

Health Care Innovation Concepts

March 2007

UPMC South Side Hospital
Amy Kowinsky

Team EPIC

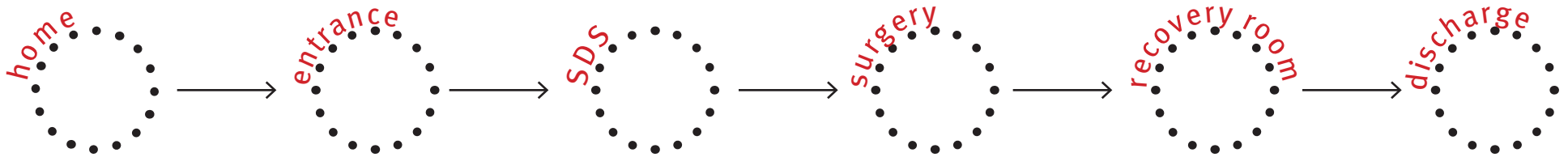
Carrie Chan | Charis Lim | Saara Kamppari
Yoko Nakano | Justin Rheinfrank

Orthopedic Patients Generative Phase

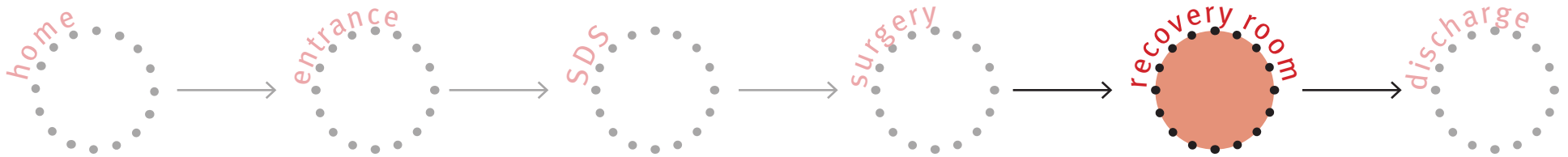
Our goal: where we started

We aim to **empower short term patients** during the entire length of their hospital stay—from the minute they walk in to a hospital, to the minute they return home. We want to address the issues of **communication, activities, relationships, trust & privacy** between patients and practitioners. By exploring problems in these areas we hope to find an opportunity to deliver a service that will enhance their experience while at the hospital.

Orthopedic Patient Flow



Orthopedic Patient Flow Focus



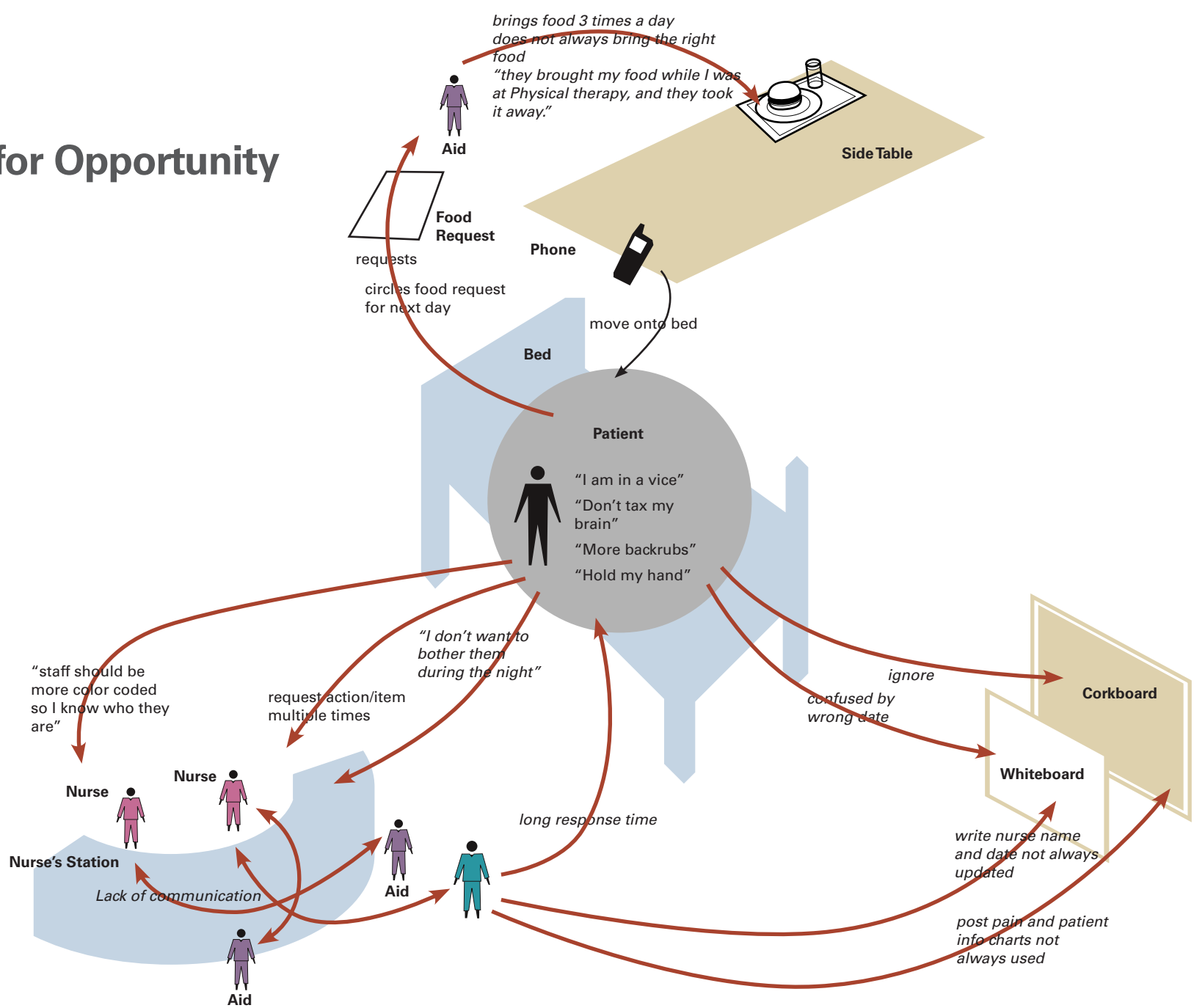
Staff surveys (5)

Collages (3)

Interviews (7)

Journal studies (26)

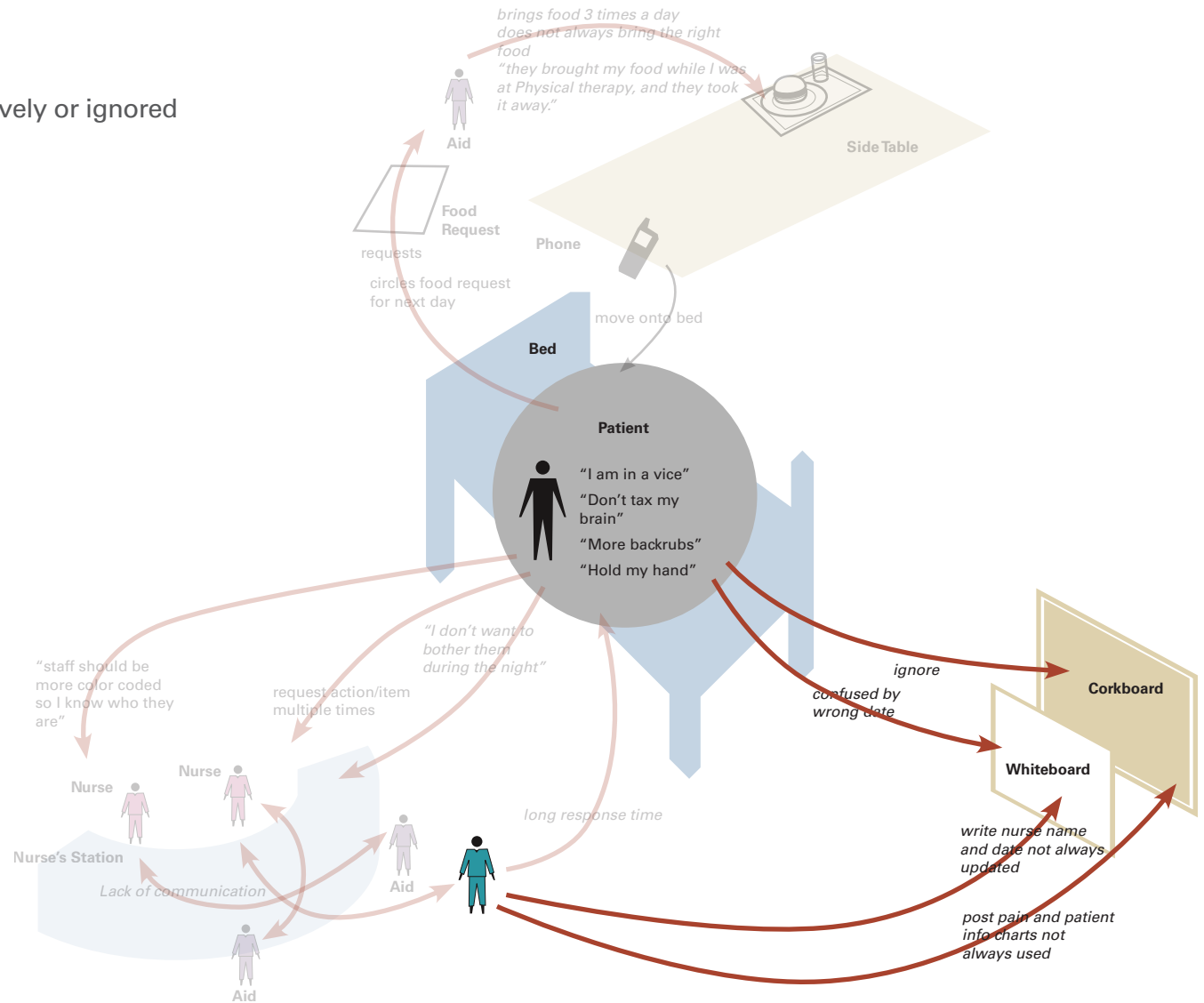
Areas for Opportunity



Areas for Opportunity

Communication tools

Whiteboard/corkboard not used effectively or ignored



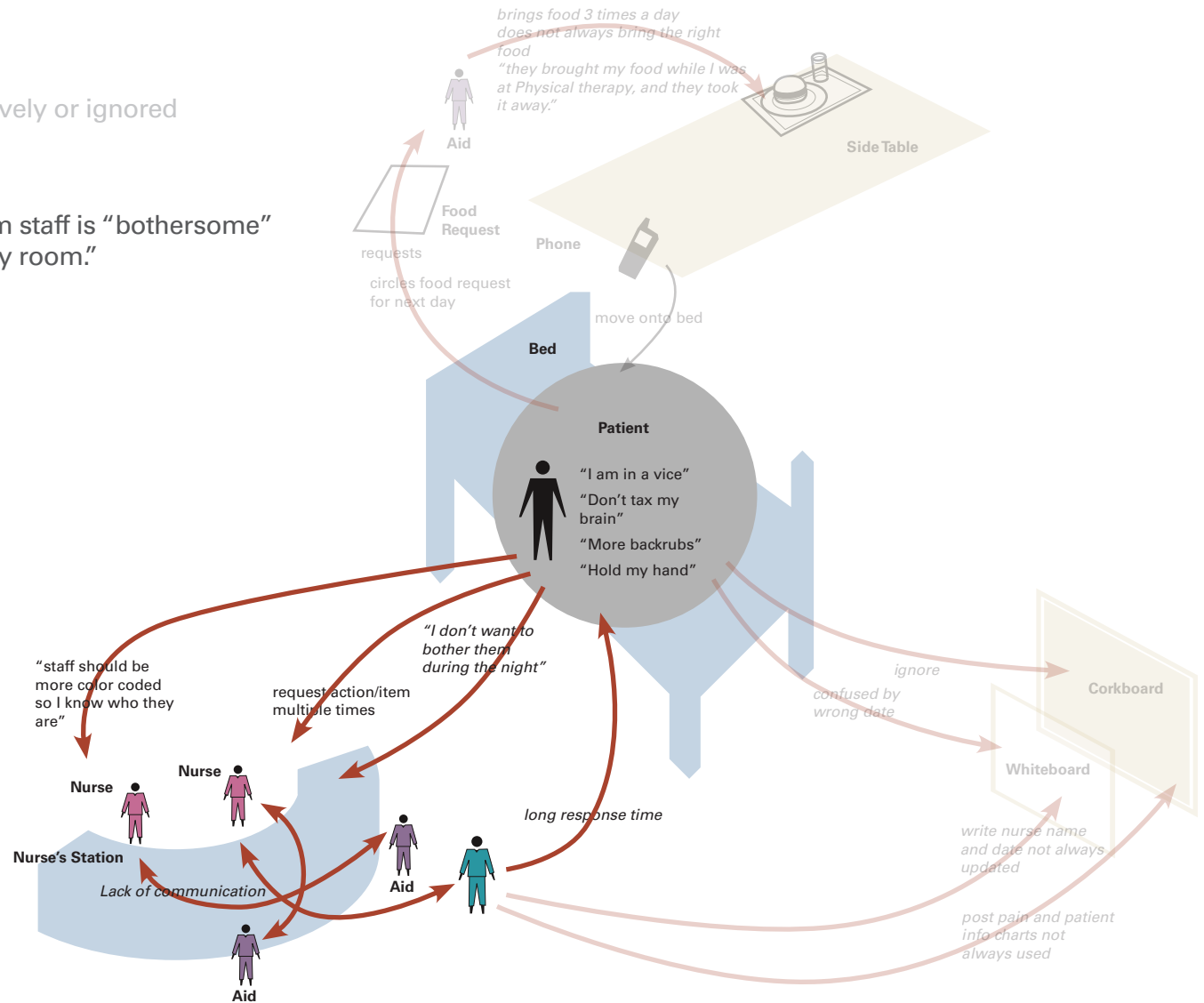
Areas for Opportunity

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Communication itself

Patients feel requesting more help from staff is "bothersome"
"I don't know who the people are in my room."



Areas for Opportunity

Communication tools

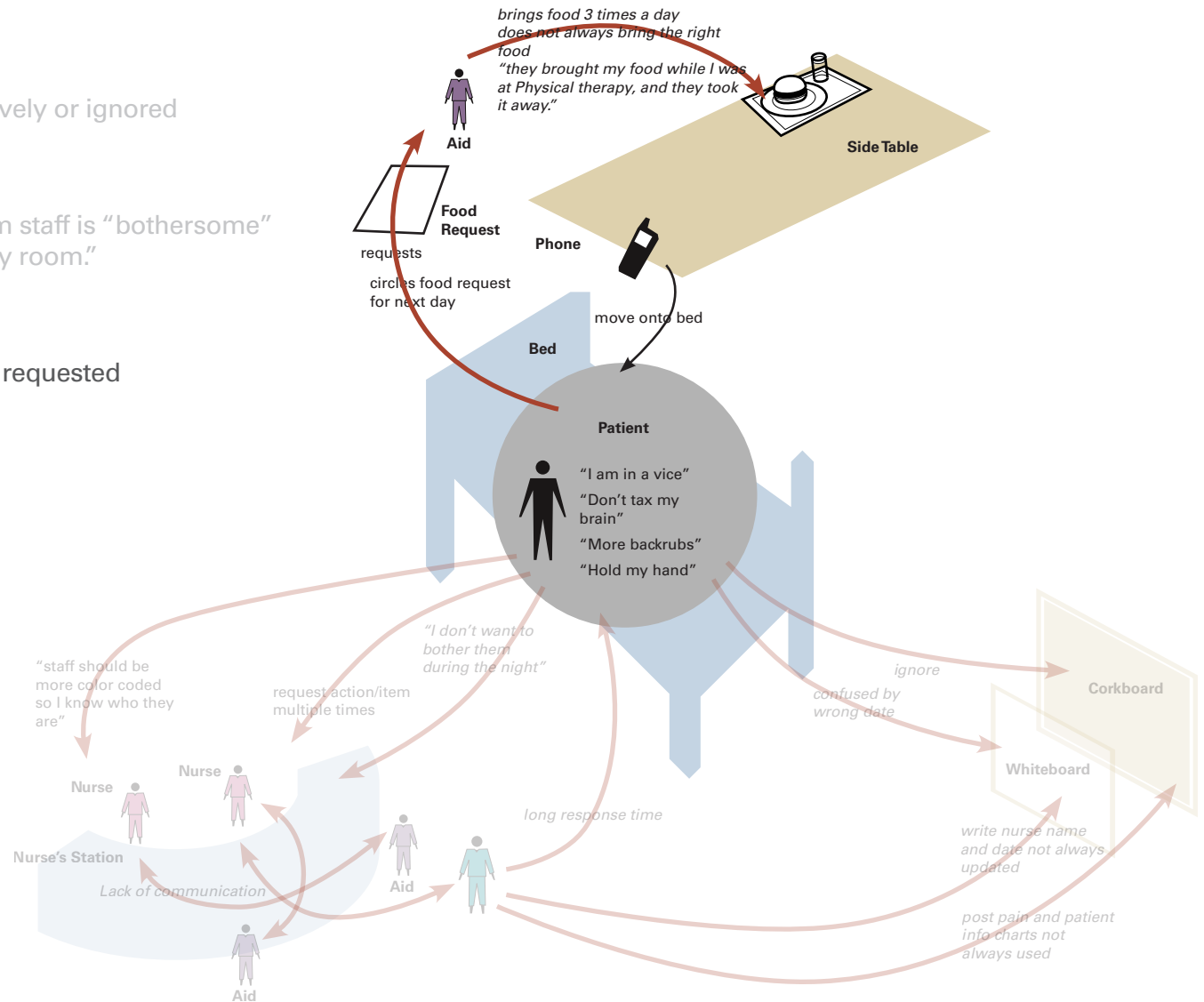
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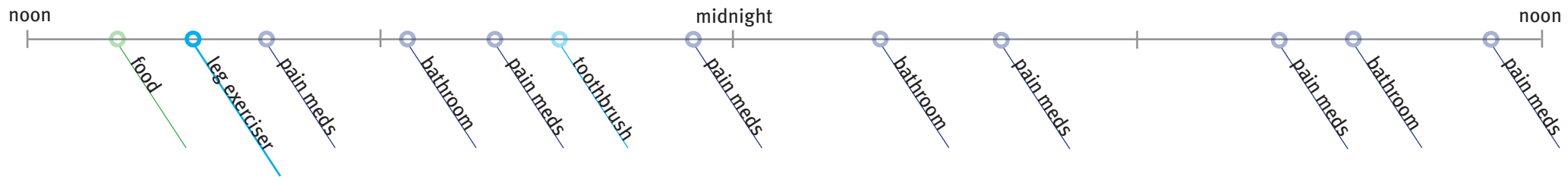
Communication itself

Patients feel requesting more help from staff is "bothersome"
"I don't know who the people are in my room."

Communication follow-through

Patients don't always get the food they requested
Request actions / items multiple times

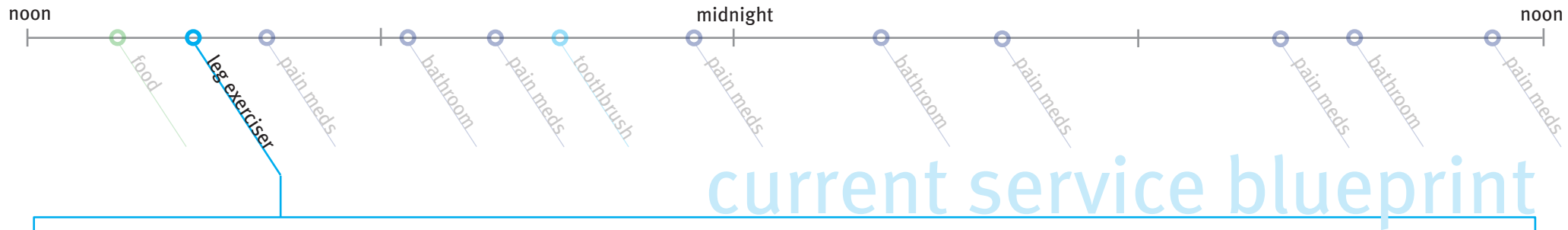




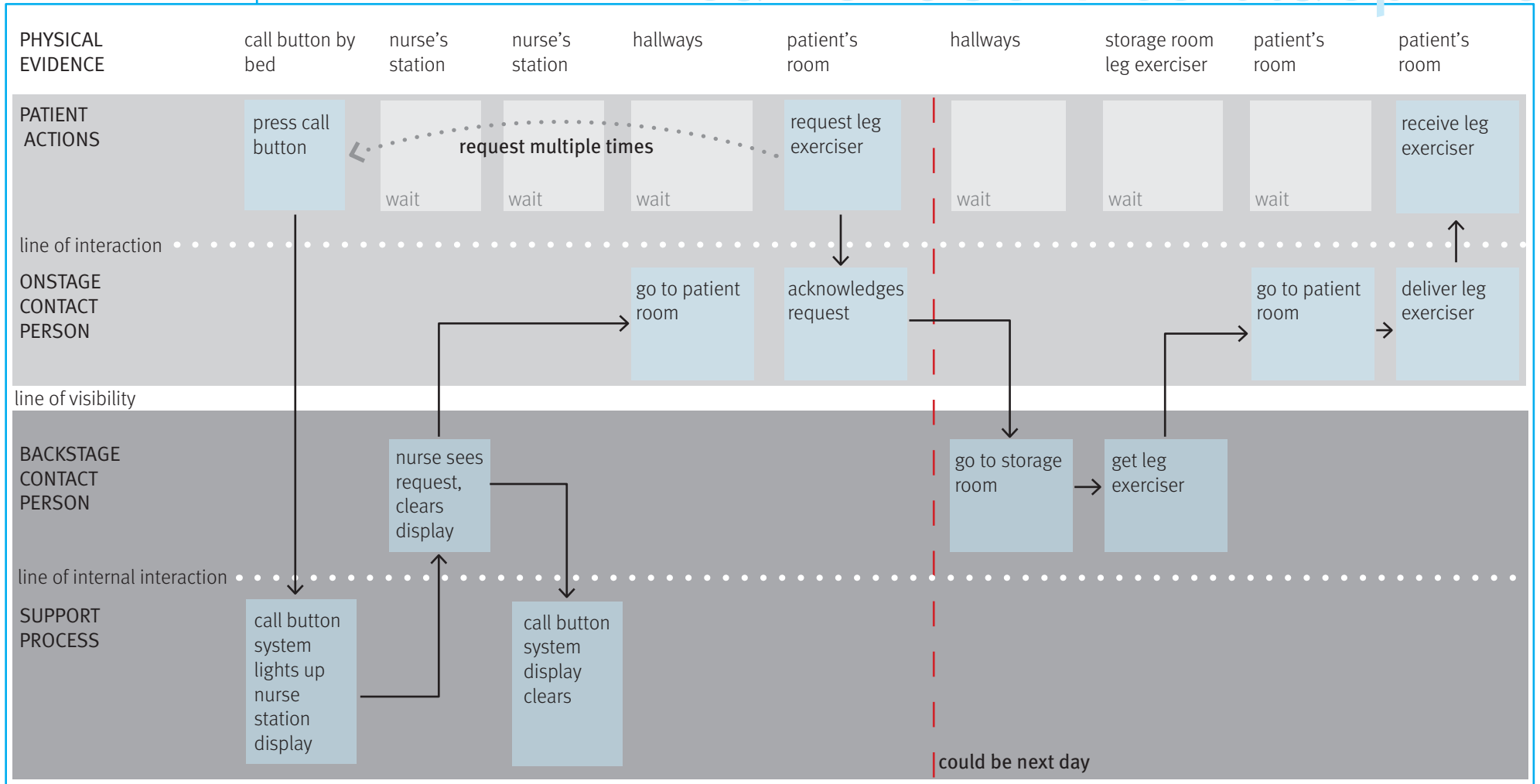
Health Care Innovation Concepts

Team epic | April 2007

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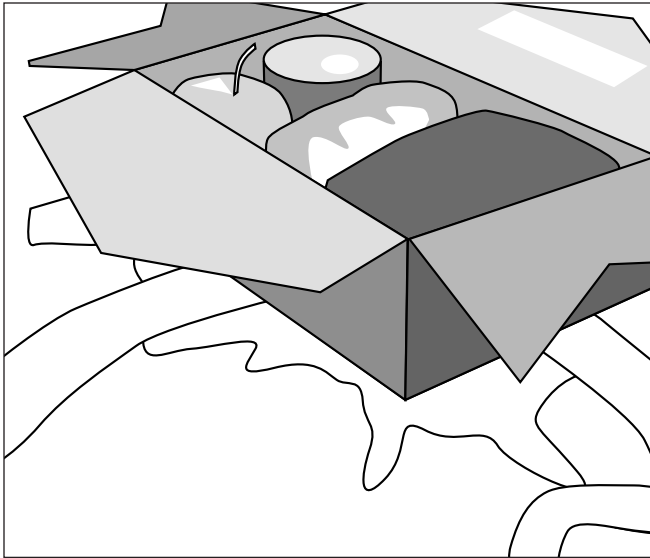


current service blueprint

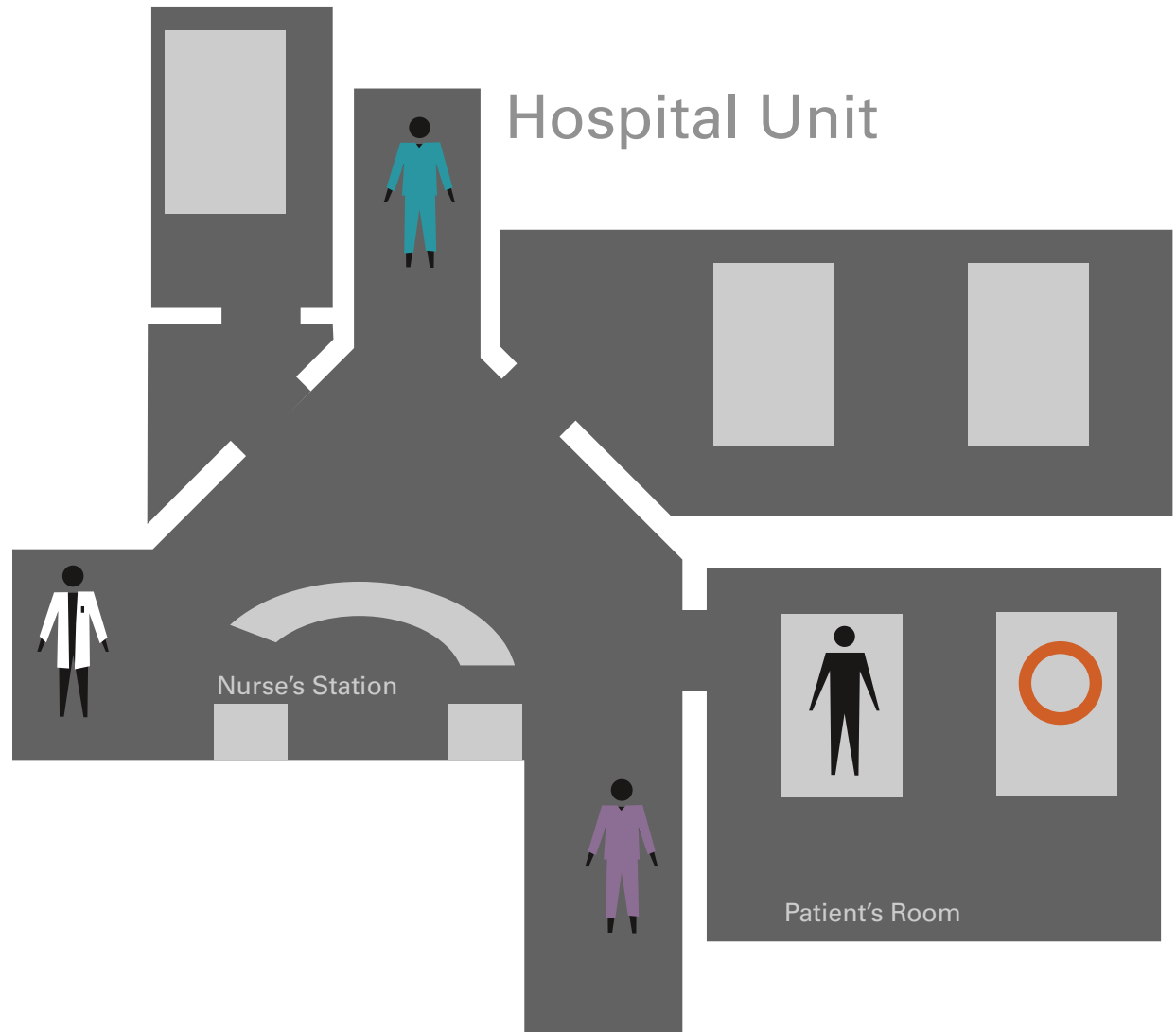


Low-Tech Concepts

Welcome Kit

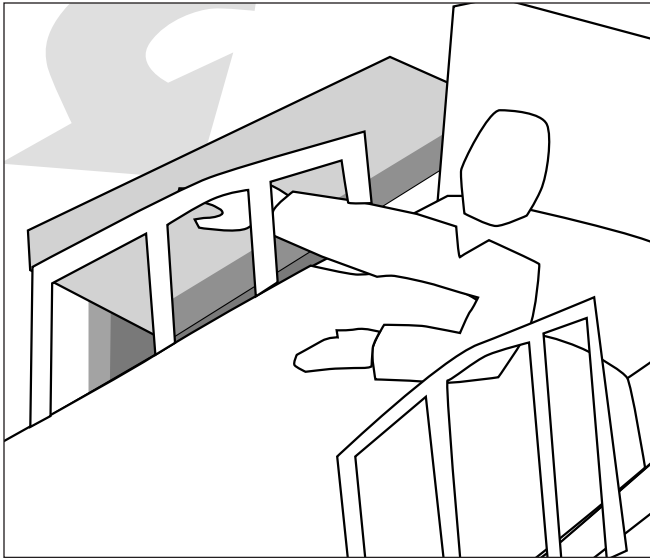


When a patient arrives at their recovery room, a welcome kit is awaiting them. It contains the basic necessities that are essential to a recovery stay, such as personal hygiene wipes and a toothbrush, as well as post-surgery appropriate snacks.

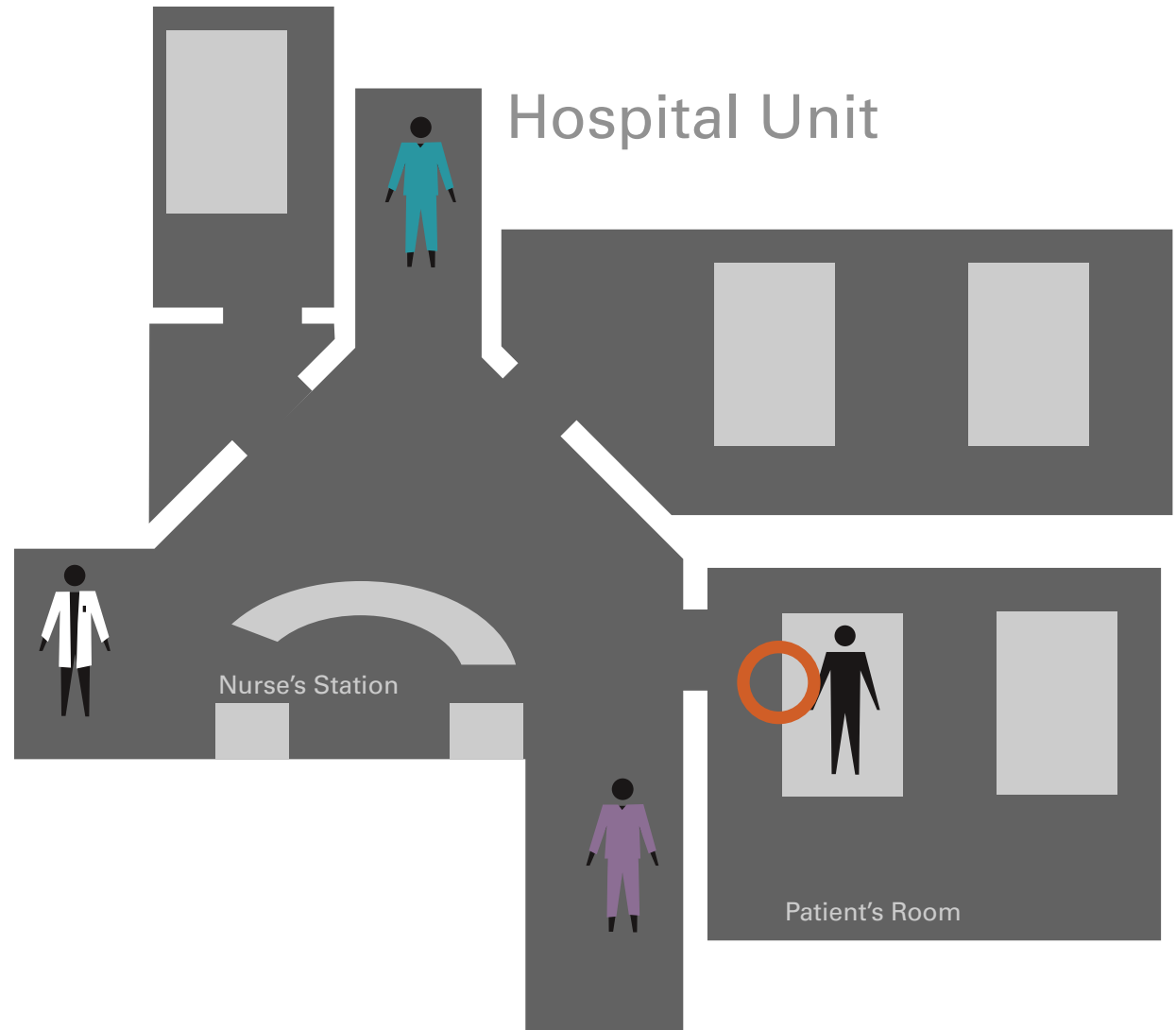


Low-Tech Concepts

Bedside Table

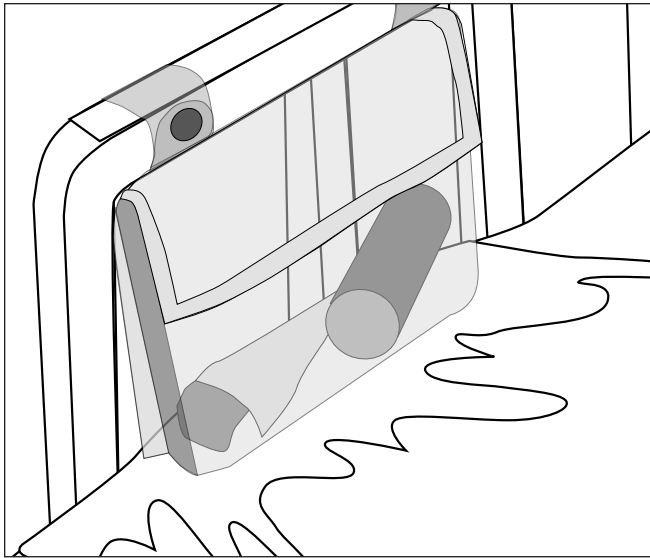


Consistency in recovery rooms will assist patients, such as having the bedside table moved adjacent to the patient bed prior to their arrival in the room.

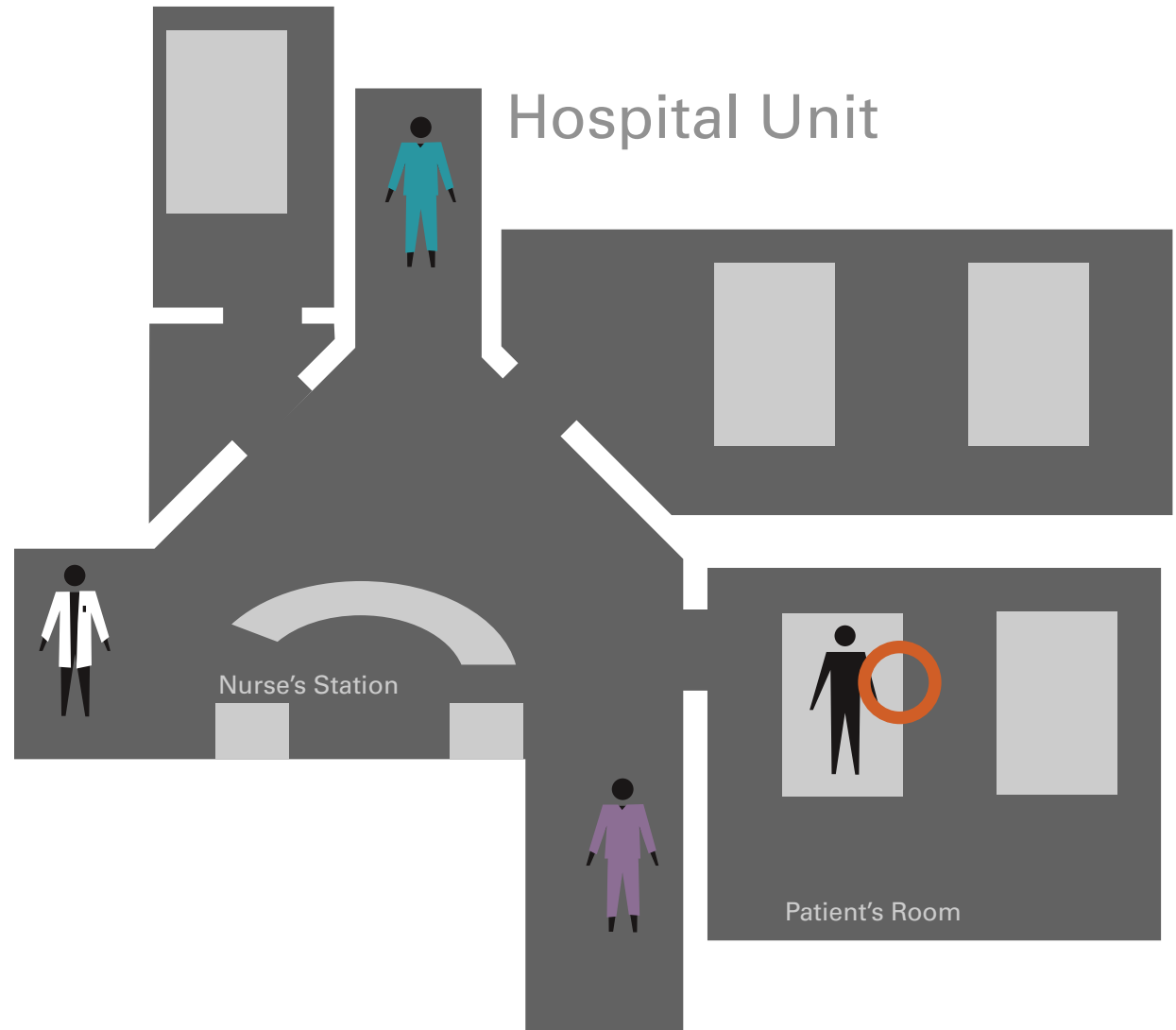


Low-Tech Concepts

Bedside Baggie



Increasing accessibility to items will be achieved by providing a location to store items always within reach of the patient on their bed.

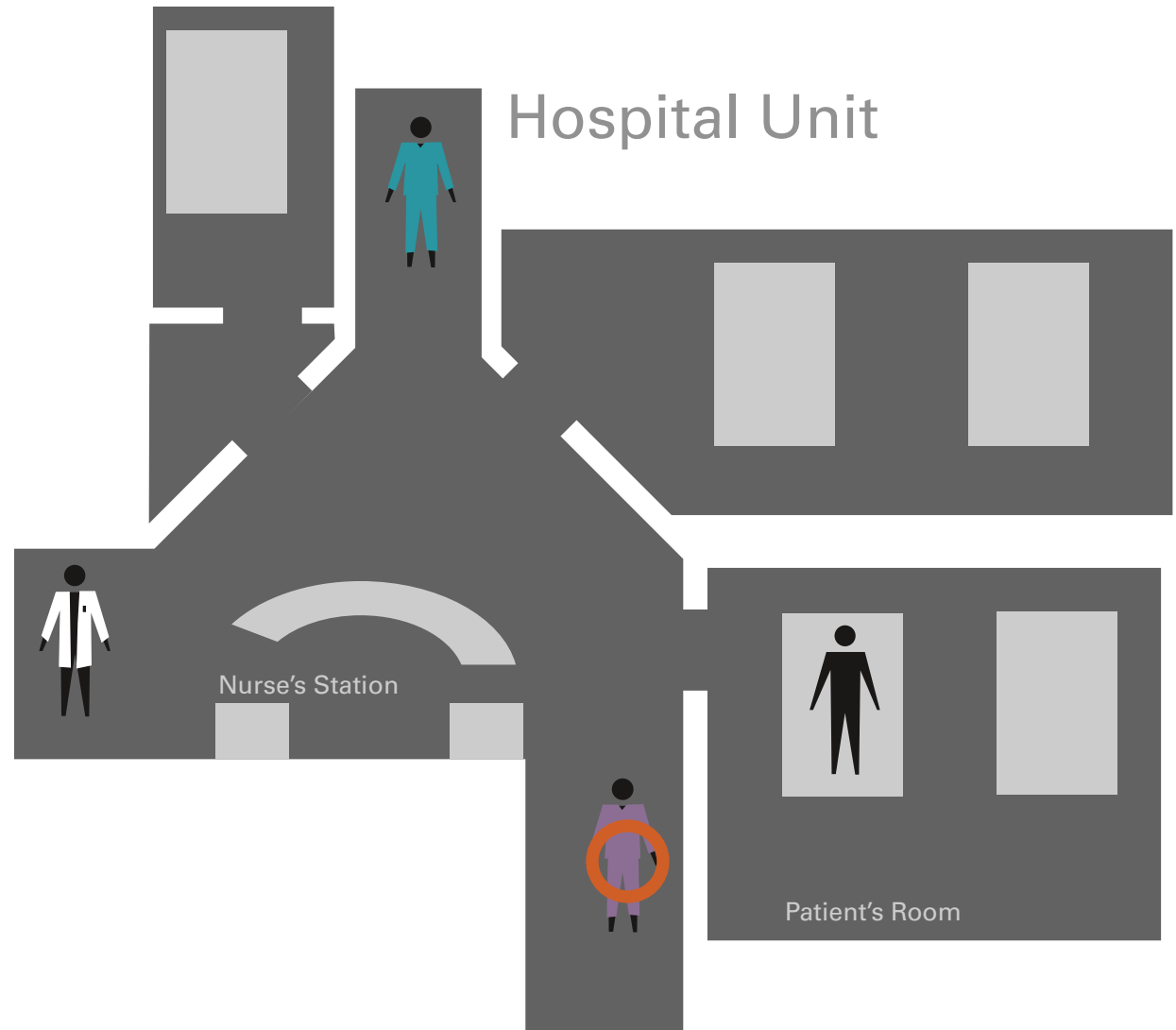


High-Tech Concepts

Service Cart

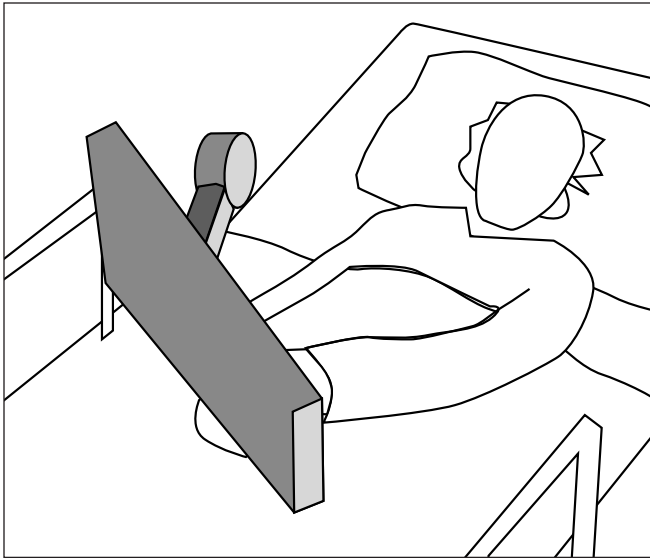


Daily rounds through the recovery rooms offering and restocking frequently used items will keep patients well equipped during their recovery at the hospital.

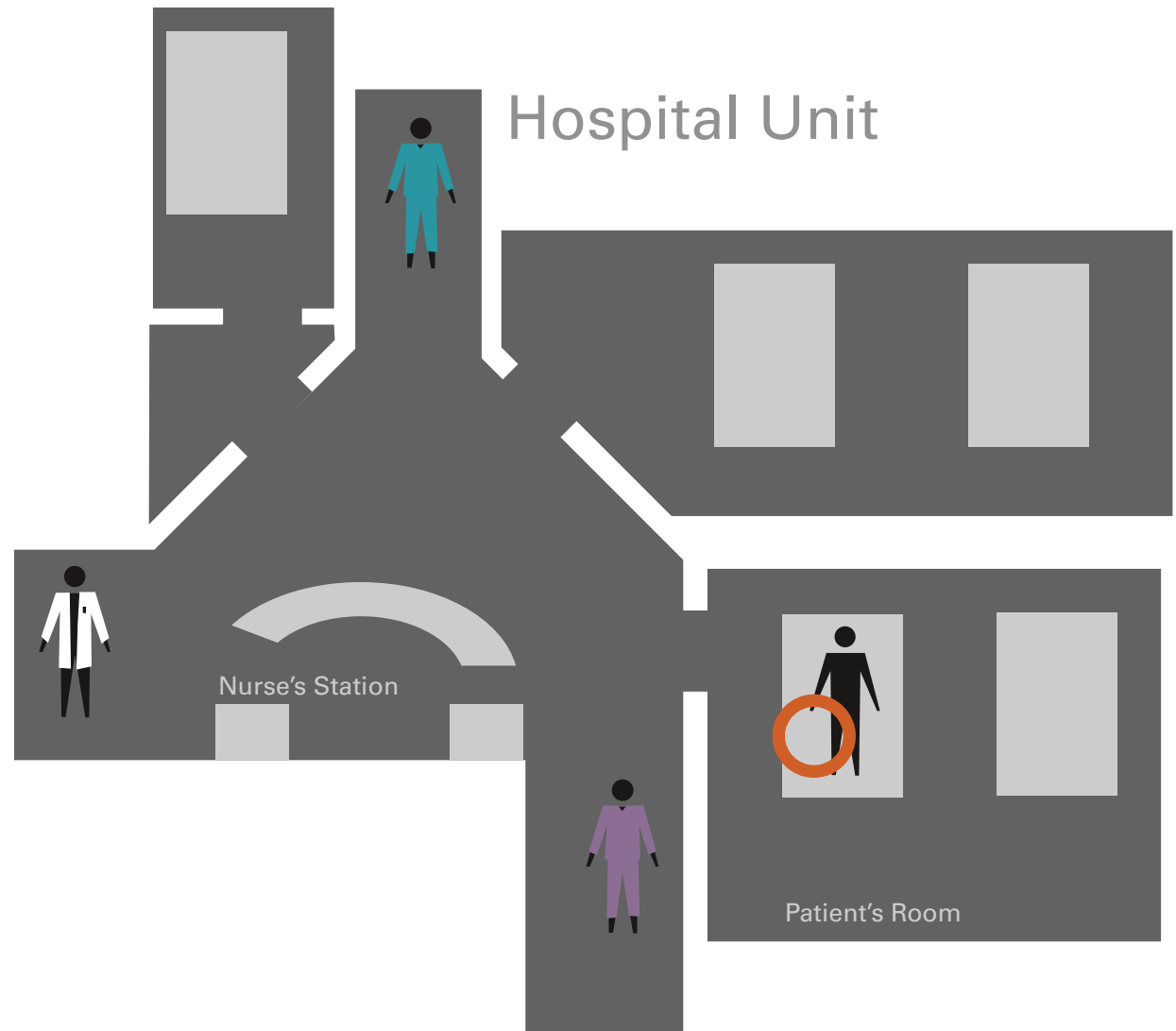


High-Tech Concepts

Bedside Hub

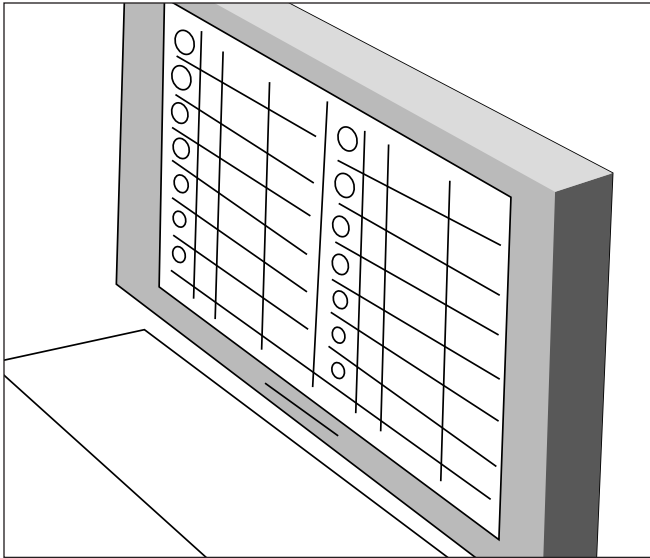


This electronic communication hub acts as a communication portal between the patient and the orthopedic staff. Various requests can be sent to and acknowledged by the nurses. Date, recovery schedule, and nurse on duty information is also displayed for the patient.

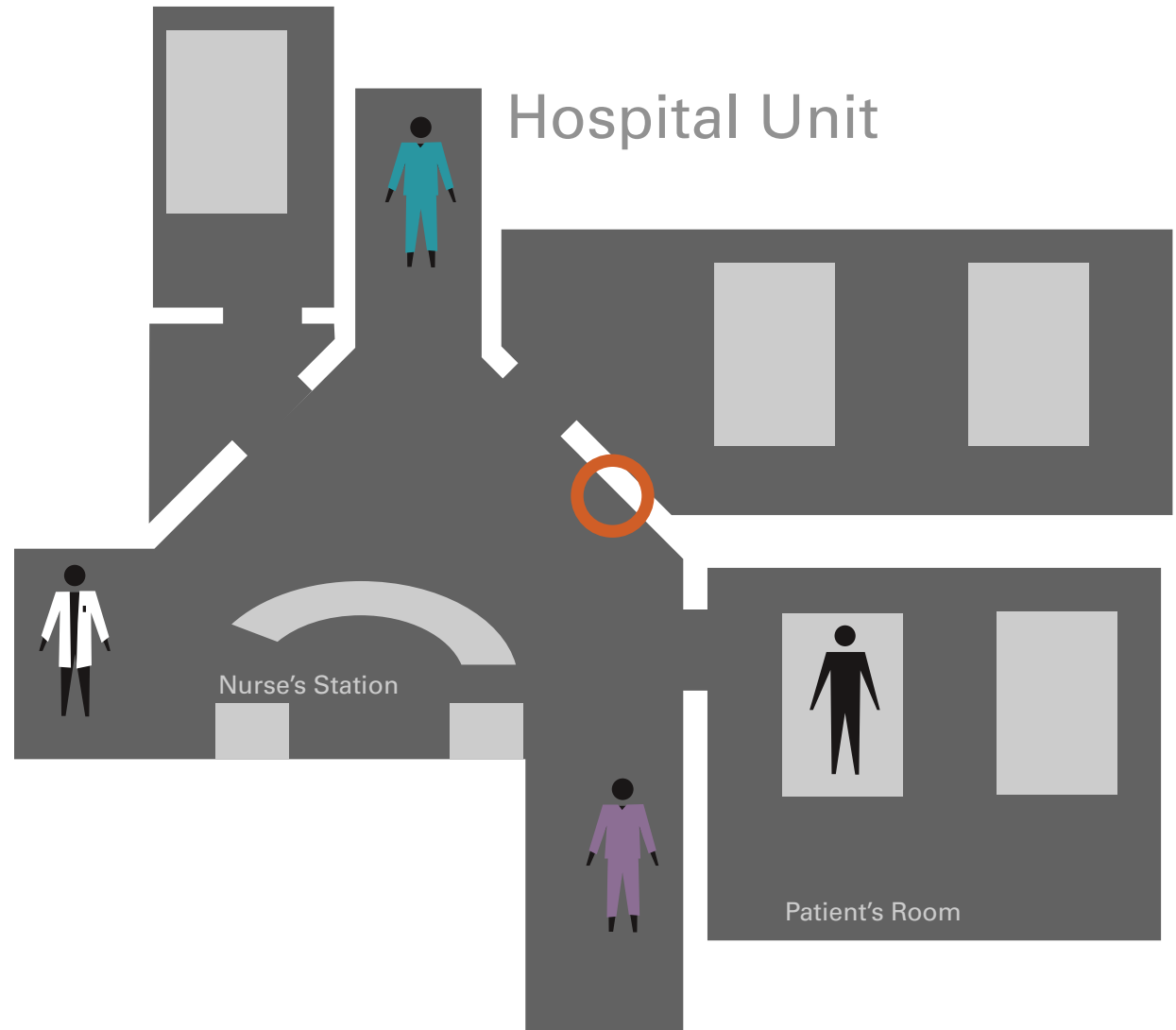


High-Tech Concepts

Digital Whiteboard

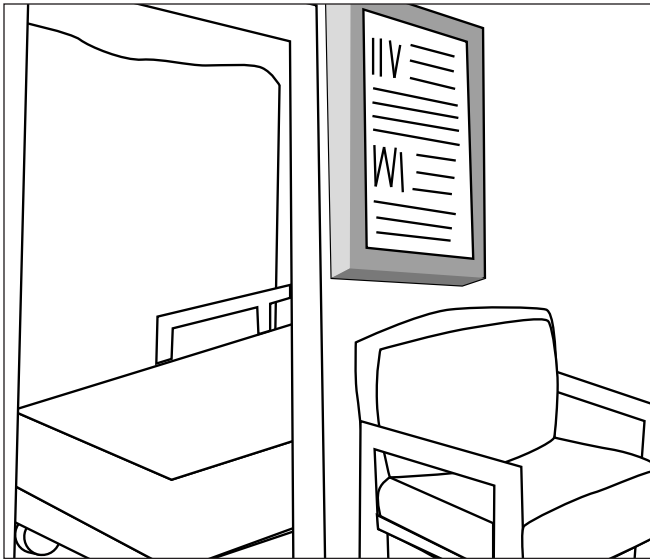


This is a technological upgrade from the current nurse station patient-room whiteboard. Automatic updates keep the nurses informed about the patients who are on the floor, and dynamic requests from the patients are displayed.

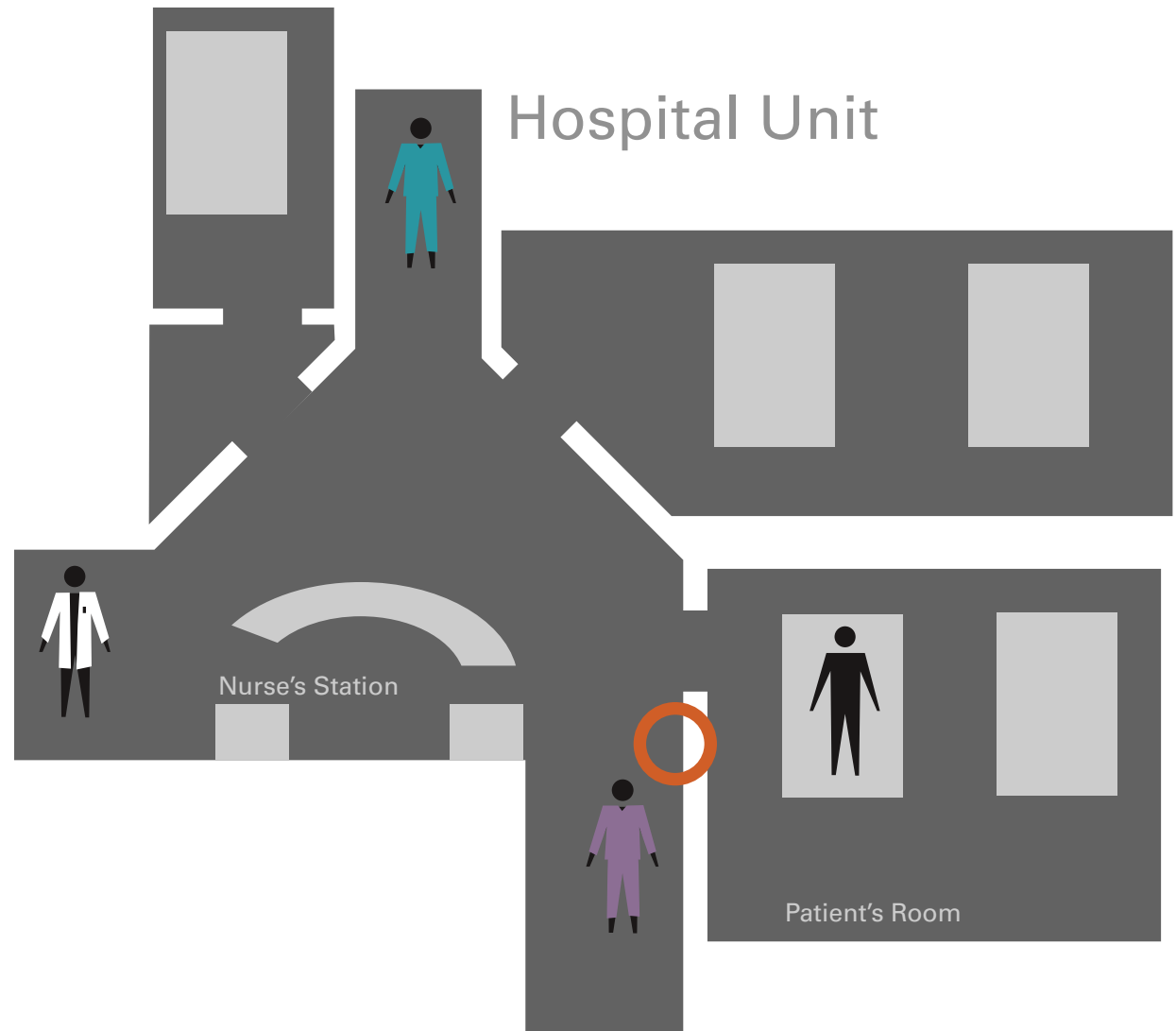


High-Tech Concepts

Doorside Display

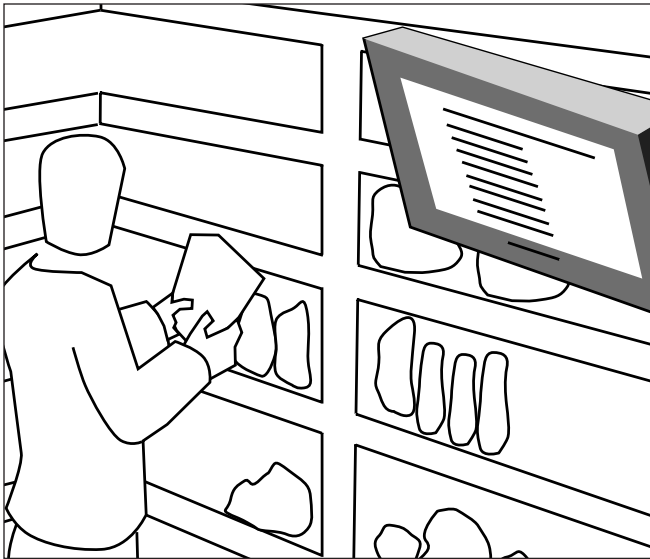


This display shows more detailed information about the patients in each room. Information such as allergies is noted, as well as patient requests. Room status regarding empty beds and preparation needed for new patients is also displayed.

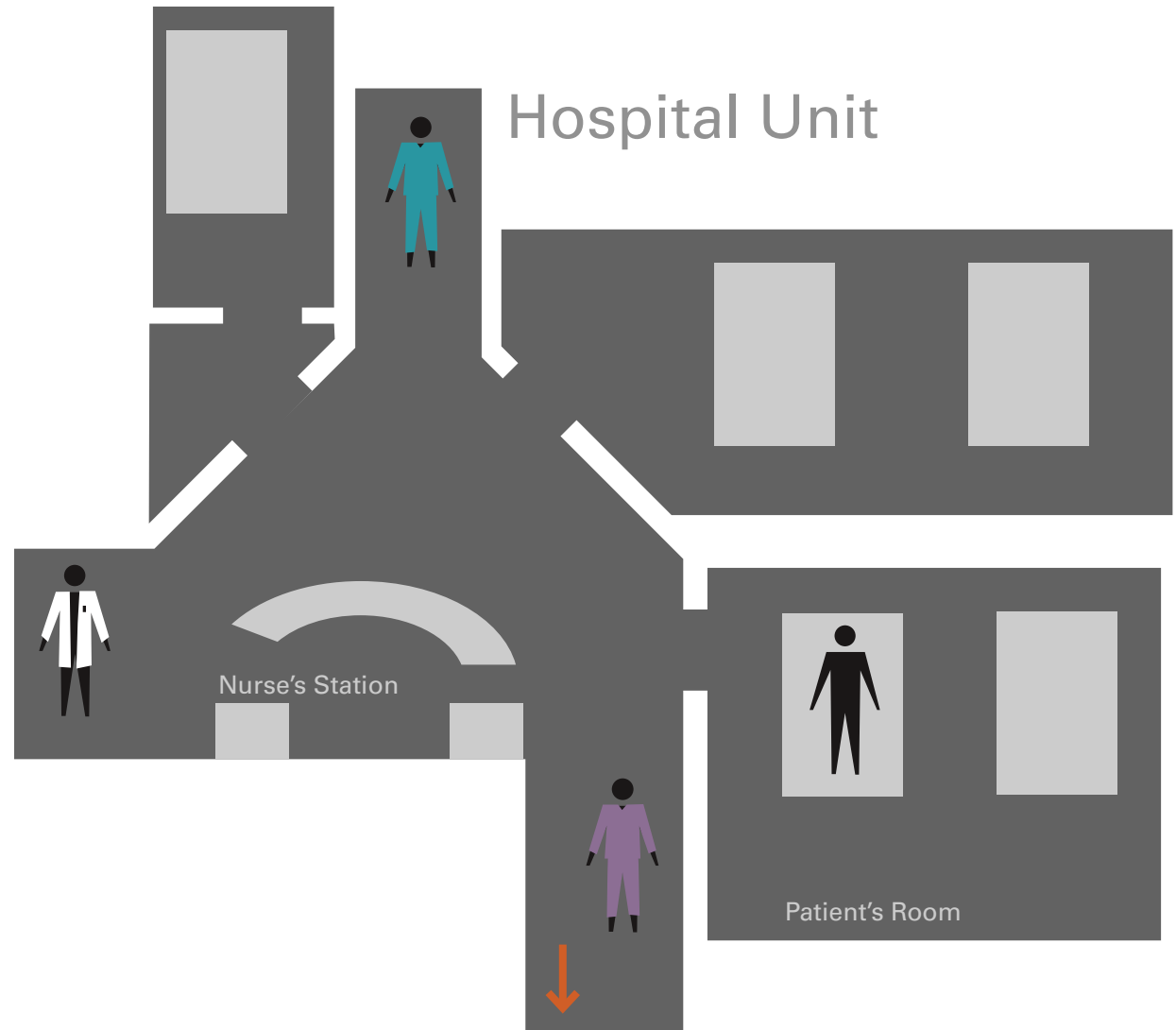


High-Tech Concepts

Stock Room Display

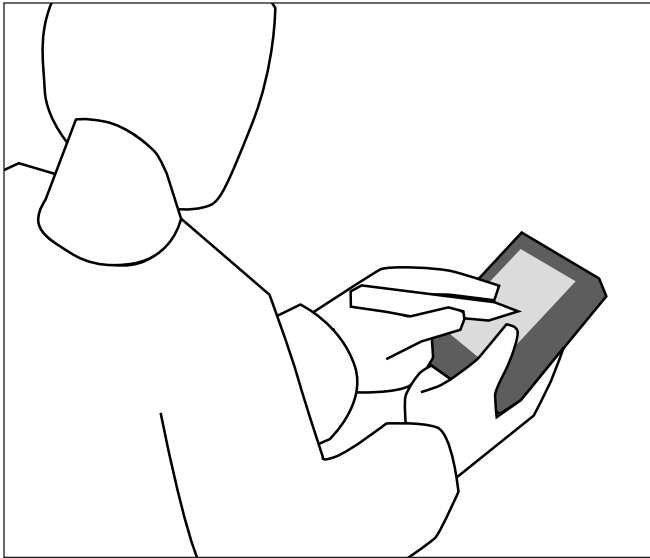


Information about the stock room contents and relevant patient requests are displayed here. This intends to alleviate trips to the stock room, as additional requests can be acknowledged during a trip to the stock room.

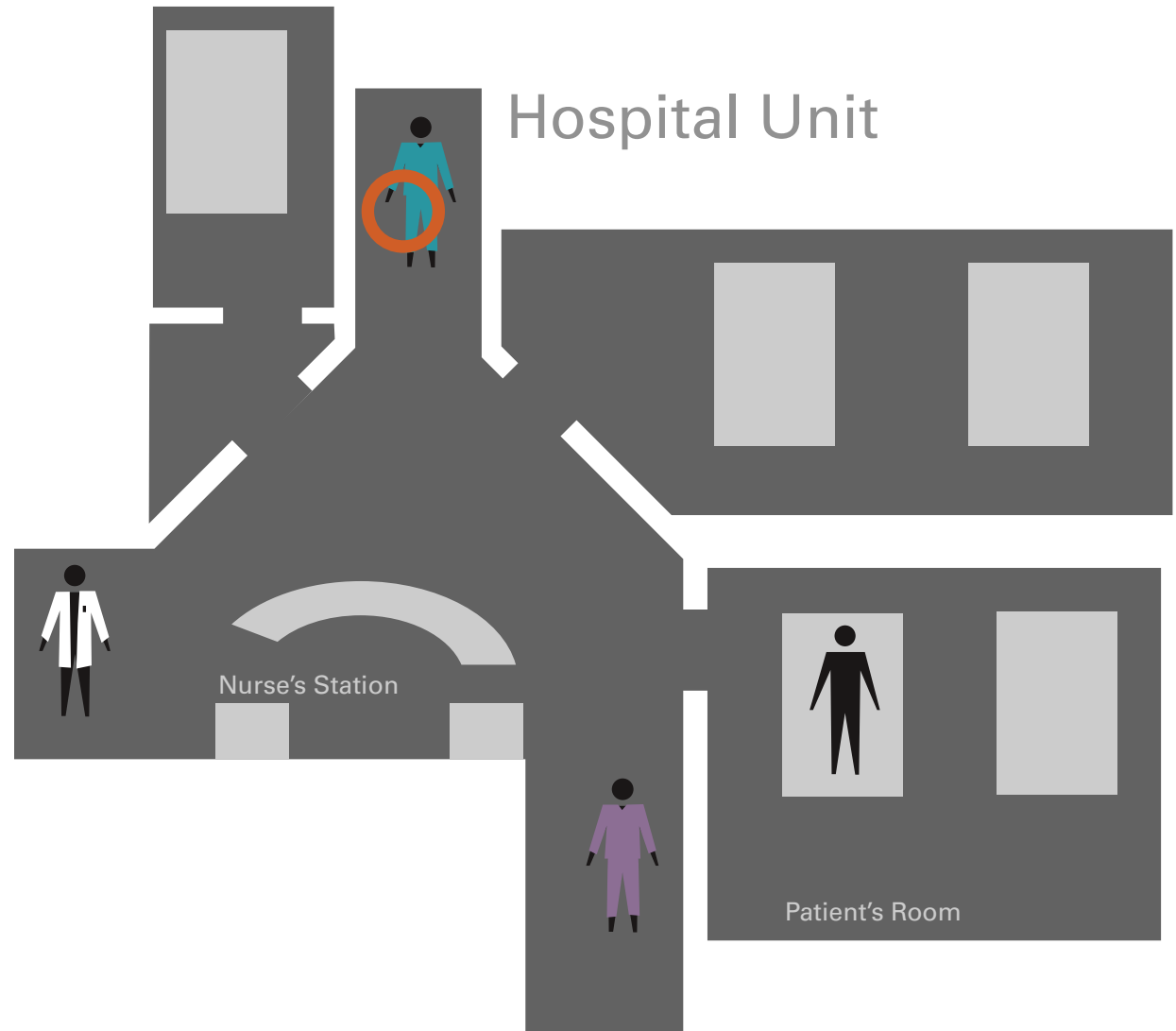


High-Tech Concepts

Nurse Palm

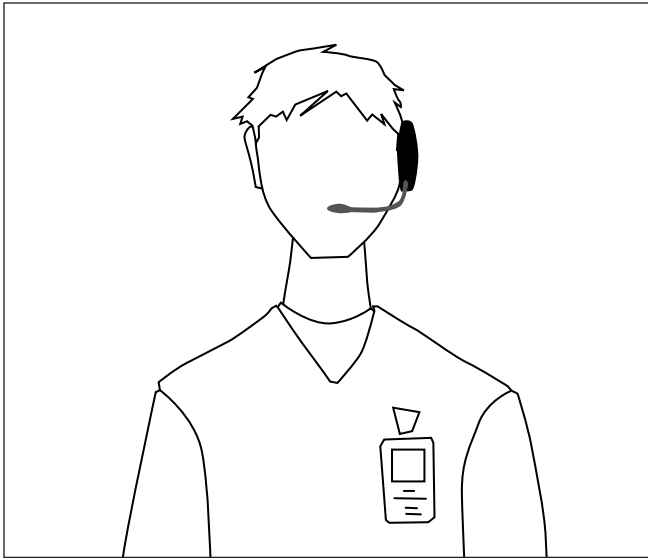


Each nurse and aid will be equipped with a Nurse Palm, which contains their schedule and to do lists. This assists them in communicating responsibilities with one another, such as responding to patient requests.

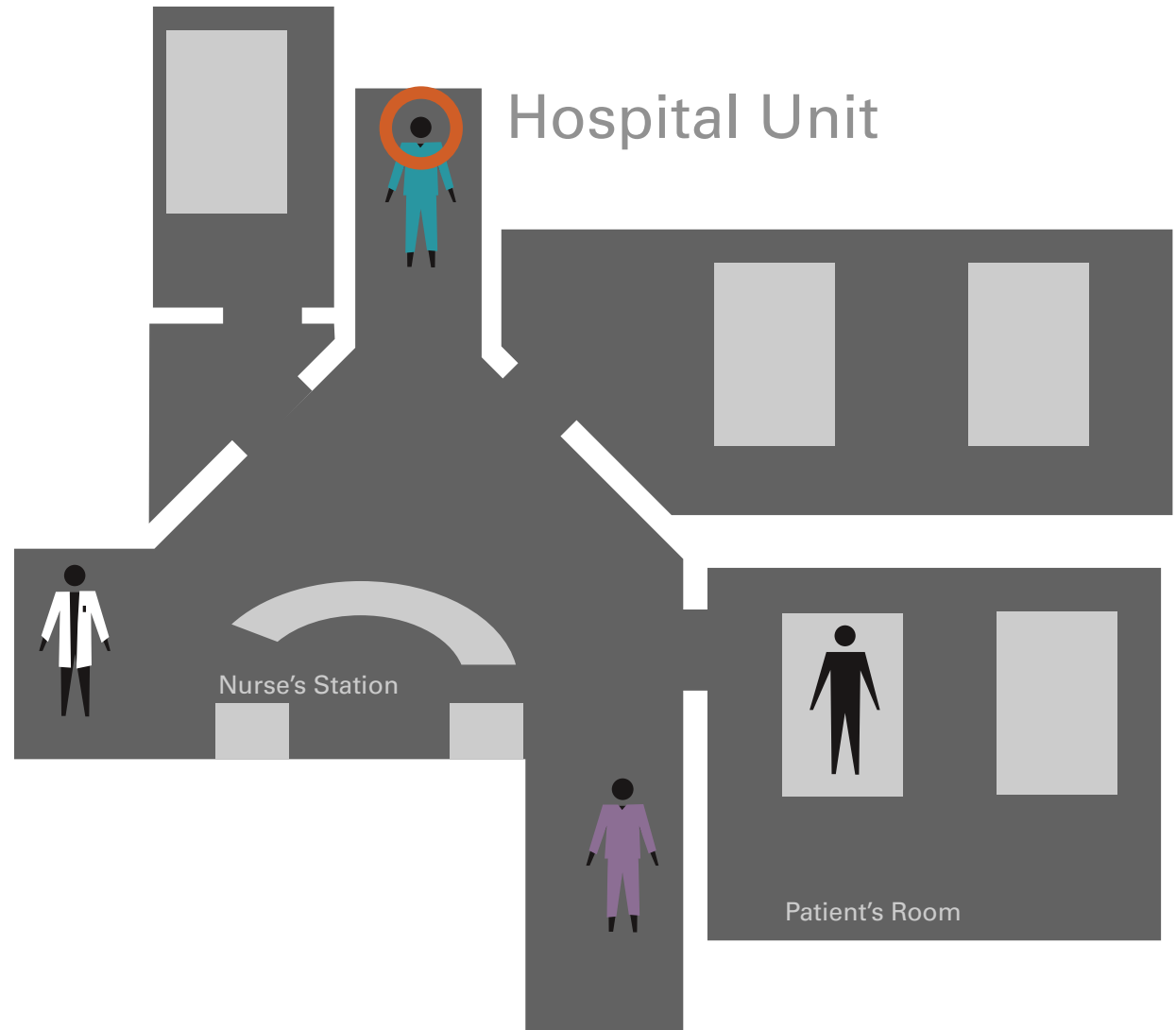


High-Tech Concepts

Nurse Phone

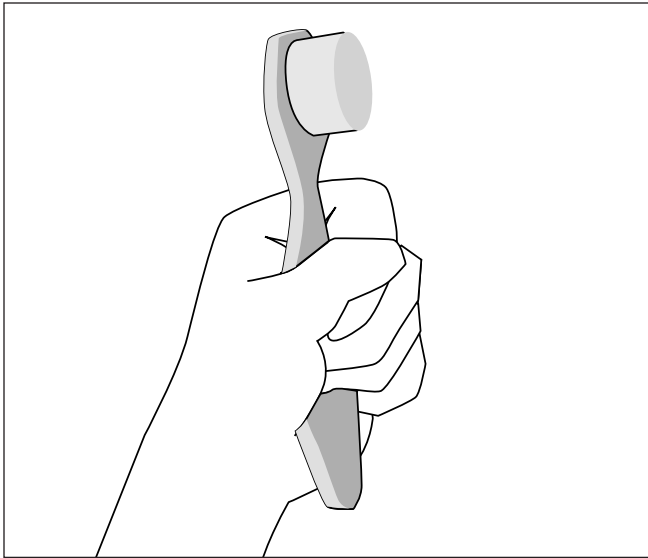


Headset phones will provide direct communication between nurses, as well as to patients when they request for urgent help. Patients' beds are equipped with microphones and speakers, such that they are speak directly with a nurse from bed.

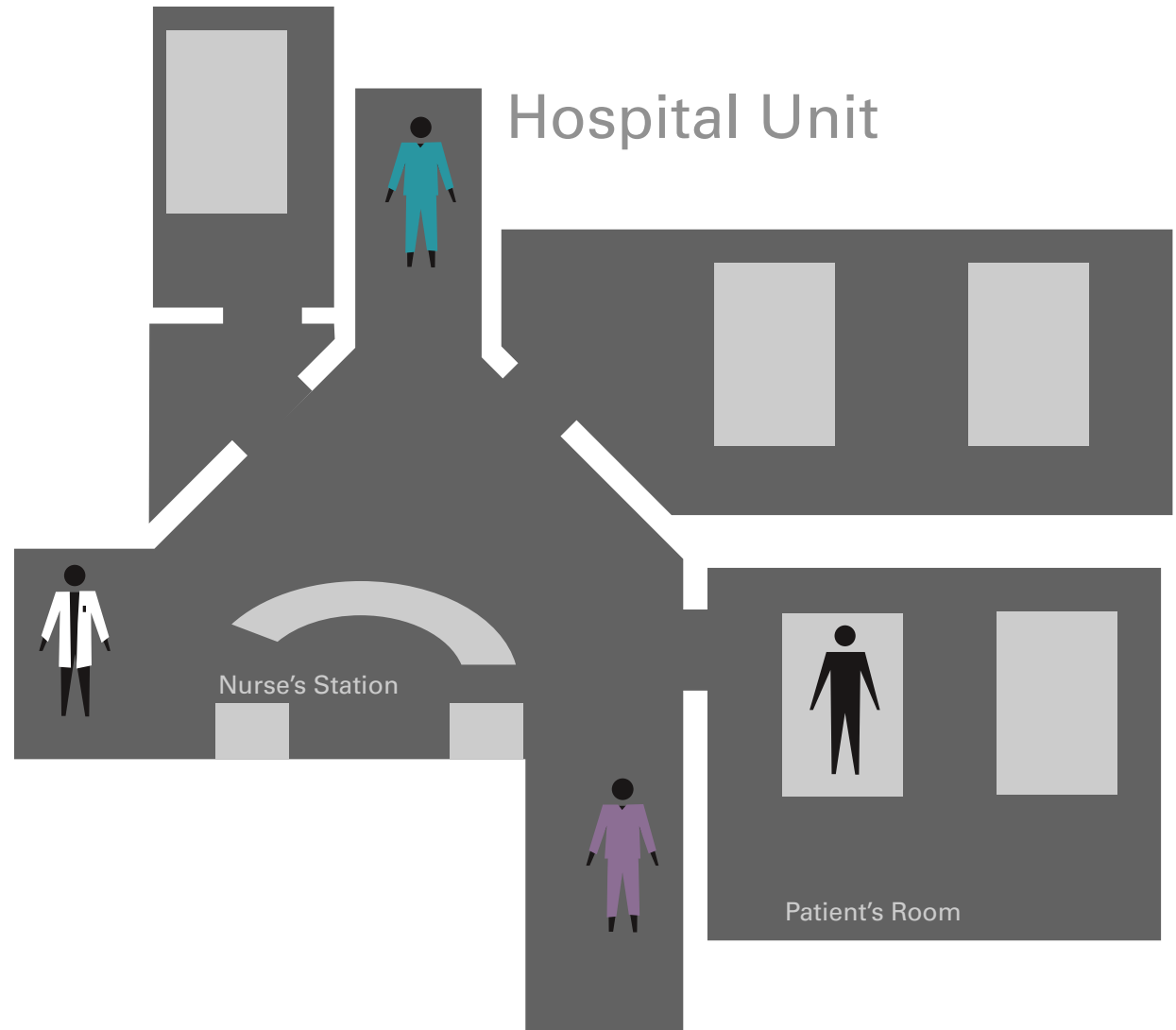


High-Tech Concepts

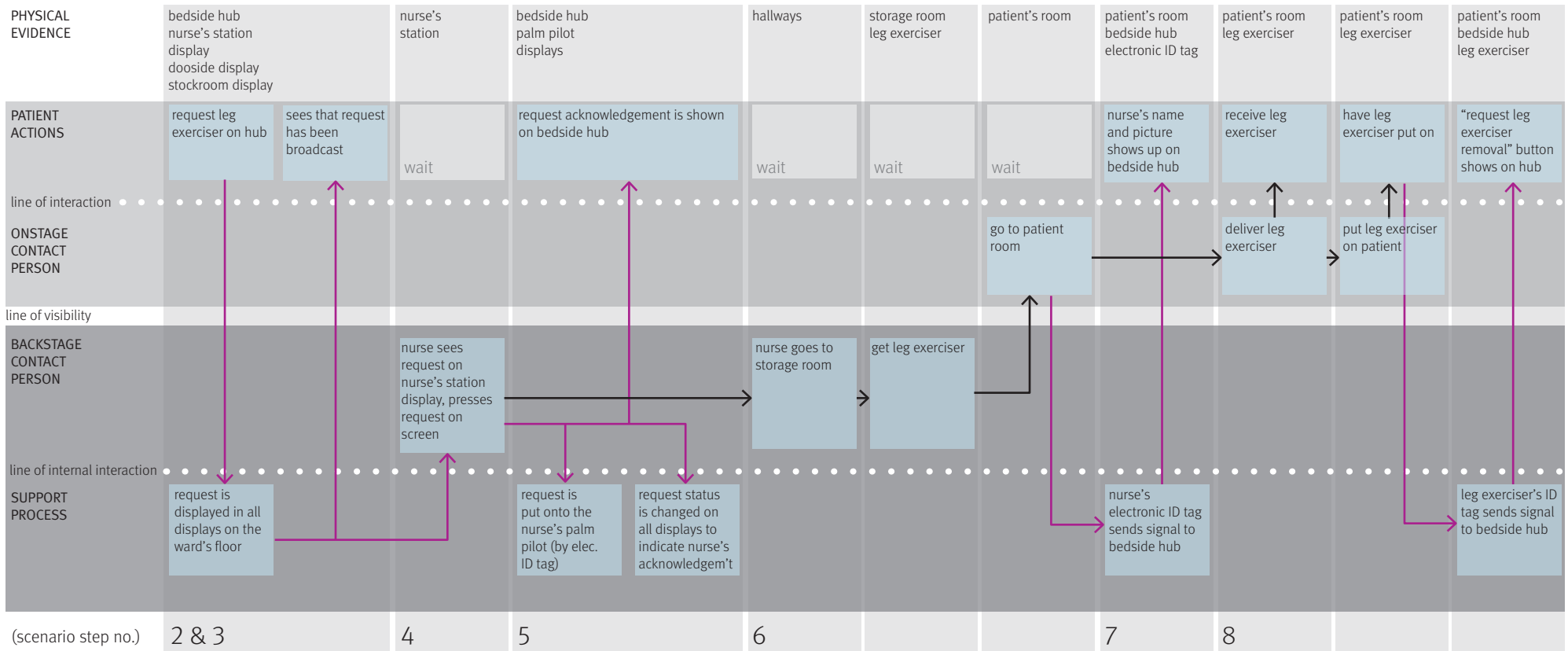
RFID Objects



Items around the floor will be embedded with RFID tags to increase communication of their location. Electronic identification in staff ID's are also sensed by the various displays, which update accordingly to who is present.

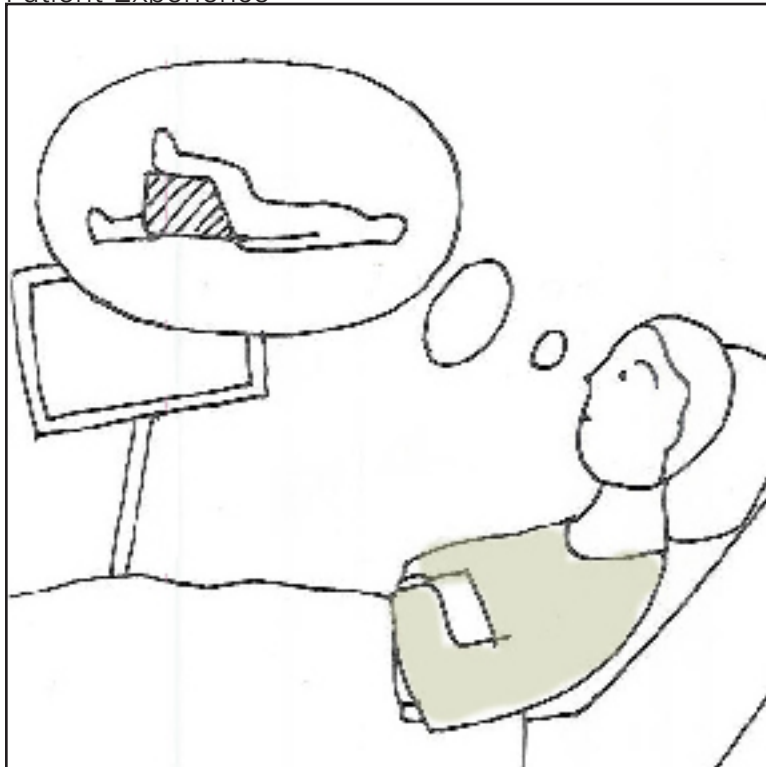


Future service blueprint & scenario



Leg Exerciser Request Scenario Step 1

Patient Experience



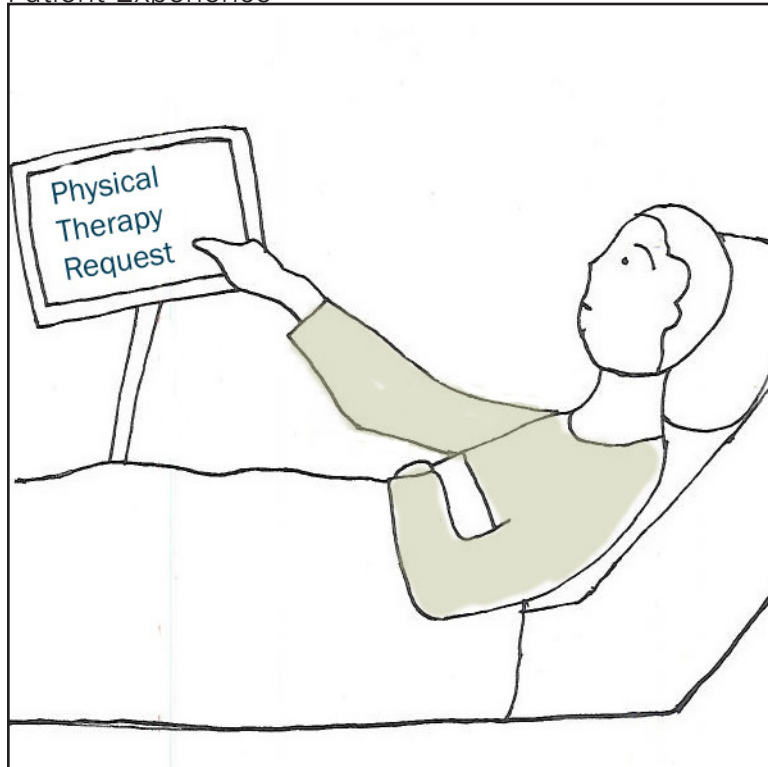
Patient Paul is recovering from a knee surgery on the Orthopedic Recovery Floor in room 332. He would like to use the leg exerciser today that his doctor recommended to him.

Nurse Experience



Leg Exerciser Request Scenario Step 2

Patient Experience



On his bedside hub, Patient Paul indicates in the physical therapy request section that he wants the leg exerciser.

Nurse Experience



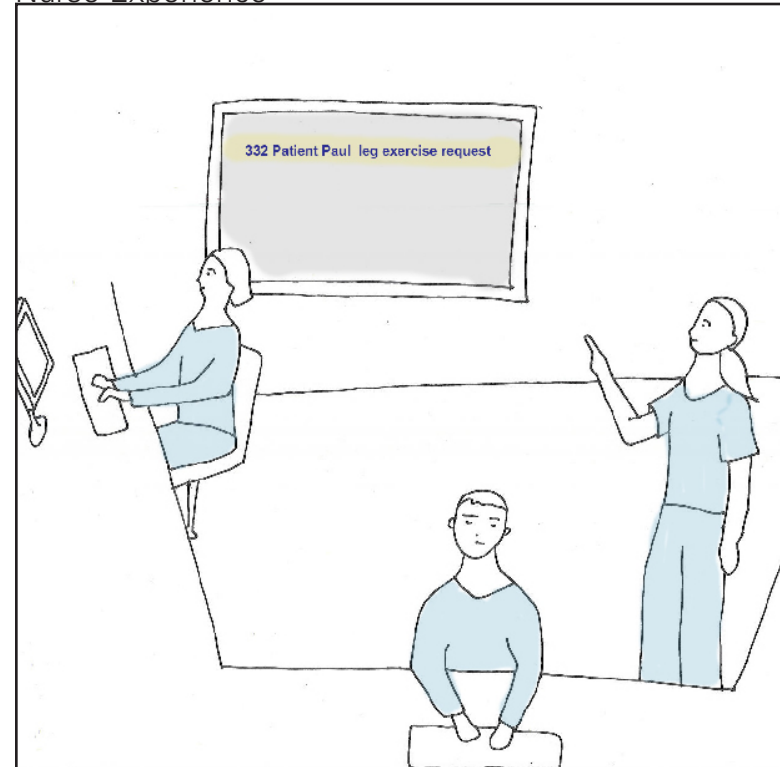
Leg Exerciser Request Scenario Step 3

Patient Experience



Patient Paul sees that his request has been broadcast to the nurses

Nurse Experience



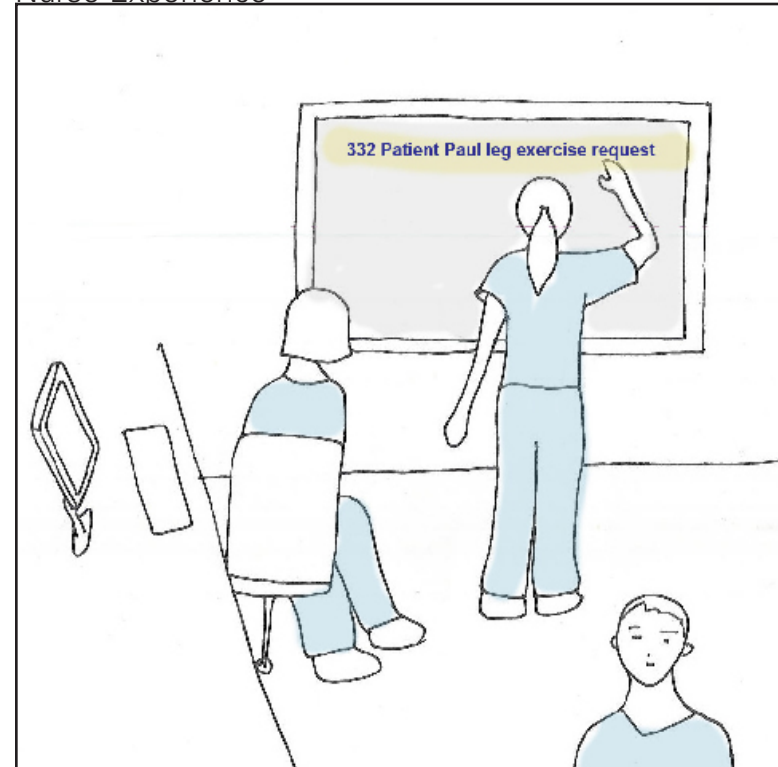
At the nurse's station, Nurse Nancy sees the digital whiteboard flash with Patient Paul's request. Across the Orthopedic Floor, Paul's request has also been displayed on the doorside display by his room, and on the stockroom display.

Leg Exerciser Request Scenario Step 4

Patient Experience



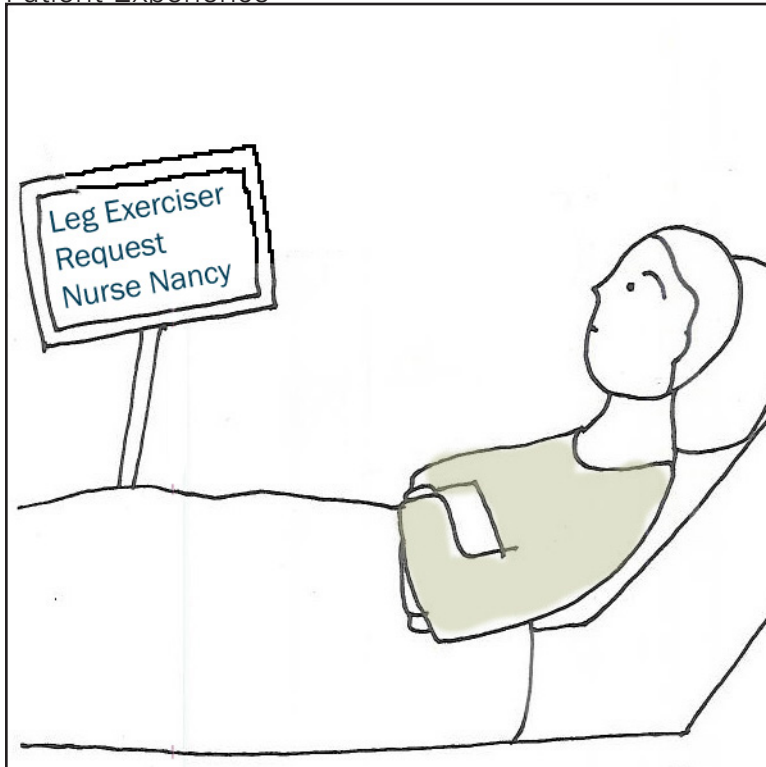
Nurse Experience



Nurse Nancy decides to respond to the request, so she approaches the board and touches the request to accept responsibility for it. The digital whiteboard recognizes it is her due to her electronic ID tag.

Leg Exerciser Request Scenario Step 5

Patient Experience



Patient Paul's hub is updated to show that Nurse Nancy has acknowledged his request.

Nurse Experience



The request acknowledgement is updated across the Orthopedic Floor displays, and is added to Nurse Nancy's palm pilot to do list.

Leg Exerciser Request Scenario Step 6

Patient Experience



Nurse Experience



Nurse Nancy retrieves the leg exerciser and brings it to Patient Paul's room.

Leg Exerciser Request Scenario Step 7

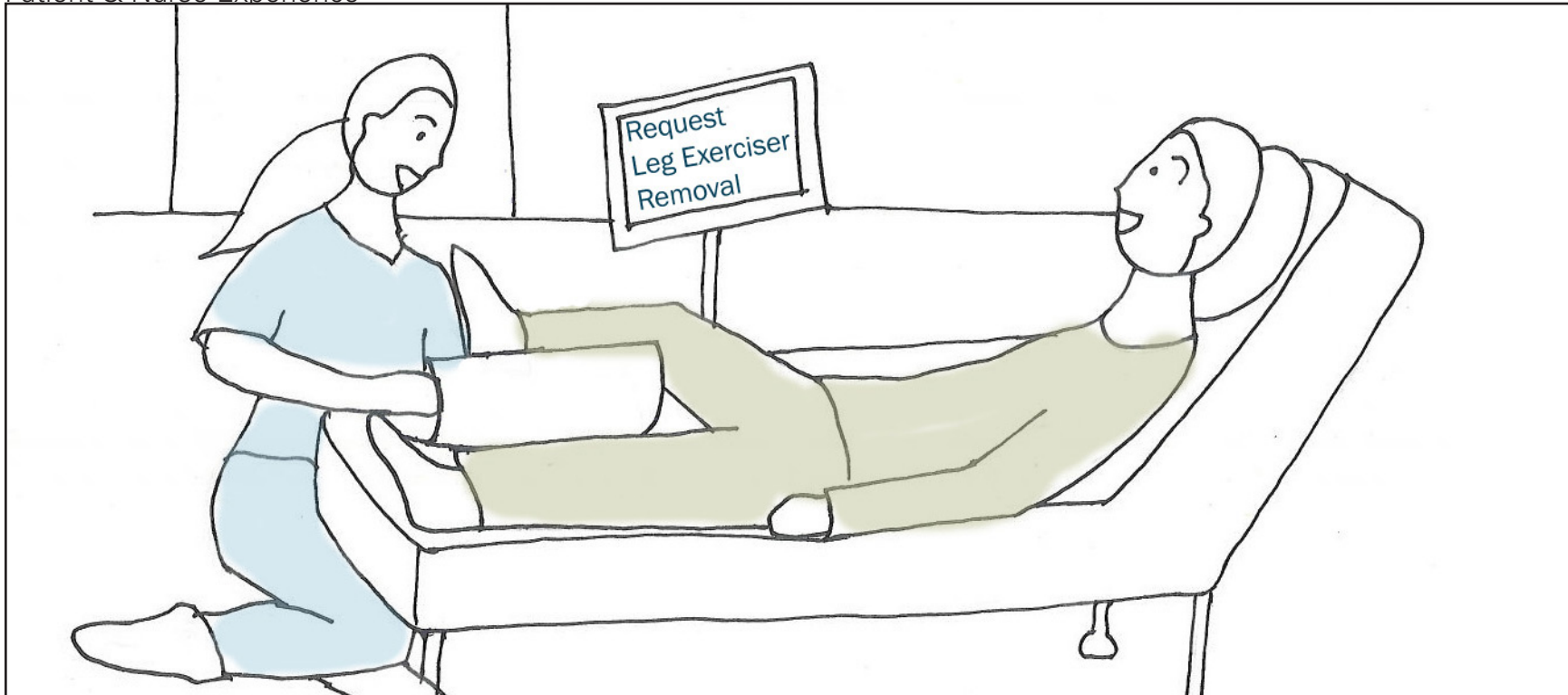
Patient & Nurse Experience



As Nurse Nancy enters the room, her electronic ID tag communicates to Patient Paul's bedside hub. The hub lights up to inform Paul that Nurse Nancy has is here with his leg exerciser.

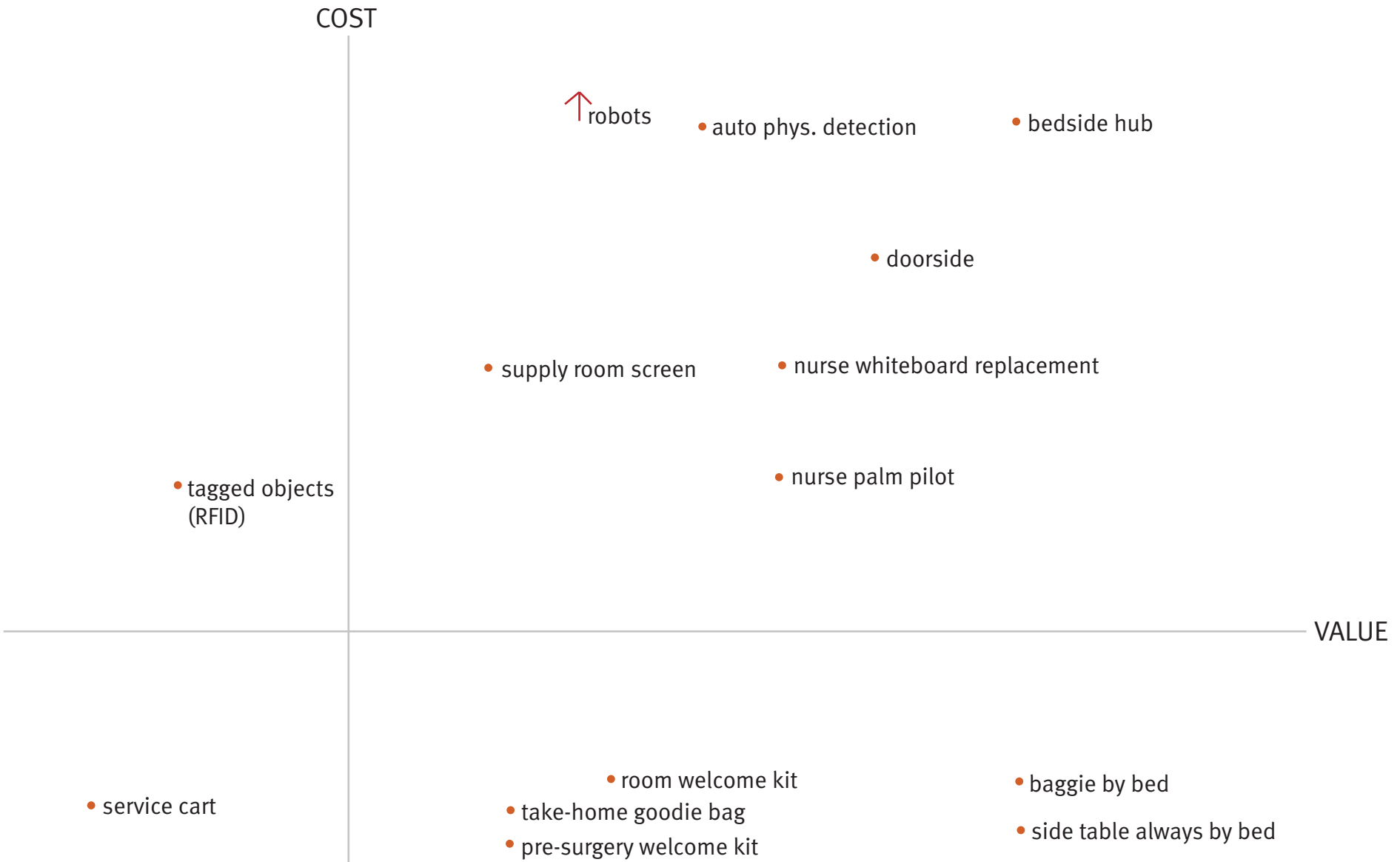
Leg Exerciser Request Scenario Step 8

Patient & Nurse Experience

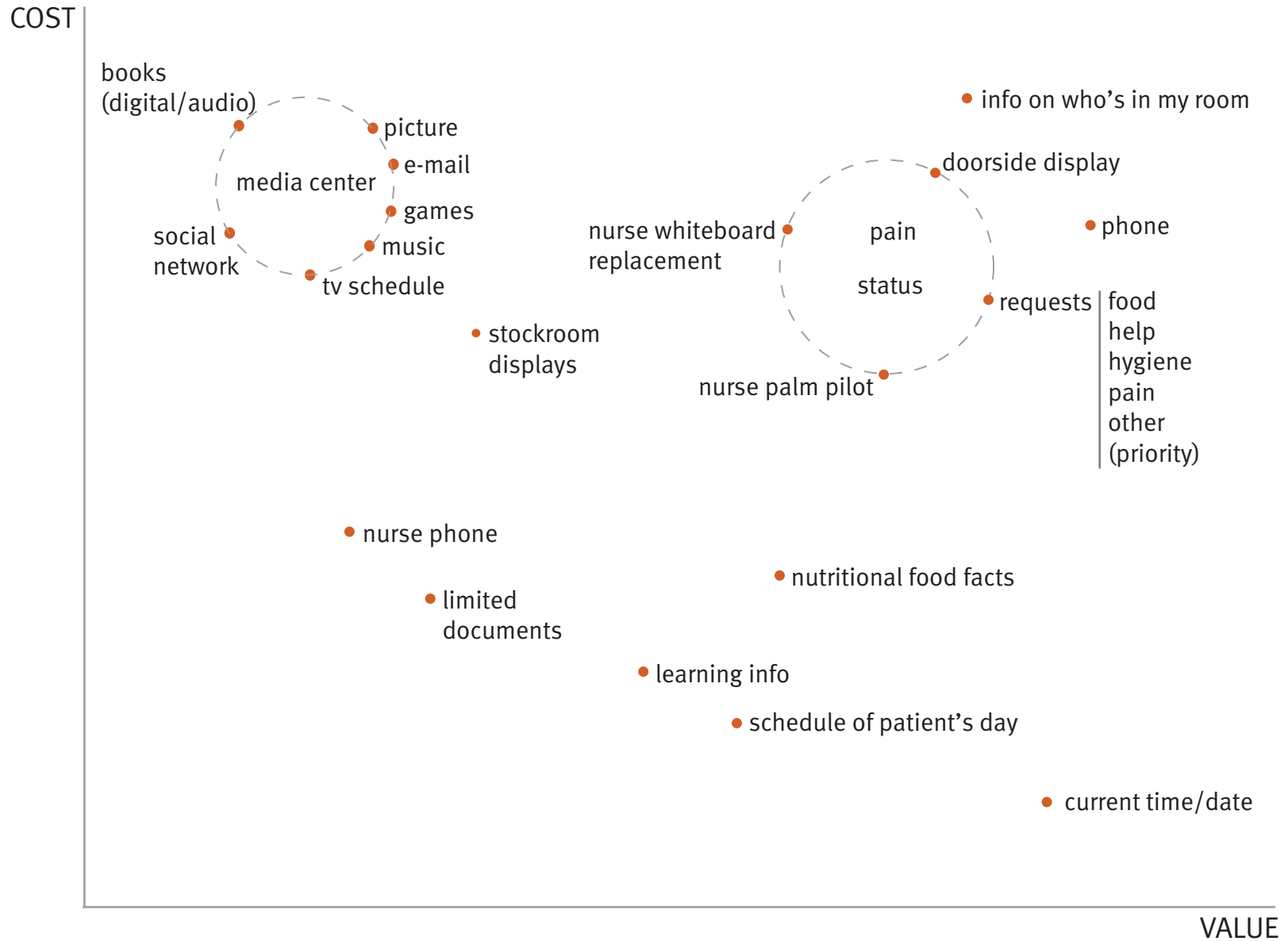


As Nurse Nancy sets up the leg exerciser on Patient Paul's bed, the hub recognizes this and adds a shortcut to the main display for requesting the removal of the leg exerciser.

Cost-Value of Concepts



Cost-Value of Bedside Hub



Next Steps

concept validation using scenarios

concept refinement