solidified video development. One final animated video was produced.
How can we continue to effectively communicate with patients through the creation of videos?

Cincinnati Children’s Hospital Medical Center
CAR-T Cell Therapy
In collaboration with: John P. Perentesis, MD, Christine Phillips, MD
When: Spring Semester 2019

The Opportunity
When families are navigating the journey after their child is diagnosed with cancer, videos have proved to be a great educational and secondary resource. The LWC team had the opportunity to further explore video communication by designing video materials relating to the value and goals of clinical research.

The Challenge
The LWC team created a general video about the topic of research. The team chose to remove specific topics like cancer research to account for viewing before diagnosis.

The Approach
The LWC team worked closely with CCHMC staff and families throughout the entire design process. They created scripts, character design, and final animations. They ensured that the videos would clearly explain each topic and become a valuable tool for both patients and their medical team.

The Impact
This video describes both the scientific process of engineering CAR-T cell therapies as well as the impacts on the patient and family. It walks patients through who this treatment is for, the treatment process, and possible side effects.

Where is it now?
Currently, a research study investigating the effectiveness of animation in improving health literacy is underway. The videos will be rolled out as part of this study in the coming months.

Script Writing and Storyboards
The team developed scripts with the help of CCHMC experts and outside resources. They then developed storyboards within the context of the script to help lay out a visual narrative.

Visual Style
The character style was created by replicating the previous semester’s work.

Final Outputs
The LWC team built assets and solidified video development. One final animated video was produced.
**How can we empower patients with ulcerative colitis to participate in shared decision-making?**

**Cincinnati Children’s Hospital Medical Center**

**Ulcerative Colitis Decision Tool**

In collaboration with: Dr. Ellen Lipstein, Dr. Phil Minar, Nancy Daraiseh, PhD, Andrea Meisman, Marlee Saxe

When: Spring 2019

**The Opportunity**

AYA patients with IBD want to participate in treatment decisions and value including others in their decision-making process. However, the role AYA patients have in decisions is not always congruent with the role they desire.

**The Challenge**

The Live Well team was tasked to design a tool which supports AYAs’ developmental need for autonomy while simultaneously facilitating decision-focused conversations with others. The tool should empower AYA patients to participate in decision making, particularly decisions made outside of the clinic.

**The Approach**

The team relied heavily on patient and clinician focus groups to gain insights. The team started with secondary research and benchmarking on ulcerative colitis and decision-making tools before conducting patient focus groups around treatment and day-to-day decision making. Next, the team developed mood boards, information architecture, and preliminary wireframes which were refined throughout the remainder of the semester.

**The Results**

The Live Well team presented the final, web-based application. The site contains five main categories — medications, symptom tracking, nutrition tracking, treatment options, and an appointment guide. Each category is framed around helpful information to both patients and clinicians while empowering the patient to be more involved in their own care. The app also contains a treatment generator which matches patient preferences and values to the best treatment options.

**Brand Identify**

The brand, IB Decide, plays off of the decision-making aspect of the app as well as irritable bowel disease or IBD.

**Sample Screens**

The app uses a card-based design with the main sections accessible from the home screen. The majority of the information is inputted by the patient with prompts and suggestions for how to use the app. Tracking symptoms and nutrition are a key component — this empowers patients to problem-solve and discuss with their doctor.

**Where is it now?**

The project has been handed off to CCHMC Bioinformatics for backend development and a pilot program starting in fall 2019 to support Dr. Lipstein’s research study.
Cincinnati Children’s Hospital Medical Center

Comprehensive Sibling Support
Sponsored By: Kate Shamszad, MS, MPH, CCLS, and Dawn Nebrig, MSW

The Opportunity
The goal of this project was to improve the understanding of the sibling’s and family’s experiences at CCHMC. These experiences informed a sibling support program. Recommendations for a program came in the form of a multi-modal service, virtual and in-person applications, on-demand and scheduled interventions, and individual and groups support systems.

The Challenge
CCHMC offers a broad spectrum of care, from an outpatient well-child visit to an unexpected trauma in the emergency department, to a chronic or complex diagnosis that requires frequent care. Across that spectrum, there is one unifying factor: the family is at the center of all care that the hospital provides. The hospital recognizes that children are part of a family unit and understands the complexities that come with supporting families during difficult experiences. There is one role in the family that needs more support: the role of the sibling.

The Approach
The LWC team focused on understanding sibling and family dynamics while conducting 74 stakeholder interactions with siblings, parents, and clinicians. They identified opportunity areas through interviews conducted at CCHMC in the Family Resource Center. Their research was used to create visualizations identifying common themes across siblings that lead to potential solutions for improvement.

The Results
Through a co-creation approach, the team developed two main solutions that manifested in a strategy for a Sibling Space and a Sibling Game. The Sibling Space was outlined to provide comfort by way of certain engagement mechanisms and psychosocial activities. The goal of the game was to allow CCHMC parents and siblings to learn about emotional milestones, drive conversations, offer bonding moments for families, and foster inter-family empathy through a neutral platform. Finally, the team created a needs assessment based on condensed research on what a sibling space and sibling game could accomplish.

Where is it now?
Tell Your Story Cards were shared during the annual Sibling Symposium with positive feedback and requests for improvements. A philanthropic donor was recruited to fund building a sibling studio space — size and dollar amount TBD. The Sibling Needs Assessment Results will be shared during the March 19, 2019, Cincinnati Children’s Pediatric Grand Rounds.