Winfield Family Medicine
Healthcare for every stage of life

Program
Jennifer Sims
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The space I have chosen to redesign is Winfield Family Medical in Crown Point, Indiana. I have chosen to focus on the family practice clinic located on the second floor, which is about 10,000 sq. ft. While part of the second floor is still unfinished, family practice and chiropractic offices occupy the rest of the space and are divided up into offices, exam rooms, break rooms, reception areas, and waiting rooms. The building is relatively new; it was built about a year ago. The owners have given me full permission to visit, photograph, and interview users of the space. Dr. Brent Jacobus and Dr. Brett Brechner are the two practicing doctors. The nurse practitioner, Dorothea Doolin, also works with the doctors at the clinic. Other staff members include secretaries and nurses.

Upon entering the building, the space opens up into a large reception hall. The second floor is visible from below. The stairs are located on the left. When the visitor ascends the stairs, he or she is welcomed into the open reception area of the family practice clinic. On the second floor, the first floor can be visible by looking over the railing on the right. The reception room has two large dropped cove ceilings in the shape of rectangles in which luminaries are hanging. A children's play area is visible through the back windows of the room. Two reception windows are across the room to the right of the stairs. Also, two doors are situated on either side of the reception windows, where clients enter and exit the clinic. The family practice clinic is divided up as follows: one waiting area, one children's play area, one break room with a balcony, fourteen exam rooms, three offices, one laundry room, two procedure rooms, one reception station, one checkout station, one preparation area, one work area, one nurse's station, two mechanical rooms, three storage closets, four sample closets, one additional closet, and three storage rooms. The exam rooms are divided down three hallways. Each of the doctors and the nurse practitioner has their own hallway and exam rooms. The color scheme combines neutral to warm tones throughout the complex. Warm wood boarders and cabinets were chosen. The bright, warm colored fabrics and wall coverings are contemporary in style with updated patterns. Several paint colors ranging from burgundy to gold to beige were used throughout the space as well.

An issue with the space is that the numerous hallways can be confusing. An open space plan would be beneficial. Additionally, even
though there is a window cut into the wall between the nurse’s station and work areas, communication problems have occurred because of visibility issues. Also, acoustical considerations were not taken in the design. The rooms are not sound proof, which causes privacy issues. A final issue concerning finishes is that sheet vinyl should have been used in the exam and procedure rooms instead of vinyl composition tile.

Crown Point, Indiana is the location of Winfield Family Medicine. Located in northwest Indiana, the climate is moderate year round. The summers are warm and humid with temperatures ranging from 70 - 90°F, and the winters are cold with temperatures from 10 - 40°F. Crown Point typically receives between 36 - 40 inches of rain per year. The census of 2000 calculated that there were 19,806 people, 7,824 households, and 5,359 families residing in the city. The population density was 1,191.7 people per square mile. The racial makeup of the city was 95.32% White, 1.41% African American, 0.18% Native American, 0.98% Asian, 0.04% Pacific Islander, 1.02% from other races, and 1.04% from two or more races. Hispanic or Latino of any race accounted for 4.00% of the population. According to an estimate of a 2020 census, there is expected to be a population of 58,768 in Crown Point.

A study showed that out of 7,824 households, 29.2% had children under the age of 18 living with them, 57.1% were married couples living together, 8.9% had a female householder with no husband present, and 31.5% were non-families. Individuals made up of 27.3% of all households, and 11.7% had someone living alone who was 65 years of age or older. The average household size was 2.45 and the average family size was 3.01. In Crown Point, the population was spread out with 22.5% under the age of 18, 7.7% from 18 to 24, 27.2% from 25 to 44, 25.3% from 45 to 64, and 17.3% who were 65 years of age or older. The median age was 40 years. For every 100 females there were 90.3 males. For every 100 females age 18 and over, there were 87.2 males. The median income for a household in the city was $52,889, and the median income for a family was $64,274. Males had a median income of $50,090 versus $26,669 for females. The per capita income for the city was $24,568. About 2.1% of families and 3.7% of the population were below the poverty line, including 3.9% of those under age 18 and 3.2% of people who were 65 or over.
Questions and Concerns

1. How long has the clinic been operating at this location in Crown Point?

2. Have there been any structural problems at the clinic?

3. Which area of the clinic is used most often?

4. What types of equipment is used in a medical clinic?

5. How many employees work for Winfield Family Medicine?

6. How can I make the current layout more work efficient?

7. How will I solve circulation issues throughout the space?

8. Are there any special finishes that need to be applied in certain areas of the clinic?

9. Are there certain rooms that should be omitted or added to the clinic?

10. What is the budget for this project?

11. Are there any special user needs?

12. How many people must be accommodated for in the waiting room?

13. What are the size requirements of each room?

14. How will I improve lighting issues throughout the space?

15. How can I create a comfortable, peaceful atmosphere for patients?

16. How can I design the office to prevent communication issues?

17. What actions can be taken to prevent any privacy issues?

18. How much workspace is needed throughout the clinic?

19. How can I combine client needs and desires in my design?

20. Are there certain codes that I need to research while designing the clinic?
<table>
<thead>
<tr>
<th>Date</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 26</td>
<td>Introduction</td>
</tr>
<tr>
<td>September 2</td>
<td>Create Table of Contents, Questionnaire, and Time/Task Table</td>
</tr>
<tr>
<td>September 9</td>
<td>Identify Client Needs; Develop Essence</td>
</tr>
<tr>
<td>September 16</td>
<td>Receive Client's Response to Questionnaire; Review Responses</td>
</tr>
<tr>
<td>September 23</td>
<td>Identify Project Issues and Create Goals; Create a Mission Statement</td>
</tr>
<tr>
<td>September 30</td>
<td>Create Concept Statements for Each Client Issue</td>
</tr>
<tr>
<td>October 7</td>
<td>Develop Performance Requirements</td>
</tr>
<tr>
<td>October 14</td>
<td>Analyze Space Requirements; Develop Essence</td>
</tr>
<tr>
<td>October 21</td>
<td>Analyze Size Relationships</td>
</tr>
<tr>
<td>October 28</td>
<td>Research - Healthcare, Assess Values</td>
</tr>
<tr>
<td>November 4</td>
<td>Analyze Project Constraints</td>
</tr>
<tr>
<td>November 11</td>
<td>Develop Space Matrix and Bubble Diagram</td>
</tr>
<tr>
<td>November 18</td>
<td>Begin Prototypical Sketches and Behavioral Mapping; Develop Essence</td>
</tr>
<tr>
<td>November 25</td>
<td>Thanksgiving</td>
</tr>
<tr>
<td>December 2</td>
<td>Organize Gathered Data and Drawings</td>
</tr>
<tr>
<td>December 9</td>
<td>Present Research and Receive Feedback from the Class</td>
</tr>
<tr>
<td>December 16</td>
<td>Final Week</td>
</tr>
<tr>
<td>December 23</td>
<td>Winter Break</td>
</tr>
<tr>
<td>January 6</td>
<td>Winter Break</td>
</tr>
<tr>
<td>January 13</td>
<td>Research a Project Precedent</td>
</tr>
<tr>
<td>January 20</td>
<td>Identify Budget Issues</td>
</tr>
<tr>
<td>January 27</td>
<td>Develop Sketches and Diagrams</td>
</tr>
<tr>
<td>February 3</td>
<td>Develop Sketches and Diagrams</td>
</tr>
<tr>
<td>February 10</td>
<td>Create Conceptual Models</td>
</tr>
<tr>
<td>February 17</td>
<td>Work on AutoCAD or Revit Plans</td>
</tr>
<tr>
<td>February 24</td>
<td>Work on AutoCAD or Revit Plans; Order Samples</td>
</tr>
<tr>
<td>March 3</td>
<td>Work on AutoCAD or Revit Plans</td>
</tr>
<tr>
<td>March 10</td>
<td>Create Elevations and Sections</td>
</tr>
<tr>
<td>March 17</td>
<td>Create Elevations and Sections; Order Samples</td>
</tr>
<tr>
<td>March 24</td>
<td>Create Details</td>
</tr>
<tr>
<td>March 31</td>
<td>Create Details</td>
</tr>
<tr>
<td>April 7</td>
<td>Create Reflected Ceiling Plan; Order and Organize Samples</td>
</tr>
<tr>
<td>April 14</td>
<td>Create Reflected Ceiling Plan</td>
</tr>
<tr>
<td>April 21</td>
<td>Work on Final Boards</td>
</tr>
<tr>
<td>April 28</td>
<td>Finalize Boards</td>
</tr>
</tbody>
</table>

*Winfield Family Medicine*

*Healthcare for every stage of life.*

Jennifer Sims - Winfield Family Medicine - Project Schedule - FCSMR 390
Preliminary Estimation of Winfield Client Needs

<table>
<thead>
<tr>
<th>SPACES</th>
<th>FURNITURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices</td>
<td>(per office) 1 desk, 3 chairs, storage</td>
</tr>
<tr>
<td>Nurse's Station</td>
<td>storage, 3 work areas, 3 chairs</td>
</tr>
<tr>
<td>Area Behind Nurse's Station</td>
<td>storage, chair, workspace</td>
</tr>
<tr>
<td>Reception Station</td>
<td>storage, 3 chairs, workspace</td>
</tr>
<tr>
<td>Check-in; Check-out Window</td>
<td>storage, 1 chair, work counter (multiple heights)</td>
</tr>
<tr>
<td>Exam Rooms</td>
<td>work area, storage, exam bed, chair, trash bins</td>
</tr>
<tr>
<td>Procedure Rooms</td>
<td>work area, storage, exam bed, chair, trash bins</td>
</tr>
<tr>
<td>Break Room / Conference Room</td>
<td>2 tables, 6 chairs, storage, sink, microwave, counter</td>
</tr>
<tr>
<td>Restrooms</td>
<td>ADA compliant, storage</td>
</tr>
<tr>
<td>Storage / Closets</td>
<td>storage, shelves, bins</td>
</tr>
<tr>
<td>Work Area</td>
<td>workspace, storage, 2 chairs</td>
</tr>
<tr>
<td>Waiting Area</td>
<td>20 chairs, 8 tables, 2 sofas</td>
</tr>
<tr>
<td>Children's Area</td>
<td>2 tables, 4 chairs</td>
</tr>
</tbody>
</table>
Winfield Family Medicine
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Winfield Client Needs Revised

<table>
<thead>
<tr>
<th>USERS</th>
<th>REQUIRED</th>
<th>PREFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>tinted windows, carpet in offices, storage units in each office</td>
<td>offices with a window, ample fluorescent lighting, earth toned finishes, exam rooms separated according to doctor</td>
</tr>
<tr>
<td>Nurses</td>
<td>centrally located nurse’s station, ample walking space between desks and work stations</td>
<td>consultation room, earth toned finishes, nurse’s station visible to reception station</td>
</tr>
<tr>
<td>Receptionists</td>
<td>small windows between the receptionist area and waiting room</td>
<td>private room for answering phones, earth toned finishes and warm colors</td>
</tr>
<tr>
<td>Patients</td>
<td>natural light in waiting area, comfortable seating, children play area</td>
<td>earth toned finishes and warm colors, easy exits to and from exam rooms</td>
</tr>
<tr>
<td>Maintenance Staff</td>
<td>hospital grade flooring and wall covering, storage rooms, closets</td>
<td>durable finishes and furnishings, easy access into all areas</td>
</tr>
</tbody>
</table>
### Spaces

<table>
<thead>
<tr>
<th>Description</th>
<th>Furniture</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices (3) (per office)</td>
<td>1 desk, 1 executive task chair, 2 guest chairs, storage</td>
<td>computers, 'hard tools,' scopes, phones, charts, printers</td>
</tr>
<tr>
<td>Nurse's Station</td>
<td>storage, 3 work areas, 3 chairs</td>
<td>phone triage, charts, computers, printers, phones, blood pressure cuffs</td>
</tr>
<tr>
<td>Area Behind Nurse's Station</td>
<td>storage, chair, workspace, sink</td>
<td>medical refills, testing kits, refrigerator for medicine and shot storage, otoscope</td>
</tr>
<tr>
<td>Nurse / Patient Consultation Area</td>
<td>1 desk, 1 executive task chair, 2 guest chairs, storage</td>
<td>computers, phones, printers</td>
</tr>
<tr>
<td>Reception Station</td>
<td>storage, 3 chairs, workspace</td>
<td>computers, phones, printers, copy machine</td>
</tr>
<tr>
<td>Phone Technician Office</td>
<td>2 desks, 2 chairs, workspace, storage</td>
<td>computers, phones, printers</td>
</tr>
<tr>
<td>Check-in; Check-out Window</td>
<td>storage, 1 chair, work counter (multiple heights)</td>
<td>computer, phone</td>
</tr>
<tr>
<td>Exam Rooms (14)</td>
<td>work area, storage, exam bed, chair, trash bins, sinks</td>
<td>medical supplies and equipment used by doctors and nurses</td>
</tr>
<tr>
<td>Procedure Rooms (2)</td>
<td>work area, storage, exam bed, chair, trash bins, sinks</td>
<td>medical supplies and equipment used by doctors and nurses</td>
</tr>
<tr>
<td>Break Room / Conference Room</td>
<td>2 tables, 6 chairs, storage, sink, counter</td>
<td>microwave, phone, refrigerator</td>
</tr>
<tr>
<td>Restrooms (4)</td>
<td>ADA compliant, storage, sink, toilet</td>
<td>grab bars, changing table, mirror</td>
</tr>
<tr>
<td>Storage / Closets</td>
<td>storage, shelves, bins</td>
<td>medical equipment, tools, medicine refills, cleaning supplies, washer/dryer, vacuum</td>
</tr>
<tr>
<td>Work Area</td>
<td>workspace, storage, 2 chairs</td>
<td>phone, computer, printer</td>
</tr>
<tr>
<td>Waiting Area</td>
<td>20 chairs, 8 tables, 2 sofas</td>
<td>TV, magazines</td>
</tr>
<tr>
<td>Children's Area</td>
<td>2 tables, 4 chairs</td>
<td>paper, drawing utensils</td>
</tr>
</tbody>
</table>
Client Response Summary

The clinic has been open for five months, and the majority of clientele consists of younger families. The staff agrees that a comfortable atmosphere and open interior space relationships are important design factors to consider. The doctors, nurses, and receptionists work anywhere from 8-12 hours a day. Doctors each see about 20-25 patients a day, which means that nurses assist between 25-75 people a day. The nurse's station and break room are used the most often by all staff members, while the waiting area and exam rooms are used most frequently by patients. Privacy is an issue in the clinic when phone conversations are overheard. A nurse said that because of the location of the nurse's station, sometimes the nurses cannot hear the receptionist announce a phone call. The nurses agree that it would be nice to have the nurses' station visible to the reception station in order to prevent communication issues. She also said that the layout of the clinic can be confusing due to the numerous hallways throughout the space. The place can seem to be a maze. The doctors agree that it would be beneficial to have an easier exit for patients moving from the exam rooms to the check-out area. The walking space between some of the desks and workstations could be expanded as well. The nurses would like to add a room for consultation with patients, and the receptionists would like to include an area strictly for staff who answer phones. The nurses said that acoustics could be improved around exam rooms to quiet sounds. The doctors said that although the windows throughout the rooms have been tinted, they should have darkened the tint or have installed blinds on the upper windows. The staff agrees that plenty of storage has been provided throughout the clinic. All staff members and users love the current earth tones used throughout the space and enjoy the contemporary style of the furnishings.
<table>
<thead>
<tr>
<th>ISSUES</th>
<th>ISSUE DEFINITION</th>
<th>GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulation - People</td>
<td>the movement or flow of people, objects, information, and substances</td>
<td>Staff and patients should be visually stimulated by the space design while easily navigating themselves through the clinic.</td>
</tr>
<tr>
<td>- Information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Materials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Privacy - Group</td>
<td>the ability to control the comings and goings of people across one's boundaries, the regulation of interaction</td>
<td>Areas of privacy should be provided for staff members and patients; certain areas need to be isolated from the public.</td>
</tr>
<tr>
<td>- Individual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort - Physical</td>
<td>providing ease and enjoyment for users in a space; physical and psychological considerations</td>
<td>The users of the space should be physically and psychologically comfortable in their environment.</td>
</tr>
<tr>
<td>- Psychological</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legibility - Orientation</td>
<td>quality of the environment as readable</td>
<td>The users of the space should have a sense of direction in the clinic; the rooms throughout the clinic should be arranged in a logical order to prevent confusion.</td>
</tr>
<tr>
<td>- Plan Recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sequence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image - Identity</td>
<td>how a place looks and is interpreted by the observer; the visual impression</td>
<td>The image of the center should make a positive visual impression on the users; a distinct visual identity must be created for the space.</td>
</tr>
<tr>
<td>- Message</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Symbolism</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Issues and Goals

<table>
<thead>
<tr>
<th>Issues</th>
<th>Issue Definition</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience</td>
<td>ease of access to places, materials, and information</td>
<td>The location of areas and materials in the clinic should be organized according to function.</td>
</tr>
<tr>
<td>Safety</td>
<td>protection from harm or danger</td>
<td>Dangerous areas or materials should be isolated from patients and staff members.</td>
</tr>
<tr>
<td>- Accidents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Hazards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durability</td>
<td>the ability to endure the designed use over time</td>
<td>Planned obsolescence, the effects of wear and tear, and aging should be considered in the design solution.</td>
</tr>
<tr>
<td>Mood / Ambience</td>
<td>the emotional sensation in response to a place</td>
<td>The attitudes and emotional responses of the staff and patients should be addressed. The spirit of the clinic should be recognizable as an experience.</td>
</tr>
<tr>
<td>- Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Emotional Response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Spirit of Place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>ability to change easily; finding multiple purposes for each space; changing from one use to the other quickly</td>
<td>Spaces throughout the clinic should be able to serve multiple functions and fulfill the needs of several users at the same time.</td>
</tr>
<tr>
<td>- Adaptability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Choice/ Variety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Multi-use</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Mission Statement

To create an inviting, visually pleasing, work efficient environment that satisfies both the physical and psychological needs of the users by taking issues such as circulation, privacy, comfort, legibility, image, convenience, safety, durability, ambience, and flexibility into consideration.
<table>
<thead>
<tr>
<th>ISSUES</th>
<th>PERFORMANCE REQUIREMENTS</th>
</tr>
</thead>
</table>
| Circulation | • Major traffic paths should accommodate the full range of handicapped users, including those with minor mobility difficulties. (5' turnaround circle in restrooms, 5' hallway width)  
  • Signage should be used to guide users.  
  • Rooms should be arranged in a logical manner according to function.  
  • Major paths between the waiting and exam areas should easily guide users through the space. |
| Privacy   | • The space layout should allow telephone calls to be kept private.  
  • The acoustical properties of the materials used around the clinic should help quiet sounds.  
  • Technology and storage should be provided to ensure that personal information is kept private.  
  • ‘Staff Only’ areas need to be separated from public spaces. |
| Comfort   | • Upon entering the clinic, patients should be greeted by inviting, peaceful surroundings in the waiting area.  
  • Several types of furniture should be available to suit the needs of all users.  
  • Finishes that provide support and comfort should be offered.  
  • Technology, such as TVs, soft music, and creative lighting techniques should increase comfort. |
| Legibility | • The users should be able to navigate throughout the space layout easily and quickly.  
  • The areas used most often by each type of employee - doctors, nurses, receptionists, and maintenance staff - should be grouped together for user convenience.  
  • Patients should be able to find their way from the waiting room to the exam rooms easily. |
| Image     | • The unique space layout should add interest to the overall design.  
  • The furnishings and finishes should be colorful, contemporary, and visually pleasing.  
  • Artwork should be included in some areas of the clinic.  
  • A variety of luminaires that produce soft, ambient lighting should be used in the waiting area to greet the patients upon arrival. |
<table>
<thead>
<tr>
<th>ISSUES</th>
<th>PERFORMANCE REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Convenience</strong></td>
<td>• Each work area should promote the easy and organized flow of the research procedures conducted within it.</td>
</tr>
<tr>
<td></td>
<td>• The reception, waiting area, and phone-answering room should be near each other. The nurse's station, nurse/patient consultation room, and exam rooms should be in close proximity.</td>
</tr>
<tr>
<td></td>
<td>• Areas used by all employees and patients should be centrally located.</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
<td>• Dirty linens containing harmful bacteria should be able to be cleaned efficiently.</td>
</tr>
<tr>
<td></td>
<td>• Dangerous materials used in exam or procedure rooms need be properly disposed of.</td>
</tr>
<tr>
<td></td>
<td>• Proper cleaning supplies need to be provided to ensure the health and safety of users.</td>
</tr>
<tr>
<td></td>
<td>• Medical equipment, including medicines, should be stored away to prevent accidents, especially with children present in the clinic.</td>
</tr>
<tr>
<td><strong>Durability</strong></td>
<td>• Durable finishes and furnishings should be chosen.</td>
</tr>
<tr>
<td></td>
<td>• Finishes and equipment that meet hospital grade requirements should be utilized.</td>
</tr>
<tr>
<td></td>
<td>• Finishes and materials should be appropriate for the use of children.</td>
</tr>
<tr>
<td><strong>Mood / Ambience</strong></td>
<td>• Upon entering the clinic, patients should be greeted by inviting, peaceful surroundings in the waiting area.</td>
</tr>
<tr>
<td></td>
<td>• The spacial relations in the clinic should promote a relaxing atmosphere.</td>
</tr>
<tr>
<td></td>
<td>• Ambient lighting techniques and warm, inviting colors should be used.</td>
</tr>
<tr>
<td></td>
<td>• Soft music and creative artwork should increase the comfort levels of patients and employees.</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td>• The break room should also be able to function as a conference or meeting room.</td>
</tr>
<tr>
<td></td>
<td>• The work area should accommodate the needs of all users - doctors, nurses, and receptionists.</td>
</tr>
<tr>
<td></td>
<td>• Work spaces should promote employee interaction while maintaining individual control of unwanted interruptions.</td>
</tr>
</tbody>
</table>
Flexibility is an important issue while designing a medical facility. Work flow must be improved in order to save time and energy. Patient participation in the treatment and healing process is key. A sense of control and comfort within the environment will promote the healing process. Within the patient areas, patient and family empowerment is provided with control over noise and distractions, lighting, thermal comfort, and social interactions. Places of retreat provide positive distractions and a sense of choice. New technology is changing and improving health care design.

"Furniture"

Seating must be durable. The requirement list in a health care clinic usually contains the following ten items: replaceable components, recoverable seats, slightly higher seat heights, slightly firmer seat, shortened seat depths, open area under the front of the seat, arms with grips that extend beyond the front of the seat, cushions covered with an antimicrobial moisture barrier or built with a closed cell foam, seat cushions built with a combination of springs and/or dense foam, and open spaces between the seat and the back. Several furniture manufacturers are listed along with the characteristics of each. Kusch + Co. is a 55 year old company whose products are created for three groups of people: patients, staff, and visitors. The wood used is primarily beech. Health Design is a division of Brayton International (a Steelcase Design Partnership Company) that strives to blend design with functional requirements. Children's Furniture Company creates products that have nontoxic finishes, and the company's aniline-dyed colors are not a stain or paint, so the wood grain is visible through the color. The company's mission is to enrich and enhance the lives of children. Nemschoff is a furniture manufacturer that focuses on patient comfort and durable wood finishes. The company developed a finished lacquer that withstands medical spills and bleach. Nemschoff chairs are designed for specific end users. Examples include the Sleep Over chair, Trendelenburg chair, Pristo Treatment chairs, and Kids Kare. Milcare Inc., A Herman Miller Company designs storage systems and nurse stations. Steelcase Inc., focuses on “the business of furniture within the healthcare facility.”
"Creating Nontoxic Health-Enhancing Environments"

Most people spend over 80% of their time indoors. Environmentally safe and nontoxic interior design is important. Environmental methodologies include sustainability, embodied energy, baubiologie, recycled content, and chemical sensitivities. The life cycle assessment steps are: acquisition of raw materials, primary distribution process, refining/purifying/processing, manufacturing/product fabrication/transportation, design specification, construction/installation phase, useful life of the product, and the reuse/removal/salvage/landfill/recycle phase. Several types of materials are discussed. The advantages and disadvantages of material and finish properties are indicated by the authors.

"The Four Levels of Evidence-Based Practice"

Evidence-based health care designs are used to create environments that are therapeutic, supportive of family involvement, efficient for staff performance, and restorative for workers under stress. An evidence-based interior designer makes decisions based on the best information available from research and project evaluations. Health care design should result in demonstrated improvements in the organization's clinical outcomes, economic performance, productivity, customer satisfaction, and cultural measures. Good health care projects feature exceptional architecture that serves their purpose well, and it contains the magic of the human spirit, infused with the sacred, the inspired, the grand, the intimate, the full richness of life. Four levels that can be used as a means to identify commitments and practices as stages are: interpret the evidence, hypothesize and measure, share results publicly, meet academic standards. Architects have a moral obligation to use the best and most reliable information available in the design of healthcare facilities. Evidence-based architecture blends the designer's experience, understanding of classic design principles, and creative inspiration with design decisions based on insightful interpretation of a broad range of research results.

"Evidence-Based Design Recommendations for Nursing Stations"

Nursing staff satisfaction is linked to the quality of patient care and satisfaction. Nurses need to be supported with a workspace that is conducive to their functional work requirements and their psychological needs and health. Six nursing units in three U.S. hospitals participated in a study analyzing the effects of
the location and set up of a nursing station on the users. Several recommendations are provided by Knoll regarding a nurse station set up. Position the reception area to provide first contact with family and to assist visitors, use a central nursing station with two to four small decentralized work stations, semi-enclose the nursing station areas, and locate an enclosed formal meeting space within the centralized nursing station.

"The Marriage of Form and Function: Creating a Healing Environment"

The new hospital movement recognizes the design elements that help reduce stress and promote safety and healing, while considering ecological issues. Elements crucial to creating a healing environment are as follows: bring the outside in, make patient privacy a must, provide hotel-like amenities, create soothing aesthetics, focus on relationship centered care, make rooms functional, keep staff morale in mind, remember the family, and consider safety issues. These elements were derived from three main categories: patient safety goals, enhanced patient/family centered care operations, and enhanced operational effectiveness and efficiencies. Clarian West Medical Center in Avon Indiana and Advocate Lutheran General Hospital in Park Ridge Illinois were the two institutions provided as examples of health care facilities that utilized these elements.

"The Architecture of Healing"

The Green Guide for Health Care is a voluntary, self-certifying system for designing high performance healing environments. Green Guide is modeled with permission of the U.S. Green Building Council’s Leadership in Energy and Environmental Design Green Building Rating System. The best practices in the Green Guide include: incorporating healing design elements such as daylight and views, using innovative technologies to reduce energy and water use, reducing hazardous chemicals, and implementing green operations.

"New Markets, New Design Principles"

The chapter outlines the areas in which new design trends are aimed at addressing the emerging shape of the market for health care. Flexibility issues are discussed. Socially responsible design has five characteristics: it is based on an explicitly understood shared value system, it is based on information, it is the product of a participatory design process, it incorporates periodic systematic design review, and it incorporates periodic evaluation of the finished product. Principles of dynamic design, patient-centered design, and vertical integration design are discussed. Several outlines are provided that suggest how facilities, equipment, and staff may be effectively shared across what once were the barriers of traditional departments. Physical comfort, social contact, symbolic meaning, and wayfinding are the four basic design
needs that all hospital patients share. Two of the most popular models for new paradigm hospitals and health care facilities are the retail and the hotel residential models. Design strategies and models must keep the community of health care providers, patients, and neighbors in mind.

"Principles: New Paradigms for a New Century"

The transition from a provider-centered to a consumer-centered health care system is shaping the emerging social and technological climate of health care design. The major transitions in health care include: youth to maturity, remediation to health, specialization to wholeness, reaction to anticipation, exclusivity to system, sickness to wellness, fragmentation to integration, hierachial to functional, passive participation to active participation, institutional to noninstitutional, and institutional dependency to self-care. Practical detail strategies for accomodating and anticipating these shifts are considered in the chapter. The concept of synergenial design is described as a design approach that acknowledges both the synergetic nature of the problem solving process and the congenial, user sensitive attributes of a successfully designed solution. Synergenial buildings are functional environments that evoke positive responses from their users on physical, intellectual, and emotional levels. "Synergeniality" can be evaluated in terms of "the five P's" which are people, purpose, price, place, and perspective.

"Women's Health Facilities and Pediatrics"

The environment should address physical, social, developmental, and emotional needs. Family needs must be taken into account. At the very least, a playroom should be part of the family accommodations. Key design goals include: interaction with peers (increases child morale), territory divisions (increases sense of safety and refuge), independence (freedom of movement and sense of competency), access to outdoors, fantasy and stimulation of the imagination (incorporate elements of fun to entertain the child's attention).

"Designing for the Senses"

Three major hospital sensors are loss of control, loss of privacy, and loss of contact. Design strategies indicate that facilities should be designed to support patients coping with stress, facilities should foster a sense of control, access to social support and positive distractions should be provided to promote wellness, and natural elements should be included to reduce stress. Design of the health care environment can positively influence the desired outcomes, all as a result of perceiving the environment through our senses. It can enhance desired therapeutic outcomes, improve staff satisfaction and performance, increase visitor and family participation, and encourage additional community support.
“Feng Shui Elements”

Feng shui is based on the belief that everything that exists in the environment has movement and energy. The energy that each object emits is known as 'chi.' Chi is composed of two parts. The first part is comprised of the five elements which are fire, wood, water, earth, and metal. The earth element represents permanence, stability, and the home. The earth element is solid, giving a sense of security and support. It strengthens feelings of safety and adds a sense of comfort from within. The colors of earth are brown, beige, sierra, and other muted colors. The second part is the concept of yin and yang. Yin is the feminine, passive energy force and yang is the masculine, active force of energy. Although the forces are strongly opposed to each other, they are also strongly connected. Both energies are essential for life. When the elements are in disharmony with each other, they clash resulting in problems at work and in personal relationships. Practitioners of feng shui strive to live in harmony with nature, to clear their environment of negative chi, and to facilitate the flow of positive chi.

“Philosophy and Divination”

Feng shui is a product of Chinese philosophy and religion. The tie between humans and the universe evolved from the concept of Tao. Tao is the way of nature, evoking the natural rhythms and balance of the universe. Yin and yang are complementary opposites. They are interdependent and exist within each other. Yin and yang should exist in a dynamic state of balance. The most important concept in achieving good feng shui is 'chi,' which translates as 'breath.' Chi is a life force or cosmic energy. The energy links the mind to the heart, to the body, to the surrounding world. The religious and philosophical roots of feng shui are intertwined. Feng shui combined deep Taoist philosophy with a combination of folk cures, mysticism, early science, and Buddhism. The union resulted in a practical and intuitive approach to the environment.

“Modern Architecture and Feng Shui”

Today, good feng shui often coincides with good city planning and land use. Green spaces help to create good chi, benefiting residences. Several examples are listed in this chapter explaining ways to incorporate aspects of feng shui. Building shapes and colors that have either positive or negative effects on chi are discussed.
“Feng Shui for Business Interiors”

While profit is generally the primary motive for using feng shui in Asia, it is used for a number of other reasons in the West - to energize an office or business, to take stress out of a building environment, to improve the productivity, to encourage employee harmony, and to create a comfortable, stimulating space in which to work. Entrances should be comfortable, large and welcoming. The lobby should be bright and open. There should be a sense of arrival, clearly directing employee’s and visitor’s eyes and bodies toward the reception area. Interior fountains and plants improve feng shui and profits. Water symbolizes money and brings life force to an interior. In feng shui, corners that jut into a room have sharp edges that can threaten the occupants. Long, straight corridors are also problematic. In an office, the desk should be positioned in the opposite corner of the entrance. The person will feel in command of the environment, be able to take on responsibility, and be less likely to be startled and distracted when a visitor drops by. Within the most corporate of interiors exists the ancient feng shui theme of shapes and symbolism. Color can improve chances of success and increase mental and physical activity. Different colors symbolize various meanings. Healthcare facilities and healing centers should be designed to put patients at ease. The facility should be accented with either the five element colors (white, blue, green, black, red, and yellow/brown) or a whole spectrum of colors. Specific colors can reinforce the healing process.

“Taoism - Ageless Wisdom for a Modern World”

The central organizing principle of Taoism is the interconnectedness of all life with its flows of continuous change. Yin-yang describes the underlying unity of life through the interplay of opposites. Taoists write that all things and all processes contain two primal energies or forces. These two basic aspects are often described as masculine and feminine, light and dark, or negative and positive. From a Taoist point of view these two polar opposites are not seen as distinctly separate or in conflict, but as interdependent and complementary. One creates the other. They are perceived in their relatedness, how one grows out of the other. Nature’s tendency is to move toward a state of harmony and balance. The idea of change leading to harmonious balance underlies another aspect of yin-yang. Processes are constantly changing, forming cyclical patterns. They expand and contract. The essential message of Taoism is that life constitutes an organic, interconnected whole which undergoes constant transformation. Gaining an awareness of life’s essential unity and learning to cooperate with its natural flow and order enables people to attain a state of being that is both free and independent, while at the same time fully connected to the flow of the universe. Our conventional Western outlook is based on the assumption that humans are all separate entities,
existing apart from each other and from the surrounding environment. ‘Te,’ on the other hand, implies a trust and belief in one’s own inner nature and in the interconnectedness of all life.

“Kisho Kurokawa Metabolism and Symbiosis”

The book describes, the life, work, and guiding principles of Kisho Kurokawa’s architecture. Kurokawa was born on April 8, 1934 in Nagoya. Not only did he found his own architectural practice, but he was involved in town-planning and product design as well. His architecture symbiotically links traditional Asian ideas and innovative Western approaches. Buddhism influenced his philosophical manifesto. In 1960, he founded the Metabolism movement. He deals with the phenomenon of metamorphosis, the process of growth and change in a dynamic balance, in his work.

“The Architecture of Arata Isozaki”

Isozaki is the leading exponent in Japan of the ‘Post Modern’ quasi-mannerist aesthetic. He was affected by American and European developments and produced a Japanese interpretation of the new style. In the main, Isozaki’s career coincides with the decline of Functionalism as the leading dogma of the modern movement and its replacement by the new aesthetics of Mannerism. The essence of Mannerism is found in the tension between, and the union of irreconcilable opposites. His aestheticism and interest in Western architecture reflect the increasing Westernization of Japan in the 1960s and 1970s and may be seen as an attempt to assimilate the renewed invasion of Western culture. An important difference between American and European quasi-mannerist architecture and Japanese work centers on the spatial quality of ‘ emptiness.’ Isozaki’s architecture moves between the two extremes of order and freedom which simultaneously attract, but can never be sustained for long. Because Isozaki continually seeks to escape from the discipline of Japanese society, the importance of individuality and freedom acquires an exaggerated importance; discipline and formal order survive.

“Arata Isozaki”

Isozaki believes that rather than being systematic, change is dramatic and destructive, lying outside human control. He refers to the Buddhist priest and scholar Vasubanhu, who clearly defines time as
In his architecture, he combines the Judaic idea of termination and the Buddhist concept of time as reduced to the instant. When a building is complete, he believes it ceases to progress toward growth and instead begins moving in the direction of ruin. His doctrine is closer to the Buddhist doctrine of the impertinence of all things. Isozaki felt that there was no other way to proceed in design than to trace every form, and concept back to its origins. Isozaki designed the Museum of Contemporary Art in Los Angeles. Since the city is located at a point of confluence between the cultures of the East and the West, he provided a methodical design interpretation of both cultures using the Golden Section, a Western concept, and yin-yang philosophy, an Eastern concept.

“The Architecture of Fumihiko Maki”

The framework of Maki’s contextualism is established by the notion of the pattern of metabolic change, and the reciprocal, evolving nature of individual / collective partnerships. For Maki, the experience of human beings in a space is his most important design consideration with the actual space relationships and architecture being secondary, which is the concern of Japanese traditional buildings. Due to his persistence of Japanese culture, Maki’s work retains a sense of local place and tradition, despite the universal and contemporary nature of the materials he uses. Japanese understanding of life and space has always involved the ever changing, with an acceptance of uncertainty and unceasing rhythm in both the material and immaterial. Maki’s classic buildings have an all-pervading sense of resolution arising from an overall geometric order. He has said that the role of architecture is always “the integration and formation of order.” Modernism and traditional Japanese architecture influenced Fumihiko Maki, but he continually criticised Modernism, looking for its true form, which involves flexibility with respect to function, humility towards the user, and continuity with the surrounding environment. Maki helped establish the Metabolist Group.
1. Health Directions, Same Day Surgery - Chicago, IL

Light is bounced off of the high ceilings and through the glass blocks. Unique dropped ceilings at several heights composed of different materials create a warm, friendly atmosphere in the space.

2. Swedish Covenant Hospital - Chicago, Illinois

An upscale, comfortable and contemporary home-like atmosphere is created through the use of rich woods, several types of sophisticated ambient lighting, and attractive contemporary furniture,

3. New Main Hospital, Santa Clara Valley Medical Center - San Jose, California

An interesting focal point is created in the pediatric ceiling by the shape of the skylight. The design is mimicked on the floor of the room as well.

4. Roxana Cannon Arsh Surgicenter Christiana Care Health System - Wilmington, Delaware

This healing environment features contemporary furnishings, indirect natural light, and a soothing color scheme. The mural creates a focal point in the reception area.
5. Clarian Health Partners, Inc. Cardiac Comprehensive Critical Care - Indianapolis, IN

The curved dropped ceilings and large columns add character to the space. The ceiling shapes mirror the curves on the ground. Glass walls allow the space layout to seem open while providing privacy.

6. Baptist Memorial Hospital - Collierville, TN

The central court provides an area to pause and relax. The interior architecture is stimulating. The natural and artificial lighting techniques promote a peaceful atmosphere. The outside is brought in through the water feature and plants.

7. The Bristol-Myers Squibb Children's Hospital - New Brunswick, NJ

The glass walls of the children's room allows parents and staff to keep an eye on children from a distance. The ceiling treatments, finishes, and natural light promote the exciting, interactive environment.

8. Fayette Community Hospital - Fayetteville, GA

An attractive environment is first established through the hotel-like entrance where signage and a soothing fountain lead to the reception desk, lounge seating, and medical facilities. The drop ceiling and accent lighting attracts attention upon entrance.
9. Wellness Center - Trexlertown, PA
The changes in ceiling height, cove lighting, and suspended ceiling over the reception desk draw attention to the area. The space is well-lit by a variety of luminaires.

10. Valley Children’s Medical Center - Madera, CA
The colorful, playful, earthy interiors promote healing by providing a mentally stimulating environment for children. The columns in the space are addressed in a unique, creative fashion, allowing visitors to interact with the design.

11. Alaska Native Medical Center - Anchorage, AK
The ceiling, structural, and lighting design emphasize the reception desk as a major focal point. The front of the reception desk has been intricately detailed.

12. Dr. Bressler's Office - Houston, TX
The multi-level ceiling, residential style furniture, understated color palette, artwork, and noninstitutional accessories create an unblemished visual image.
13. La Jolla IV - La Jolla, CA
The ceiling and flooring mirror each other. Accent lighting is used to highlight certain areas. Alcoves in the wall serve as display areas for artwork.

14. Dairyland Healthcare - Glenwood, MN
The various shapes and angles of the high ceiling create interesting spatial relationships. Large windows allow natural light filters throughout the space.

15. Pinedale Clinic - Pinedale, WY
Bright colors draw attention to the reception desk. The cross beams in the ceiling provide a sense of support in relation to the actual ceiling height. Natural light is filtered throughout the space.

16. The ceiling design pauses the visual path of the eye along the long corridors. The unique changes in ceiling heights, materials, and colors contribute to the contemporary style of the hospital.
A variation in lighting techniques produces an ambient atmosphere in the space. Cove lighting highlights the areas above the reception desk and display case. Pendant lights create soft lighting above lounge seating.

A window seat is provided for visitors. The space is well-lit by natural and artificial lighting. Storage behind and around the exam bed can serve multiple functions. The room is brightly colored and contemporary in style.

The bright colors and partition walls with cut-out geometric shapes create an interactive atmosphere for children. The space is naturally lit from large clerestory windows above.

Sparkling ceiling lights guide visitors throughout the clinic. Curvilinear, dropped ceilings and softly lit furnishings promote a peaceful atmosphere, reducing stress. Flooring inlays add a unique characteristic to the space.
Upon entering the clinic, the reception desk is located to the immediate left. A few chairs are to the right of the desk. Winfield clients would want a larger reception desk, and would like the main waiting area to be located around the reception desk. Also, they would not approve of the reception desk finishes.

Past the reception desk on the left, the hallway comes to a 'T' and the users turn left or right. This picture was taken from the end of the hallway on the right. The circulation plan is simple, but the rooms are all located separately from each other, creating flexibility and legibility issues.

Beyond the reception station, the waiting area, patient rooms, physician and nurse stations are located in a room down the hallway to the left. Winfield clients would like the reception area to be located near the waiting room. The users want patient rooms divided according to doctors. The ceiling treatment needs more attention.

Only one type of seating is provided, which may not comfortably accommodate all users. A small area is provided for children's toys in the corner of the room, and Winfield clients want to include an entire children's playroom in the plans. The finishes are all white and bland. Winfield clients want earth-toned finishes.
Knox Family Health Care - Value Assessment

The nurse's station is small, providing little storage space. Privacy issues are not addressed, and phone conversations could be overheard. The nurse's station at Winfield Medical must accommodate at least two nurses, and the nurses are concerned about the privacy around the workstation. They want a central location in relation to all other work areas in the clinic.

Beyond the reception desk, the lab is located down the hallway on the right. The nurses and doctors at Winfield Medical would like to have the lab located near the nurse's station and work station. The clients require additional, different types of storage systems than are depicted in this picture as well.

The physician's workstation is small and does not provide adequate storage space. Winfield clients require more work space. The works pace should be adjacent to other work areas and the nurse's station because several types of users will utilize this space.

The lunch/break room is located down the hallway to the right. Winfield clients would prefer more contemporary, brighter finishes. They enjoy the balcony located in the lunch room. At Winfield, the lunch room also serves as a conference room, so several types of furniture and storage systems will be required.
Knox Family Health Care - Value Assessment

The exam rooms are small and do not create an inviting, calming atmosphere for the patient. A limited amount of storage space is available. Winfield clients would prefer a more comfortable room layout. They would also like to incorporate lively finishes and interesting artwork as well.

A storage system is desperately needed for these files. Perhaps the files could be reorganized electronically. The privacy of patients is in jeopardy. At Winfield, several types of storage areas are needed for private information. These areas should be restricted from public access.

The business office is unorganized and does not provide any privacy means between the three workstations located within the space. The furnishings do not match and need to be updated. Storage systems are needed. Winfield clients require the office spaces to be well organized with plenty of storage space.
I chose to observe and map the behaviors of the users in the waiting room vicinity of Knox Family Health Care. The space is divided into a physician area, procedure room, nurse's station, waiting area, and five exam rooms. The users of this space included a nurse, doctor, and patients. On November 5th and November 12th, I watched the activities of the users for about 45 minute intervals each day from 4:00 - 4:45pm.

November 5, 2009 Knox Family Health Care 4:00 to 4:45pm

Knox Family Health Care
Areas Observed While Sitting in the Waiting Room

<table>
<thead>
<tr>
<th>Area</th>
<th>Waiting Area</th>
<th>Nurse's Work Area</th>
<th>Physician Work Room</th>
<th>Exam Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>patients</td>
<td>nurse, doctor</td>
<td>doctor</td>
<td>doctor, nurse, patients</td>
</tr>
<tr>
<td>Number of Users</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Time Users Spend in the Space</td>
<td>about 15 min.</td>
<td>about 10 min.</td>
<td>about 10 min.</td>
<td>doctors: about 10 mins. nurses: about 5 mins. patients: about 15 mins.</td>
</tr>
<tr>
<td>User Activities</td>
<td>watch tv, read magazines, sit in chairs, children play with toys, make phone calls</td>
<td>paper work at desk, charts, notifies patients, uses computer</td>
<td>wash hands before assisting each patient, retrieves tools, uses computer, looks over paper work</td>
<td>(not allowed access) nurses and doctors check health of each patient; exam beds, sink, counter, chairs, and storage are located in exam rooms</td>
</tr>
</tbody>
</table>
Winfield Family Medicine
Healthcare for every stage of life.

Behavioral Mapping

Nursing Station

Waiting Area

Exam Room

Increased usage of each space

Doctors

Patients

November 5, 2009 4:00-4:45 pm.
Behavioral Mapping

I chose to observe and map the behaviors of the users in the waiting room vicinity of Knox Family Health Care. The space is divided into a physician area, procedure room, nurse’s station, waiting area, and five exam rooms. The users of this space included a nurse, doctor, and patients. On November 5th and November 12th, I watched the activities of the users for about 45 minute intervals each day from 4:00 - 4:45pm.

November 12, 2009 Knox Family Health Care 4:00 to 4:45pm

Knox Family Health Care
Areas Observed While Sitting in the Waiting Room

<table>
<thead>
<tr>
<th></th>
<th>Waiting Area</th>
<th>Nurse’s Work Area</th>
<th>Physician Work Room</th>
<th>Exam Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>patients</td>
<td>nurse, doctor</td>
<td>doctor</td>
<td>doctor, nurse, patients</td>
</tr>
<tr>
<td>Number of Users</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Time Users Spend in the Space</td>
<td>about 15 min.</td>
<td>about 10 min.</td>
<td>about 10 min.</td>
<td>doctors: about 10 mins. nurses: about 5 mins. patients: about 15 mins.</td>
</tr>
<tr>
<td>User Activities</td>
<td>watch tv, read magazines, sit in chairs, children play with toys, make phone calls</td>
<td>paper work at desk, charts, notifies patients, uses computer, answers phone</td>
<td>wash hands before assisting each patient, retrieves tools, uses computer, looks over paper work</td>
<td>(not allowed access) nurses and doctors check health of each patient; exam beds, sink, counter, chairs, and storage are located in exam rooms</td>
</tr>
</tbody>
</table>
Behavioral Mapping

Winfield Family Medicine
Healthcare for every stage of life.

Jennifer Sims - Winfield Family Medicine - Behavioral Mapping - FCSMR 390

November 12, 2009  4:00-4:45 pm.
### Criteria Matrix

<table>
<thead>
<tr>
<th>ROOM NAME</th>
<th>SQUARE FOOTAGE (to room #’s)</th>
<th>PUBLIC ACCESS (yes or no)</th>
<th>DAYLIGHT VIEW (yes or no)</th>
<th>NEEDS PRIVACY (yes or no)</th>
<th>PLUMBING (yes or no)</th>
<th>SPECIAL FURNISHINGS &amp; EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reception (including check-in and check-out)</td>
<td>275 sq. ft.</td>
<td>yes</td>
<td>yes, if possible</td>
<td>yes</td>
<td>no</td>
<td>storage, 3 chairs, workspace, computers, phones, printers, copy machine</td>
</tr>
<tr>
<td>2. Waiting</td>
<td>950 sq. ft.</td>
<td>yes</td>
<td>yes, if possible</td>
<td>no</td>
<td>no</td>
<td>20 chairs, 8 tables, 2 sofas, TV, magazines</td>
</tr>
<tr>
<td>3. Children's Playroom</td>
<td>170 sq. ft.</td>
<td>yes</td>
<td>yes, if possible</td>
<td>no</td>
<td>no</td>
<td>2 tables, 4 chairs, paper, drawing utensils</td>
</tr>
<tr>
<td>4. Phone Technician Office</td>
<td>100 sq. ft.</td>
<td>no</td>
<td>yes, if possible</td>
<td>yes</td>
<td>no</td>
<td>desks, chairs, computers, workspace, storage, phones, printers</td>
</tr>
<tr>
<td>5. Exam Rooms</td>
<td>92 sq. ft. (each 14)</td>
<td>yes</td>
<td>yes, if possible</td>
<td>yes</td>
<td>yes</td>
<td>work area, sink, storage, exam bed, chair, trash bins, medical supplies and equipment used by doctors and nurses</td>
</tr>
<tr>
<td>6. Procedure Rooms</td>
<td>150 sq. ft. (each 2)</td>
<td>yes</td>
<td>yes, if possible</td>
<td>yes</td>
<td>yes</td>
<td>work area, sink, storage, exam bed, chair, trash bins, medical supplies and equipment</td>
</tr>
</tbody>
</table>
### Criteria Matrix

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Area (sq ft)</th>
<th>Rooms Available</th>
<th>Needs</th>
<th>Has</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break Room/Conference Room</td>
<td>315</td>
<td>1 (near balcony)</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>yes, if possible</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>tables, chairs, storage, sink, counter, phone, microwave, refrigerator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse’s Station Area</td>
<td>90</td>
<td>5, 6, 9, 10, 11, 12</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>yes, if possible</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>storage, work areas, chairs phone triage, charts, printers, computers, phones, blood pressure cuffs</td>
<td></td>
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</tr>
<tr>
<td>Work Areas</td>
<td>70</td>
<td>1, 8, 9, 10, 11</td>
<td>no</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td></td>
<td>(2)</td>
<td></td>
<td>yes, if possible</td>
<td>no</td>
<td>no</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>workspace, storage, 2 chairs, phone, printer, computer</td>
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<tr>
<td>Nurse/Patient Consultation Area</td>
<td>100</td>
<td>5, 6, 8, 9, 10, 11</td>
<td>no</td>
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<td></td>
<td></td>
<td></td>
<td>yes, if possible</td>
<td>yes</td>
<td>no</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>desk, executive task chair, guest chairs, storage, computers, phones, printers</td>
<td></td>
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</tr>
<tr>
<td>Nurse Preparation Area</td>
<td>85</td>
<td>5, 6, 8, 9, 10, 11</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
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<tr>
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<td></td>
<td>yes, if possible</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Chairs, counter, sink, charts, storage, chair, workspace medical refills, testing kits, refrigerator for medicine and shot storage, otoscope</td>
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### Criteria Matrix

<p>| | | | | | | | | | | | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>12. Offices</td>
<td>150 sq. ft. each (3)</td>
<td>7, 8, 14</td>
<td>no</td>
<td>yes, if possible</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>13. Restrooms</td>
<td>60 sq. ft. (4)</td>
<td>1, 2, 5, 6, 7, 8, 13</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
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<tr>
<td>14. Mechanical Rooms</td>
<td>73 sq. ft. each (2)</td>
<td>18</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
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<td>15. Sample Closets</td>
<td>6 sq. ft. each (4)</td>
<td>5, 6, 8, 9, 11, 12</td>
<td>no</td>
<td>no</td>
<td>yes</td>
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<tr>
<td>16. Closets</td>
<td>12 sq. ft. (4)</td>
<td>5, 6, 8, 9, 11, 12</td>
<td>no</td>
<td>no</td>
<td>yes</td>
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<tr>
<td>17. Storage Rooms</td>
<td>40 sq. ft. (3)</td>
<td>5, 6, 8, 9, 11, 12</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
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<tr>
<td>18. Laundry Room</td>
<td>25 sq. ft.</td>
<td>5, 6, 8, 9, 11, 12</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td></td>
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<tr>
<td><strong>SQUARE FOOTAGE TOTALS</strong></td>
<td><strong>Sub Total:</strong> 4886 s. f. <strong>Circulation:</strong> 1,217 s. f. <strong>Total:</strong> 6,083 s. f.</td>
<td></td>
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</tbody>
</table>

- **Desk, executive task chair, guest chairs, storage, computers, 'hard tools,' scopes, phones, charts, printers**
- **ADA compliant, storage, grab bars, toilet, changing table, mirror, sink**
- **Mechanical equipment**
- **Storage, shelves, bins, medical equipment, tools, medicine refills**
- **Storage, shelves, vacuum, bins cleaning supplies**
- **Storage, shelves, bins, medical equipment, tools, cleaning supplies**
- **Storage, shelves, bins, washer/dryer**
Winfield Family Medicine
Healthcare for every stage of life.

Prototypical Sketches

RECEPTION AREA
CLOSET
SAMPLE CLOSET
LAUNDRY ROOM
STORAGE ROOM
CHILDREN'S PLAY ROOM

Jennifer Sims - Winfield Family Medicine - Prototypical Sketches - FCSMR 390
Winfield Family Medicine
Healthcare for every stage of life.

Prototypical Sketches

Waiting Area
Winfield Family Medicine
Healthcare for every stage of life.

Prototypical Sketches

ADA RESTROOM

MECHANICAL ROOM

PATIENT CONSULTATION ROOM

OFFICE

Jennifer Sims - Winfield Family Medicine - Prototypical Sketches - FCSMR 390
WORKS CITED


WORKS CITED


Questionnaire and Responses

Doctors and Nurse Practitioner:

General Inquiries

1. How long has the clinic been operating at this location in Crown Point?
   Answer: 5 months

2. Have there been any structural problems at the clinic?
   Answer: No

3. What are the demographics?
   Answer: mostly young females

4. What do you like most about the space?
   Answer: plenty of space, comfortable atmosphere for patients

5. If you could change anything about the space, what would it be and why?
   Answer: 1) easier exit for patients 2) air control on NE corner (temperature)

6. During an average day, how long do you work in the office?
   Answer: 8 hours

7. About how many patients do you see per day?
   Answer: about 20-25 patients

8. When you aren't in your office or an exam room, which part of the clinic do you use the most often?
   Answer: 1) nurses station for charting 2) break area (lunch room)

9. Do you use the lunch room and balcony?
   Answer: yes

Layout Issues

10. Are you satisfied with the size and layout of your office? If not, please explain.
    Answer: yes

11. Have you encountered any circulation issues throughout the clinic? If so, please explain.
    Answer: NE corner exam room temp controls,
Dr. office temp. increases with morning sun

12. Do you like the fact that each doctor and nurse practitioner has his/her own set of exam rooms down a designated hallway? If not, please explain why.

Color and Light

13. If you could choose, what color schemes and finishes would you use throughout the space? Answer: love current finishes

14. What color schemes and finishes would you use in your own personal office? Answer: earth tones

15. Are there any lighting issues you have notices throughout the space, especially in exam rooms, that could be improved? If so, please explain.
Answer: The windows were tinted, we possibly should have increased the tint or installed blinds on upper part of windows.

Equipment and Storage

16. Is there any special equipment needed in your office? Answer: none given

17. What type of equipment do you use the most often in the clinic? Answer: hard tools (scopes)

18. Do you have enough storage space in your office and around the entire clinic? Answer: yes, plenty

Nurses:

19. How many nurses are there on staff? Answer: 5 nurses

20. About how many patients do you see per day? Answer: about 20 patients per doctor
21. During an average work day, how long do you work in the clinic?  
Answer: about 8-12 hours

22. When you aren't at the nurse's station, or in an exam room, which part of the clinic do you use the most?  
Answer: the lab

23. In the more open areas of the clinic, is privacy ever an issue? If so, please explain.  
Answer: overheard phone conversations

24. What types of activities take place behind the nurse's station?  
Answer: phone triage, medical refills, patient charting

25. What are the pros and the cons of your nurse's station?  
Answer: pro = central location; con = patients can hear us on the phone

26. What do you think of the station's location relative to other rooms and stations?  
Answer: We don't like that patients can hear us on the phone. It would be nice to have the nurses station visible to the reception station in order to prevent communication issues.

27. Have you noticed any problems with the layout of the space? If so, please explain.  
Answer: The walking space between the desks is not wide enough.

28. Do you have a sufficient amount of workspace available?  
Answer: yes

29. If you had the chance to add an extra room, what would it be and why?  
Answer: We would add a room for nurse consultation with patients.

30. Are the hallways wide enough for two people to walk through side by side?  
Answer: yes

31. In your opinion, are the exam rooms large enough for all purposes?  
Answer: yes
32. Would you change or add anything to the layout of the exam rooms?
Answer: no

33. Are there any communication problems in the clinic due to the space layout? If so, please explain.
Answer: Sometimes the nurses cannot hear the receptionists announce a phone call.

34. Are there any acoustical problems throughout the clinic?
Answer: no

35. Have you noticed any circulation issues throughout the space? If so, please explain.
Answer: Yes, the layout can be confusing due to the numerous hallways throughout. The space can seem like a maze sometimes.

36. Do you use the lunch room often?
Answer: Of course!

37. Do you use the lunch room for any other purposes than eating lunch?
Answer: staff meetings

38. What is your favorite feature of the lunch room?
Answer: balcony

39. Do you enjoy having a balcony? Do you use it often?
Answer: yes!

40. What other work areas are needed besides the reception and nurse's station, offices, and exam rooms?
Answer: none

Color and Light

41. Are there any lighting issues around the nurse's station that you have noticed? If so, please explain.
Answer: We have more than enough lighting.

42. Is there sufficient lighting in the exam rooms?
Answer: yes

43. Do you think there is a sufficient amount of natural light throughout the space?
Answer: yes

44. What type of color scheme would you recommend to be used throughout the clinic?
Answer: current colors
45. Is there anything you would change about the current finishes?
Answer: no

46. Is the lunch room provided with enough natural and artificial light?
Answer: yes

47. What types of equipment is required near the nurse’s station?
Answer: computers, printers

48. What type of equipment is required in the area located in the hallway behind the nurse’s station?
Answer: testing kits, refrigerator for medicine (insulin, shot storage)

49. What is each equipment system used for?
Answer: charting, testing

50. What type of equipment is used in the exam and procedure rooms?
Answer: otoscope, blood pressure cuff

51. Which type of equipment is used the most often in the clinic?
Answer: same as the above

Receptionists:

52. How many receptionists are on staff?
Answer: 5 receptionists

53. During an average day, how long do you work in the office?
Answer: 8 hours

54. Do you like the size of you work area? If not, why?
Answer: yes

55. Has there been any trouble communicating with patients in the waiting area? If so, please explain.
Answer: none

56. How many people are usually working behind the reception desk?
Answer: 4 people

57. If you could change one thing about the reception desk?
ception station, what would it be and why?
Answer: none

58. What is your favorite feature about the office?
Answer: smaller windows between receptionists and patients

Layout Issues

59. Have there been communication issues between yourself and the rest of the staff due to the layout of the clinic? If yes, please explain.
Answer: communication with nurse station

60. Do you use the lunch room and balcony often?
Answer: yes, every day

61. If you could change one thing about the office layout, what would it be and why?
Answer: I would add an area for phone answering and for staff members for just phones.

62. How often is the children's play area used?
Answer: most of the day

Color and Light

63. Do you believe there is sufficient lighting around the reception work station?
Answer: yes

64. What types of finishes and color schemes would you like to see used in the space? Why?
Answer: We love the current finishes.

Equipment and Storage

65. What types of equipment do you use?
Answer: computer, copy machine, phones, printer

66. What types of equipment are available in the reception station?
Answer: all
67. Do you have enough storage space?  
Answer: yes and even extra

68. What initial impression is made upon your arrival to the waiting room?  
Answer: love it

69. Are you comfortable in your surroundings?  
If not, they why?  
Answer: yes, very comfortable

70. Describe how you feel when you are in the clinic.  
Answer: Relaxed. It's inviting.

71. Do you believe that there is a sufficient amount of lighting throughout the clinic?  
Answer: yes

72. Are there any privacy issues that you have noticed while visiting the clinic?  
Answer: no

73. Have there been any communication issues between you and the staff due to layout issues?  
Answer: no

**Summary**

Since the space was recently built, the users seem pretty pleased with the current design, except for a few areas of concern. I need to find ways to improve the space layout while fulfilling client needs. First, the space layout is slightly confusing. There are several hallways, and a nurse referred to the layout as "a maze." I want to make it easier for the users to navigate throughout the space. Also, a few suggestions were made about rooms that could have been added, and about acoustical and air circulation issues. Everyone agrees that the finishes used in the office are comforting and appropriate for the space. My challenge is to create a functional, well-designed layout in order to eliminate way-finding confusion and promote a healthy, work efficient environment.