the ecology of waiting within an ambulatory waiting room



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DISCLAIMER

This report is a student project for Cornell University, Design and Environmental Analysis. The opinions expressed within are the product of the project and may not reflect the true wishes or intentions of Cayuga Medical Center of Ithaca, New York.



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issue
research
analysis
synthesis
invention



implications

of inventions

executive summary:

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Ambulatory Waiting Room

© CMC

project summary:

The focus of this project was to investigate the issue of waiting, most specifically in reference to the Cayuga Medical Center's Ambulatory waiting room on the 3rd floor of the hospital. This space originally opened in December of 2002 and currently the staff have become concerned it is not being fully utilized. So to answer this question of why, the act of waiting was investigated further. The result found waiting to be an emotional process that is very stressful to the users of the waiting room. Looking at the current facility there really were no real coping mechanisms for the anger and the frustration associated with waiting room users was examined. This revealed two large basic user groups affected by the room: the general public and hospital affiliated workers. The general public group is most affected by the situation, so solutions were tailored more toward this group.

Subcategories of this group were determined and solutions for coping mechanisms or distractions were suggested. Some solutions included: changing the color of the room; bringing the outdoors in; changing furnishings and arrangements; the use of technical equipment. Longer range solutions included a space redesign, frosted glass next to the entrance, digital murals and tablet pcs.



introduction ambulatory waiting



the issue

wait1

Function: verb

1: to stay in place in expectation of

2: to remain stationary in readiness or expectation

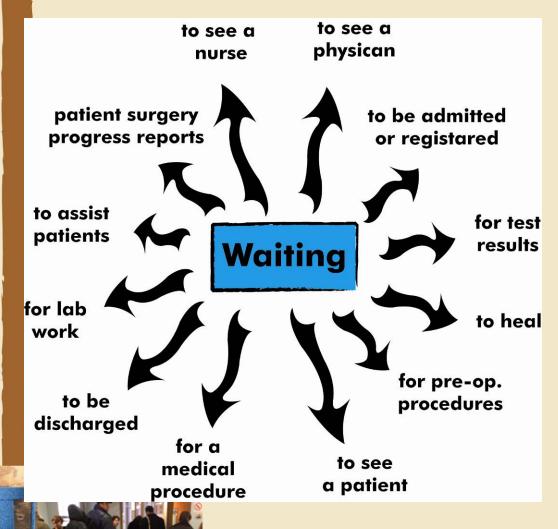
3: to look forward expectantly

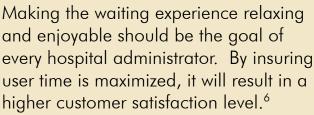
4: to be ready and available

5 : to remain temporarily neglected or unrealized

waiting

There are a variety of reasons for spending valuable time waiting in a medical facility:





physical setting

introduction

ambulatory surgical center

- Located at the Cayuga Medical Center in Ithaca, New York
- Opened December 9, 2002
- Created as a response to patient feedback regarding current surgical services at the hospital and the Surgicare Unit at the Convenient Care facility.³
- Design effort included Joe Fitzgerald, Hospital Administrator; Char Troy, R.N., Director of Surgical Services; Holt Architects, Ithaca, NY; doctors; staff; and patients of CMC.
- Designed to support hospital's mission ". . . To supplement community services in order to meet the needs of the community by providing modern, efficient, and economically feasible programs, personnel, equipment, and facilities."²
- Shortly after the unit opened, Troy described it in an interview as the following: "Admissions, surgery, and recovery happen right here; everything flows around the operating core, where surgery is performed. The open plan allows for a more cohesive team approach to patient care."
- Specifically this report will focus on the waiting room. This area was described by Troy as, "everything, from preadmission on, happens in one place. It is very user-friendly . . ."³

Cayuga Medical Center Stats 3,4

Total Patients
Served

2001: 143,888

2002: 150,148

2003: 157,284

2004: 167,408

Total Out-patient
Procedures

2001: 5,213

2002: 5,407

2003: 5,315

2004: 5,281



typology

Hospital management teams must incorporate a multitude of solutions to issues affecting a diverse group of individuals, because there are a variety of reasons for being in a hospital. Most importantly all user time, no matter the position, should be considered an asset and treated with the respect it deserves.6

CMC ambulatory users



Visitors:

Family and Friends of patients spend the majority of their time waiting in Ambulatory waiting room. Uncertainty, anger and boredom are pertinent issues affecting visitors.



Patients:

Patients spend a short period of time in the waiting area before moving to the pre-op area. They could be experiencing anxiety towards their impending procedure.



Administration & Volunteers:

They spend a large portion of their day aiding patients and visitors and making them more comfortable and relaxed. Considering the nature of the situation, they deal with people ranging from happy to upset.



Nurses:

Patients and visitors rely on them for most up-to-date info regarding the patient's progress. Nurses usually care for the patient, along with, inform visitors of patient's progress throughout the day.

Doctors:

Rarely seen by visitors, they generally give a final report about the successfulness of the procedure to the patient and visitors. At the discretion of the doctor, this is done one of three ways: privately; semi-privately; or in public.

introduction

significance

bringing it all together

Waiting + ambulatory facilities + users = a need for compassion for those individuals forced to wait for long periods of time, for loved ones going through procedures or surgery.

A. Why looking at "waiting"?

The average person spends a large part of their normal day waiting for some type of service to be provided. Example: banking, food, car service, etc.

B. Why ambulatory waiting?

Despite knowing there will be a large amount of time spent waiting, people generally come unprepared to fill up the time. Some find it difficult to concentrate on the distraction they brought to the waiting due to the stressfulness of the situation.

C. Why is this important?

Since the 1950's the yearly total of outpatient procedures has risen. During the year 1990 the yearly total of outpatient procedures surpassed the total number of in-patient procedures.⁷

As more ambulatory facilities are constructed to meet the increasing demand of outpatient procedures, healthcare organizations have begun to realize the importance of attracting people to their facility. Outpatient services are the new

Number of Same-day Ambulatory Pracedures Facilities

Since 1950's

Invasiveness Length of In-patient Beds
Patient Stay

Reds

money-makers for hospitals and understanding how to properly accommodate individuals waiting will become a more salient issue as the "fight" for patients and doctors increases.

Outpatient procedures preformed in the U.S.^{7,8}

1975 190 million

1980 202 million

1989 285 million

1990 301 million

1995 425 million

2000 510 million

2004 575 million



waiting at the CMC ambulatory center:

Waiting is an issue that affects people in all environments. It is an especially relevant issuein hospitals, where a variety of waiting areas are present to handle the large amounts of people waiting for various reasons. On December 9, 2002, Cayuga Medical Center opened their new Ambulatory Surgery Services. Their vision to create a space that was flexible, user-friendly, and attractive was realized. Once opened the waiting area within the unit began to face some unique issues and challenges related to the act of waiting.

The fact that CMC is the only hospital in the town of Ithaca, NY makes it an important landmark in the community. The CMC administration is dedicated to making sure the citizens of Ithaca want to use their facility for reasons other than location. However, the current ambulatory waiting room experience is not as enjoyable as one might hope. The administration realizes the importance of this issue and wants solutions: short-term and long-term, on how to improve the current waiting situation.

the issue waiting



the act of waiting

"Waiting is a kind of suspended animation. Time solidifies: a dead weight. The mind reddens a little with anger and then blanks off into a sort of abstraction and fitfully wanders, but presently it comes up red and writhing again, straining to get loose. Waiting casts one's life into a little dungeon of time. It is a way of being controlled, of being rendered immobile and helpless. One can read a book or sing (odd looks from others) or chat with [others] if the wait is long enough to begin forming a bond of shared experience, as at a snowed-in airport. But people tend to do their waiting stolidly." 9





types of waiting

Waiting is not on the top of anyone's "to do list" each day, but even in this fast-paced society it still is a major part of life for Americans. The most frustrating element of the situation can be that there is generally no control over how long the wait will be for a particular service. ²¹

Waiting is categorized into three separate areas: pre-process; in-process; and post-process.¹¹ In an ambulatory waiting room *preprocess* is from the time of arrival to when the patient is taken back into the pre-op area. *In-process* is the time between pre-op till the surgery is finished and the condition of the patient is released. *Post-process* is the remaining time it takes for visitors to be allowed to see the patient.

Waiting has been described by some as disagreeable, uncertain, frustrating, annoying, demoralizing, aggravating, stressful, and producing anxiety. These feelings can be categorized into two groups: uncertainty reactions and associated feelings of uneasiness, unsettledness, and anxiety (uncertainty); and anger reactions and associated feelings of annoyance, irritation, and frustration (anger). ¹⁰ Of course not everyone has such a negative reaction to waiting. Some find positive distractions to lessen the emotional impact of waiting.

one woman's way of coping with waiting²²

"[Waiting used to be] awful. I was so impatient. Now it is different because I am different. I use the time spent waiting to my advantage. Here are a few things I do while waiting: I think about good things, projects I would like to do some time; I plan out the details in my mind. I pray instead of stewing because I have to wait; I read; (I usually keep a book or pamphlet with me.) I knit if it is going to be a long wait. I made several afghans last year while I was waiting in hospitals. A side benefit

was that I made a lot of nice acquaintances because people

stopped to talk to me about what I was making.

To sum it up, I kind of make the time I wait work for me, I keep it simple. A positive attitude and an openness to adventure also helps you expect something good to happen to you. You would be surprised at what you can see and learn and do while you wait.



the issue

effects of waiting

uncertainty



Generally, uncertainty is a normal response to stress produced by triggers or events¹³, such as a surgery or concern for a loved one. While this reaction only lasts a short amount of time, it still can be uncomfortable when experiencing it.

Psychological symptoms can include¹⁴: anxiety; low mood; irritability; emotional ups and downs; poor sleep; poor concentration; and wanting to be alone.

Physiological symptoms can include¹⁴: palpitations; feeling sick; chest pain; headaches; stomach pains; a knotted stomach; and breathing difficulties.

Hospitals alone can conjure up feelings of threat, vulnerability and stress. 18

These feelings can be induced by the sterility of the environment; or the notion that death and suffering is a daily occurrence in a hospital. 18

Noise, wayfinding, access to nature, positive distractions, light exposure, and social support are all elements that can be manipulated to help reduce the fore mentioned feelings.¹⁹

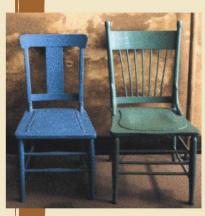
anger



Generally, anger is a normal human emotion, that can be triggered by delays or unexpected events. The feeling can be highly unpredictable and powerful when in full force.¹⁵

Psychological triggers can include¹⁶: feeling unwell; rejection; threatened; experiencing loss; pain; personal assessments, assumptions, and evaluations; and interpretations of situations; and vulnerability.

Physiological symptoms can include ¹⁷: tense muscles; a burst of energy; heart rate acceleration; rise in blood pressure; increased breathing; flush face; narrowed attention; lasting state of arousal; decreased formation of new memories; and decreased concentration.



providing distractions

Stress can be reduced by giving people a choice of what they can do when they wait.²⁰

This can be in the form of a healthy distraction from the current situation.

These distractions usually help pass time during periods of waiting.²¹

indoor and outdoor views



Providing a glass wall partition between the waiting area and a busy hall is a creative way to distract people while they wait.²²







Art, including scenes of natural elements, can also help to reduce stress and anxiety.²³

the issue

providing distractions



Common distractions provided in waiting rooms are magazines, newspapers, refreshments, toys, and television access.

These are usually well intentioned distractions. However, they actually do very little to help waiters cope with the long waits, generally associated with surgery.

patient and family education



ion areas
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encourage
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places to wait

People tend to wait at hospitals in a variety of ways: in large groups; small groups; alone; conversely; or quietly.²²

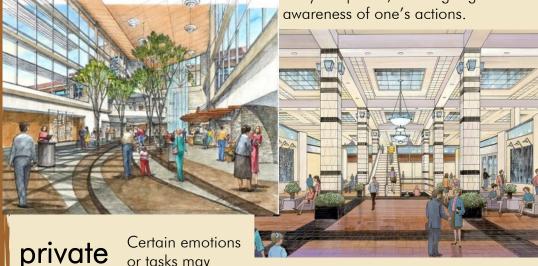
Areas in the hospital should support the desire people have to control the environment around them.²³ This control can help to reduce stress and anxiety associated with waiting.²⁴

public

The constant swarm of activity in a public area can be an interesting distraction. Watching people interact with each other and move around the space²⁴, to some, can

be more interesting than reading or watching a television show. It's a place to escape from the worry of the current event or reality. Public places provide the user with a variety of resources with little concern over how their actions will affect the people around them.²² In most cases, interaction with others is welcomed and accepted in larger public areas more so than in smaller areas. These smaller areas may be public but will

likely be guieter, creating a greater



or tasks may

visitors where can escape from

require a more private setting for some patients and visitors. These emotions can include grief, anger, and frustration. Some private tasks may involve making a telephone call, doing business related work, delivering news about a patient.²² A common approach to dealing with this need for privacy is providing visitor seating in patient rooms, in a private garden, or private sitting areas where patients and





surgical waiting

the future of waiting

Healthcare administrators, architects and designers are giving more consideration to the waiting experience when designing surgical waiting rooms. Giving visitors a choice of how to pass the time, by providing a variety of amenities and distractions, helps reduce stress, boredom, and anxiety associated with the waiting process. In the Mayo Clinic Waiting Room visitors are given views to the outside and partitioned rooms to help provide some privacy and noise control. The Holmes Regional Medical Center's Cardiac Waiting Room provides a living room atmosphere with large comfortable furniture to help visitors feel more at home. The Dublin Methodist Hospital's Surgery Waiting room provides fun for everyone. There are plenty of places to sit, toys, and a variety of reading material. The most notable distraction the waiting room provides is a private roof garden that is attached to the waiting room only. This allows visitors to get some fresh air without wandering too far from the information desk.

"In the surgical waiting area, family members read magazines, watched the one television, and awaited the call that surgery was complete."²⁵



Mayo Clinic Surgery Waiting Room Jacksonville, Florida

Holmes Regional Medical Ctr. Cardiac Waiting Room Melbourne, Florida





waiting around:

Waiting is a form of imprisonment. One is doing time—but why? One is being punished not for an offense of one's own, but for the inefficiencies of those who impose the wait. Hence the peculiar rage that waits engender, the sense of in justice. Aside from the boredom and physical discomfort, the subtle misery of waiting is the knowledge that one's most precious resource, time, a fraction of one's life, is being stolen away, irrecoverably lost.

~Lance Morrow, 1984

Three forms of waiting (pre-process; in-process; and post-process) can result in two basic psychological and physiological responses: uncertainty and anger. To reduce these responses, distractions can be provided in the waiting space. Types of distractions can include: indoor and outdoor views; outdoor interactive environments; patient education; refreshments; music; televisions; etc.. Places to wait can range from public areas to very private spaces. The future of waiting gives people a choice on how they can distract themselves or pass the time in a stress free environment.

physical setting ambulatory waiting room



ambulatory history

a little hospital history²⁶

Before 1800, most hospitals were places you went to die. They did not encourage happiness or healing. Between 1800 and 1900 hospitals became more organized and began medically caring for individuals. In the late 1800's operating theatres were created for surgical purposes but most surgeries were extremely invasive and with a unpredictable success rate until the 1950's.

The 1950's began the change toward the modern hospital we know today.



the beginning

Before 1960: Doctors and Patients did not believe in doing outpatient procedures.⁷ **1960:** The first outpatient surgery departments

opened in George Washington University in Washington, DC, and at the University of Los Angeles Medical Center in Los Angeles, California.⁷

1968: First freestanding surgical outpatient center opened in Providence,

1970: First successful freestanding surgical center was opened in Phoenix, AZ, after two years of planning and making sure insurance companies would cover procedures preformed in the facility.²⁸

1971: American Medical Association endorses outpatient procedures on young fairly healthy individuals.⁷

1973: American College of Surgeons approves the practices associated with freestanding outpatient facilities.²⁷

1980: Medicare is permitted to pay facilities costs of certain operations performed in freestanding Ambulatory Surgical Centers (ASC).²⁷

1983: Congress pass a price regulation law that requires a diagnostic price related to payment. ⁷ 150 Medicare approved outpatient facilities exist. ²⁶

1988: 838 Medicare approved ASCs exist.²⁷

2000: 70% of procedures are performed on an outpatient basis.²⁹

a century of patient wards/rooms

Traditional notions and ideas of how to treat patients, medically and emotionally, constantly changes as technology and the understanding of the human condition advances. The most

obvious visual evidence of this advancement can be seen in gradual progression of a typical patient room, over the century.



pictured: typical patient areas for each decade



ambulatory waiting today

physical setting

presently day designs

In 1936, surgical visitors were faced with uncomfortable chairs and fairly long waits. While the waits have improved in 2006, the relative chair comfort has only mildly improved. Seventy years ago, waiting rooms contained rows of seating resembling a playhouse arrangement. Today, they are lined up around the room with chair groupings also in the center. Interior finishes have only slightly improved, carpet not tile covers the floor. Despite the available empirical data on waiting, waiting rooms have not changed to allow the visitor more control over their environment. CMC is looking to change this by making procedural and design improvements to their waiting room. Currently the waiting room looks great, however, it is functioning at a less than optimal level. CMC wants to give more



Surgical Waiting Room, Grady Hospital, circa 1936



Ambulatory Waiting Room, Cayuga Medical Center, circa 2006

control to the visitor during their visit to the waiting room, in hopes that it will improve their overall waiting experience.

ambulatory procedures

In general, outpatient procedures do not require an overnight stay and are categorized as minor surgeries according to healthcare insurance providers. In some cases the patient is admitted after their surgery due to complications, overall health condition of the patient, or for insurance coverage purposes. For these reasons it will always be necessary for outpatient services to be located within hospitals, not just stand alone facilities.

oh, how far we've come in 70 years!

really?



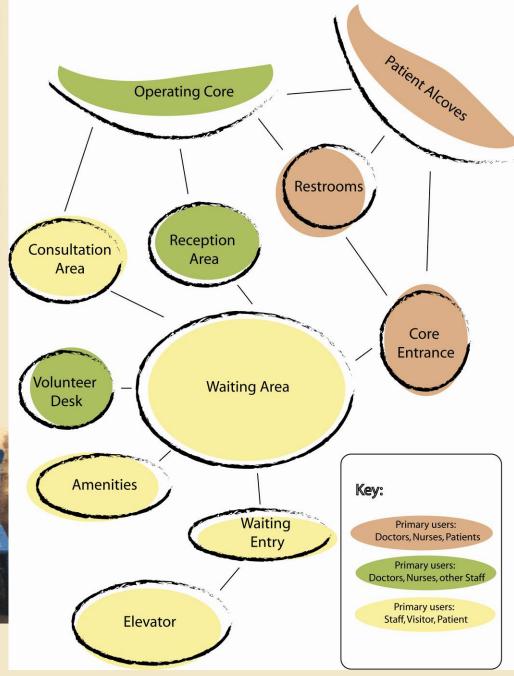


ambulatory zones

activity zones

Mapping out the user activity zones enables the space to come alive simply and visually. This analysis can be used later when creating user appropriate distractions for the space. For example, placing a patient-oriented distraction in the reception area wouldn't be an appropriate use of resources. Since patients are rarely in the reception room.

Within the CMC Ambulatory Surgery Center each area is divided into user zones. For instance, the waiting room area is primarily used by staff, visitors, and patients throughout the day; and the patient alcoves are primarily used by doctors, nurses and patients. The diagram below shows the user zones of the ambulatory center, in accordance to how often a user utilizes a particular area the majority of the time.

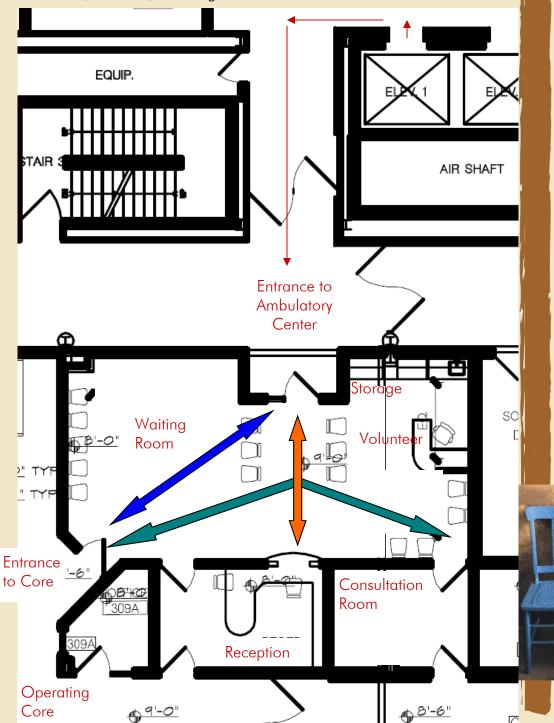




floorplan

physical setting

CMC Ambulatory Surgery Center waiting area is located on the 3rd floor, around the corner from the main elevators. The waiting room is accessible from the main entrance, through a core entrance, from a reception room and from a consultation room. The main points of entrance, however, is through the main entrance and the core entrance.



Internal Circulation: In the waiting room, the main internal circulation is disruptive to individuals passively using the space. The initial entrance path, from the hall to the reception desk, falls in the center of the space. Generally, people like to visually assess a room upon entering. This pathway makes this natural instinct difficult to execute. Another disruptive path occurs when individuals walk between the main entrance and the core entrance. This pathway is used by all types of individuals for various reason, causing unnecessary commotion throughout the day. The third main circulation path is from the core to the consultation room.

This path, while not often used, is still inconvenient.

23

© 2002 HOLT Architects, Ithaca, NY

waiting room description

Lack of Windows:

An obvious missing element in the room is natural light. Exterior windows are not possible in the waiting room, because it is located in the center of the building. Skylights are not present either, however, they are present in the adjacent patient alcove area. This lack of natural light creates a more cavernous environment within the waiting room.



The Ambulatory Surgery Center is

located, conveniently near the elevators, on the 3rd floor of the Cayuga Medical Center Hospital.



Before entering the space, a small sign hanging above the door is the sole marker for the waiting room entrance.

Another more predominate sign hangs to the right of the door, indicating where other departments on the third floor

are located. Since the first sign a visitor sees from the hall is generally the larger sign, this configuration causes some confusion. Inside the surgery center, the wood veneer reception desk is located directly across

from the entrance. The carpet directly in front of the desk is cut and laid in a small arcing pattern. This change in the floor pattern attracts visitors to the desk by emphasizes the reception's importance in the space. The

design concept of the room design is meant to resemble a cozy living room space, by incorporating neutral

tones in the walls, carpet and furniture. The success of the

concept is questionable. The patterned fabric on the chairs match the gray tones of the room. The small size of the chairs makes it difficult for anyone larger than

170lbs to comfortably sit in them. One settee was provided for the space after the staff requested alternate seating for their larger patients

and visitors. After the space opened, two recliners were added to the space for night shift workers/visitors who needed a place to sleep for the duration of the wait. The gray walls are covered in a washable textured wallpaper, and the ceiling materials are combinations of drywall and acoustical



tiles, for a homey yet sound absorbing space. The space includes three types of dimmable **lighting**: sconces; recessed lighting, and florescent grid lighting. However, all three types of lighting are rarely utilized at the same time.

amenities and distractions

physical setting



Amenities available in the Ambulatory waiting room include a volunteer, who is the visitor's liaison to the patient's status. Despite the privacy requirements of HIPPA, the

private

consultation

room is rarely

utilized for the

patient-

patientcentered discussions between staff and visitors. Located behind the volunteer's desk is a coat rack for visitors and patients, a sink, water dispenser, and coffee maker. All of these items are used on an intermittent basis.



Natural Distraction:

Nature is represented in the waiting room in the form of wood veneers and the nature photographs



located throughout the space. While these photographs can be relaxing to view, they go almost unnoticed.



Distractions in the room include a television, located next to the core entrance. When the television was installed, the furniture was rearranged to allow for maximum visibility from every seat. Pamphlets, a variety of

women's magazines, a few men's magazines are provided for reading pleasure. Internet jacks are present in the room but they are not clearly marked, leaving guest wondering if

they can be used or not. Visitors still have to provide their own laptop. Low, soft music is also provided, but

when the television is

playing this can provided conflicting noise. Entertainment for **children** includes two small gray chairs and child-sized table with numerous books. There are no toys in the room.





waiting rooms:

The time between 1968 and today has yielded many changes in technology, patient health and human behavioral knowledge. Despite this increased understanding of the human experience, healthcare design has been slow to follow. Chairs in a room with a stack of magazines somehow constitutes a room being called a "waiting room".

Most waiting rooms can be broken down into activity zones to aid in the future examination of their successfulness. Within the activity zones circulation paths can reveal awkward designs or furniture arrangements. Analyzing the room's appearance, amenities, and available distractions paint a full and accurate picture of the users' perception of the a waiting room. Using all of this examination of elements, it is safe to say the current space is not a very pleasant place to wait.

analysis user typology



basic typology

typology explanations

1. What is typology?

The dictionary defines typology as "1. a doctrine of theological types 2. study of or analysis or classification based on types". In the case of the ambulatory surgery center, typology will refer to the users of the facility and the categories or classifications they will fall under according to their activity patterns and relevant characteristics.



2. How will this be accomplished?

The primary classification for all the ambulatory waiting room users will be their reason for being at the center. These groups will be represented by titles including: visitor, patient, staff, nurse, and doctor. The secondary classifications will be based on their characteristics: relating to their primary classification; relevance to their activity pattern; and approximate time spent waiting.



3. What is the significance to the ambulatory user typology?

Classifying characteristics of the users enables a more conclusive analysis of user patterns and requirements. User patterns reveal functional and non-functional aspects of the waiting environment. User characteristics aid in the creation of tailored solutions for improving the current user patterns. The goal of the user analysis is to create short— and long— term solutions for improving the current waiting experience at Cayuga Medical Center's ambulatory waiting room.



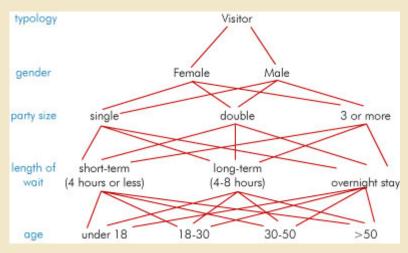


waiting room typology

analysis

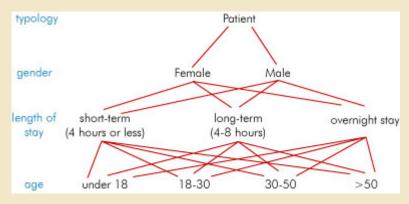
topology mapping: general public

Within the CMC ambulatory waiting room the users can be broken down into the following typology:



Visitors

This group includes family members and friends of patients. Relevant characteristics that will be used to define this group further are: size of group; gender; age; and length of waiting period.



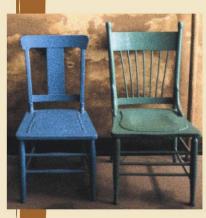
Patients

This group includes individuals receiving the procedure or surgery. Relevant characteristics that will be used to define this group further are: gender; age; and length of stay in the hospital.

mapping explanation

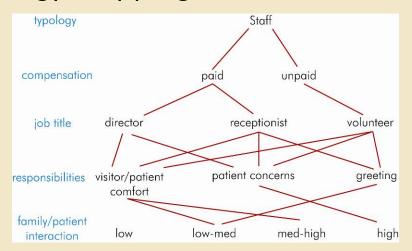
Typology mapping has been used to simply and visually show the connectivity of different variables. This visual display additionally shows how numerous variables can affect the degree of pleasantness in a waiting experience.

Good or bad each element is connected and this is shown through the numerous lines.



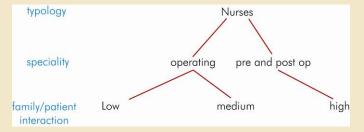
waiting room typology

typology mapping: hospital affiliated



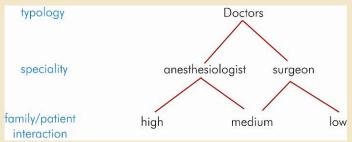
Staff

This group includes those working in the hospital to help other users. Relevant characteristics that will be used to define this group further are: monetary compensation; job title; responsibilities; and amount of patient/visitor interaction.



Nurses

This group includes those working in the hospital to help doctors and looking out for patients' best interests. Relevant characteristics that will be used to define this group further are: rank; practicing specialty; amount of patient/visitor interaction.



Doctors

This group includes those who perform surgeries and procedures or administer anesthetics to patients. Relevant characteristics that will be used to define this group further are: practicing specialty; amount of patient/visitor interaction.



analysis concentration

analysis

a closer look



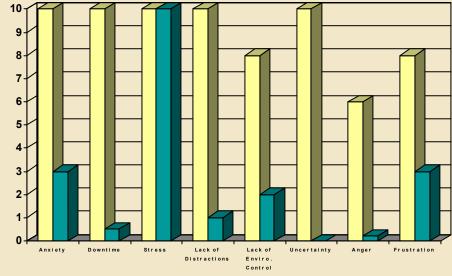
visitors and patients

general public

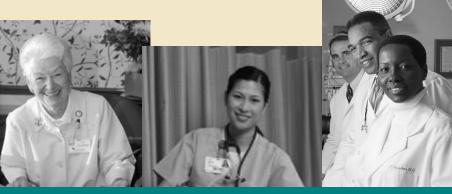


Typology association and intensity of emotions and issues associated with waiting during time spent at hospital.

intensity of emotions and issues



emotions and issues associated with waiting



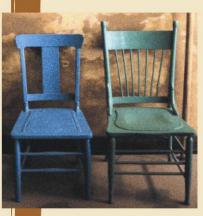
staff, nurses, and doctors

hospital affiliated

graph results

The graph illustrates how 2 basic groups of typology: general public (visitors and patients); and hospital affiliated (staff, nurses, and doctors) encounter emotions and issues, associated with waiting, differently during their time at the hospital. The graph reveals that the general public deals with issues and emotions associated with waiting more than staff, nurses or doctors. This result reveals the intervention should mostly focused on the general public than those associated with the hospital.

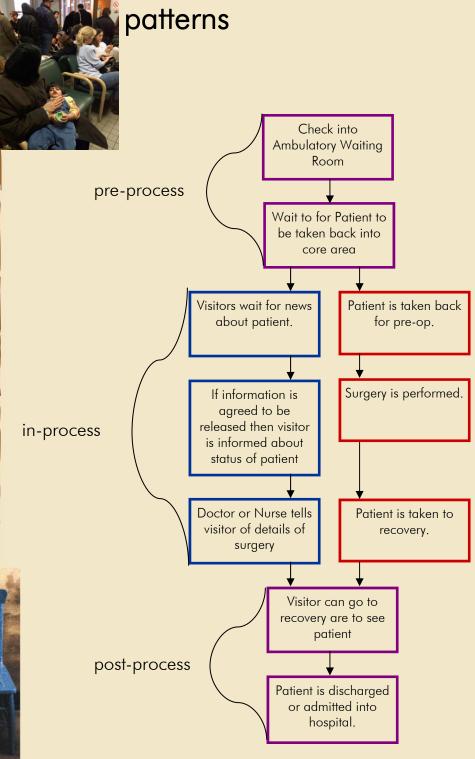
The remainder of the report will reflect these findings.



visitors and patients

It is important to understand the path visitors and patients take when in the ambulatory center. This understanding can help us tailor specific solutions for improving the current waiting situation.

This is a very simplistic chart visually showing the patient and visitors moving through the ambulatory surgery center process.





visitors and patients

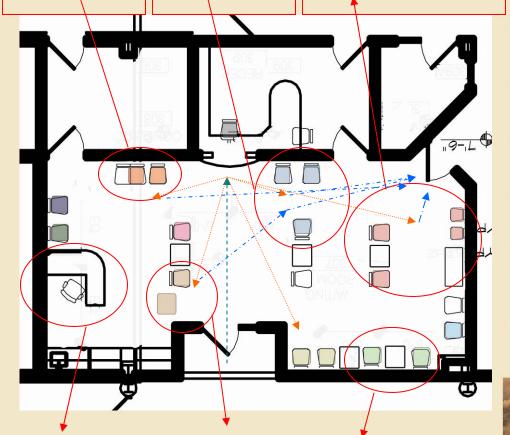
analysis

pattern diagram

This party included 2 middle aged women. 1 was overweight and the other a normal size. the overweight women sat down in the single chair, not the bench.

This party included 2 males and 1 female of their mid-twenties. They came in and their was no group seating left so they turned one chair to allow for easier communication.

This group included 4 adults includes 2 women in their mid 60's, 1 male of the same age and 1 female in late 80's. They were the last large group to enter so they chose the seating arrangement near the children's area. 1 women and 1 man sat in the children's chairs. The older woman had to go to the bathroom at one point and was confused as to where it was located.



Between 12:30 and 1:30 there was no volunteer stationed at the desk. If people had questions or needed help. They had to ask the receptionist. Some people seemed irritated over this.

Couple entered around late 40's, female chose a single seat, despite the room being fairly empty. Husband grabbed a newspaper and stood beside her the entire wait, reading the newspaper.

Couple in mid 30's, obviously been in the waiting room a while. Reading magazines and talking but due to table in the way they had to lean over table to talk. They attempt to hold a conversation but at a whisper level. One commented on the continuous opening of the door to the core, as annoying and making her anxious for a progress report.

This pattern diagram shows the seating pattern of the ambulatory waiting room between 12:15 and 12:45 pm on a Friday. The colored squares represent a different person and the different colors of the squares denote different parties. The colored dashed arrows show the circulation **paths** of patients. pre-registering

after-registering

once being called back into core



visitors and patients

sole waiters vs. group waiters

Sole waiters tend to have no one to talk to about the situation.

They often talk on the cell phone to loved ones about the wait or the patient's progress.

Their stress level appears to be higher and they are more easily agitated by unexpected results.

Group waiters generally chat amongst themselves about the situation or about other things. This talking seems to relieve tension about the situation, being able to voice their concern or just have some company to distract them appears to help.



characteristics

Gender effects type of distraction utilized

Both <u>genders</u> came equally prepared for the wait. However women brought books and crafts, and

men brought newspapers and electronics.

Group size effects staying in the Room and noise level

<u>Group size</u> determined whether a party stayed in the room to wait. Parties less than 3 tended to stay in the room, where larger groups moved out to the waiting area near the elevators. (This waiting area is more public). Group size also effected conversing level. Larger groups conversed often and were louder than groups of two or less. Groups of two whispered or talked low to each other periodically. Sole visitors only talked to the volunteer.

Longer waits and unexpected delays effects frustration and anger levels

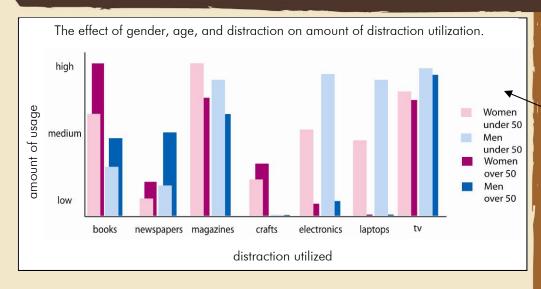
Longer <u>waiting periods</u> contributed to higher levels of uncertainty and anger, than shorter procedures. If the procedure took longer than expected uncertainty pursued. If waiting for a patient to wake up or to be assigned to a patient room for night, frustration was evident. The shorter waits resulted in happier visitors.

Age effects level of activity, noise level, and type of distraction utilized

The average <u>age</u> of the group members affected speaking volumes and activity levels. Visitors, appearing to be under 30 years of age, constantly walked in and out the waiting room throughout the wait and during post-op visitation. Those approximately between 30 and 50 years of age stayed in the waiting room but read or talked quietly. Those over 50 years of age stayed in the room and read, crafted or talked at a normal volume level to each other.

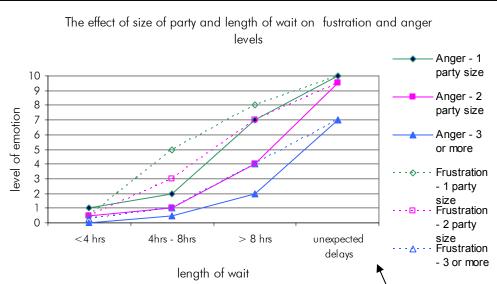
visitors and patients

analysis



men and women over 50 years of age generally used low tech. distractions unlike men and women under 50.

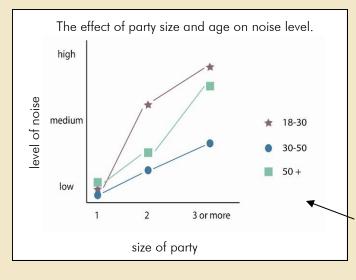
Men under 50 used more technology then women under 50.



↑ age = ↓activity level

18-30 had trouble sitting still; 30-50 stayed in place for most of the time

the younger the person the harder it is for them to sit still for long periods of time.



frustration rose more rapidly than anger for all groups but single groups felt both emotions more intensely than larger groups.

under 30 and over 50 tend to be the loudest in the room



comparisons

Comparing

Making a comparison to other places people wait can help to reveal particular aspects that may or may not successfully contribute to the act and effects of waiting. The four places explored reveal a variety of differing aspects in the space and in user behavior compared to the ambulatory surgery center.

waiting in other places

hotel lobby—Statler Hotel, Ithaca, NY

-Elements of the space

- large comfortable, traditional and warm furniture
- constant activity to look at
- architectural elements help control noise
- an abundance of plants
- beautiful displays to look at
- little private niches to sit and wait
- mirrors and reflective surface to make the space seem larger and brighter

-People—generally short-term waiting

- content when waiting
- watch all the activity
- look at all the architectural elements
- seem semi-relaxed

hospital waiting area—3rd floor open waiting

-Elements of the space

- large windows with natural light and views
- furniture varies in shape, size and comfort for various activities
- furnishings are light colored and reflect the natural light
- places to relax, work, and eat
- semi-private due to glass partition separating it from corridor
- semi-private allows for activity in hall to be watched
- fake plants safely bring outside elements in

-People—short and long term waiting

- relax on the long sofa
- watch the activity in the hall
- talk at normal volume levels
- bring up meals from café
- seem fairly happy and not anxious



comparisons

analysis

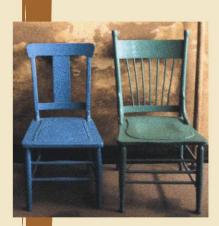
surgicare waiting—east campus CMC

- -Elements of the space
- waiting area is 2 rooms
- large windows with natural light and views of parking lot
- white walls and dark carpet
- furniture is dark wood, maroon vinyl, and slightly uncomfortable
- table available for working or eating
- not a tremendous amount of seating, about 10-12 chairs only
- located right outside the parking lot
- 2nd room is small with same furnishings except child's table, books, and tv.
- -People—generally long-term waiting
- seem to be more upbeat
- don't seem to be interested in the tv
- bring their own distractions
- easy to transport patients to and from car to waiting room
- fairly quiet and peaceful

café—east campus CMC

- -Elements of the space
- bright colors on materials and furnishings
- roughly 40'x40'
- lunch line for prepared foods
- vending machines/microwave/supplies on back wall
- 3 tables with four chairs each
- upbeat music playing
- small windows high on the wall, no real view
- -People—short-term waiting
- most are nurses, doctors and staff
- having a good time, laughing and talking
- woman behind the counter engaged everyone in a conversation
- no one stayed to eat
- upbeat atmosphere

Each of these spaces deals with waiting in their own way. Some common elements found among the spaces are nature; natural light; bright materials and furnishings; visible pedestrian activity and visually stimulating views.



observation:

The typology analysis revealed visitors and patients deal with emotions and issues related to waiting more than hospital affiliated workers. The entire process of waiting can face an abundance of problems, from where to sit to what to do during the wait. The choices people make regarding distracting themselves from the situation, can also affect those around them. Results of these distractions or lack there of, can be noise, frustration, anger, pacing, etc. Using comparisons of other facilities, in which people wait, reveal areas in which the current space could improve. Further investigation into what makes these spaces work could reveal elements the current ambulatory space could incorporate into their room. By determining ways to cope with these issues and even mitigate them the space could become a more enjoyable experience.

synthesis implications for design



key concept

"patients need to know they have not been forgotten by those in charge; they need to feel comfortable; they need to have things to do, watch, or read; they need to be able to choose whether to interact with others or not."²²

to reduce emotional responses to waiting by using appropriate distractions

emotional responses in current space

uncertainty—manifests itself in <u>lack of concentration</u>: people staring into space; unable to focus on a reading distraction; nervous chatter; twitching in seat; shaking foot; unable to sit still anger—manifests itself in personal interpretations of the situation: upset with staff, nurse or doctor; upset with patient; raised voice; pacing; burst of emotion; raised blood pressure; lashing out at those trying to help; decreased patience; annoyed easily; <u>lack of concentration</u>.

All of these emotions have been observed at the CMC Ambulatory Surgery Center.

distractions in the current space

available distractions in the room—television; pamphlets; posters; magazines; artwork; refreshments; recliners; unadvertised internet access

available distractions outside the room— food; nature walk; views of nature; places to eat; places to relax; people to watch; small patient education room

personal distractions patients and visitors can bring from home—books, magazines, crafts, laptops, DVD players, personal gaming stations, .mp3 players, CD players









key concept

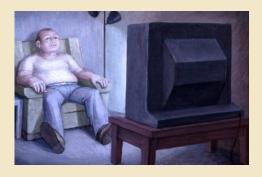
Despite the large amounts of distractions available, most people do not use them or bring them. Why?

the answer can very simply be that they do not anticipate or understand the array of emotions they will be experience while at the surgery center. They bring an inappropriate distraction or don't even think to bring a distraction simply based on a lack of understanding. To understand this further we must first look at some common traits between the two most common waiting room emotions.

Anger and uncertainty have several things in common:

- 1. Both are results of a stressful situation.
- 2. Both can physically make one feel abnormal during the wait.
- 3. Most importantly, both decrease concentration.

Taking these items into consideration, makes some currently available distractions seem ridiculous.



It is also obvious to see why adding a tv to a waiting room seems to be so popular these days. To the staff, it appears to be a popular distraction and that people are actually watching it. However, it is more likely that they are not really paying attention to the television program, but instead just using it as a means of staring, something that takes little concentration. Most zone off into some other part of their mind and in the result is a waiting room full of zombies. While a tv may seem to calm everyone down, it does nothing to relieve some of the stress and tension the visitors and patients are feeling. In some cases, it can irritate others due to the noise or the subject matter being shown on the tv.



key problem areas

People differ in age, sex, infirmity and how they like to spend their time waiting. Watch tv, read, peoplewatch, talk, work on crafts, or play with children. The key is to provide environmental supporters for people with as many distractions as possible. It is also important to make sure waiting room activities do not conflict with others.²²

providing distractions

Providing distractions is not as simple as a tv in a space. While this distraction may be a good solution for some, others maybe annoyed by the noise or subject matter visible. The important key ways to make a distraction work are:

- 1. providing appropriate distractions
- 2. providing a choice of distractions

The above requirements can be fulfilled by examining the typology of the users. The ambulatory center visitors and patients generally fall into at least one of the following categories:

- socially supported—generally larger groups who have come to support a patient or another visitor during the waiting process. (all ages)
- 2. active and possibly technologically savvy—generally up and down during the stay, trouble sitting still and possibly using some type of technological device, such as a cell phone. (generally under 30 years of age)
- 3. **not active and technological savvy**—generally sits in one spot and uses tech equipment to stay busy during the wait. Examples of equipment include laptop, mp3 player, personal gaming station. (generally 30 to 50 years of age)
- 4. **not active and non-technical**—generally stays in one spot with book, crafts or watches tv to pass the time. (generally 50 years of age and older)



Tailoring distractions to each of these groups could help to provide more appropriate distractions. These distractions would help reduce the emotional responses each person has to the stress of waiting.



key problem areas

size verses needs

At this point there becomes a need to question where will all these distraction be stored. The answer is with the right innovation and technology anything is possible. By following these guidelines the right design solutions will be possible in any size space.

- A. Solutions should incorporate spaces outside the current waiting room. For example: the café; other waiting areas; the nature trail. This can be done in some fun and creative ways.
- B. Solutions should consider the current space and rearranging the current layout to support learning, social networking, and privacy.
- C. Some solutions should make adaptations to the current space, by changing furnishings and materials to enhance the mood of the room and brighten the space.
- D. Solutions should use existing elements and adapt them for distractions. For example using walls, lights, storage, desks, and even rooms that are not currently being used to full capacity.
- E. More invasive solutions should aim to make the space feel larger, brighter, and more entertaining for people who remain in the space during the entire waiting time.

It is not wrong to encourage people to leave the space, so that distractions outside the waiting room can be utilized. The important things to remember are to provide options in distractions and to keep the staff, nurses, and doctors conveniently connected to their patients and visitors.







facility performance

"Even though stress can be reduced by giving people choices of what they can do when they wait, many hospitals still do not do this."²¹

quality, quantity, and cooperation

quality

The quality of the space and areas surrounding the waiting room should be consistent with the rest of the hospital. The current space is finished and furnished in quality materials and the same design integrity should be met with the new design solutions. This requirement is for both short term and long term solutions.

quantity

Ensuring there is enough distractions within a space for everyone can be expensive and a huge space concern. There is a risk of reducing seating and forcing people to leave or stand in the waiting room. The quantity of the distractions should not reduce the seating capacity, but should instead help to increase it. This can be done by making exterior waiting areas easier to see and use.

cooperation

Visitors and patients have been the focus of this facility and the proposed distractions. However, the important thing to remember is they are not the only ones that would be effected by the addition of new distractions. Staff such as the receptionist and the volunteer need to continue to do their job successfully. Design solutions should not interfere with them and should ultimately make it easier for them to carry-out their work.

Nurses shouldn't have to track down waiting visitors or patients. The distractions should be compatible with delivering progress reports and allowing visitation. The same goes for doctors. They should not have to chase anyone and more importantly they won't. Design solutions should enable privacy and help doctors carry out their work without interruptions. Lastly for hospital administrators, maintenance and cleaning, the space should be easy to keep track of, maintain, and clean. Most importantly solutions should be cost-effective.



design solutions

the key to success

makes the jobs of hospital affiliated workers easier to accomplish reduces emotions associated with waiting: uncertainty and anger

give users control over their environment







Viable design solution



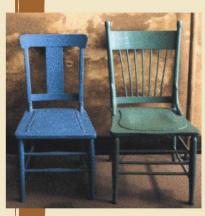
is constructed of high quality, durable and economical materials



does not reduce the amount of seating space in the current waiting room



distracts a large variety of people and provides for their comfort



good solutions:

Who decides what is good and bad solutions? In this case a good solution addresses all the issues and concerns associated with the problem: waiting. They should address uncertainty and anger in an appropriate manner without sacrificing space. The solutions should support a variety of people without negatively affecting others. They should be of the highest quality and not negatively effect the space available. Most importantly solutions that will work, needs cooperation from all parties involved. In this situation that includes: patients, visitors, staff, doctors, nurses, hospital administrators, maintenance, janitorial and more. Once a solution meets all these needs then it can be considered for the space.

immediate & short term solutions



color

Lighting and color

Warm light should be used to create a more home-like environment. Table lamps could help with this and also aive off additional light. The light should be intense enough to read but should not produce a glare. The interaction of light with some materials can produce a glare. Monotony can be relieved by using more than one color in a space.22

brighten it up

Natural light is not currently accessible in the waiting room. A way to create the illusion of natural light is to brighten the colors of the space. This also makes the space appear larger than it's true dimensions. While color



is not a distraction, a lighter space can help to improve the overall mood of patients and visitors and help to relieve some feelings associated with stressful situations. Changing the color of the space benefits all typologies.

a dark soffit helps to balance out the wood on the bottom half of the wall. the wall color and carpet was changed to a lighter more natural color.

changing the fabric to a more natural color helps to lighten up the space.



natural elements

short term solutions

bring the outdoors in

Another issue related to no windows is the lack of out exterior views. So a simple way to deal with this, is to bring the outdoor inside. The first easy and inexpensive way to bring in nature is through artwork. While the current artwork contains nature scenes, they are small and not engaging. Ultimately the current artwork fails as a good distraction. Other ways to bring the outdoors in, is through plants. While real plants may not be advised for hospitals, artificial plants are certainly a good option. They not only soften the space but help with noise control.



Another option is to replace existing ceiling tiles with sky tiles, this would help the space appear larger and would give the illusion of exterior windows. All of these solutions are fairly inexpensive and could be implemented during the off hours of the center. Bring in the outdoors benefits the non-active, non-technical visitors and patients the most.



Nature

"Views to the outside provide a valuable way to feel connected to the outside world. Attractive views provide relief and pleasure. Providing indoor natural elements such as atriums, greenhouses, planters and window boxes also allow for the users to benefit from the natural view without leaving the building."22



simple changes

Seating arrangements affect patients' and visitors' ability to converse comfortably. People carrying on a conversation like to face each other at an angle. Moveable furniture allows people the ability to create customized furniture arrangements.

Seating should be comfortable for hours of use, and should be able to accommodate a variety of people.

Seating should also be easy to get into and out of repeatedly.^{22,23}

spacial and furnishing changes

The size and current arrangement of the furniture are undesirable and not conducive to a social support network. As mentioned in the waiting room description, the current furnishings in the room are smaller than desirable. New furnishings should be larger enough to accommodate patients and visitors 200 to 250 lbs. Also making sure the furniture is comfortable enough to use for extended amounts of time but still easily accessible is critical. The current arrangement of chairs lines the room or faces the tv, both of which is not conducive to social support. While some people wait alone and may want to watch tv while doing so, others come as a group to support each other through the situation. Some areas of the room should have groupings of furniture, so that friends and family can easily communicate with each other. By providing a variety of seating styles and arrangements, there is some control of the environment for the users.

provide a table of some sorts for people to work or eat at.

provide a variety of styles of furniture for people of all types. This will help in providing the most comprehensive comfort for all users.

provide high back chairs
that are easy to get in and
out of and comfortable for
long periods of time.

setting up small groupings of furniture can make it easier for groups of people to talk to each / other.

partitions separate groups from each other.



technology

short term solutions

optional pager system

This is a good option for those active visitors or patients. While the pager itself may not be linked to reducing anxiety, it certainly opens up the possibilities for more distractions. It provides the user the freedom to explore the hospital and it's grounds with little fear of missing important information. This can be done



several ways: through a paging device; through the user's cell phone; or through a walkie talkie device. This solution would require procedural changes and could be handled through the receptionist or volunteer. It would also be an added expense for the paging devices.

rentable equipment

These days it seems possible to rent anything, so why not make it available in hospitals. Providing a walkman for music, dvd players and movies; laptops; or even personal gaming stations. This could be done with or without a rental fee. Security for the devices would have to worked out. This solution would service those not active but technically savvy users. MIT media Lab This also could be a receptionist or volunteer run service.



this is the new \$100 laptop by

tv noise and viewing material

While the tv may not be an ideal distraction it is still a distraction to some. The problem occurs when it disturbs someone else with it's noise or subject matter. In attempt to control the volume of the tv a fm

transmitter could be placed on the tv along with closed captioning. This allows the tv to be heard and read from afar without disrupting others. The fm transmitter plays the sound from the tv through a radio station that can be heard on a radio station available on any walkman. With rentable equipment, those who did not bring a walkman



can get one from the center. This is a low tech way to turn off the sound to the tv and still have it's benefits. The viewing material on the tv can also cause anxiety. If the tv plays only g rated shows that insures no violence or stressful events are shown during the day. This would benefit all the users that stay in the room.

Pager Study³⁰

Tested the use of pagers as a way of communicating to family members, roaming the hospital ground, about patient's progress.

When the pagers were activated the family members were instructed to call the number printed on the pager for the patient's progress.

Results:

Activity level was increased for those with pagers.

The pagers did not reduce feelings of anxiety



in short:

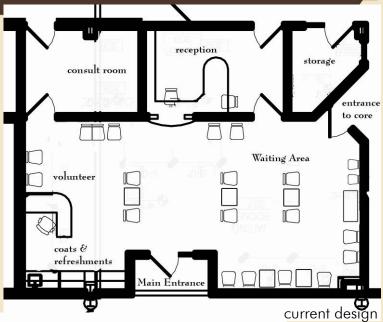
Quick and easy ways to improve the space are useful to all types of waiters: group waiters; active waiters; not active and technical waiters; and not active and not technical waiters. Most can be implemented in one weekend or less time and are generally not invasive and expensive. Changing color, bring the indoors in, adding and rearranging furniture, and implementing technology all help to improve emotions and provide distractions while waiting. One thing not mentioned that should be considered by the hospital is providing vending machines or refreshments on the 3rd floor for those waiting. The next section will focus on more expensive and invasive design solutions.

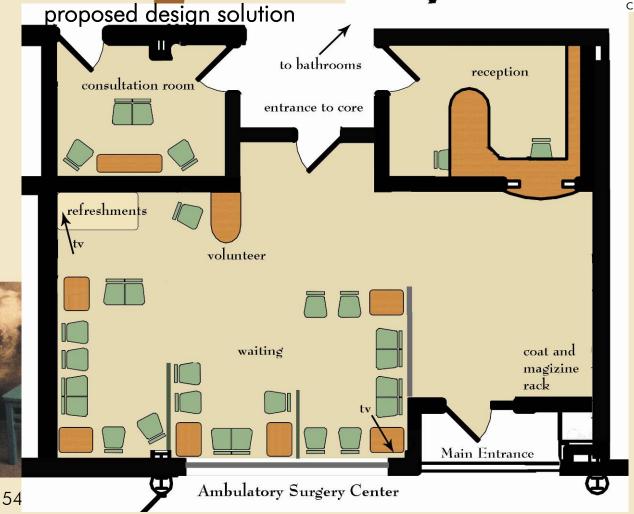
longer term solutions



space planning changes

The best way to handle the current waiting situation is to redesign the current space. This longer term solution would also incorporate all of the suggestions made in the short term section with some more expensive and invasive ideas.





space planning changes

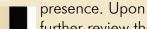
long-term solutions

plan changes

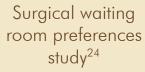
Circulation: The main entrance has been moved over to the far right. As seen on page 33 the current circulation is in the middle of the waiting area, due to the location of the entrance reception and core door. This new design moves the main entrance and the reception to the one side and allows all of the waiting area to be on the other side. This is done to reduce some of the traffic through the space. The doors to the reception and consultation room have been moved behind the core door. Moving the core door to the center also reduces traffic through the waiting area. While traffic may be a good distraction having it through the waiting area can be an annoying distraction.

Furniture: The furniture provided follows the same suggestions made in the short term solutions section. Providing more comfortable chairs that give a variety of options is important. The layout is done more group friendly but can also accommodate sole waiters. In a couple of places short dividers have been installed to help create an even more private feel.

Volunteer and storage: The desk has been reduced and the storage removed. The volunteer's desk size has been reduced since currently they do not fully use it. The new desk would be at standing height with a high comfortable stool type chair provided. This will help the desk stand out among all the seating, giving the volunteer a bigger

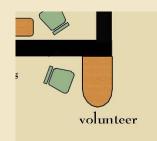


further review the storage was not being fully used so removing it was a good option. The coat storage has been moved next to the door, because it is current not visible when entering the space. By moving it next to the door the anticipation is that it will be used more often.

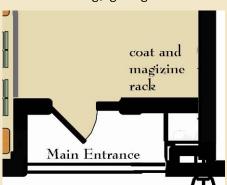


Study participants had an in-progress wait of on average 3.1 hours. It was a written survey asking about waiting room amenities on a Likert-type scale

Results indicated the key elements to have in a waiting room are: large windows; fresh flowers; flower/rock garden; artwork; close proximity to food, gift shop, and restrooms; group arrangement of chairs; mid traffic area; soundproof area for children; a terrace; computers; rentable equipment; games; and patient information.



waiting





interesting distractions

Glass walls

Glass walls separating the waiting room from the hall can be a good distraction. The glass has a way of making people feel part of what is going on outside the space. Some people want to see what is happening in the waiting room before they enter it. It gives them a chance to assess the situation before entering. They can then quickly decide where to sit and put their belongings once they enter.²²



a grand entrance

One item not fully investigated in this document was the entrance of the facility, I will touch on it briefly here. Since the redesign should be a full consideration of possibilities the entrance should be "beefed up". The current door is just a fire door and above it rests a sign. In the new plan this would be increased to look more like an entrance of a home. By changing the entrance, emotions could be

reduced initially before the patient or visitor even enter the space.

Using a more residential type application in a healthcare environment should have a calming

effect.



frosted vision

The gray area in the floor plan is a suggested interior lightly frosted glass window. This

would help to let natural light from the windows in the hallway into the space. It would also provide as a visual distraction for those that want to watch the activity in the hallway. Another benefit is the initial surveying of the space before someone enters the waiting room. This is previously

mentioned on page 23 of the report. In addition, it allows people who may be waiting with others, to see if their party members are coming or if they are in the waiting room

already without having to leave or enter the room. There are a variety of ways the window could be frosted. Here are just a few.



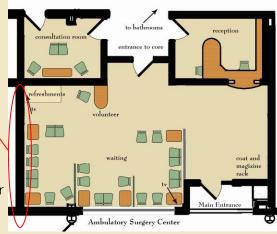


interesting distractions

long-term solutions

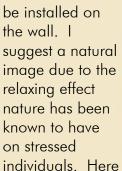
wall of interest

Another proposal to give interest to the space and provide another distraction is a mural on the left most wall. This wall can be see by most and provides a large expanse of space. The proposed type of mural can either be digital and change every so many minutes. If digital it can be



a make-up of smaller images or a rotating larger image. A more

economical solution would be a hand painted or screen printed mural that would





are a few suggestions. In some cases mural wallpaper can be order for an even more economical solution.

the ultimate distraction

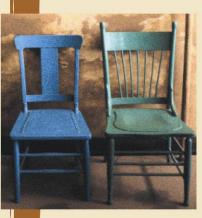
For the ultimate price, \$1500 a piece, forget the rentable equipment for those tech savvy people. Instead equipt all the seating in the room with tablet PCs. These neat little devices could provide personal watching choices, play music, movie player, patient education tools, games, short

stories, and much more on one device. The tablet would be touch screen sensitive and user friendly program to make it easy to use for even the most untech savvy person. Proximity silent alarms would insure people didn't walk away with the equipment The tablet gives the user control over their choice of distraction.



Murals

The use of murals can provide visual stimulation, due to the complex nature of the subject and the use of a variety of colors.²⁰ A slowly changing image if done correctly can provide continued visual stimulation. Fun environments should not be limited to just pediatrics. Aesthetics appeal to our higher senses and can contribute to a person's state of mind.²³



a commitment:

The implementation of longer term solutions takes a physical, mental and monetary commitment to the issue of waiting. Redesigning a space could take months of disruption but the results could be seen as a more comfortable, relaxing, and enjoyable space. Creating an entrance that portrays confidence is important, and currently that is not the impression the user gets when approaching the space, uncertainty is a closer description. Being able to see others waiting and going through the same thing may encourage and help calm a person who may not know what to expect. A digital mural will never go out of style as pictures and images can be updated as time passes. This also insures there is usually something new to look at during each visit. The tablet is the ultimate distraction, providing a variety of appropriate distractions in one piece of equipment, that is easy to use. All of these solutions may not be possible but will help spawn more ideas on how to distract people while they wait. Ultimately their happiness is the most import thing.

conclusion



issue and setting

this is a collection of the sectional conclusions

introduction

On December 9, 2002, Cayuga Medical Center opened their new Ambulatory Surgery Services. Their vision to create a space that was flexible, user-friendly, and attractive was realized. Once opened the waiting area within the unit began to face some unique issues and challenges related to the act of waiting. The fact that CMC is the only hospital in the town of Ithaca, NY makes it an important landmark in the community. The CMC administration is dedicated to making sure the citizens of Ithaca want to use their facility for reasons other than location. However, the current ambulatory waiting room experience is not as enjoyable as one might hope. The administration realizes the importance of this issue and wants solutions: short-term and long-term, on how to improve the current waiting situation.

the issue: waiting

Three forms of waiting (pre-process; in-process; and post-process) can result in two basic psychological and physiological responses: uncertainty and anger. To reduce these responses, distractions can be provided in the waiting space. Types of distractions can include: indoor and outdoor views; outdoor interactive environments; patient education; refreshments; music; televisions; etc.. Places to wait can range from public areas to very private spaces. The future of waiting gives people a choice on how they can distract themselves or pass the time in a stress free environment.



physical setting: ambulatory waiting

The time between 1968 and today has yielded many changes in technology, patient health and human behavioral knowledge. Despite this increased understanding of the human experience, healthcare design has been slow to follow. Chairs in a room with a stack of magazines somehow constitutes a room being called a "waiting room".

Most waiting rooms can be broken down into activity zones to aid in the future examination of their successfulness. Within the activity zones

conclusion

analysis and synthesis

circulation paths can reveal awkward designs or furniture arrangements. Analyzing the room's appearance, amenities, and available distractions paint a full and accurate picture of the users' perception of the a waiting room. Using all of this examination of elements, it is safe to say the current space is not a very pleasant place to wait.

analysis: user typology

The typology analysis revealed visitors and patients deal with emotions and issues related to waiting more than hospital affiliated workers. The entire process of waiting can face an abundance of problems, from where to sit to what to do during the wait. The choices people make regarding distracting themselves from the situation, can also affect those around them. Results of these distractions or lack there of, can be noise, frustration, anger, pacing, etc. Using comparisons of other facilities, in which people wait, reveal areas in which the current space could improve. Further investigation into what makes these spaces work could reveal elements the current ambulatory space could incorporate into their room. By determining ways to cope with these issues and even mitigate them the space could become a more enjoyable experience.

synthesis: implications for design

Who decides what is good and bad solutions? In this case a good solution addresses all the issues and concerns associated with the problem: waiting. They should address uncertainty and anger in an appropriate manner without sacrificing space. The solutions should support a variety of people without negatively affecting others. They should be of the highest quality and not negatively effect the space available. Most importantly solutions that will work, needs cooperation from all parties involved. In this situation that includes: patients, visitors, staff, doctors, nurses, hospital administrators, maintenance, janitorial and more. Once a solution meets all these needs then it can be considered for the space.



solutions

immediate & short term solutions

Quick and easy ways to improve the space are useful to all types of waiters: group waiters; active waiters; not active and technical waiters; and not active and not technical waiters. Most can be implemented in one weekend or less time and are generally not invasive and expensive. Changing color, bring the indoors in, adding and rearranging furniture, and implementing technology all help to improve emotions and provide distractions while waiting. One thing not mentioned that should be considered by the hospital is providing vending machines or refreshments on the 3rd floor for those waiting.

longer term solutions

The implementation of longer term solutions takes a physical, mental and monetary commitment to the issue of waiting. Redesigning a space could take months of disruption but the results could be seen as a more comfortable, relaxing, and enjoyable space. Creating an entrance that portrays confidence is important, and currently that is not the impression the user gets when approaching the space, uncertainty is a closer description. Being able to see others waiting and going through the same thing may encourage and help calm a person who may not know what to expect. A digital mural will never go out of style as pictures and images can be updated as time passes. This also insures there is usually something new to look at during each visit. The tablet is the ultimate distraction, providing a variety of appropriate distractions in one piece of equipment, that is easy to use. All of these solutions may not be possible but will help spawn more ideas on how to distract people while they wait. Ultimately their happiness is the most import thing.





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