Medium Size Clinic Floor Plan

Siddharth Gupta, Rupal Deshmukh
Analysis Methodology

- Facts
- Spaghetti Diagram
- Zoning
- Adjacency
- Efficiency
- Privacy Issues
Facts

Facility:
- Total Area 2000 Sq. Ft
- 4 Patient Encounter Rooms: 150 sq. ft
- Corridor: 5 Ft wide, and 72.5 sq. ft long
- Waiting room: Seating capacity of 7 patients
- Other rooms: 2 Doctors Offices, Janitors room, ADA Rest Room, Lab/Vitals room, Managers Office, Nurse Station
Users and Nature of Activity

- Patients: ~ 20 a day - 10 hrs of operation per day, 2 doctors and 2 exam rooms each
- 2 doctors
- 2 Nurses/M.As
- 1 Manager
- 1 Receptionist
- 1 Janitor
Use of Spaghetti Diagram

- Spaghetti Diagram
- Best Floor Plans: Minimize Traffic Jams and Travel Distances
- Analyze user flow
- Estimate Travel Distances
- Identify Bottlenecks
Patient

Average Distance Traveled: 162.5 ft per visit
Nurse/ M.A

<table>
<thead>
<tr>
<th>Path</th>
<th>Avg. Distance</th>
<th>Frequency</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry-Exit</td>
<td>100 Ft</td>
<td>Low</td>
<td>Black</td>
</tr>
<tr>
<td>MA Station-Lab</td>
<td>26 Ft</td>
<td>Low-Moderate</td>
<td>Purple</td>
</tr>
<tr>
<td>MA Station-Offices</td>
<td>77.5 Ft</td>
<td>Moderate</td>
<td>Green</td>
</tr>
<tr>
<td>MA Station-ER</td>
<td>45 Ft</td>
<td>High</td>
<td>Red</td>
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Doctors

<table>
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<th>Path</th>
<th>Avg. Distance</th>
<th>Frequency</th>
<th>Color Code</th>
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<tbody>
<tr>
<td>Entry-Exit</td>
<td>115 Ft</td>
<td>Low (2-3 times a day)</td>
<td>Red</td>
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<tr>
<td>Office-Conference</td>
<td>55 Ft</td>
<td>Low (Once a week)</td>
<td>Purple</td>
</tr>
<tr>
<td>Room</td>
<td></td>
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<tr>
<td>Office-PER</td>
<td>40 Ft</td>
<td>High</td>
<td>Green</td>
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</table>
Bottleneck

- Corridor
- 5 feet wide, 2 people
- Flow in both directions
Zoning

- Well defined, obvious, separate
- Does not confuse patients

Case #102 (Medium)
Ideal Adjacency
Actual Adjacency

- Very close to ideal
- Exam room and office distance potentially large
Privacy Issues

- Shared Corridor
- Shared Rest room
- Shared waiting room
- Exam rooms visible from exit
Efficiency

- Less used conference room – adds to heavily trafficked area
- Move to left – major traffic incoming from right
- Horizontally stacked exam rooms – add to heavily used path.
- Lack of supply room – use Exam Room and Lab storage?
Exam Room Layout Analysis

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Exam Room Layout

1. Seamless Floor
2. Rubber Base
Adjacency

- Encourage washing hands upon entry and exit
- Simultaneous view of patient and monitor
- Exam table and monitor proximity
- Ease of access to literature rack from chair
Dimensions

Exam Room: 10 x 12 Square Feet

Work Triangle Analysis

Work Triangle 1:
Dimensions 6x6x4
Side 1: Exam Table-Chair
Side 2: Chair- Wash Basin
Side 3: Wash Basin-Exam table

Work Triangle 2:
Dimensions : 4x3x1.5
Side 1: Monitor-Literature Rack
Side 2: Literature Rack-Chair
Side 3: Chair-Monitor
Recommendations

- Blood Pressure Measurement Arm Chair Corner of the room
- Interchange Positions: Literature Rack and Monitor Table, Chair Set
- Above changes reduce distances between
  - Exam Table-Chair
  - Chair-Wash Basin
  - Literature rack-chair + monitor