Nosocomial Infection Control

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Pediatric Health Center of the Future

Project Summary

• Provide subtle reminders with multiple ways to clean hands
• RFID triggers lighting cues for bed sanitizer and room sink
• RFID triggers vibrating reminder on “clean pocket”
• If a person doesn’t use a solution within 15 seconds, reminders increase.
• Noncompliance noted if hands not sanitized before entering patient zone
Problem Statement: Throughout hospitals in the US, 2 million people acquire infections not related to their original condition. These nosocomial infections are often caused by poor hand washing practices. In fact, hand washing compliance rates are typically as low as 15-35% as inconvenient sink locations and forgetfulness create barriers to proper hand washing behavior.
**Behavioral Solutions**

- RFID monitoring
  - Records caregiver’s movements within room
  - Entering room triggers lighting, vibration reminders
  - Detects movement into patient or sink zone
  - Deactivates system when caregivers leaves room

**Medical Records**

- Patient records displayed next to the sink for status checks while washing hands.
- Activating sink starts on-screen timer to ensure caregiver washes for 15 seconds.
- System logs off when caregiver leaves room.

**Lighting Cues**

- Track lighting illuminates path to sink
- Undersink light draws eye to sink
- If sink not activated within 15 seconds, lighting begins to blink

**Pocket Cleaners**

- Antiseptic gel bulb in waterproof pocket on jacket
- Disinfectant solution always with caregiver
- Disposable cartridge replaceable when empty
- Vibrator on pocket reminds caregiver to use Clean Pocket or sink

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