Optimizing Workflow with Technology and Design

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Objectives

- Describe automating and integrating medical devices into the clinical practice environment.

- Demonstrate how smart technologies can impact the workflow for clinicians and the overall experience for the patient.

- Explain strategies for designing the patient environment to improve patient outcomes and clinical workflow.
Caregivers spend only **25-30%** of their time delivering direct care

- **Direct Care**: 25-30%
- **Searching**: 5-15%
- **Med Admin**: 15-20%
- **Documentation**: 20-25%
- **Communication**: 15-20%

**Utilize integrated medical devices in clinical Workflow to ensure an accurate flow of clinical information.**

**Design the hospital for optimal storage and equipment tracking to help reduce time needed to find equipment.**

**Attention to clinical workflow during facility planning ensures meds administration process is at peak efficiency.**

**Built-in workstations and proper planning for technology help ensure clinician access to the right tools.**

**Design units for optimal team coverage and appropriate devices to facilitate proper communication.**

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Connecting...

Devices Need Appropriate Knowledge
- Too Smart – Loaded with software and functionality that create duplicate work
- Too Dumb – Focused on performance of core device functions without the ability to interact and/or share data in proper patient context.

➢ ... people to devices
➢ ... devices to workflow
➢ ... workflow to outcomes
Cerner Smart Room – Integrated Solutions

The Cerner Smart Room combines innovative technologies, medical device interoperability and workflow solutions to improve patient care and clinician efficiency. The Smart Room incorporates key elements of the patient and clinician experience to streamline care. The objective of the Smart Room is to create an environment that:

- Connects medical devices to the EMR
- Allows caregivers to view relevant clinical data from the EMR and medical devices
- Empowers patients and their families by connecting them to their personal health record.

- **CareAware myStation**
  Offers interactive health information, education and entertainment to improve the patient and family experience.

- **CareAware iAware**
  Provides clinicians a personalized view of all information relevant to patient care by enhancing communication and access to information.

- **CareAware iAccess**
  Eliminates the need to manually enter user name and password on a PC. Uses presence detection and biometric authentication to log into PowerChart and other supported applications.

- **CareAware RoomLink**
  Electronic signage outside a patient room to communicate appropriate data to clinicians, including falls risk and allergies, as well as whether or not a clinician visit is in-progress.

- **CareAware RxStation**
  Delivers a unified closed loop medication solution, automating every step of the process from order and dispense to administration.

- **CareAware VitalsLink**
  Allows clinicians to take vitals, document verify and sign in under 60 seconds.

- **CareAware AlertLink**
  Improves patient outcomes by routing alerts to a clinician’s mobile device.

- **CareAware iBus Including Bed Connectivity**
  CareAware iBus™ is the core component of the CareAware architecture that manages two-way communication between devices and the EMR.

- **CareAware EPS**
  A fully integrated, enterprise-wide positioning and real time location solution that delivers clinical integration and process improvement benefits.
Outside of Patient Room
Electronic Room Signage

**Patient Safety:**
- Displays Room #
- Displays Room/Patient Information in real time. Ex. NPO, Latex Allergy, Isolation
- Integration with Nurse Call system

**Room Availability:**
- Red & green lights to show room Status
- Display caregiver currently in the room name and role.

**Visitor Information:**
- Integration to display messages to visitors Ex. Do not Disturb.
Television in patient room
Patient Entertainment, Education, Communication . . .
Patient Data Display in Critical Care

- Fixed monitor
- Mobile cart
Patient Data Display in Critical Care
RTLS Technology for Tracking

- Command and Control your operations with real time data on the position and status of patients, staff, and equipment by integrating real-time location services (RTLS) and clinical data.
Is Your Facility Designed for the Future?

Increase satisfaction and supports optimal patient care
- Does your design support your planned care delivery structure?
- Are your rooms built with a patient-centric design?
- Are your units designed for caregiver efficiency and satisfaction?
- Are nurses able to document at the point of care?

Enable your infrastructure for future innovation and flexibility
- Do you have a network infrastructure ready to handle integrated smart solutions and their respective data flow?
- Do you have enough power to run your envisioned device roadmap?
- Can you change out the acuity of a room easily?
- Can you expand and contract in reaction to patient census?
- Are you designed as to minimize change and refit needs?
FacilityWorks

Consulting services focused on alignment of clinical, technical and architectural strategies to drive efficiencies and optimize care outcomes through facility design.

Key Benefits:
- Blend of design, technical and clinical expertise
- Capitalizing on 30 years of healthcare experience
- Deep technical understanding and abilities
- History of strong collaboration with industry leading partners
- Strong commitment to Innovations and R&D
- Agnostic perspective focused on optimizing clinical outcomes
Principles for Facility Design and Workflow

✓ **REDUCE**
- Costs due to facility re-design and re-construction
- Patient stays due to optimal healing environment
- Traffic in patient room
- Energy costs from design efficiencies
- Negative environmental impacts

✓ **INCREASE**
- Staff efficiencies
- Provider, patient and family satisfaction
- Patient Safety

✓ **OPTIMIZE**
- The care environment
- Apply evidence based clinical design to achieve optimal patient outcomes
- The Ideal workspace for the care provider
- Technologies to increase visibility and access to patient data

✓ **OUTCOMES**
- Define the vision for clinical best practices
- Realize desired clinical outcomes for the now and future
- Focus on clinical transformation
- Building on the vision for the future
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<thead>
<tr>
<th>Healthcare Outcomes</th>
<th>Evidence Based Design Strategies or Environmental Interventions</th>
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<tbody>
<tr>
<td></td>
<td>Single Bed Rooms</td>
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<tr>
<td>Reduce hospital-acquired infections</td>
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<td>Reduce medical errors</td>
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<td>Reduce patient falls</td>
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<td>Reduce pain</td>
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<td>Improve patient's sleep</td>
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<td>Reduce patient stress</td>
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<td>Reduce depression</td>
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<td>Reduce length of stay</td>
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<td>Improve patient privacy and confidentiality</td>
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<td>Improve communication with patients and families</td>
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<td>Improved social support</td>
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<tr>
<td>Increase patient satisfaction</td>
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<td>Decrease staff injuries</td>
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<td>Increase staff effectiveness</td>
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<td>Increase staff satisfaction</td>
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NCH Healthcare System

“When you connect all of the parts together it helps the care team deliver the care better and lessens the risk for the caregiver, but ultimately gets the patient home faster.”

— Gerald McGinnis, Director of Nurse Informatics at NCH North Naples Hospital
“Cerner performed workflow analyses and held kick-off sessions with clinical staff from Dewitt Army Community Hospital, Walter Reed Army Medical Center and National Naval Medical Center to present the new technology and observe on-site operations.”

— The Voice Newsletter
Rethink and Refit.... Reward

Facility-wide equipped infrastructure

Flexibility through modularity

Complex campus coordinated efforts
THANK YOU!