

Claremont McKenna College

**Caring for Caregivers: Exploring Neuro-oncology Relationships and  
Spreading Collaborative Grief Support Using Human-Centered Design**

submitted to  
Professor Albert Park  
and  
Professor Fred Leichter

by  
Anya Zimmerman-Smith

for  
Senior Thesis  
Spring 2021  
May 3rd, 2021




## **Caring for Caregivers:**

Exploring Neuro-Oncology Relationships  
and Spreading Collaborative Grief Support  
Using Human-Centered Design

May 2021

Anya Zimmerman-Smith  
Human Centered-Design Thesis

a.zimsmith1@gmail.com  
anyazimmerman-smith.com



*"I've often cried because of patients...  
to deny myself the tears would be  
to deny myself the human that I  
already was before and am after  
becoming a doctor."*

Quote on grief as an oncology physician  
2017, Quora

---

## Abstract

02

As a college student studying Human-Centered Design (HCD), my goal for the culmination of my education was to have an impact in an area that was human, complex, and emotion filled. This project explored the need for healthcare professionals, specifically physicians and nurses working in neuro-oncology, to acknowledge their natural human grief in the face of patient death. In partnership with the UCSF Honor Project, my partner and I employed Human-Centered Design to establish practices and spaces for these communities to process their grief.

At the foundation of our work was the deeply dedicated medical professional who needs relief from the weight of witnessing so many patients pass. Preventing this were barriers of medical stigma around objectivity and emotion, time crunches, and a belief that one is either 'built for the job' or not. Through our research and ideation we created an informative video and implementation materials to convince neuro-oncology departments outside of UCSF to attempt the Honor Project and take seriously the benefits of a structured space for shared grief. Our materials were met with great support and the Honor Project was tested by several departments across the country.

# Table Of Contents

**02** Abstract

**05** Introduction

**08** Brain Tumor Network

**24** Understanding the Problem Space

**38** The Honor Project

**56** Concept Development

**62** What We Made & Its Impact

**66** Reflection

The purpose of this project was to explore the people and impact of oncology navigation and examine the relationships between nurse and social work navigators of various kinds, physicians, caregivers, and patients. We were so struck by the impact of the work of the Brain Tumor Network (BTN) who we had worked for previously that we felt compelled to further explore the topic of oncology navigation more broadly. Nurse and social work navigators at BTN are incredible resources, providing invaluable, personalized research on treatment options, clinical trials, second opinions, transportation and more all while supporting patients and caregivers through the emotional ups and downs of a brain cancer diagnosis.

We wanted to see where else this type of service exists, if at all, and what the history of navigation is, so that we could further understand the navigator role and lend our efforts to expanding the offering and quality of this type of care in the U.S. Our goal was to understand this landscape as best we could so that we could design an intervention that would positively support and empower caregivers, navigators, nurses, or physicians.

Through our research we discovered that while there are navigation services in some places across the country, the roles differ greatly and there is little consensus as to what a navigator does and how they can be most helpful.

Midway through our project we discovered a wonderful program that attends to neuro-oncology staff grief. We had been interested previously in designing for navigators who are constantly confronted with emotionally difficult topics and situations and felt that this intervention, the Honor Project, was an excellent solution. With the blessing of the founder of the Honor Project, our work then focused on spreading this program and solving implementation problems practically and in regards to medical grief stigma.

Through our research we discovered a profound need for space for healthcare professionals to grieve. Their constant interactions with death were lodged in between the human need to emote and process, and a frequent belief that good medical decisions could only be made if such feelings were pushed aside.



# 01 Brain Tumor Network

---

Empathy - Users - Insights - Stakeholder Mapping

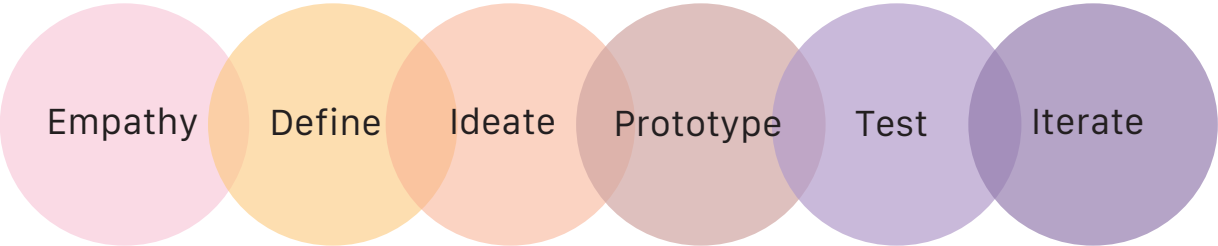
# Human-Centered Design Process

To give a better understanding of the flow of our project and how it compares to a traditional Human-Centered Design Project I've created these two diagrams. A traditional HCD project starts with a topic of inquiry or a general problem brief and the designer goes through the stages Empathy, Define, Ideate, Prototype, Test, & Iterate. While it is quite normal for some of those steps to be looped back through several times, our project is essentially several full cycles through this design process in one.

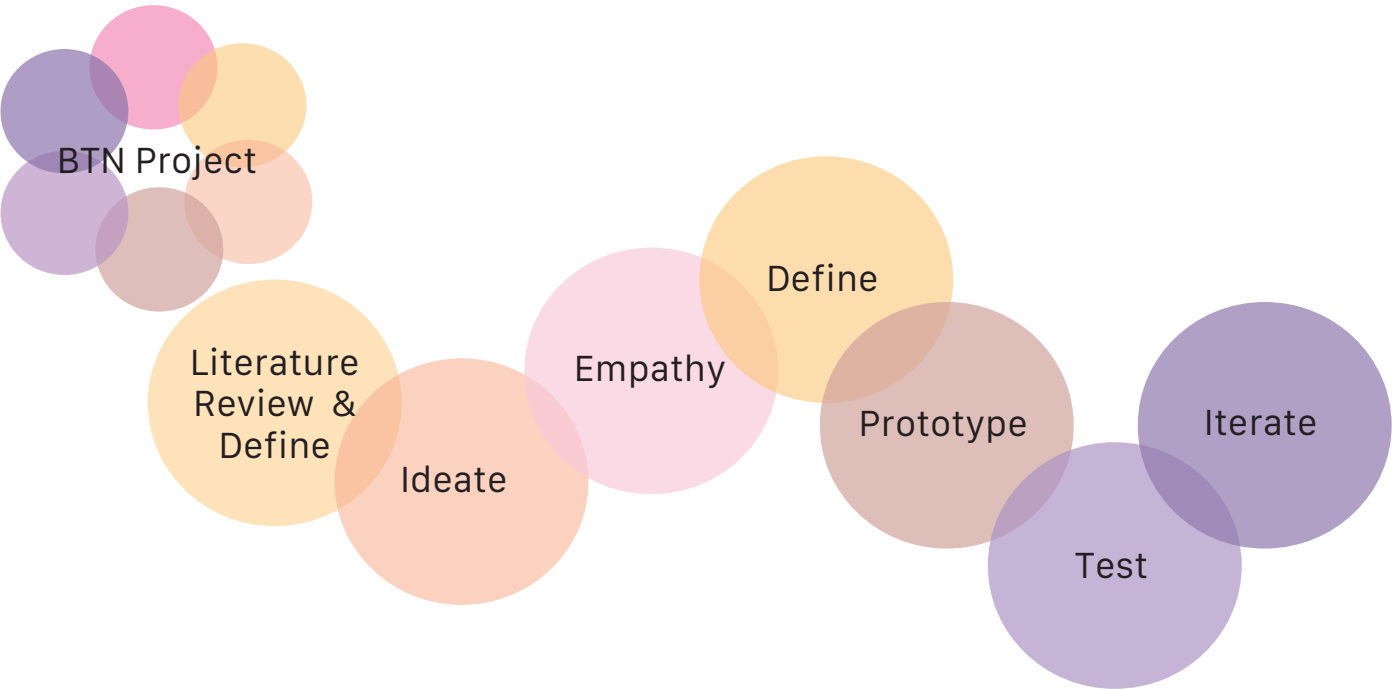
A prior HCD project with The Brain Tumor Network heavily informed the work done for my thesis. I see the connection between the two projects as an incredibly real life manifestation of the design process, discovering solutions when we were not expecting to, researching again later in the project, etc. The design process is messy but the strength of HCD framework is that it is malleable and can serve you in many different ways.

Human Centered Design is a problem finding and solving discipline which draws upon and integrates insights from the fields of anthropology, sociology, psychology, history, design, and engineering. At the heart of HCD, practitioners are called upon to identify pressing problems, to iterate and test solutions. Leaders in HCD immerse themselves in the point of view and experience of those they are serving, then combine the resulting insights with the analytical, problem solving, and technical skills needed to translate them into real world solutions. To make a contribution via Human Centered Design it is necessary to be able to understand how people function, how problems arise and how environments affect people in them. Essential to HCD is the skill of navigating ambiguity and being comfortable working in the unknown.

Human-Centered Design Process Framework



Our Human-Centered Design Process



---

# The Brain Tumor Network

Advanced Human Centered Design Independent Study, Aug-Dec 2020

Riley Knowles  
Nathan Chun  
Kaitlyn Paulsen  
Diana De Rada Ocampo  
Anyia Zimmerman-Smith

Through the Sontag Center for Collaborative Creativity (The Hive), I worked with a team of students to redesign an aspect of the nurse navigation service the Brain Tumor Network (BTN) offers for caregivers & patients. Much of what we learned informed the conclusions and the decisions my partner, Kaitlyn Paulsen, and I made in this thesis project. To provide context for the thesis project the following is a brief overview of the work my team and I did for The Brain Tumor Network.

*“Nurse and social work navigators at BTN provide personalized assistance to alleviate or eliminate the barriers that exist to patients accessing timely services and to fully understanding their treatment related options.”*



---

# Empathy

To begin Human-Centered Design project we started our with the Empathy stage and interviewed:

caregivers  
patients  
nurse navigators  
social work navigators  
doctors  
palliative care nurses

From our interviews we learned that navigators support patients and caregivers by doing research on clinical trials, suggesting doctors for second opinions, providing transportation and emotional support services, discussing finance and insurance related issues, and translating medical jargon, diagnosis, and treatment information among so many other things.

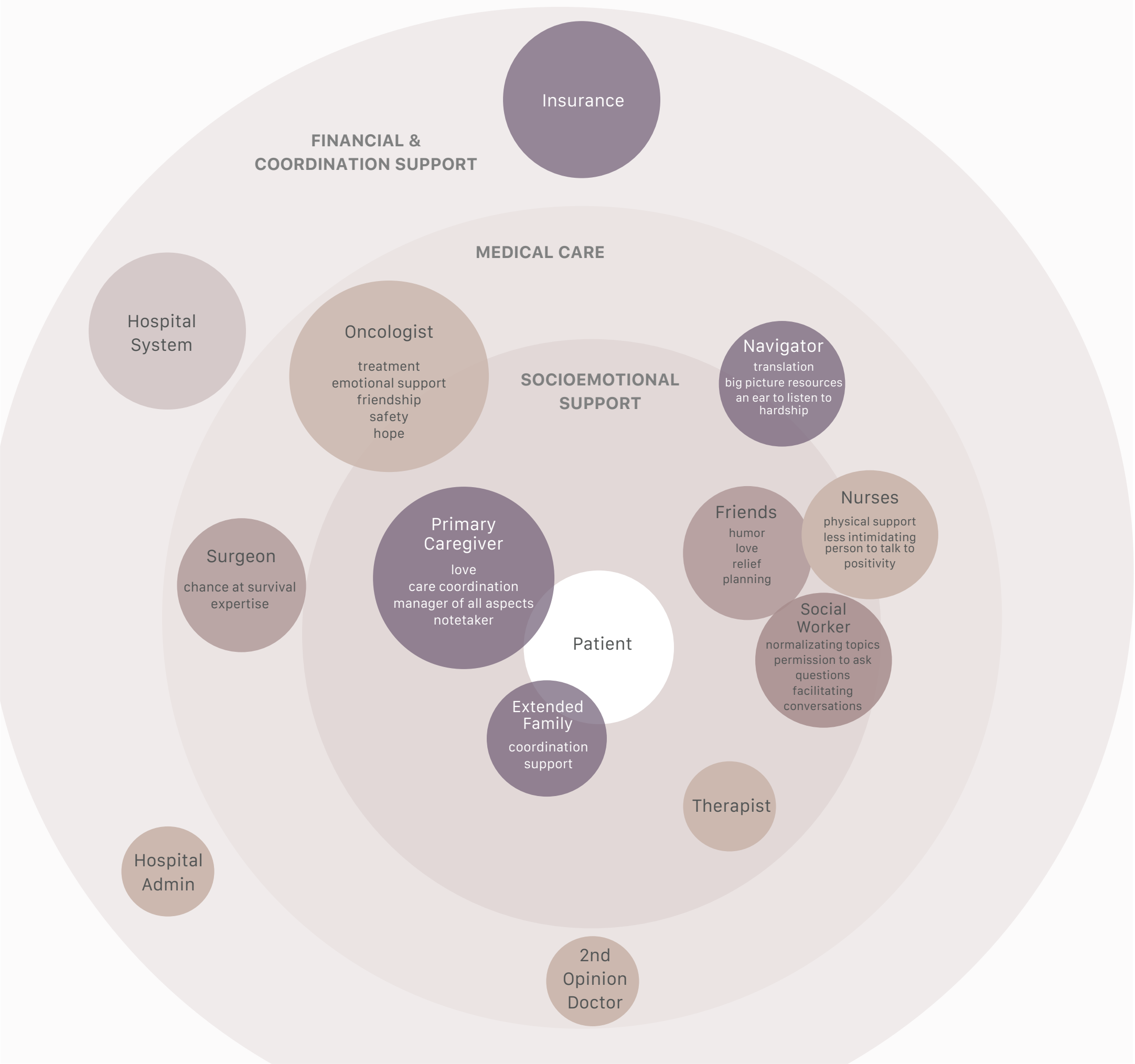
We also learned that as an organization independent of any hospital or medical system, navigators have the unique ability to suggest resources from any institution that might be most helpful for the patient and have a bigger picture view of all the possible resources in neuro-oncology than a navigator within a hospital might have. Additionally, patients often come to BTN later in their brain tumor journey which allows BTN navigators to help them take a step back and make a wholesome evaluation of the options going forward.

*"I just want to find the silver bullet that will solve everything for her but I know that's not possible."*

*– CA, Caregiver*

Abstract orange and yellow shapes, resembling overlapping circles or organic forms, are positioned in the bottom right corner of the page, partially overlapping the pink background.

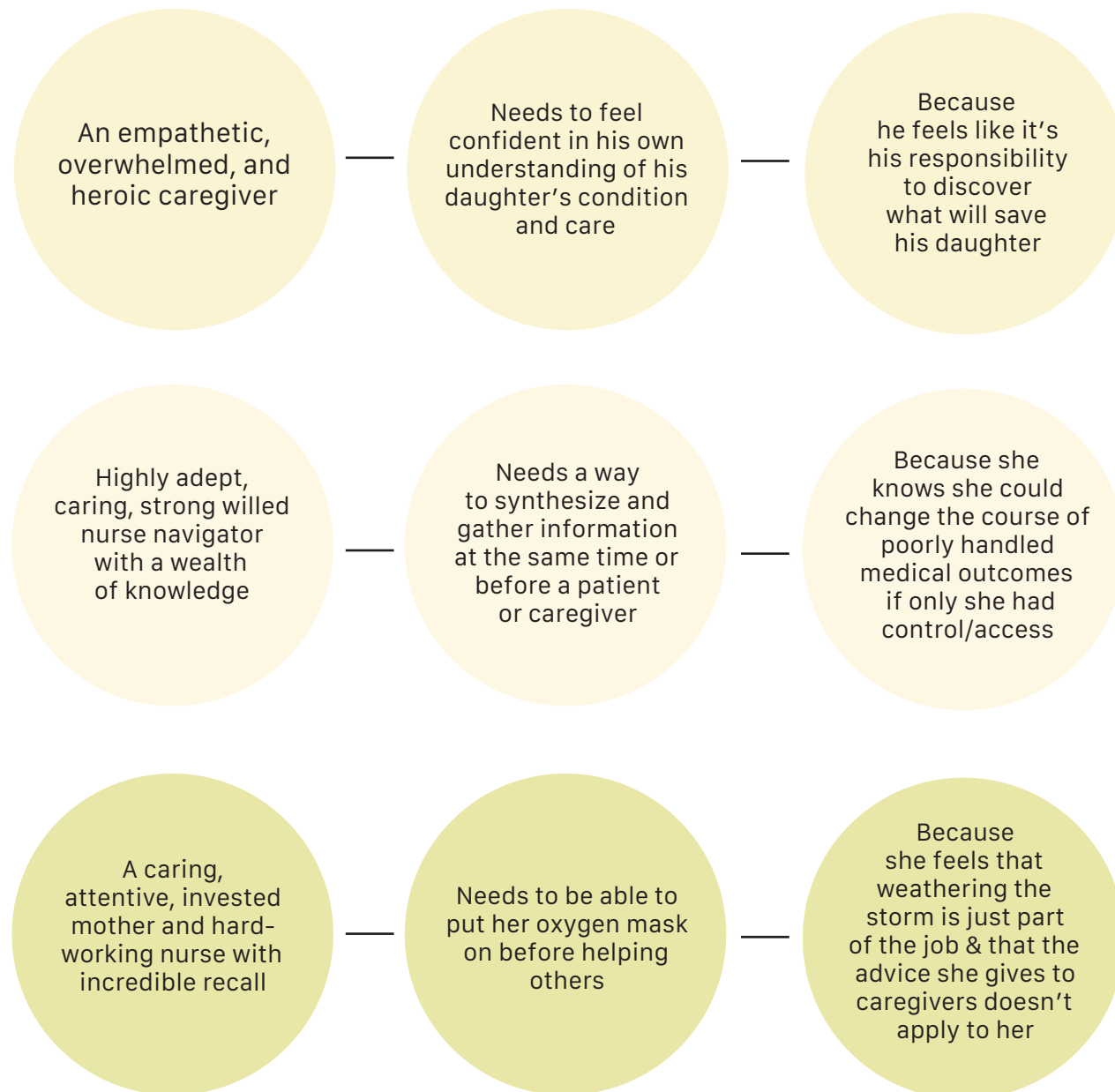
# Stakeholder Value Map



We used our stakeholder value map as a exercise to gain an understanding of the roles that different stakeholders play during a patient’s brain cancer journey. Focusing on the value to the patient and caregiver, we found that often the caregiver is at the center of the system as much as the patient is. This is a result of the disease as it affects many patients cognitive capacities and much of the care coordination and support is taken on by the caregiver. The central role of the caregiver led to the realization that caregivers need to be taken care of as well in order to do what they need to do best. Many caregivers we spoke to regarded their navigators, nurses etc. as friends and drew strength from interaction that may not have seemed ‘productive’ to care providers but safe and understanding spaces for caregivers.

## Define

Keeping with the HCD process, our next step was to Define who the users were with the most pressing and unique needs that we could design for to make the biggest impact.



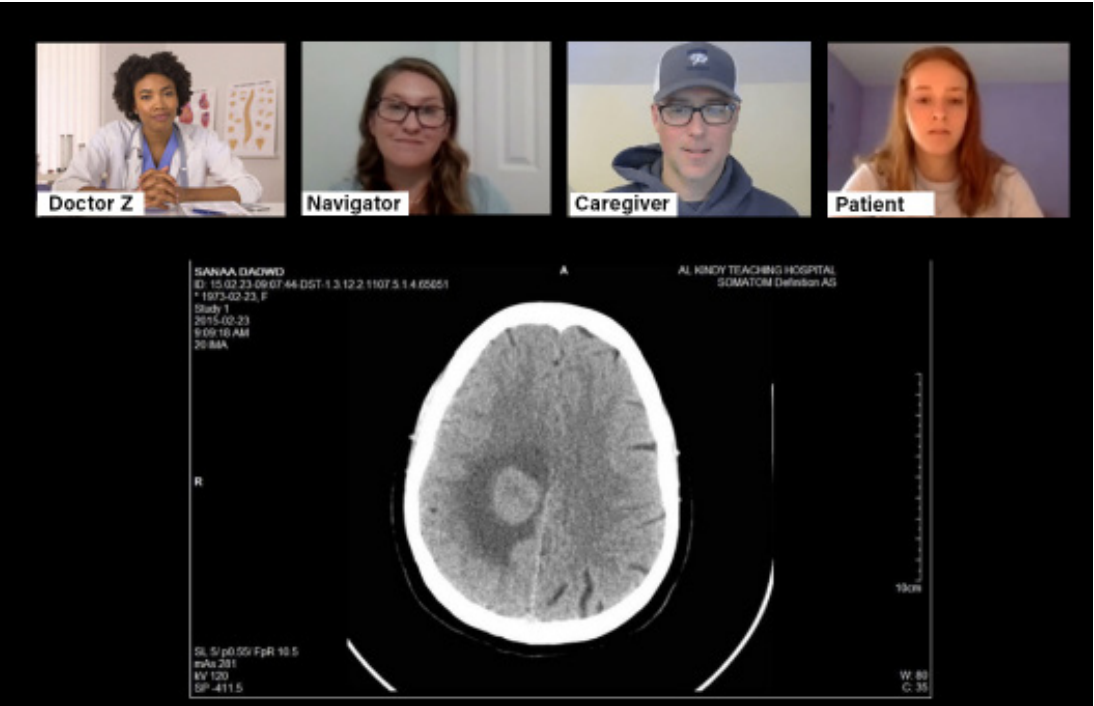
*"If you keep it all in, in oncology,  
you will explode."  
– RS, Palliative Care Nurse*

# Prototype

After extensive ideating based on our users we reached two breakthrough concepts. The first was the 'Navigator Sidekick' which placed the navigator in video calls with the patient, caregiver, and physician. This solved the caregivers need for empowerment when it came to asking questions, a medically trained ear to take notes, emotional support and more. Additionally, having the navigator in the call diverted the need for the caregiver to relay all they heard in the appointment which often led to confusion, missed points, and use of precious time. The simplistic impact of this tool proved true as caregivers and navigators alike voiced strong support for it when we gathered feedback.

Our second breakthrough was the realization that caregivers often did not know what assistance they needed it until it was too late and that they often came to BTN looking for one thing, unaware of the plethora of services available to them. Our Brain Tumor Network Journey Map introduces BTN's services in a way they did not have in the hopes that they can have more of an impact on a patient and caregiver's journey from the beginning.

## Navigator Sidekick



Brain Tumor Network Journey Map

---

# Insights

01

Navigators are instrumental translators, incredible information finders, and compassionate friends to patients and caregivers enduring difficult medical situations involving misunderstandings, bad timing, stress, and confusion.

02

Caregivers are superheroes and are at the center of the BTN care model, navigating complex situations and overloads of information, and relentlessly searching for the silver bullet to save those they are caring for.

03

Medical information is sorely in need of redesign and it's language is almost impenetrable to those who do not "speak" it.

04

Caregivers and Patients come to BTN with a limited understanding of the wealth of resources the organization can offer them, and often do not know the services they need before they need them.

05

Restructuring to add different roles and re-envisioning their current organizational structure would allow BTN to grow and feasibly scale.

After all of our work we came to the conclusion that these 5 insights were the biggest in the BTN space and the tools that we designed aimed to solve these needs in a variety of ways.

# 02 Understanding the Problem Space

---

Literature Review - Define - Systems Mapping






---

## What Next?

Inspired by what we saw in our work with The Brain Tumor Network, we thought, oncology navigation is such an impactful tool, does it exist elsewhere? How could we improve or spread it? This became the focus of the thesis project.

Since we had done a great amount of empathy work in our BTN project understanding people's experiences with navigation our first step of this new HCD project was to do research on navigation more broadly.



*"It is so helpful to be able to ask, 'Can you please explain this to me in English and is it something that will help my wife?'"*  
-Caregiver

## Literature Review

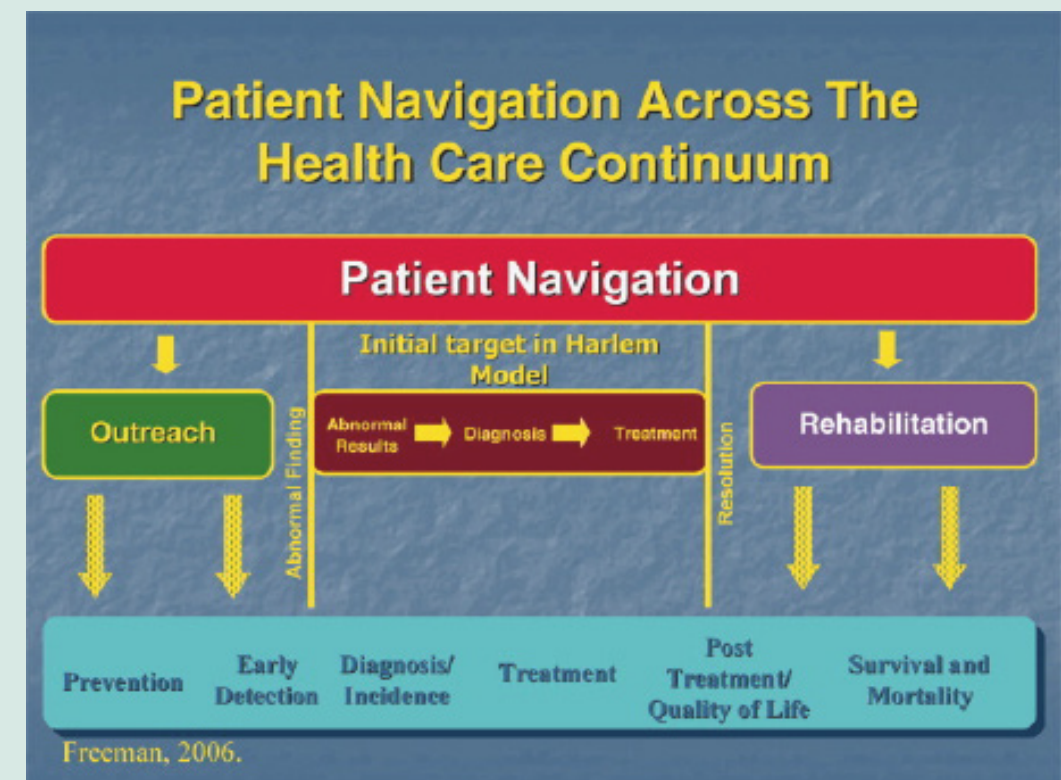
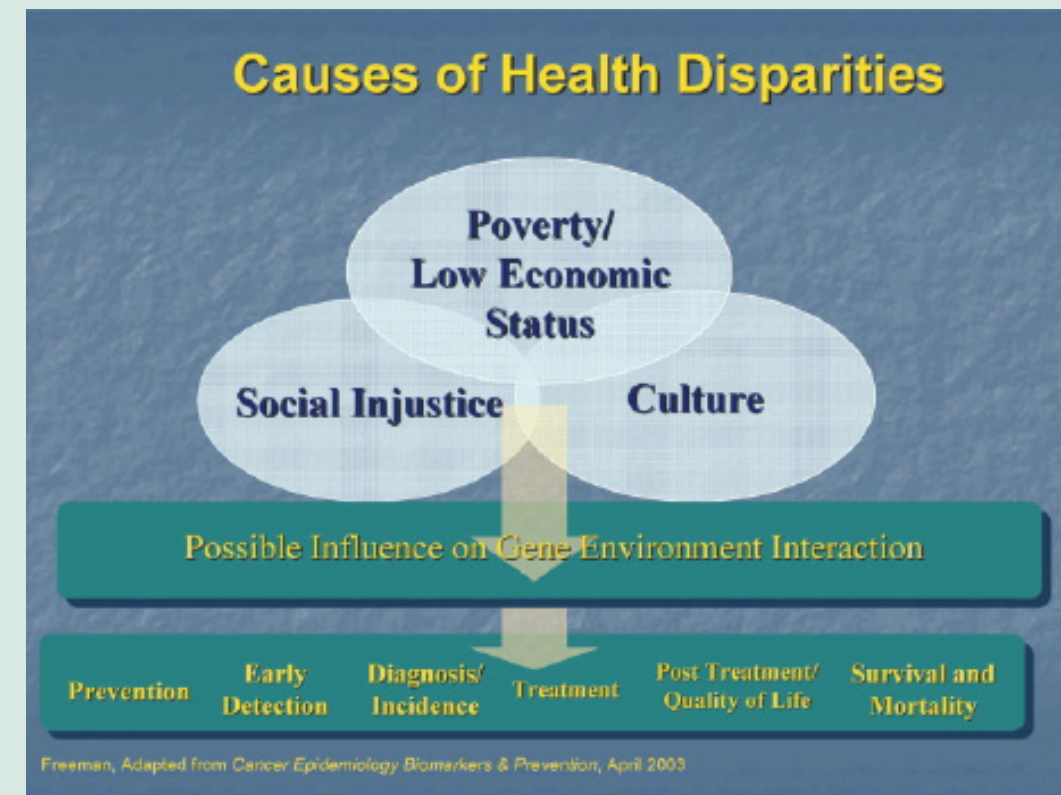
We conducted a literature review to gain a deeper understanding of the topic area and the landscape we had been exploring with the Brain Tumor Network. It was important to us to understand the history of navigation and the variety of navigation programs that had been tested and are currently in practice in the U.S. The information we uncovered aligned with much of the empathy work we had done in our previous project and served as foundational knowledge going forward.

From our research we learned that the first navigation program was established in Harlem, NY by Harold Freeman in 1990 based on findings from the American Cancer Society National Hearings on Cancer in the Poor.

The aim of the program was to improve health outcomes in vulnerable populations by eliminating barriers to timely diagnosis and treatment of cancer through the support of a nurse navigator. Freeman designed the program so that in-hospital nurses would help individual patients overcome:

- financial barriers
- communication/information barriers
- medical system barriers
- fear, distrust, and emotional barriers

The program proved effective as cancer navigation services increased the five-year survival rate from 39% to 70% amongst breast cancer patients. These main barriers were echoed in the related studies and papers we read on navigation.



*"History and Principles of Patient Navigation"*  
Freeman, 2011



Through our research we found that oncology navigation does exist beyond BTN but that there is no one definition of what a navigator does. Navigation services in the studies we read all aim to achieve similar goals but come in a variety of forms. Beyond studies on the efficacy of navigation systems, we researched which major healthcare systems have oncology navigation services and the definitions of navigation that exist in the Academy of Oncology Nurse & Patient Navigators.

In the 30+ studies we read we saw three main types of navigation. In-hospital, independent organization, and lay navigation.

	In-Hospital Navigation	Independent Organization	Lay Navigation
Prevention	<ul style="list-style-type: none"><li>- no involvement</li></ul>	<ul style="list-style-type: none"><li>- no involvement</li></ul>	<ul style="list-style-type: none"><li>- fosters relationship between community and local physicians</li><li>- healthcare literacy work</li></ul>
Screening / Early Detection	<ul style="list-style-type: none"><li>- coordinates screenings</li><li>- explains results</li></ul>	<ul style="list-style-type: none"><li>- no involvement</li></ul>	<ul style="list-style-type: none"><li>- coordinates screenings for community members</li><li>- explains importance of healthcare with cultural sensitivity</li></ul>
Diagnosis	<ul style="list-style-type: none"><li>- ensures connection with physician to understand diagnosis</li><li>- provides information and hospital resources for next steps</li></ul>	<ul style="list-style-type: none"><li>- provides emotional support, translation to understand diagnosis</li><li>- big picture next steps, 2nd opinion, treatment options</li></ul>	<ul style="list-style-type: none"><li>- link between patient, community physician, and cancer center</li><li>- explains medical information in lay terms</li></ul>
Treatment	<ul style="list-style-type: none"><li>- schedules appointments</li><li>- ensures follow ups occur and medical information is received</li></ul>	<ul style="list-style-type: none"><li>- advises on financials &amp; insurance</li><li>- reviews all possible clinical trials</li><li>- gives transportation and socioemotional resources</li></ul>	<ul style="list-style-type: none"><li>- helps allay fear and distrust of medical system</li><li>- emotional support</li><li>- assists with scheduling</li></ul>
Post Treatment	<ul style="list-style-type: none"><li>- follow up check in calls</li><li>- connects patient to quality of life resources</li></ul>	<ul style="list-style-type: none"><li>- follow up check in calls</li><li>- connects patient to quality of life resources</li></ul>	<ul style="list-style-type: none"><li>- follow up check in calls</li><li>- connects patient to quality of life resources</li></ul>
Survival & Mortality	<ul style="list-style-type: none"><li>- connects to in-hospital support groups</li></ul>	<ul style="list-style-type: none"><li>- provides grief resources</li><li>- check up calls, emotional support</li></ul>	<ul style="list-style-type: none"><li>- knowledge of cultural practices around grief</li><li>- provides emotional support</li></ul>

# What is a Navigator?

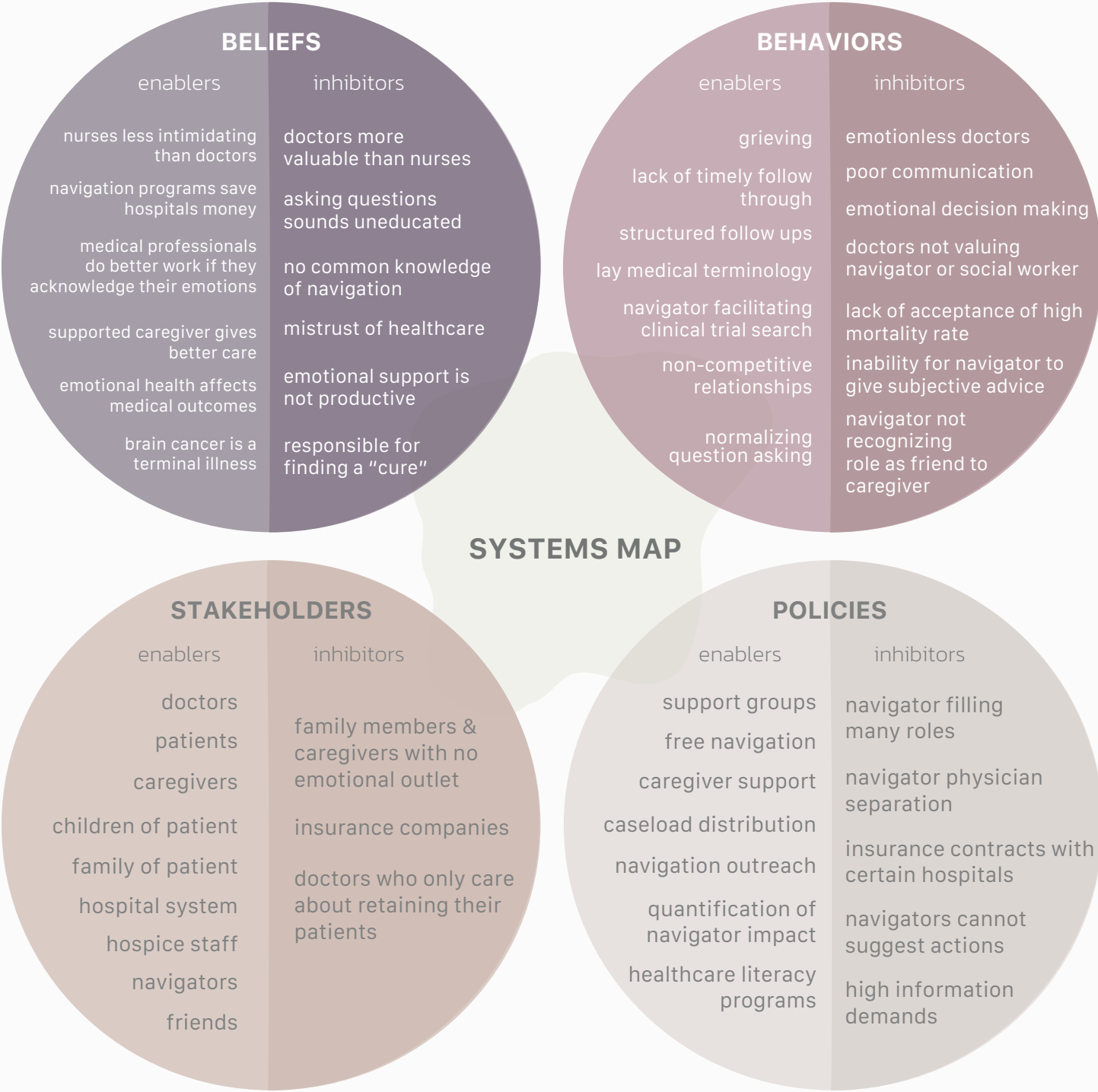
Once we saw the variety of navigator roles that exist we layed out all we had learned about their duties to try and define oncology navigation and find a topic we could design for, either an aspect of navigation we could improve or configuration of navigation we could try to spread.

Additionally, since navigator’s duties spanned a wide range of topics and expertise, we wondered, is there one configuration of the navigator role that is most effective? After combining research from our literature review and prior interviews we saw that Navigator duties mainly fall into 4 categories:

Socioemotional Support  
Care Coordination  
Education & Health Literacy  
Equity/Access to Care

	Socioemotional Support	Care Coordination	Education / Health Literacy	Equity / Access to Care																															
Subthemes	<div>emotional support</div> <div>stress management</div> <div>compassion</div> <div>decision making support</div> <div>family dynamic support</div> <div>empathy</div> <div>understandable communication</div>	<div>bridge communication between patient and doctor</div> <div>patient advocacy</div> <div>care deliberation</div> <div>second opinion location</div> <div>treatment coordination between specialists</div> <div>appointment scheduling and immediacy of care</div>	<div>healthcare system literacy / education</div> <div>cancer / personal diagnosis literacy</div> <div>medical terminology education</div> <div>navigating the digital healthcare system</div> <div>translation of medical information</div>	<div>broad community outreach</div> <div>financial / insurance barriers</div> <div>shifting / augmenting cultural perceptions and fears of healthcare</div> <div>connection to resources / awareness / education of resources</div> <div>health literacy education</div> <div>mitigating socioeconomic disparity</div>																															
HMWs	<div>HMW quantify the impact that navigators have on socio emotional support</div> <div>HMW create structure for the social relationship between Navigator and patient or caregiver?</div> <div>HMW help NN's accept how close they are to their patients and the reality of their relationships</div> <div>HMW allow for patients and NN's to feel like they have a real relationship and not just a professional one</div> <div>HMW influence Navigators to pay attention to the emotional level of conversations with patients?</div> <div>HMW make empathy the first part of treatment for any condition</div> <div>HMW gain an understanding of Navigators feelings towards being emotional supports?</div> <div>HMW balance Navigators' desire to "get things done" and patient's need for emotional connection?</div> <div>HMW recognize to the need of a patient needing someone to call and check in?</div> <div>HMW help NN's see the benefit in engaging with their patients on a human level and not professional</div>	<div>HMW cut the wasted time and tortured waiting out of the system</div> <div>HMW make being remote a benefit that helps them do their jobs better?</div> <div>HMW create a system that notifies bad news to people in the "right time" when they are with "the right people"</div> <div>HMW make the care coordination process more visible?</div> <div>HMW put the patient at the center of the care coordination</div> <div>HMW increase empathy throughout the care coordination process?</div> <div>HMW make the care coordination process more automatic?</div> <div>HMW put the care back in care coordination</div> <div>HMW improve timeliness of care starting pre-diagnosis</div> <div>HMW employ a navigator for everyone regardless of condition</div> <div>HMW allow more time for treatment deliberation?</div> <div>HMW utilize the communication styles that work best for patient/doctor respectively</div>	<div>HMW childlike education tools on cancer that will make it seem less scary for everyone</div> <div>HMW increase the comfort of engaging with the healthcare system?</div> <div>HMW educate the general public about cancer so that it is not so scary when it happens to people</div> <div>HMW help caregiver feel in control during research</div> <div>HMW intervene in healthcare literacy before it matters?</div> <div>HMW streamline the education process for cancer care</div> <div>HMW make the conversations between patients and doctors more approachable</div> <div>HMW shrink the communication gap between doctor and caregiver / patient</div> <div>HMW we incorporate disease education into the patient's treatment</div> <div>HMW automate some of the decisions made where timeliness is important</div> <div>HMW we utilize the skills of those who have high health literacy</div> <div>HMW we rethink treatment as a learning opportunity</div>	<div>HMW provide resources to all patients without providing them all individual navigators?</div> <div>HMW we remove the financial barriers to care?</div> <div>HMW we encourage conversations with doctors about bias?</div> <div>HMW increasing knowledge of care increase access to care?</div> <div>HMW identify the perceived barriers of care that aren't there?</div> <div>HMW shift cultural perceptions of doctors</div> <div>HMW identify communities that are in most need of care?</div> <div>HMW we make the financial barriers to care more upfront?</div> <div>HMW bring more medical attention into communities that need it most</div> <div>HMW we make the access to care more equitable</div> <div>HMW use navigators to facilitate discussions of access to care</div> <div>HMW mitigate socioeconomic disparity?</div>																															
Directions	<div>Expand the use of support groups</div> <div>Create structure for emotional guidance of patients</div> <div>how to talk to a doctor clinic</div> <div>Have navigators teach social / emotional skills to doctors</div>	<div>Creating guidelines / structure for how Navigators should act/ behave in call with doctors</div> <div>Creating more structure for the relationship between navigator and navigator</div> <div>Creating something to help caregivers communicate their needs and thoughts</div>	<div>Implement some form of transition tool</div> <div>dictionary of medical jargon / information for lay navigators to use to teach patients</div> <div>Make learning modules for learning about brain tumors</div>	<div>working to creating navigators services to certain populations</div>																															
Data	<div>Lay navigators were a source of emotional support, "reflecting on this experience, we feel that they were not fully prepared for the stress related to caring for patients with cancer" #10</div> <div>Lay navigators being culturally attuned to the population led to them being trusted as an emotionally deeper level #10</div> <div>"that aspect of the program was the development of trusting and therapeutic relationship which patients improved well-being through care and new relationships between the navigator and the patient" #10</div> <div>"Our experiences show that the navigators helped to ease the gap for patients to reach diagnosis, medical and emotional support" #10</div> <div>Relationship-building was also a critical aspect of patient care and connecting them with the support team here was paramount to the experience clinical knowledge and emotional support was paramount to the experience</div> <div>A social relationship involving care navigation was also a critical aspect of patient care and connecting them with the support team here was paramount to the experience clinical knowledge and emotional support was paramount to the experience</div> <div>A social relationship involving care navigation was also a critical aspect of patient care and connecting them with the support team here was paramount to the experience clinical knowledge and emotional support was paramount to the experience</div>	<div><b>Key Points</b></div> <ul style="list-style-type: none"><li>• A key point for religious</li><li>• The religious culture and faith</li><li>• A key point for religious</li><li>• The religious culture and faith</li></ul> <div><b>Table 1: Benefits of Patient Navigation and Care Coordination Across the Phases of Cancer Care*</b></div> <table><tr><th>Phase</th><th>Primary Function</th><th>Benefit</th></tr><tr><td>Screening</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Diagnosis</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Treatment</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Follow-up</td><td>Primary Function</td><td>Benefit</td></tr></table> <div><b>Key Points</b></div> <ul style="list-style-type: none"><li>• A key point for religious</li><li>• The religious culture and faith</li><li>• A key point for religious</li><li>• The religious culture and faith</li></ul> <div><b>Table 1: Benefits of Patient Navigation and Care Coordination Across the Phases of Cancer Care*</b></div> <table><tr><th>Phase</th><th>Primary Function</th><th>Benefit</th></tr><tr><td>Screening</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Diagnosis</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Treatment</td><td>Primary Function</td><td>Benefit</td></tr><tr><td>Follow-up</td><td>Primary Function</td><td>Benefit</td></tr></table> <div><b>Key Points</b></div> <ul style="list-style-type: none"><li>• A key point for religious</li><li>• The religious culture and faith</li><li>• A key point for religious</li><li>• The religious culture and faith</li></ul>	Phase	Primary Function	Benefit	Screening	Primary Function	Benefit	Diagnosis	Primary Function	Benefit	Treatment	Primary Function	Benefit	Follow-up	Primary Function	Benefit	Phase	Primary Function	Benefit	Screening	Primary Function	Benefit	Diagnosis	Primary Function	Benefit	Treatment	Primary Function	Benefit	Follow-up	Primary Function	Benefit	<div>Through customized navigation programs, patients reported that they were more comfortable with the healthcare system and more confident in their decisions. This was attributed to the fact that the navigators were able to provide emotional support and help them understand the medical information they were receiving.</div> <div>Lay navigators worked closely with the primary care physician and the patient's primary oncologist to help them understand the medical information they were receiving.</div> <div>Lay navigators worked closely with the primary care physician and the patient's primary oncologist to help them understand the medical information they were receiving.</div> <div>Lay navigators worked closely with the primary care physician and the patient's primary oncologist to help them understand the medical information they were receiving.</div>	<div><b>DATA IN IMPROVING HEALTH LITERACY</b></div> <div>12% improvement in health literacy scores</div> <div>12% improvement in health literacy scores</div> <div>12% improvement in health literacy scores</div> <div>12% improvement in health literacy scores</div>	<div><b>Figure 1 - Better Health</b></div> <div>Figure 1 shows that patients who received navigation services had a significantly higher rate of adherence to medical advice compared to those who did not receive navigation services.</div> <div>Figure 1 shows that patients who received navigation services had a significantly higher rate of adherence to medical advice compared to those who did not receive navigation services.</div> <div>Figure 1 shows that patients who received navigation services had a significantly higher rate of adherence to medical advice compared to those who did not receive navigation services.</div> <div>Figure 1 shows that patients who received navigation services had a significantly higher rate of adherence to medical advice compared to those who did not receive navigation services.</div>
Phase	Primary Function	Benefit																																	
Screening	Primary Function	Benefit																																	
Diagnosis	Primary Function	Benefit																																	
Treatment	Primary Function	Benefit																																	
Follow-up	Primary Function	Benefit																																	
Phase	Primary Function	Benefit																																	
Screening	Primary Function	Benefit																																	
Diagnosis	Primary Function	Benefit																																	
Treatment	Primary Function	Benefit																																	
Follow-up	Primary Function	Benefit																																	
Insights	<div>navigator takes holistic approach to help with a variety of issues</div> <div>navigator can be a source of comfort in an otherwise cold environment</div> <div>having a navigator coordinate care can reduce patient stress</div> <div>we want to help those who are struggling with a variety of issues</div> <div>we want to help those who are struggling with a variety of issues</div> <div>we want to help those who are struggling with a variety of issues</div>	<div>grief, diagnosis</div> <div>diagnosis to consultation</div> <div>consultation to treatment</div> <div>treatment to end of life</div> <div>Further explore the navigator in call method</div> <div>Can we map out all the ways that various navigator roles coordinate care?</div> <div>Depending on the type of navigator the care coordination tasks vary</div> <div>grief, diagnosis</div> <div>diagnosis to consultation</div> <div>consultation to treatment</div> <div>treatment to end of life</div> <div>Further explore the navigator in call method</div> <div>Can we map out all the ways that various navigator roles coordinate care?</div> <div>Depending on the type of navigator the care coordination tasks vary</div>	<div>In some cases it is more helpful to have the navigator be a part of the healthcare system but in other ways not</div> <div>It's navigation mainly do research and provide resources but it's not a navigator's role to be a part of the healthcare system but in other ways not</div> <div>Could be helpful to further explore the relationship between doctor and navigator - working together at an office</div> <div>More assistance of navigator in care deliberation - more of a navigator's role to be a part of the healthcare system but in other ways not</div> <div>Benefits of navigator programs to cancer centers often need to be proven beyond just the benefit it provides patients. HMW explore and synthesize these benefits?</div> <div>Would be helpful to ask navigators if they feel being part of the clinic team is helpful or having autonomy is better</div> <div>Does information need to be taught or presented in different ways depending on cultural environment?</div> <div>Can cultural values be taught or presented in different ways depending on cultural environment?</div> <div>Can cultural values be taught or presented in different ways depending on cultural environment?</div>	<div>Facing one barrier will not help because if they have many for both of the diversity is being tested of someone. they're trying to help people back</div> <div>What if everyone had a conversation with everyone else to look for signs of cancer?</div> <div>Do if everyone knew what to look for signs of cancer?</div> <div>Really helps to have navigators who are culturally attuned to who they are working with but if they aren't medical professionals then they face other issues such as medical jargon and content, and emotional coping strategies</div> <div>How do you get the best of both worlds in a navigator?</div> <div>"If someone can't afford to pay for their food or pay for their rent, you can talk to them and say, 'if you have money for food or the electricity is being turned off tomorrow, they're trying to help people back"</div> <div>Really helps to have navigators who are culturally attuned to who they are working with but if they aren't medical professionals then they face other issues such as medical jargon and content, and emotional coping strategies</div> <div>How do you get the best of both worlds in a navigator?</div>																															

To combine the insights we heard in our interviews with BTN and the research we did through our literature review we attempted to map out aspects of the oncology navigation system. We knew that every specific aspect of the system affected others and that we could not focus on designing for one problem without touching others so we felt it was important to take a look at the system as a whole.


















# Areas of Opportunity

With the whole world of oncology navigation open to us we needed to narrow our focus to a specific problem space to ideate and prototype for. We did this by writing How Might We questions, creating 2x2 frameworks to understand types of actors in the system, and defining emerging themes and directions that could use attention.

We landed on several topics that we were interested in pursuing:

- Equity / bringing navigation to underserved communities
- Helping navigators deal with the emotional support their jobs require them to do / the heavy topics they deal with
- Amplifying the importance of navigation in the medical world

 HMW cut the wasted time and tortured waiting out of the system	 HMW make the care coordination process more automatic?	HMW make being remote a benefit that helps them do their jobs better?	HMW make the care coordination process more visual?	HMW put the care back in care coordination 	HMW employ a navigator for everyone regardless of condition	HMW allow more time for treatment deliberation?
HMW create a system that notifies bad news to people in the "right time" when they are with "the right people"	HMW we increase empathy throughout the care coordination process?	HMW improve timeliness of care starting pre-diagnosis	HMW put the patient at the center of the care coordination	HMW utilize the communication styles that work best for patient/doctor respectively	HMW help NN's accept how close they are to their patients and the reality of their relationships	HMW quantify the impact that navigators have on socio emotional support
HMW gain an understanding of Navigators feelings towards being emotional supports?	HMW help NN's see the benefit in engaging with their patients on a human level and not professional	HMW create structure for the social relationship between Navigator and patient or caregiver?	HMW influence Navigators to pay attention to the emotional level of conversations with patients?	HMW recognize to the need of a patient needing someone to call and check in? 	HMW allow for patients and NN's to feel like they have a real relationship and not just a professional one	 HMW balance Navigators' desire to 'get things done' and patient's need for emotional connection? 
 HMW make empathy the first part of treatment for any condition	HMW streamline the education process for cancer care	HMW we rethink treatment as a learning opportunity	HMW educate the general public about cancer so that it is not so scary when it happens to people	HMW shrink the communication gap between doctor and caregiver / patient	HMW intervene in healthcare literacy before it matters?	HMW we utilize the skills of those who have high health literacy
 HMW we incorporate disease education into the patient's treatment	 HMW use childlike education tools on cancer that will make it seem less scary for everyone	HMW help caregiver feel in control during research	 HMW automate some of the decisions made where timeliness is important	HMW increase the comfort of engaging with the healthcare system?	HMW we make the conversations between patients and doctors more approachable	HMW shift cultural perceptions of doctors
HMW use navigators to facilitate discussions of access to care	HMW we encourage conversations with doctors about bias?	HMW we make the financial barriers to care more upfront?	HMW mitigate socioeconomic disparity? 	HMW increasing knowledge of care increase access to care	HMW bring more medical attention into communities that need it most	HMW provide resources to all patients without providing them all individual navigators?
HMW identify the perceived barriers of care that aren't there?	HMW we make the access to care more equitable	HMW we remove the financial barriers to care?	HMW identify communities that are in most need of care?	HMW we quantify the impact of nurse navigators?	HMW we bridge the emotional gap between doctors and navigators?	HMW amplify the navigator position in the medical sphere? 
HMW bring recognition and value to the role?	HMW connect patients to navigation services sooner?	HMW we demonstrate the importance of navigators 	HMW better understand the role of navigators?	HMW create the optimal navigator experience?	HMW create a network of navigators to check one another 	HMW we utilize non-nurses as navigators
HMW increase the sense of urgency around navigation	HMW define the best navigator one could have?	HMW create a world where navigators are seen as a necessity	HMW allow doctors to spend more time with the patients that need them the most	HMW envision a role that's between a friend and a doctor?	HMW encourage people to get tested for cancer?	HMW remove fear from the cancer process
HMW make the cancer process fun?	HMW utilize the skills of survivors/ caregivers as lay navigators?	HMW encourage nursing students into nurse navigator roles	HMW find the right people to be nurse navigators?	HMW simulate the experience of cancer before someone has cancer?	HMW prioritize the patients emotional needs over their treatment needs	HMW create a decision making network that patients can trust
HMW make cancer treatment affordable?	HMW make cancer treatment free?	HMW bring more optimism to cancer treatment	HMW better connect stakeholders in the cancer process?	HMW design a care process that is customized to a patient's communication style? 	HMW make cancer treatment more like choose your own adventure	is emotional support on the list of job tasks that navigators at BTN take on
HMW rethink the navigator role to include multiple people? 	HMW rethink cancer as an unacceptable disease?	HMW we bring more cohesion to the entire treatment process?	HMW make cancer screening an opt out system?	HMW get medical professionals to treat a medical issue like a design project?	HMW help low income underserved patient recently diagnosed find navigation?	HMW provide an underserved community the emotional support they need while they go through cancer diagnosis

# 03 The Honor Project

---

Needs - Impact - Barriers - Implementation



# The Honor Project

- 01** Workplace intervention for multidisciplinary team in medical settings with high mortality rates
- 02** Decorative shelf in staff-only area; team members invited to write the name of the patient on a card and place on shelf
- 03** Addresses grief through once monthly meetings
- 04** Each patient’s name said aloud, moment of silence, & invitation to share memories, reflections
- 05** Occasional song, poem, or reading shared
- 06** Shared chocolate to “ease the bitterness of death, and remind us of the sweetness of life”

# Surprise Solution

After all of our research and efforts to narrow our focus we felt that we needed to interview more individuals on the topics we were interested in going into to gain further direction. Through our interviews we spoke with Rosemary Rossi, a clinical social worker in the neuro-oncology clinic in the UCSF Brain Tumor Center. We learned about the Honor Project, a meaning-centered team intervention to address the loss and grief staff working in neuro-oncology experience.

Rosemary, the Honor Project founder, saw the impact of the program at UCSF and wanted to spread it to other hospitals. Since designing for navigators dealing with the emotional heaviness of their jobs had been a previous interest of ours, we were excited by the existence of this program. With Rosemary as our co-designer, we took on the project of figuring out how to get other neuro-oncology clinics to see the Honor Project’s benefit and implement it.



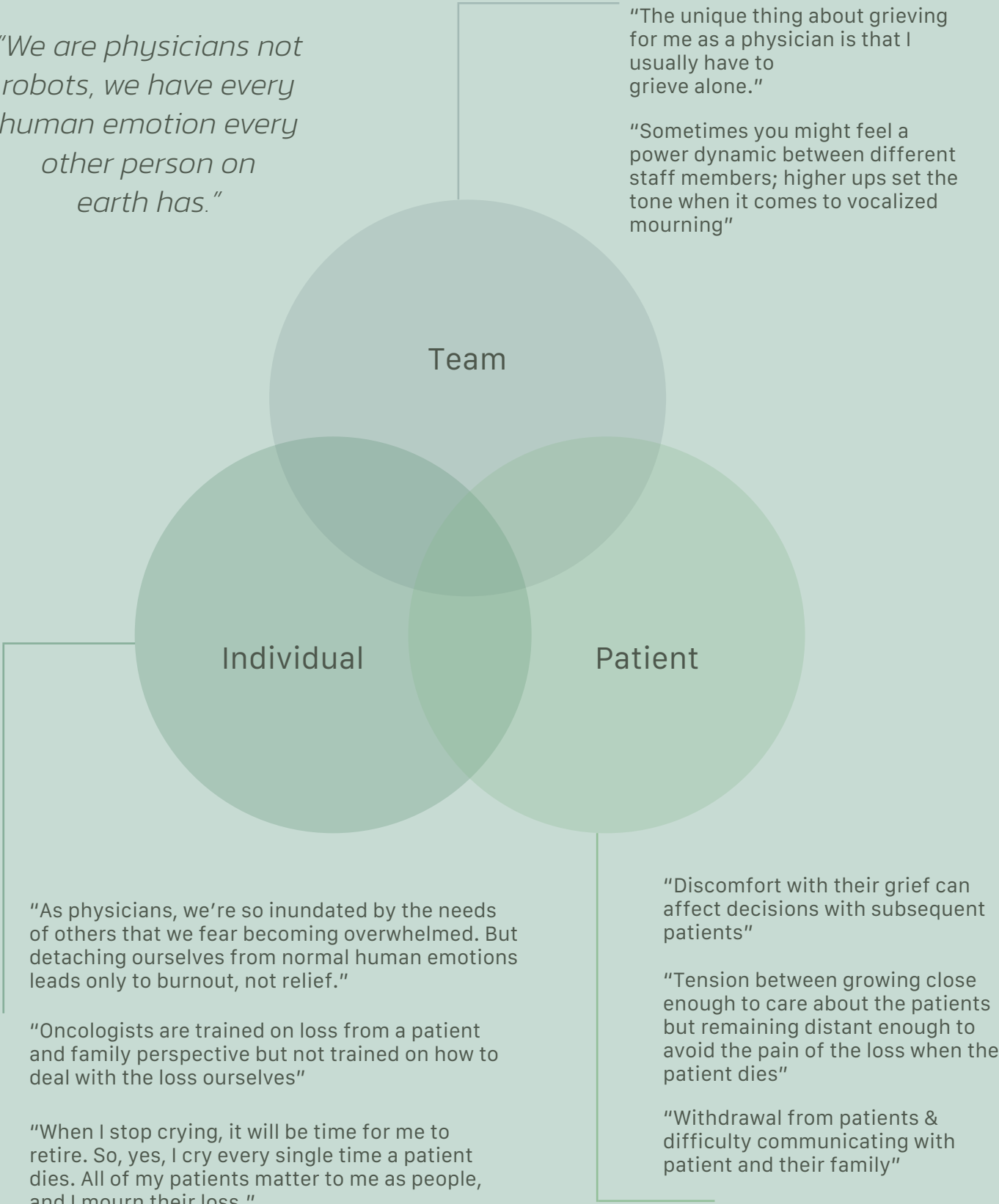
# Is There a Need?

To tackle the problem of spreading the Honor Project we needed to do empathy research in 3 areas:

Need for Grief Support Services in Neuro-Onc/Oncology beyond UCSF  
Impact of the Honor Project at UCSF  
Barriers to Implementation

By combining insights from interviews during our Brain Tumor Network Project and with UCSF staff, information from studies, and oncology team members experiences posted on Quora we were able to gain a full understanding of the culture and sentiments around how medical providers deal with working in settings with high mortality rates.

We wanted to see, is there a need for something like the Honor Project? In the areas of grief impact personally on medical providers, on medical teams, and subsequently on patients and their families, the answer was a resounding yes.



"We get to celebrate the lives of the patients and the privilege that we've been able to have to be a part of the patient's journey at a very difficult time"

"When it's an especially tough month people say "Okay, I don't have to think about this now because I have the Honor Project coming up, I can allow myself to really be present with the group at that time and focus on work now"

"I was able to witness people who I respect greatly, and doctors who intimidated the hell out of me being incredibly human and incredibly feeling about their motivations and experiences"

"The Honor Project absolutely helps me do my job...I think more thoroughly about the kinds of circumstances and richness of their lives that patients bring in that I don't necessarily know."

"It's just a lot healthier to acknowledge that clinicians have emotions too."

"The Honor Project makes me more compassionate in my work"

"The Honor Project has been a primary resource in feeling connected to my colleagues"

"It's taking the time to accept that it wasn't anything you did that led to their passing, it was the disease"

Acknowledges workplace loss & grief, enhances coping

Cultivates cross-discipline empathy, creating a culture of support & acceptance

Combats stigma that providers have to be emotionless to be effective

Builds community; fosters mutual respect & compassion amongst team members

Decreases burnout & compassion fatigue

Enhances job satisfaction, meaning & productivity

Celebrates life & connection

Healthy compartmentalization: put aside emotions until the Honor Project in order to get through the day

- INDIVIDUAL
- PATIENT
- TEAM

## Impact

With the knowledge that there was a need for support when it comes to dealing with grief for medical providers we needed to ensure that the Honor Project addressed and impacted the same areas of need.

We did this by interviewing a wide variety of staff members at UCSF who participate in the Honor Project.

clinical social worker  
clinical trial coordinator  
social work resource coordinator  
clinical nurse specialist  
neuro-oncology nurse  
neuro-oncologist  
neuro-oncology supportive services coordinator

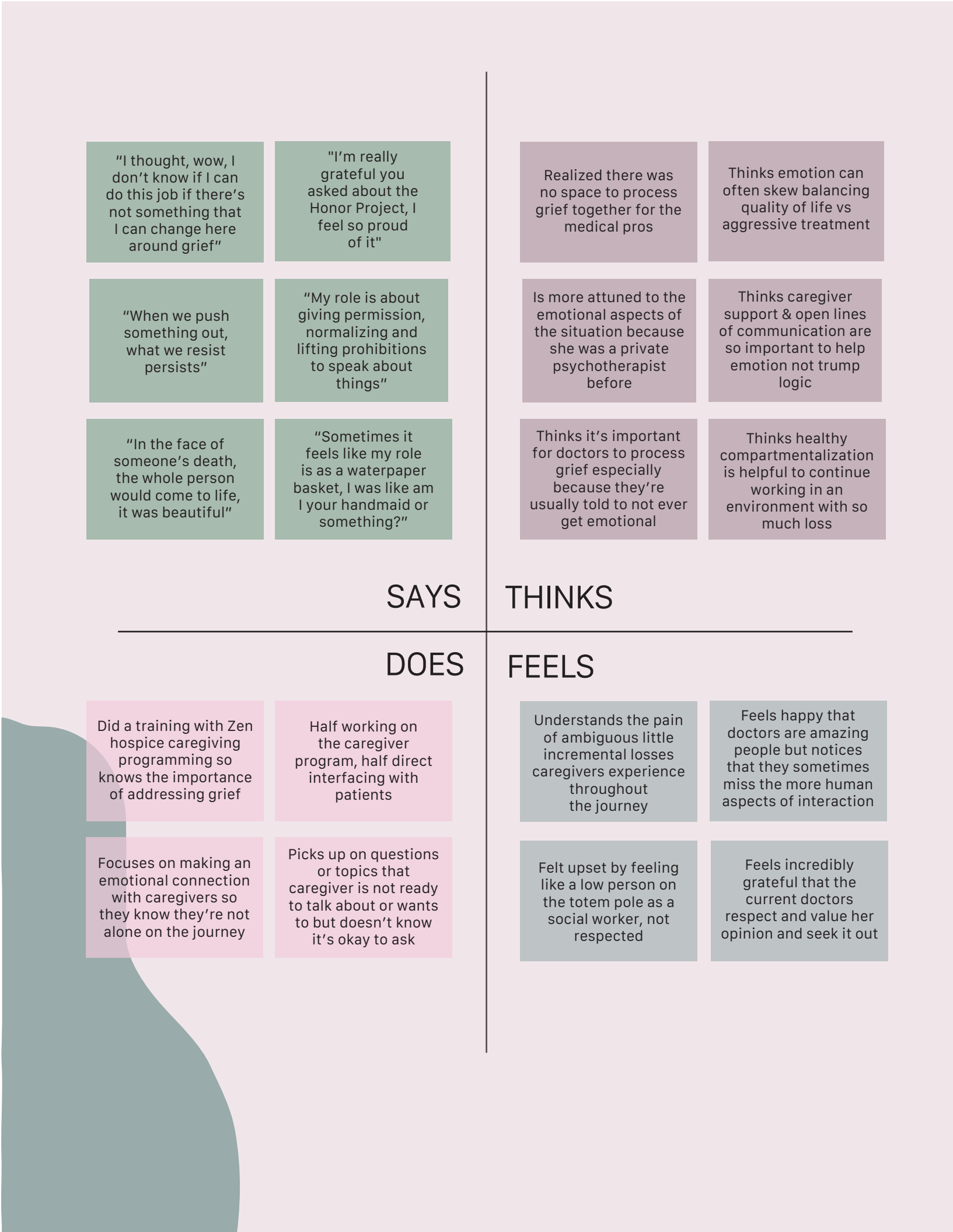
In order to show other clinics that the Honor Project could solve the needs their team members were facing we gathered data to back our claim up.



# Empathy Mapping

Throughout the steps of our project we used empathy maps to break down the information we gathered in interviews into insights that would further our broad understanding of the problem space. Breaking down information in this way brought to light assumptions, actions, beliefs, and emotions that may not have been directly spoken by the individual but were clear through allusion, inference, body language, or tone.

In this interview for example, we were able to gather that the neuro-oncology clinical social worker we spoke to feels strongly that grief acknowledgement among healthcare workers is important and when laying the information out visually could see the connections between her career history, personal experience, and that belief.



# Barriers to Implementation

Once we had found the need for grief acknowledgement and support and cemented that as our solution, the Honor Project, solved the need, it was necessary to investigate how to get clinics onboard to adopt it and barriers they might have to being amenable to such an idea.

Through our interviews and research we found 4 main categories which stood in the way of easy implementation of the Honor Project. These were imperative to understand as we knew we would have to be sensitive to them when presenting the Honor Project, it was important to not turn anyone off by touching these hotspots.

## Logistics & Time Constraints

"Time constraints are the number one issue to implementation of something like this, hard to come up with time for something that's not clinical."

"I didn't know how it was going to fit into my schedule, I was worried, but we make time for it and now that it's in my routine it works and is very integral."

## Emotionless Medical Stigma

"Caring that deeply for a patient keeps one from being objective and it really makes it tons harder to deliver shitty news."

"We protect ourselves from overly empathizing, because if you do that, it would be very hard."

## 'Built for This' Ideology

"I think if you are an emotional person and it gets to you, you leave oncology, because you know, you can't handle it, it's not a bad thing."

Sentiment that you either have it in you to deal with the emotional toll of oncology or you do not

## Physician Failure Mentality

"Sometimes there is a mentality that physicians don't want to accept that they can't do anything more, they don't want to admit defeat, this can lead to an attitude of death meaning failure, if that's the case then how could you possibly get together and talk about the patient's who have died?"

"I feel...like a failure [when I have to inform them that their loved one died]..."

With our goal of getting the Honor Project into more clinics we needed to define who exactly we would be targeting in our efforts. While there are a wide variety of individuals who can benefit from the program, from the physicians and nurses to the administrative staff and clinical trial researchers, it was important to narrow our focus on who to design our implementation materials for. We wanted to have the highest chance of the program being adopted so we needed to define the various users and see their relationships in order to understand who might be best to take on implementation and therefore who we should target in our dissemination materials and efforts.

After defining our users we ideated ways we could spread the information about and impact of the Honor Project, made prototypes, and tested them with individuals we had previously interviewed.



# Defining Users

When looking through the users we created Points of View for we came to the conclusion that it would be best to create our materials on the Honor Project around the neuro-oncologist physician as they often set the tone when it comes to the emotional openness of a clinic. From our interviews we learned that it is imperative to get the chiefs of the departments to sign off on and support such programs for the highest probability of team members attending so we felt it would be smartest to design our presentation of the Honor Project in a manner that neuro-oncologists could see themselves reflected in the experiences we represented.



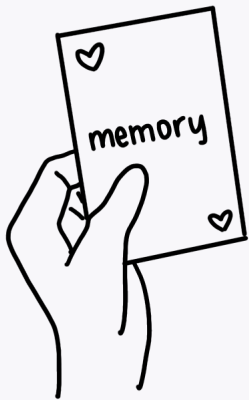
# Ideation

Now came the part of the project when we asked, what could we make that would get the Honor Project out into the world?

Idea generation in most Human-Centered Design projects is focused on coming up with a brand new, out of the box concept to serve a need. While we also were focused on creative concepts our design problem was in regards to spreading an existing solution rather than coming up with a new solution altogether.

Reflecting on Human-Centered Design at this juncture helped me reaffirm my belief that it is a tool that can be used in a wide variety of ways. A tool such as HCD is a framework, and frameworks can be applied as directed step by step or in a winding, reconfigured pattern. I found great value in using HCD to solve the problem of spreading an existing solution and in this way our ideate phase was not focused on generating solutions to help medical staff healthily process grief but how to convince team members it was important and convey the impact that the Honor Project could have on them and their colleagues.

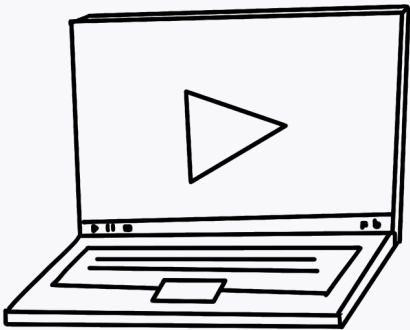
Honor Project Card Deck



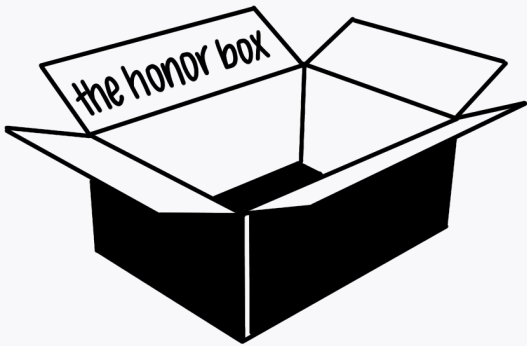
Honor Project 'Recipe'



Honor Project Video



Honor Project Kits



# Concept Development

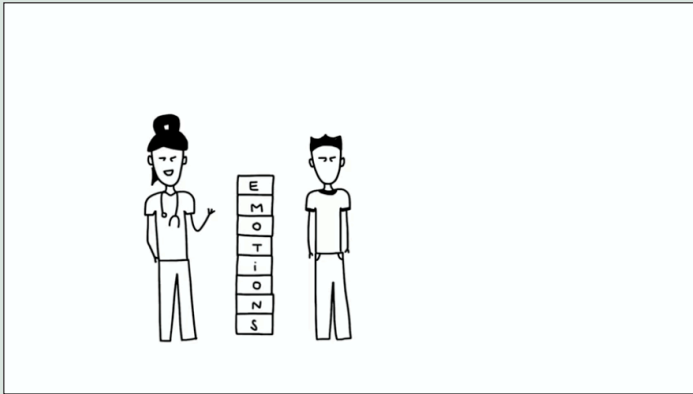
After ideation and checking in with our co-designer Rosemary, we landed on a video, with my partner Kaitlyn’s wonderful visuals, as the concept that would be most effective in getting the Honor Project out into the world and implemented.

The hope behind the video was to exemplify an emotionally relevant story which medical staff could relate to and see then see the potential that The Honor Project could have on their lives and subsequently the experiences of their team members.

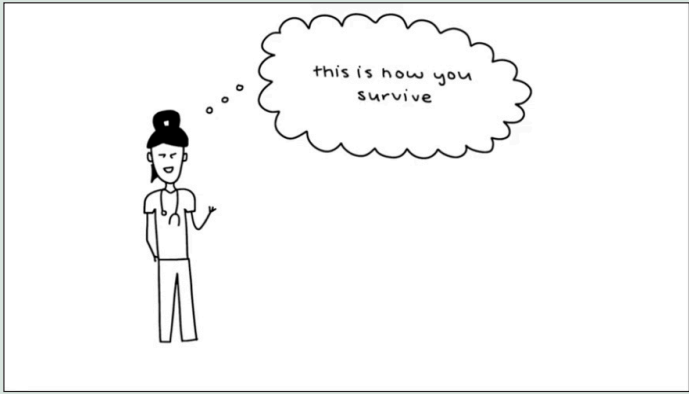
Several iterations of our storyline and script later, we created a prototype of the video itself. We tried to include as many points about the benefits of The Honor Project as well as touch on the barriers to implementation and buy in.



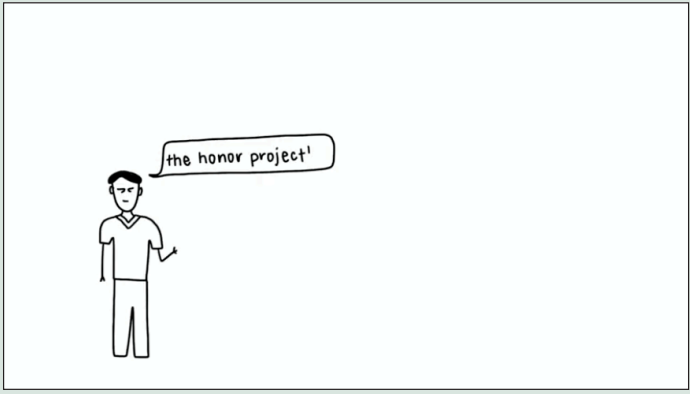
Meet Emily. Emily is an experienced and dedicated neuro-oncologist. Although she loved her work, she often felt worn out by the inevitability of death.



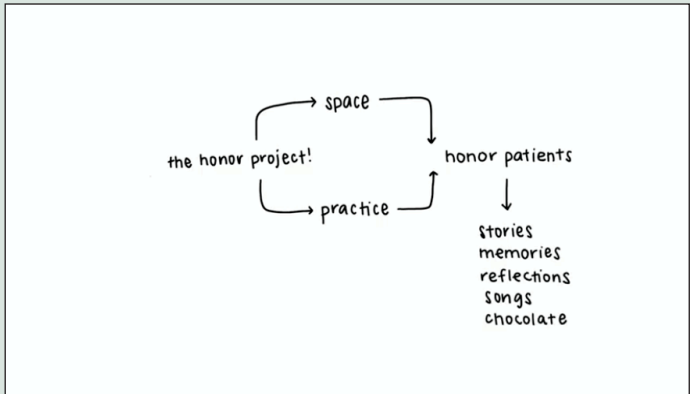
Over the years, she found herself desensitized to death, building up a wall between herself and her patients. This is what successful physicians do, she told herself.



This is how you maintain sound judgement and remain professional. This is how you survive.



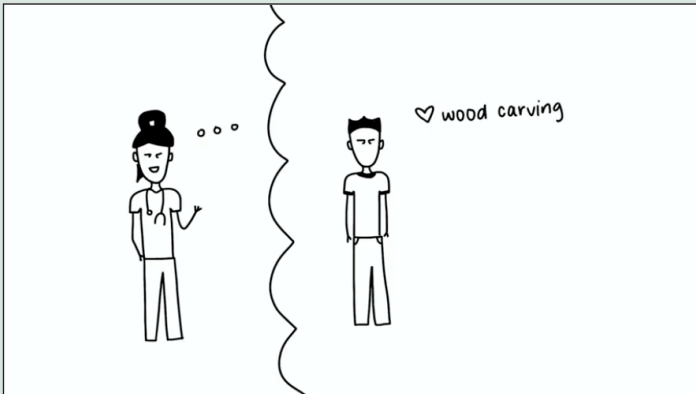
Until one day, her chief introduced the Honor Project.



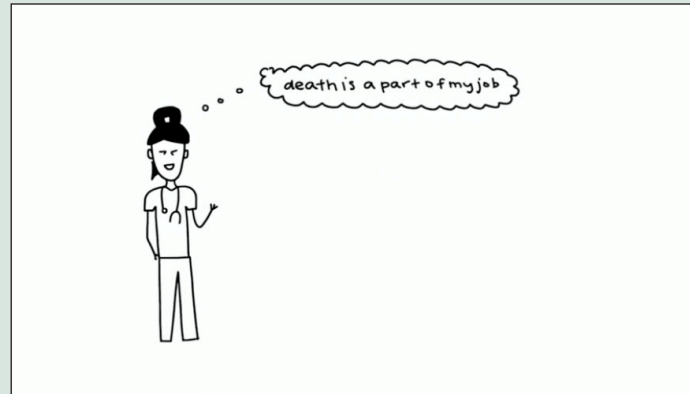
The Honor Project is a space and a practice where the entire multidisciplinary team gathered together each month to honor the patients who had died and support one another. Sharing stories, memories, reflections, songs, and chocolate.



This isn’t for me, Emily thought. She was built for oncology.



The very next day, she received news that a long time patient suddenly died. His love of wood carving and kind demeanor reminded her of her own father.

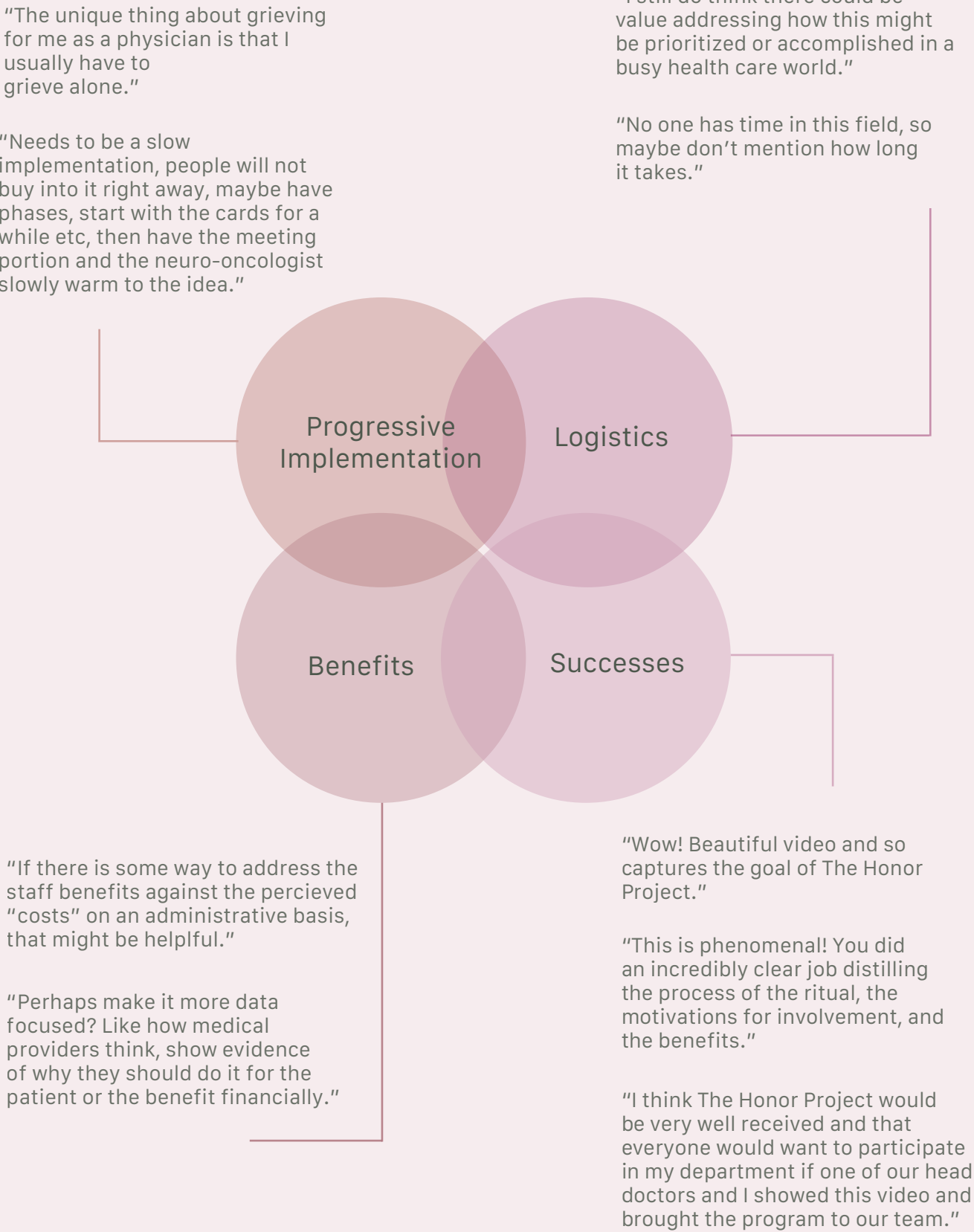


She took a deep breath, and reminded herself that dealing with death was a part of her job.... continues to THE END.

# Testing & Feedback

We showed our video prototype to the UCSF staff members we had interviewed as well as a few other medical providers we knew from the Brain Tumor Network and elsewhere. The feedback we recieved was very valuable as we wanted to ensure the video would land well with healthcare staff and sound accurate medical language wise.

We knew a short video would be most effective and because of that there was no way to fit every point we wanted to make about The Honor Project into it. The goal of the video was to touch people and take them through the emotional journey of an individual experiencing grief and The Honor Project benefits. With the feedback on addressing costs, data, and logistics we came to the conclusion that an accompanying document would be the best place for this information.





# Implementation Guide

To ensure that the message of our video led to action and implementation of the Honor Project at other clinics we created an Implementation Guide to further spell out the steps and aspects of the program.

We made sure to clearly spell out the benefits of the Honor Project as well as distinctly show how to make this program happen. There had been a worry expressed in our testing of the video that the administrative and logistical aspect should be mentioned in some form which we addressed through a quote on cost and time.

**“The Honor Project** is an opportunity for shared grieving, we get to take the time and space to acknowledge how hard it is, and **support each other** so we can keep going”

## About

The Honor Project is a cost-effective, meaning-centered, workplace intervention to address the loss and grief that multidisciplinary team members experience in healthcare settings with high mortality rates.

When notified of a death, team members are invited to pause and mindfully write the name of the person on a card and place it on a decorative shelf mounted in a staff-only area.

Once a month, at a protected time during the workday, the entire team gathers to read aloud the names of deceased patients, sharing stories, reflections, chocolate, and a moment of silence for each person they came to know. Families are notified that their loved ones have been honored in this special way.



## The Impact

- Acknowledges workplace loss & grief, enhances coping
- Decreases burnout & compassion fatigue
- Celebrates life & connection
- Strengthens resilience; enhances job satisfaction & productivity
- Combats the expectation that one is 'built' to deal with loss & grief alone
- Builds community; fosters mutual respect & compassion among team members
- Cultivates cross-discipline empathy, creating a culture of support & acceptance

## Make It Happen

- 1 Identify leader & designate time & place
- 2 Locate shared space for name cards; gather supplies
- 3 Invite your team; confirm calendar dates
- 4 Communicate outline of process to team members
- 5 Gather. Read each name aloud & invite participation
- 6 Thank team members & let them know their presence was valued

*“The impact of the Honor Project on our team is so great that it is worth the small cost and time that is needed to make it happen”*

*To learn more or for support with implementation contact: [rosemary.rossi@ucsf.edu](mailto:rosemary.rossi@ucsf.edu)*



# Sharing the Materials

After creating our materials and a website, [thehonorproject.org](http://thehonorproject.org), for them to live, we gathered the names and contact information of the directors of the top neuro-oncology, brain tumor, and neurosurgery clinics and centers across the country.

Dr. Susan Chang, the director of the UCSF Division of Neuro-Oncology, kindly sent our materials out as we agreed that they would have the most success landing and garnering responses if they came from a respected individual in the community.

Along with our materials we created a short survey which was included in the emails. The aim of the survey was to create a place for questions, suggestions, feedback, and to ask if individuals were interested in implementing The Honor Project with their healthcare team. We wanted to make sure we had a way to track the success of our materials.



*"We could be the guinea pigs at Mayo Clinic, we could start it and then share two months later how it has affected us and how it has made a difference in our day to day life, and get more buy in from the whole department."*

*"My colleague is in cardiology and has lost 30 patients this year due to Covid. The psychological burden these physicians face is immense and unaddressed. Passing your video along. Love the concept and thought of this."*

*"This video is super well-done, and I love the concept of The Honor Project. I would be happy to learn more about this. I will also include others in our City of Hope neuro-oncology team who may be interested as well."*

---

## Responses

While we continue to receive responses and track the impact of our materials and efforts we have heard from several individuals who are interested in implementing The Honor Project with their healthcare team.

So far, the Honor Project has been implemented at *MD Anderson Cancer Center* and is in the process of being implemented at the *National Institute of Health, Miami Cancer Institute, Dana-Farber Cancer Institute*, and the *Duke Cancer Institute*.

We look forward to seeing the reach and impact of the program and continuing to hear how The Honor Project and grief acknowledgement and support practices transform individual and team experiences in medical spaces.

# 04 Reflection & Acknowledgements

---



---

# Design In Healthcare

Throughout this process I came to understand Human-Centered Design (HCD) even more than I had before. It is a tool with a unique ability to reach human experience and feeling that is rarely expressed in day to day life and in other design processes. This was clear to me through the responses we got on our video and even simply on the quotes we gathered throughout our interviews. There is a raw beauty in the attentive and acceptive listening of HCD that allows for individuals to express themselves safely and trust that the designer is in it as an act of service and not with a goal of production or self-aggrandizement. Especially when discussing topics as heavy and personal as a brain cancer diagnosis I learned that the interview portion of the process is one of the most critical and impactful stages that requires preparation and personal reflection. It is imperative to consider one's own situated identity when asking questions about others and to reflect on the effect of one's presence overall.

As for HCD as a tool in medicine, the most important insight I gathered is that healthcare *is* Human-Centered Design. Diagnosing is empathy and problem solving, treating is ideation, and prototyping. Because of these similarities, HCD can be a perfect tool to help fill in the gaps to make healthcare better.

Since medical professionals have such expertise curing and helping people, the analytical and technical aspects of the experience and environment can be concentrated on to an extent that misses the human element of healthcare. This is where I find Human-Centered Design to fit perfectly into the medical space, to bridge the scientific and the technical with the emotional. When we think about going to the doctor so many of us have fears about asking questions, sounding uneducated, not wanting to doubt the expert, these are all emotional aspects to the experience of healthcare and physician-patient relationship that we have no structure for. While the medical field clearly does an excellent job treating people, Human-Centered Design can help provide tools and frameworks to make the feeling aspect of the experience more comfortable for all involved.

---

# Co-Design

One of the most impactful aspects of this project with UCSF and the work I did last semester with the Brain Tumor Network was the opportunity I had to co-design with professionals in the healthcare field.

What I've gathered most from this process is that Human-Centered Design should be empowering, not extractive. In the end you as a designer are creating something for a user. You will move on to your next project but the user will continue to engage with your creation. This fact makes it imperative that users feel ownership over the tool and that their thoughts, concerns, and preferences have been taken into account. It is possible to take a user's feedback into account during the testing stage but the next level of excellent design is bringing them along through the entire design process, teaching them why you're doing what you're doing, and how to employ HCD in their own lives. This will leave them with the tools and the confidence to use your creation and alter and spread it further if they desire, so that it can live on and they can thrive after you have left.

While co-design is an imperative and fulfilling practice it can sometimes be difficult, as are all collaborative efforts. One effect of doing a design project working to spread a solution to a need that someone else made, as we did with The Honor Project, was a fear that we were going to do something that our co-designer disagreed with or felt encroached on her creation. It was sometimes difficult to know when we could make decisions without passing them by our co-designer or to figure out where our roles began and ended.

Despite this it was incredibly fulfilling to work with our co-design partners on both The Honor Project and Brain Tumor Network portions of our project. We created close, trusting relationships and felt that the work we did together was mutually beneficial.

---

# Acknowledgements

I would like to thank my partner on this project, Kaitlyn Paulsen, for her incredible work ethic, genius insights, positivity, and humor. This project would not be what it is without her and I am very grateful that I had the opportunity to work on an impactful topic with such an exceptional designer and friend.

A large thanks goes to Fred Leichter my Human-Centered Design major sponsor, thesis reader, and mentor. Fred's unwavering support and teaching has guided me through my college career and opened my mind to topics and possibilities that inspire me and positively impact the world. My gratitude goes to Fred for opening so many doors for me and for being an incredible mentor and friend.

Additionally, I sincerely appreciate all the invaluable guidance, insight, and support from my co-designers, advisors, colleagues, family, and friends who made my Human-Centered Design major and this thesis possible:

- Stephanie Gebhardt
- Rosemary Rossi
- Albert Park
- Dustin Locke
- Nicholas Warner
- Shannon Randolph
- Linda Shimoda
- Nathan Chun
- Olivia Hewitt
- Riley Knowles
- Diana De Rada Ocampo
- Evan Smith
- Bonnie Zimmerman
- Rick Sontag
- Brain Tumor Network Staff
- UCSF Brain Tumor Center Staff
- And all the courageous and strong patients and families facing brain cancer diagnoses who openly shared their experiences and inspired us

---

# Sources

Altman, Mara. "The Costly, Painful, Lonely Burden of Care." The New York Times, The New York Times, 16 Mar. 2021, [www.nytimes.com/2021/03/16/us/caregiving-burnout.html](http://www.nytimes.com/2021/03/16/us/caregiving-burnout.html).

Anyadike, Gloria. "Grief management: A qualitative study of the continuing education needs of oncology nurses related to the bereavement process ." ProQuest Dissertations Publishing, 2014.

Athanasios, Amira. "Do Doctors Grieve: Addressing Physician Grief and Cultivating Better Doctors." Pastoral Psychology, vol. 69, 2020. <https://doi.org/10.1007/s11089-020-00899-1>

Byrne D, McMurray A. "Caring for the dying: nurses' experiences in hospice care." Australian Journal of Advanced Nursing, vol. 15, no. 1. Nov. 1997.

Eliacin, Johanne, et al. "Patients' and caregivers' perspectives on healthcare navigation in Central Indiana, USA after brain injury." Health Soc Care Community. 2020.

Eng, Juliana. "Patient Death Debriefing Sessions to Support Residents' Emotional Reactions to Patient Deaths." J Grad Med Educ, vol. 7, 2015. <https://doi.org/10.4300/JGME-D-14-00544.1>

Freeman, Harold and Rodriguez, Rian. "History and principles of patient navigation." Cancer, vol 117. 2011. <https://doi.org/10.1002/cncr.26262>

Freeman, Harold. "The Origin, Evolution, and Principles of Patient Navigation." American Association for Cancer Research, vol 21. Aug. 2012.

Freeman, Harold. "Poverty, Culture, and Social Injustice: Determinants of Cancer Disparities." CA: A Cancer Journal for Clinicians, vol. 54. 2004. <https://doi.org/10.3322/canjclin.54.2.72>

French-O'Carroll, Robert. "Grief reactions and coping strategies of trainee doctors working in paediatric intensive care." British Journal of Anaesthesia, vol. 123, no. 1. July. 2019.

Gentry, Esther. "Compassion Fatigue in Oncology Nurse Navigation: Identification and Prevention." Team-Based Oncology Care: The Pivotal Role of Oncology Navigation. 2018.

Goldschmidt Mertz, Birgitte, et al. "The effects of individually tailored nurse navigation for patients with newly diagnosed breast cancer: a randomized pilot study." Acta Oncologica, vol 56, no. 12. 2012. DOI: 10.1080/0284186X.2017.1358462

Granek, Leeat. "Nature and Impact of Grief Over Patient Loss on Oncologists' Personal and Professional Lives." Arch Intern Med, vol. 172, no. 12, 2012. doi:10.1001/archinternmed.2012.1426

Granek, Leeat. "When Doctors Grieve." The New York Times, The New York Times, 25 May 2012, [www.nytimes.com/2012/05/27/opinion/sunday/when-doctors-grieve.html](http://www.nytimes.com/2012/05/27/opinion/sunday/when-doctors-grieve.html).

Guadagnolo, B. Ashleigh. "Metrics for Evaluating Patient Navigation During Cancer Diagnosis and Treatment." Cancer. Feb. 2011.

Holmes, Dennis, et al. "Increasing minority patient participation in cancer clinical trials using oncology nurse navigation." The American Journal of Surgery, vol. 203, no. 4. 2012. <https://doi.org/10.1016/j.amjsurg.2011.02.005>.

Kline, Ronald, et al. "Patient Navigation in Cancer: The Business Case to Support Clinical Needs." Journal of Oncology Practice, vol. 15, no. 11. 2019.

Lubejko, Barbara. "Novice Oncology Nurse Navigator: Core Elements in Establishing Training Needs and Building on Competencies." Clinical Journal of Oncology Nursing, vol 1, no. 23. Aug. 2019. doi: 10.1188/19.CJON.387-394. PMID: 31322621.

Marchese, David. "Covid Has Traumatized America. A Doctor Explains What We Need to Heal." The New York Times, The New York Times, 22 Mar. 2021, [www.nytimes.com/interactive/2021/03/22/magazine/diane-e-meier-interview.html?action=click&module=Editors+Picks&pgtype=Homepage](http://www.nytimes.com/interactive/2021/03/22/magazine/diane-e-meier-interview.html?action=click&module=Editors+Picks&pgtype=Homepage).

Martinez-Donate, Ana et al. "Identifying Health Literacy and Health System Navigation Needs among Rural Cancer Patients: Findings from the Rural Oncology Literacy Enhancement Study (ROLES)." J Canc Educ, vol 28. 2013. <https://doi.org/10.1007/s13187-013-0505-x>

Meade, Cathy, et al. "Lay Navigator Model for Impacting Cancer Health Disparities." Journal of Cancer Education, vol 29. 2014. <https://doi.org/10.1007/s13187-014-0640-z>

Miller, Eleanor. "Neuro-Oncology Nurse Navigation." Clinical Journal of Oncology Nursing, vol. 22, no. 3. June 2018.

Moench, Susan. "Lay Navigation Programs in Cancer Care: Study Reveals Need for Integration Into Clinical Care Team." Oncology Nurse Advisor. Dec. 2019.



---

Mohua, Basu. "The Effect of Nurse Navigation on Timeliness of Breast Cancer Care at an Academic Comprehensive Cancer Center." *Cancer*. Nov. 2012.

Muscari Desimini, Esther. "Making the Case for Nurse Navigators." *Oncology Issues*. Oct. 2011.

Redinbaugh, Ellen, et al. "Health care professionals' grief: a model based on occupational style and coping." *Psycho-Oncology*, vol. 10. <https://doi.org/10.1002/pon.507>

Rocque, Gabrielle, et al. "The Patient Care Connect Program: Transforming Health Care Through Lay Navigation." *Journal of Oncology Practice*, vol. 12, no. 6. 2016.

Sansone, Randy A, and Sansone, Lori. "Physician grief with patient death." *Innovations in clinical neuroscience* vol. 9, no. 4. 2012.

Schubart, Jane. "Caring for the Brain Tumor Patient: Family Caregiver Burden and Unmet Needs." *Neuro-Oncology*, Feb. 2008.

Smith, Leah and Hough, Catherine. "Using Death Rounds to Improve End-of-Life Education for Internal Medicine Residents." *Journal of Palliative Medicine*, vol. 14, no. 1. 2011.

Spencer, Lesley. "How do nurses deal with their own grief when a patient dies on an intensive care unit, and what help can be given to enable them to overcome their grief effectively?" *Journal of Advanced Nursing*, vol. 19, 1994. <https://doi.org/10.1111/j.1365-2648.1994.tb01198.x>

Steinberg, Michael, et al. "Lay Patient Navigator Program Implementation for Equal Access to Cancer Care and Clinical Trials." *American Cancer Society*, June. 2006.

Wells, Kristen, et al. "Patient Navigation: State of the Art or Is it Science?" *American Cancer Society*, Sept. 2008.

Wenzel, Jennifer et al. "Working through grief and loss: oncology nurses' perspectives on professional bereavement." *Oncology nursing forum* vol. 38, no. 4, 2011. E272-82. doi:10.1188/11.ONF.E272-E282

© 2021 Anya Zimmerman-Smith  
All Rights Reserved.

This document or any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of the author.

Contact: [a.zimsmith1@gmail.com](mailto:a.zimsmith1@gmail.com)

