TOWER A

Stacking and Adjacencies

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

VERTICAL PROXIMITY BETWEEN MIU AND L&D

The Postpartum / Mother Infant Unit is located on Level 05 to enable team members to quickly travel to and from Labor and Delivery. Proximity between these floors also better positions the postpartum unit to accommodate antepartum overflow.

- Increased safety during rapid code response
- Reduced travel distances for care team staff
- Enhanced team collaboration
- Increased flexibility

ADJACENCY BETWEEN L&D AND NICU

The NICU is located on Level 04 for vertical proximity to the Labor and Delivery Unit. This proximity ensures the shortest travel distance possible for NICU infants, as well as immediate access to Labor and Delivery for the NICU team.

- Increased safety and rapid response during resuscitation events
- Increased family satisfaction

LEVEL 03 CONNECTION TO ROBERTS PAVILION SURGERY

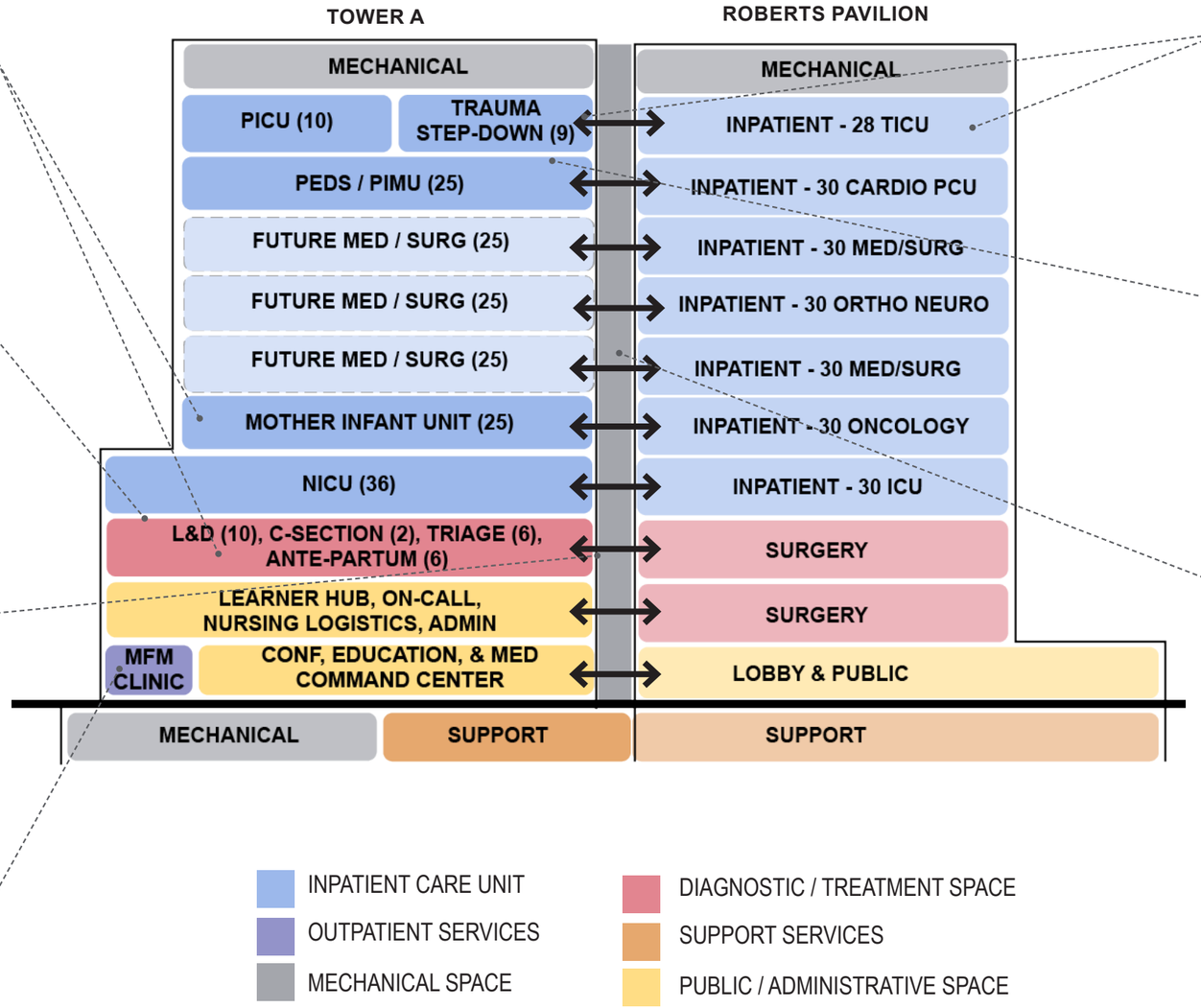
The Labor and Delivery Unit is located adjacent to the operating rooms on Level 03 of Roberts Pavilion so that, in the case of more than two simultaneous c-sections, the Labor and Delivery unit can utilize Roberts ORs.

- Optimized space utilization
- Ability to leverage Roberts ORs for multiple c-sections in during simultaneous, unscheduled emergencies
- Improved access to sterile supplies

EARLY INTERVENTION FOR HIGH RISK MOMS

An on-site Maternal Fetal Medicine (MFM) clinic is maintained in response to a recent rise in maternal mortality in the U.S. Early identification and intervention for high-risk moms can improve outcomes.

- Improved patient health outcomes



ADJACENCY BETWEEN TRAUMA STEP DOWN AND TRAUMA ICU

A 9-bed Trauma Step Down unit is located on Level 10, adjacent to the Trauma ICU. This positioning is intended to allow for a direct transition from ICU to Step Down while also allowing increased collaboration between the two units.

- Shorter distances for patient transport
- Increased team cohesion and collaboration
- Greater flexibility

VERTICAL ADJACENCY BETWEEN PEDS AND PICU

The Pediatric/Pediatric Intermediate Care Unit is located directly below the Pediatric Intensive Care Unit to facilitate team member access between units and the sharing of key clinical support spaces.

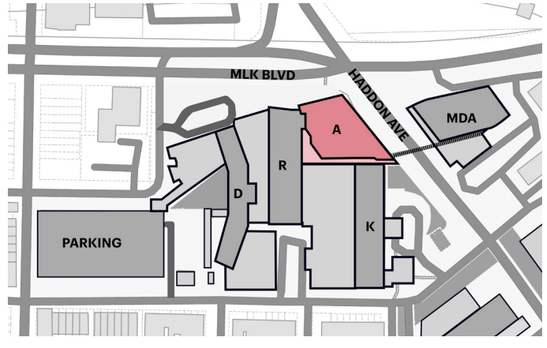
- Reduced travel distance
- Increased team collaboration
- Improved space utilization

CONNECTION TO ROBERTS PAVILION ON EACH LEVEL

Every floor connects back to Roberts Pavilion to allow staff to easily traverse between units. The connection to Roberts Pavilion is also intended allow connection to future Towers B&C.

- Shorter travel distances for staff
- Increased team cohesion and collaboration
- Flexibility for future connection to Towers B&C

SITE PLAN



GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

- https://www.commonwealthfund.org/publications/issue-brief-report/2020/dec/maternal-mortality-united-states-primer#:~:text=During%20pregnancy%2C%20hemorrhage%20and%20cardiovascular,infection%20is%20the%20leading%20cause.

TOWER A

L03 - Antepartum / Labor and Delivery

SCHEMATIC DESIGN - FEBRUARY 15, 2024

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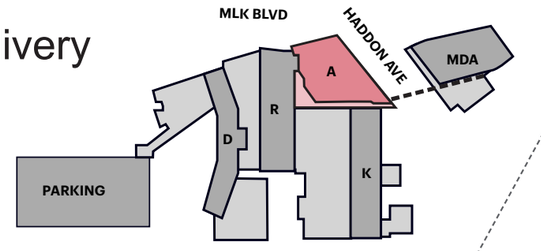
COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE



SPACE FOR FAMILY DIGNITY

The rose room is intended for infant holding, and the consult room can flex to a separate waiting area for grieving families. Family respite spaces also allow family members to wait in a private nook while patients receive epidurals.

- Increased patient and family satisfaction
- Increased patient privacy
- Limited disruption to staff workflow

CONTROLLED ENTRY

Direct sightlines from the unit secretary desk into the family waiting room is provided. Control doors and a sally port provide additional security for staff and infants

- Increased security
- Increased staff satisfaction

OVERFLOW CAPACITY

A connection to the operating rooms in Roberts Pavilion provides overflow space for additional C-sections to plan for emergency and growth.

- Optimized space utilization
- Leveraged Roberts ORs for multiple c-sections in during simultaneous, unscheduled emergencies
- Improved access to sterile supplies

RAPID ROUTE TO SURGERY

C-Section suite is strategically located between the labor and delivery rooms (LDRs), Roberts Pavilion, and patient elevators.

- Shortened travel distances to surgery from horizontal and vertical destinations save time for high risk moms
- Increased patient safety

ANTEPARTUM AS DESTINATION

Comprehensive women's services, from antepartum to postpartum services are rising in significance. Adjacencies between antepartum, delivery, and postpartum intend to enhance continuity of these services. Mother and family members can use a backstage corridor to reach antepartum rooms and can be moved to labor and delivery rooms.

- Enhanced patient privacy
- Supports strategic adjacencies on unit

- PATIENT CARE SPACE
- CLINICAL SUPPORT SPACE
- ANCILLARY SUPPORT SPACE
- C-SECTION & PREP/RECOVERY
- TRIAGE
- FAMILY SPACE
- VERTICAL CIRCULATION
- MECHANICAL/ELECTRICAL
- CIRCULATION

PRIVATE PATIENT ROOMS

Labor and delivery rooms are right-sized and standardized with space for infant and mother. Antepartum rooms are private with ample clearances. Private patient rooms reduce falls by 66%.

- Spatial capacity for bedside procedures
- Increased patient and family satisfaction
- Improved room utilization
- Improved workflow for staff

STANDARD CLINICAL CORE

A standardized clean supply, medication room, and nourishment alcove are located on either end of the unit on every floor to minimize walking distances and limit time spent searching for supplies. Entries are located at off-stage corridors for easy cart deliveries and to limit disruption to patient rest.

- Reduced walking distances
- Increased staff satisfaction
- Increased time spent in direct patient care
- Reduced noise levels

INTERPROFFESIONAL MODEL

The central workstation has multiple options for focused to collaborative work, including an individual enclave room, a large enclosed workroom for all team members, and open workstations for easy patient monitoring.

- Increased staff satisfaction
- Flexibility in work mode
- Increased interdisciplinary collaboration
- Improved visibility of patient rooms

CO-LOCATION OF TRIAGE & AND PREP/ RECOVERY

Combination of triage and prep/recovery spaces supports adequate staffing, peer collaboration, spatial efficiency, and flexing patient care space to meet fluctuating volumes

- Optimize space utilization
- Improve staff experience
- Provide flexibility

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

- Hendrich, A., Fay, J., & Sorrells, A. (2002). Courage to heal: Comprehensive cardiac critical care. Healthcare Design, pp. 11–13.
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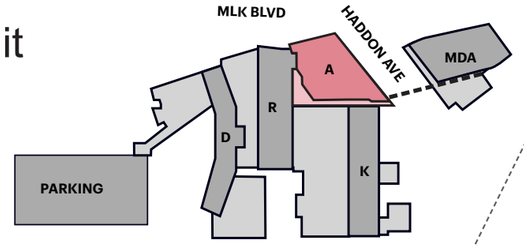
TOWER A

L04 - Neonatal Intensive Care Unit

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE



VISUALIZATION OF UNIT ENTRY AND SCRUB STATION

Direct visibility from unit secretary desk to the unit entry and scrub station is provided to improve both safety and first impressions. Secure door controls provide added security.

- Enhanced Safety

ADJACENCY TO BIRTHING UNIT

The NICU is located on Level 04 for vertical proximity to the Labor and Delivery Unit. This proximity ensures the shortest travel distance possible for NICU infants, as well as immediate access to Labor and Delivery for the NICU team.

- Increased safety and rapid response during resuscitation events
- Increased family satisfaction
- Reduced infant hypothermia and morbidity

FAMILY ACCOMMODATIONS

A family lounge with showers, laundry, consultation space, and lactation is provided directly on the unit. The rose room, intended for infant holding and private grieving, is located off stage. Family respite spaces also allow family members to step away.

- Enhanced parental comfort and freedom
- Increased family-to-family interactions
- Opportunity for emotional support

OFF-STAGE LOCKER AND LOUNGE

The staff locker room and lounge is located for direct access off the elevators and for access to daylight. The off-stage location further encourage staff to take dedicated breaks.

- Increased staff satisfaction
- Reduced staff burnout
- Increased staff retention

PRIVATE ROOMS

Single family rooms are provided on the unit in alignment with family-centered care. Single family rooms are associated with higher parental presence and empowerment. Single family rooms support hospital-based breastfeeding, which has been linked with a reduction in infant deaths.

- Increased parental presence
- Reduced stress levels for families
- Shortened length of stay for infant
- Improved lactation outcomes
- Reduced noise levels

PODS OF 3-WALLED BAYS

3-walled bays are provided on the unit to optimize the number of infant care stations available, to respond to the rise of premature birth in the U.S. 3-walled bays balance enhanced patient monitoring with family privacy.

- Enhanced communication between staff and family
- Space optimization
- Increased staff satisfaction
- Enhanced patient monitoring

INFECTION CONTROL

Distributed bottle cleaning stations, decentralized supply cabinets for personal protective equipment and handwash sinks for family enhance infection control practices.

- Increased patient safety
- Reduced travel for supplies

CHOICE IN WORK STATION

The central workstation has multiple options for focused to collaborative work, from individual enclave rooms, to enclosed but transparent team workrooms, and open workstations for easy patient monitoring. Decentralized charting alcoves further diversify workstation opportunities.

- Increased staff satisfaction
- Flexibility in work mode
- Increased interdisciplinary collaboration
- Improved visibility of patient rooms

DUAL OCCUPANCY ROOM

A dual occupancy room makes strategic use of irregularly space that can be used for twin patients.

- Space optimization
- Efficient staffing
- Increased flexibility

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

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TOWER A

L05 - Postpartum/ Mother Infant Unit

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

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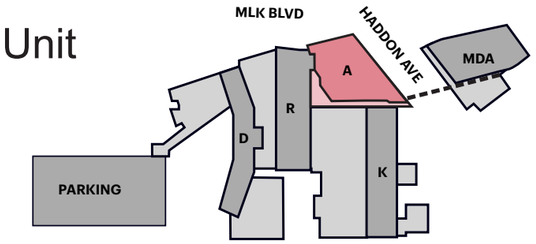

ANTEPARTUM OVERFLOW

Patient rooms around the northwest workstation can be used for antepartum overflow to better accommodate antepartum and postpartum patient volumes.

- Optimized room utilization
- Flexibility
- Improved care team continuity

MEDICAL EDUCATION ROOM

A medical education room is located on the unit and near the central workstation to provide learners a dedicated space.

- Enhance opportunity for integrated, in-situ learning
- Greater connectivity to staff and educators
- Increased learner satisfaction

CONTROLLED ACCESS WAITING

A family waiting area is located directly of the public elevators with controlled entry into the unit. Location of the PSR desk allows for monitoring of families entering and exiting the unit.

- Increased safety and security

LOCKER AND LOUNGE LOCATION

The staff locker room is located for direct access off the elevators and the lounge is located for access to daylight.

- Increased staff satisfaction
- Reduced staff burnout
- Increased staff retention

FAMILY RESPITE

Two family respite areas are located at either end of the unit to allow family members to take a break or leave the patient room during patient care.

- Increased patient and family satisfaction
- Improved staff workflow

SPLIT ACCESS NOURISHMENT

The nourishment zones are zoned with an entry alcove to allow family members to access key items (ice, water, snacks). A secondary, locked room provides secure storage of patient-specific dietary items.

- Increased family satisfaction
- Decreased staff interruptions

PATIENT CARE SPACE
CLINICAL SUPPORT SPACE
FAMILY SPACE
ANCILLARY SUPPORT SPACE
VERTICAL CIRCULATION/ SHAFT
MECHANICAL/ELECTRICAL
CIRCULATION

TEAM HUDDLE SPACE

A centrally located huddle room can be used for rounding, team hand-offs, student learning, and etc. Glass walls and central monitoring screens maintain situational awareness while limiting noise and crowding around patient rooms.

- Increased team collaboration
- Increased staff and learner satisfaction
- Minimized disruption to patient rest
- Maximized visibility

STANDARDIZED SUPPORT CORE

A standardized clean supply, medication room, and nourishment alcove are located on either end of the unit on every floor to minimize walking distances and limit time spent searching for supplies. Entries are located at off-stage corridor for easy cart deliveries and to limit disruption to patient rest.

- Reduced walking distances
- Increased staff satisfaction
- Increased time spent in direct patient care
- Reduced noise levels

STAFFED NURSERY

The nursery is located directly off the workstation to connect staff with their peers. The exam room is directly connected to the nursery to allow for infant holding before or after circumcisions. Space for infant resuscitation is provided for rapid response.

- Increased infant monitoring
- Improved staff workflow

WORKSTATION CHOICE

The central workstation has multiple options for focused to collaborative work, from individual enclave rooms, to enclosed but transparent team workrooms, and open workstations for easy patient monitoring. Charting alcoves further diversify workstation opportunities and enhance visibility.

- Increased staff satisfaction
- Flexibility in work mode
- Increased interdisciplinary collaboration
- Improved visibility of patient rooms

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

- 2010. Pressler. Universal Patient Care Rooms.
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TOWER A

L06 - Typical Inpatient Unit

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

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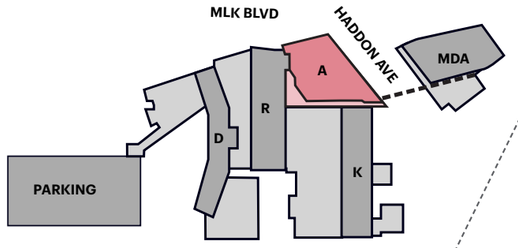

FAMILY RESPITE

Two family respite areas are located at either end of the unit to allow family members to take a break or leave the patient room during patient care.

- Increased patient and family satisfaction
- Improved staff workflow

MEDICAL EDUCATION ROOM

A medical education room is located on the unit and near the central workstation to provide learners a dedicated space.

- Enhance opportunity for integrated, in-situ learning
- Greater connectivity to staff and educators
- Increased learner satisfaction

LOCKER AND LOUNGE LOCATION

The staff locker room is located for direct access off the elevators and the lounge is located for access to daylight. Additional spaces to support staff include a lactation room, respite room, and on-call suite within the unit. These spaces are intended to improve staff experience in response to rising trends in staff burnout. Staff turnover can cost more than $62,100 per nurse.

- Increased staff satisfaction
- Reduced staff burnout
- Increased staff retention

CONTROLLED ACCESS FAMILY WAITING AREA

A family waiting area is located directly of the public elevators with the option for controlled entry into the unit. Location of the PSR desk allows for monitoring of families entering and exiting the unit.

- Increased safety and security

POSITION OF PATIENT ROOMS

Patient rooms are located to maximize views on MLK Boulevard and Haddon Avenue. No patient rooms are located parallel to Roberts to protect patient privacy and ensure patients in Tower A do not have direct sight lines into patient rooms in Roberts.

- Optimized daylight and views
- Increased patient privacy

TEAM HUDDLE SPACE

A centrally located huddle room can be used for rounding, team hand-offs, student learning, and etc. Glass walls and central monitoring screens maintain situational awareness while limiting noise and crowding around patient rooms.

- Increased team collaboration
- Increased staff and learner satisfaction
- Minimized disruption to patient rest
- Maximized visibility

STANDARDIZED SUPPORT CORE

A standardized clean supply, medication room, and nourishment alcove are located on either end of the unit on every floor to minimize walking distances and limit time spent searching for supplies. Entries are located at off-stage corridor for easy cart deliveries and to limit disruption to patient rest.

- Reduced walking distances
- Increased staff satisfaction
- Increased time spent in direct patient care
- Reduced noise levels

SPLIT ACCESS NOURISHMENT

The nourishment zones are zoned with an entry alcove to allow family members to access key items (ice, water, snacks). A secondary, locked room provides secure storage of patient-specific dietary items.

- Increased family satisfaction
- Decreased staff interruptions
- Improved workflows

WORKSTATION CHOICE

The central workstation has multiple options for focused to collaborative work, from individual enclave rooms, to enclosed but transparent team workrooms, and open workstations for easy patient monitoring. Charting alcoves further diversify workstation opportunities.

- Increased staff satisfaction
- Flexibility in work mode
- Increased interdisciplinary collaboration
- Improved visibility of patient rooms

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

- Jones, C. B. (2004). The costs of nurse turnover: Part 1: An economic perspective. The Journal of Nursing Administration, 34(12), pp. 562–570.
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TOWER A

L09 - Pediatric / PIMU

SCHEMATIC DESIGN - FEBRUARY 15, 2024

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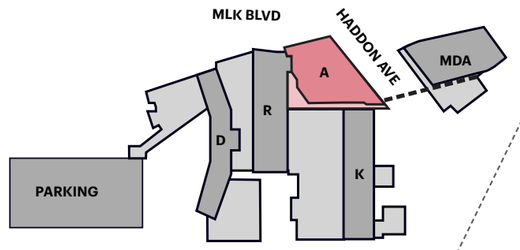
COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE



FAMILY RESPITE

Two family respite areas are located at either end of the unit to allow family members to take a break or leave the patient room during patient care.

- Increased patient and family satisfaction
- Improved staff workflow

MEDICAL EDUCATION ROOM

A medical education room is located on the unit and near the central workstation to provide learners a dedicated space.

- Enhance opportunity for integrated, in-situ learning
- Greater connectivity to staff and educators
- Increased learner satisfaction

LOCKER AND LOUNGE LOCATION

The staff locker room is located for direct access off the elevators and the lounge is located for access to daylight. Additional spaces to support staff include a lactation room, respite room, and on-call suite within the unit. These spaces are intenteded to improve staff experience in response to rising trends in staff burnout. Staff turnover can cost more than $62,100 per nurse.

- Increased staff satisfaction
- Reduced staff burnout
- Increased staff retention

CONTROLLED ACCESS FAMILY WAITING AREA

A family waiting area is located directly of the public elevators with the option for controlled entry into the unit. Location of the PSR desk allows for monitoring of families entering and exiting the unit.

- Increased safety and security

POSITION OF PATIENT ROOMS

Patient rooms are located to maximize views on MLK Boulevard and Haddon Avenue. No patient rooms are located parallel to Roberts to protect patient privacy and ensure patients in Tower A do not have direct sight lines into patient rooms in Roberts.

- Optimized daylight and views
- Increased patient privacy

TEAM HUDDLE SPACE

A centrally located huddle room can be used for rounding, team hand-offs, student learning, and etc. Glass walls and central monitoring screens maintain situational awareness while limiting noise and crowding around patient rooms.

- Increased team collaboration
- Increased staff and learner satisfaction
- Minimized disruption to patient rest
- Maximized visibility

STANDARDIZED SUPPORT CORE

A standardized clean supply, medication room, and nourishment alcove are located on either end of the unit on every floor to minimize walking distances and limit time spent searching for supplies. Entries are located at off-stage corridor for easy cart deliveries and to limit disruption to patient rest.

- Reduced walking distances
- Increased staff satisfaction
- Increased time spent in direct patient care
- Reduced noise levels

SPLIT ACCESS NOURISHMENT

The nourishment zones are zoned with an entry alcove to allow family members to access key items (ice, water, snacks). A secondary, locked room provides secure storage of patient-specific dietary items.

- Increased family satisfaction
- Decreased staff interruptions
- Improved workflows

WORKSTATION CHOICE

The central workstation has multiple options for focused to collaborative work, from individual enclave rooms, to enclosed but transparent team workrooms, and open workstations for easy patient monitoring. Charting alcoves further diversify workstation opportunities.

- Increased staff satisfaction
- Flexibility in work mode
- Increased interdisciplinary collaboration
- Improved visibility of patient rooms

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Flexibility

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TOWER A

Typical Labor & Delivery Room

SCHEMATIC DESIGN - FEBRUARY 15, 2024

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

DISTINCT FAMILY ZONE

A large sleeper sofa is located in a distinct, recessed area close to the patient.

- Increased privacy for family
- Enhanced patient wellbeing
- Increased family participation
- Increased clear space for care teams

STANDARDIZED HEADWALL

Headwall with medical gases and utilities on either side of the bed utilizes a standard layout across units.

- Optimized safety for patient care
- Reduced number of errors
- Improved ergonomics and clinical workflow
- Increased standardization and consistency
- Increased modularity

INFANT ZONE NEAR MOTHER

Infant resuscitation zone is located adjacent to the mother and along the headwall.

- Standardized footwall maintained
- Increased space for both NICU and L&D Teams
- Increased patient privacy

CORRIDOR PPE CABINETS

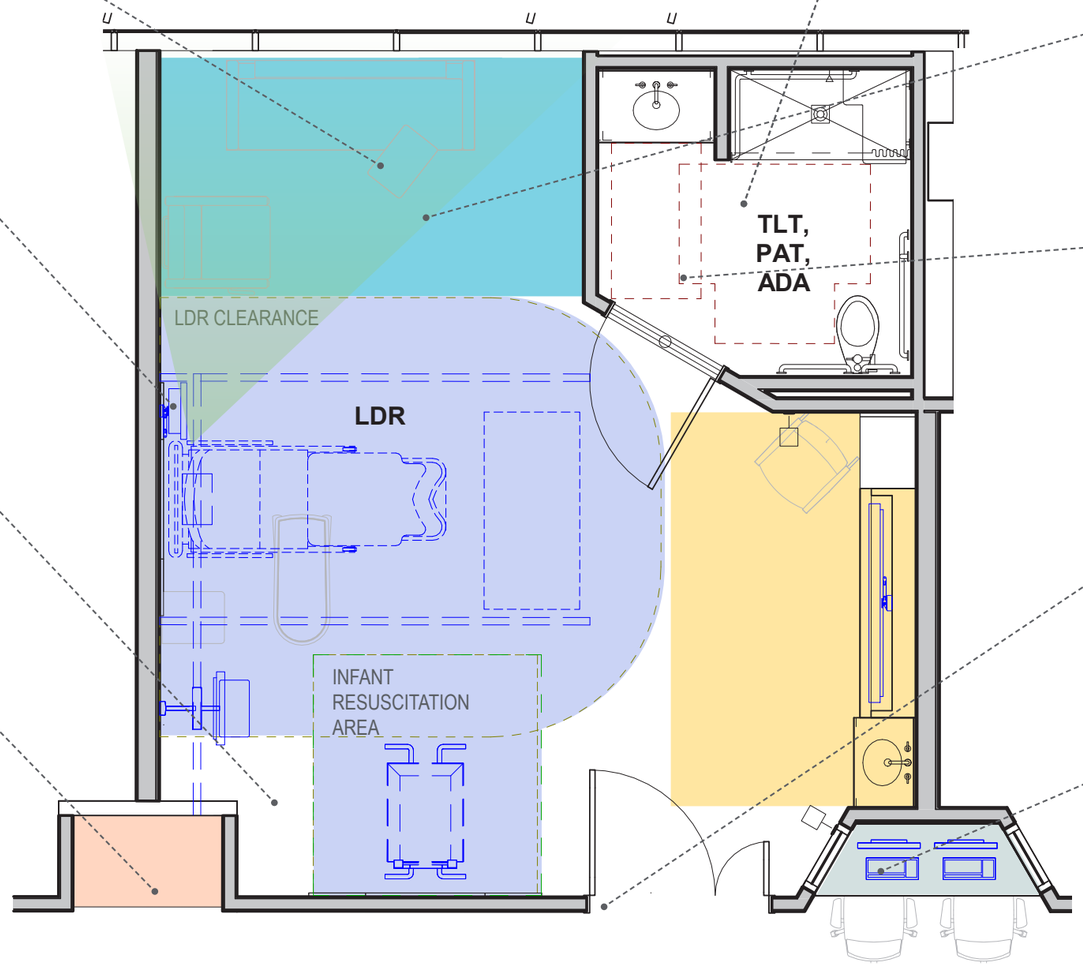
PPE cabinets are located at each patient room with direct access from the corridor. Soiled linen cabinets are accessed from within the room.

- Increased access to point of care supplies
- Reduced walking distances for staff
- Improved safety and infection control practices

OUTBOARD TOILET ROOM

Patient toilet room is located along the exterior wall.

- Improved clinical workspace in the room
- Increased visibility and patient monitoring
- Enhanced entry into patient room
- Improved patient access to toilet room.



FAMILY SPACE
PATIENT CARE SPACE
VIEW TO EXTERIOR
CHARTING ALCOVE
PPE CABINET
STAFF WORK ZONE

ACCESS TO DAYLIGHT

There is access to indirect daylight from within the care space.

- Improved staff and family experience
- Regulated circadian function
- Improved patient outcomes

TOILET ROOM AT FOOTWALL

There is direct visibility into the toilet room from the patient bed.

- Reduced patient falls
- Reduced rates of incontinence
- Increased patient control and agency
- Increased patient access to daylight and views
- Improved access to headwall for staff

DOOR TYPE AND ORIENTATION

Entry into the room includes dual leaf swing doors that open facing the footwall.

- Improved patient privacy
- Increased ease of entry

ANGLED CHARTING ALCOVE

Charting alcoves are located at the footwall with angled windows and space for two people.

- Increased visibility and patient monitoring
- Reduced disruptions to patient rest
- Increased staff and patient/family satisfaction
- Space for learning and collaboration

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Simulation

- Pati, D. et al. (2009). A Multidimensional Framework for Assessing Patient Room Configurations. HERD: 2(2), 88-111.
- Nanda, U. (2014). In-board vs. Outboard; Headwall vs. Footwall; Same-Handed vs. Mirrored. CADRE. Synthesis No. 0001.
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- Nejati, Adeleh. (2014). Medical Gas Booms, Columns, and Headwalls: Usage, Benefits, and Challenges - Evidence Inconclusive. Center for Advanced Design Research and Evaluation. Synthesis No. 0003.
- Pope Architects, Inc. & Michael Gaves Architecture & Design (2014). The Falls Assessment Research Report: Creating a Safe Environment to Prevent Toileting-Related Falls. Minnesota Hospital Association. Patient Safety | Safe Design.
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- Summary of the relationships between design factors and healthcare outcomes. American Journal of Infection Control. Bartley, Olmsted and Haas. June 2010

TOWER A

Typical NICU Room

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

FAMILY / VISITOR RECLINER

A recliner for mother-baby activities is provided in the room.

- Increased family engagement in infant care
- Increased participation in baby initiative activities (i.e. breast feeding, skin-to-skin, and kangaroo care)

STANDARDIZED HEADWALL

Headwall with medical gases and utilities on either side of the bed utilizes a standard layout across units.

- Optimized safety for patient care
- Reduced number of errors
- Improved ergonomics and clinical workflow
- Increased standardization and consistency
- Increased modularity

DOOR TYPE AND ORIENTATION

Entrance into the room includes dual leaf swing doors that open facing the footwall.

- Improved patient privacy
- Increased ease of entry

CORRIDOR PPE CABINETS

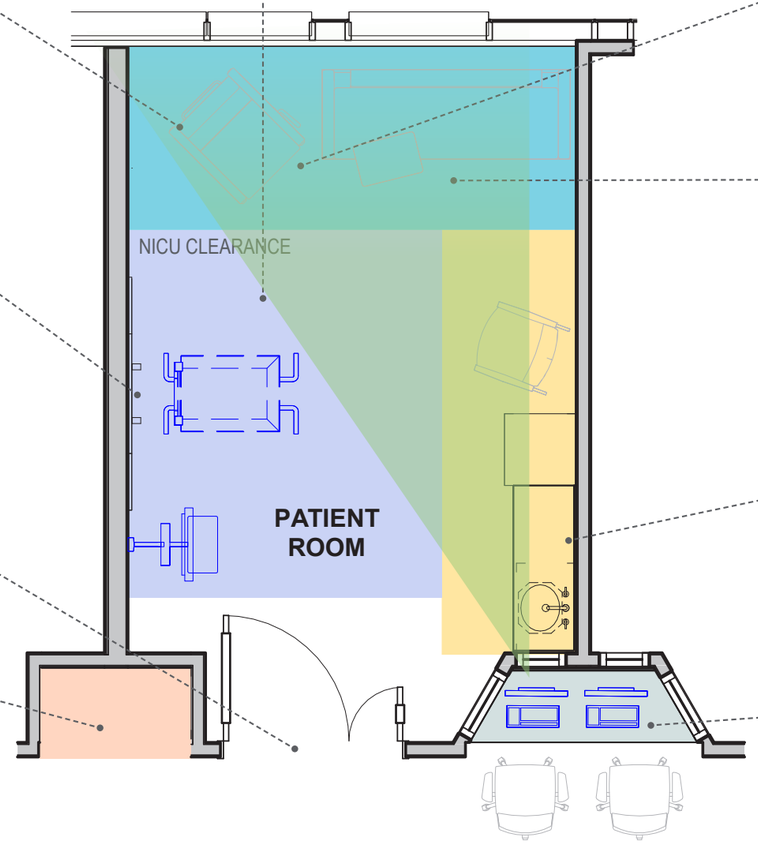
PPE cabinets are located at each patient room with direct access from the corridor. Soiled linen cabinets are accessed from within the room.

- Increased access to point of care supplies
- Reduced walking distances for staff
- Improved safety and infection control practices

PRIVATE NICU ROOM

Private NICU rooms are provided on unit.

- Reduced stress levels
- Increased parental satisfaction
- Improved lactation outcomes
- Reduced noise levels
- Supports developmental continuum of care



FAMILY SPACE
PATIENT CARE SPACE
VIEW TO EXTERIOR
CHARTING ALCOVE
PPE CABINET
STAFF WORK ZONE

ACCESS TO DAYLIGHT

There is access to indirect daylight from within the care space.

- Improved staff and family experience
- Regulated circadian function

DISTINCT FAMILY ZONE

A large sleeper sofa located in a distinct, recessed area close to the patient.

- Increased privacy for family
- Enhanced patient wellbeing
- Increased family participation
- Increased clear space for care teams

STANDARD FOOTWAL

The layout of the footwall follows the standard layout used across other single patient rooms.

- Increased staff satisfaction
- Improved clinical workflow
- Increased standardization and consistency

ANGLED CHARTING ALCOVE

Charting alcoves are located at the footwall with angled windows and space for two people.

- Increased visibility and patient monitoring
- Reduced disruptions to patient rest
- Increased staff and patient/family satisfaction
- Space for learning and collaboration

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Simulation

- Pati, D. et al. (2009). A Multidimensional Framework for Assessing Patient Room Configurations. HERD: 2(2), 88-111.
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- Linam, W. M., Marrero, E. M., Honeycutt, M. D., Wisdom, C. M., Gaspar, A., & Vijayan, V. (2019). Focusing on Families and Visitors Reduces Healthcare Associated Respiratory Viral Infections in a Neonatal Intensive Care Unit. Pediatric Quality & Safety, 4(6), e242. https://doi.org/10.1097/pq9.0000000000000242
- Grimes, C., Meilink, L. (2017). The Decentralized Station: More Than Just Patient Visibility. Academy of Architecture for Health. No. 19. pg. 40-45.
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- Feeley, N., Robins, S., Genest, C., Stremler, R., Zelkowitz, P., & Charbonneau, L. (2020). A comparative study of mothers of infants hospitalized in an open ward neonatal intensive care unit and a combined pod and single-family room design. BMC Pediatrics, 20(1), 38.

TOWER A

Typical NICU Bay

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

DISTINCT FAMILY ZONE

A distinct family zone is nested behind a small wing wall.

- Increased privacy for family
- Increased family participation
- Increased clear space for care teams

STANDARDIZED HEADWALL

Headwall with medical gases and utilities on either side of the bed utilizes a standard layout across units.

- Optimized safety for patient care
- Reduced number of errors
- Improved ergonomics and clinical workflow
- Increased standardization and consistency

DUAL LEAF SWING DOORS

Entrance includes dual leaf swing doors enclosing the NICU Bay.

- Reduced noise
- Increased privacy for family

DECENTRALIZED SUPPLIES

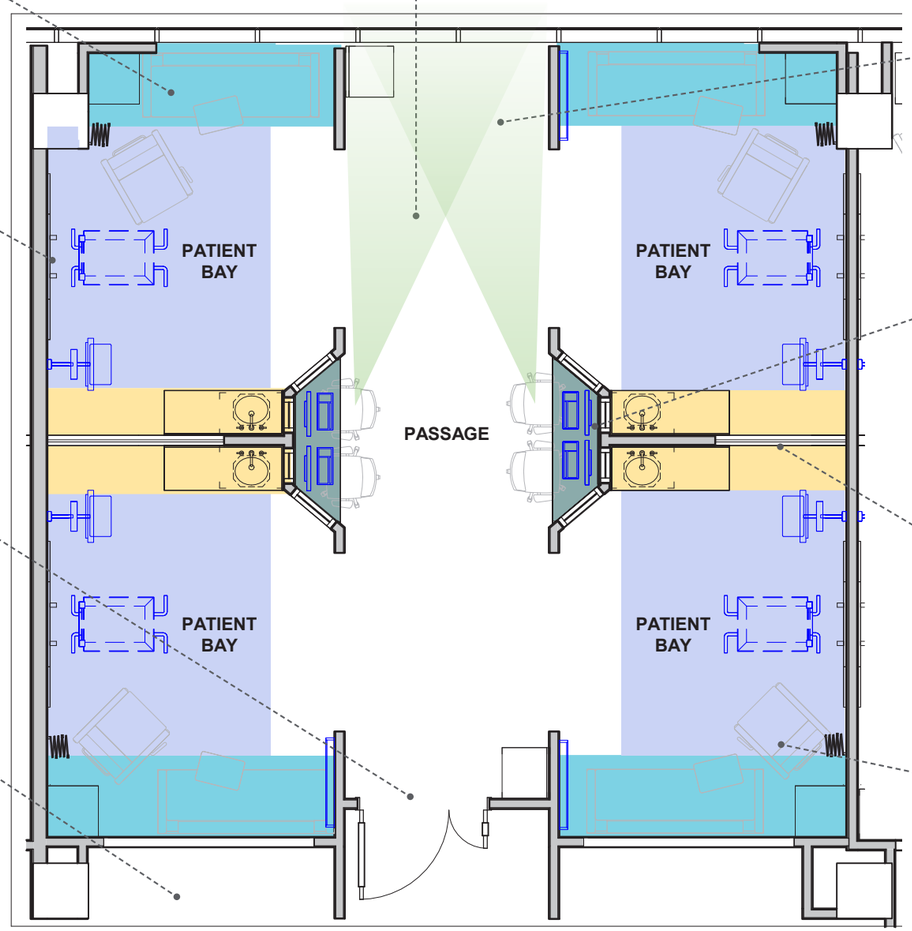
Supplies are located in alcoves along the corridor.

- Increased access to point of care supplies
- Reduced walking distances for staff
- Improved safety and infection control practice

3-WALLED BAYS

Pods of multiple NICU bays are on the unit.

- Optimized use of space
- Supported family engagement and participation
- Increased visibility and patient monitoring
- Facilitated family communication with staff
- Supports developmental continuum of care
- Improved infant neurodevelopment
- Increased opportunity for family community building



FAMILY SPACE
PATIENT CARE SPACE
VIEW TO EXTERIOR
CHARTING ALCOVE
PPE CABINET
STAFF WORK ZONE

ACCESS TO DAYLIGHT

There is access to indirect daylight from within the care space.

- Improved staff and family experience
- Regulated circadian function

CHARTING ALCOVE

Charting alcoves are located at the center of the 4-bay module and between two bays.

- Increased visibility and patient monitoring
- Reduced travel distances for staff
- Increased staff and patient/family satisfaction
- Improved infant safety

HALF HEIGHT WALL

Half height wall is located between NICU bays with full height glazing.

- Increased visibility and patient monitoring
- Increased access to daylight for all bays

FAMILY/VISITOR RECLINER

A recliner for mother-baby activities is provided in the room.

- Increased family engagement in infant care
- Increased participation in baby initiative activities (i.e. breast feeding, skin-to-skin, and kangaroo care)

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Simulation

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- Linam, W. M., Marrero, E. M., Honeycutt, M. D., Wisdom, C. M., Gaspar, A., & Vijayan, V. (2019). Focusing on Families and Visitors Reduces Healthcare Associated Respiratory Viral Infections in a Neonatal Intensive Care Unit. Pediatric Quality & Safety, 4(6), e242. https://doi.org/10.1097/pq9.0000000000000242
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TOWER A

Typical Patient Room

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

DISTINCT FAMILY ZONE

A large sleeper sofa is located in a distinct, recessed area close to the patient.

- Increased privacy for family
- Enhanced patient wellbeing
- Increased family participation
- Increased clear space for care teams

STANDARDIZED HEADWALL

Headwall with medical gases and utilities on either side of the bed utilizes a standard layout across units.

- Optimized safety for patient care
- Reduced number of errors
- Improved ergonomics and clinical workflow
- Increased standardization and consistency
- Increased modularity

DOOR TYPE AND ORIENTATION

Entrance into the room includes dual leaf swing doors that open facing the footwall.

- Improved patient privacy
- Increased ease of entry

CORRIDOR PPE CABINETS

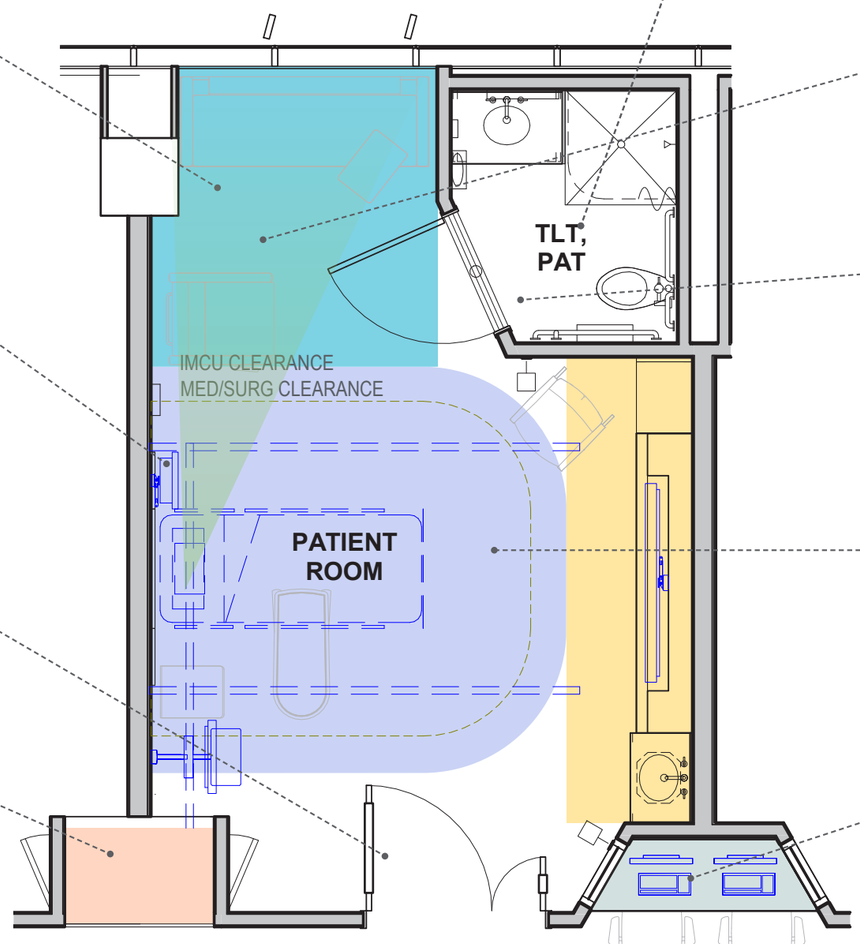
PPE cabinets are located at each patient room with direct access from the corridor. Soiled linen cabinets are accessed from within the room.

- Increased access to point of care supplies
- Reduced walking distances for staff
- Improved safety and infection control practices

OUTBOARD TOILET ROOM

Patient toilet room is located along the exterior wall.

- Improved clinical workspace in the room
- Increased visibility and patient monitoring
- Enhanced entry into patient room
- Improved patient access to toilet room.



FAMILY SPACE
PATIENT CARE SPACE
VIEW TO EXTERIOR
CHARTING ALCOVE
PPE CABINET
STAFF WORK ZONE

ACCESS TO DAYLIGHT

There is access to indirect daylight from within the care space.

- Improved staff and family experience
- Regulated circadian function
- Improved patient outcomes

TOILET ROOM AT FOOTWALL

There is direct visibility into the toilet room from the patient bed.

- Reduced patient falls
- Reduced rates of incontinence
- Increased patient control and agency
- Increased patient access to daylight and views
- Improved access to headwall for staff

UNIVERSAL CLEARANCES

The room is sized to accommodate med/surg, intermediate care, and intensive care clearances.

- Staged for future flexibility
- Reduced need for patient transport
- Improved standardization and consistency
- Reduced medical errors

ANGLED CHARTING ALCOVE

Charting alcoves are located at the footwall with angled windows and space for two people.

- Increased visibility and patient monitoring
- Reduced disruptions to patient rest
- Increased staff and patient/family satisfaction
- Space for learning and collaboration

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Simulation

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- Calkins, Margaret, Biddle, Stacey, Biesan, Orion. (2012). Contribution of the Designed Environment to Fall Risk in Hospitals. The Center for Health Design. Ideas Institute.
- Summary of the relationships between design factors and healthcare outcomes. American Journal of Infection Control. Bartley, Olmsted and Haas. June 2010

TOWER A

Pedicatric Intensive Care

SCHEMATIC DESIGN - FEBRUARY 15, 2024

Cooper University Health Care | HKS + ARRAY architects

COOPER UNIVERSITY HOSPITAL - PROJECT IMAGINE

DISTINCT FAMILY ZONE

A large sleeper sofa is located in a distinct, recessed area close to the patient.

- Increased privacy for family
- Enhanced patient wellbeing
- Increased family participation
- Increased clear space for care teams

STANDARDIZED HEADWALL

Headwall with medical gases and utilities on either side of the bed utilizes a standard layout across units.

- Optimized safety for patient care
- Reduced number of errors
- Improved ergonomics and clinical workflow
- Increased standardization and consistency
- Increased modularity

DOOR TYPE AND ORIENTATION

Entrance into the room includes dual leaf swing doors that open facing the footwall.

- Improved patient privacy
- Increased ease of entry

CORRIDOR PPE CABINETS

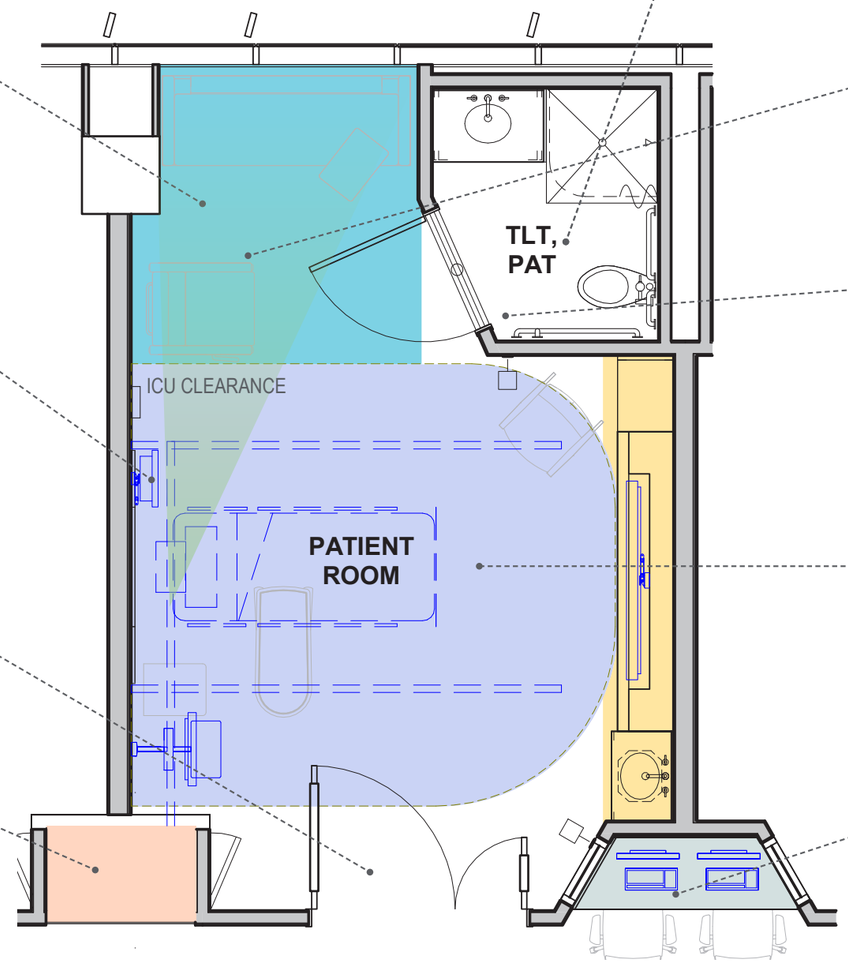
PPE cabinets are located at each patient room with direct access from the corridor. Soiled linen cabinets are accessed from within the room.

- Increased access to point of care supplies
- Reduced walking distances for staff
- Improved safety and infection control practices

OUTBOARD TOILET ROOM

Patient toilet room is located along the exterior wall.

- Improved clinical workspace in the room
- Increased visibility and patient monitoring
- Enhanced entry into patient room
- Improved patient access to toilet room.



FAMILY SPACE
PATIENT CARE SPACE
VIEW TO EXTERIOR
CHARTING ALCOVE
PPE CABINET
STAFF WORK ZONE

ACCESS TO DAYLIGHT

There is access to indirect daylight from within the care space.

- Improved staff and family experience
- Regulated circadian function
- Improved patient outcomes

TOILET ROOM AT FOOTWALL

There is direct visibility into the toilet room from the patient bed.

- Reduced patient falls
- Reduced rates of incontinence
- Increased patient control and agency
- Increased patient access to daylight and views
- Improved access to headwall for staff

UNIVERSAL CLEARANCES

The room is sized to accommodate med/surg, intermediate care, and intensive care clearances.

- Staged for future flexibility
- Reduced need for patient transport
- Improved standardization and consistency
- Reduced medical errors

ANGLED CHARTING ALCOVE

Charting alcoves are located at the footwall with angled windows and space for two people.

- Increased visibility and patient monitoring
- Reduced disruptions to patient rest
- Increased staff and patient/family satisfaction
- Space for learning and collaboration

GUIDING PRINCIPLES

- Efficiency
- Experience
- Exceptional Quality of Care
- Safety

RATIONALE

- Evidence
- Best Practice
- Innovation
- Precedents
- User Feedback
- Simulation

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