Increasing time at the Bedside with Data

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Objectives

1. Describe framework and factors influencing workflows.

2. Summarize the impact of technology on bedside care processes.

3. Identify implications for organizing and improving nursing care.

Form follows Function: Implications for Nursing Care

"It is the pervading law of all things organic and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, **that form ever follows function".**

Differences in form.....

Old Hospital – Children's Memorial Hospital

- Double rooms and larger rooms patients
- Open area for NICU patients
- Centralized (Hub) Nursing station
- Dirty and Clean utility area
- Compact and easy to view and hear changes

New Hospital – Ann & Robert H. Lurie Children's Hospital of Chicago

- Private Rooms (Patient Room Zoned – Caregiver space, Family space, and Provider space)
- De-centralized Nursing Station(s)
- No main hub of the unit/area
- 4 Pods (NE, NW, SE, & SW)
- Back Staging area (white space – working area)

Differences in Function: Next steps

Patient Centered Approach incorporating into Relationship Based Care

- How do we communicate with our patients?

    – Call into room

    – Escalation plan – Nursing input and standardize amongst critical and acute care floors

Interdisciplinary Communication incorporating Relationship Based Care

- How do we communicate with each other?

    – Canned text messages

    – Ability to individualize messages

RELATIONSHIP-BASED CARE

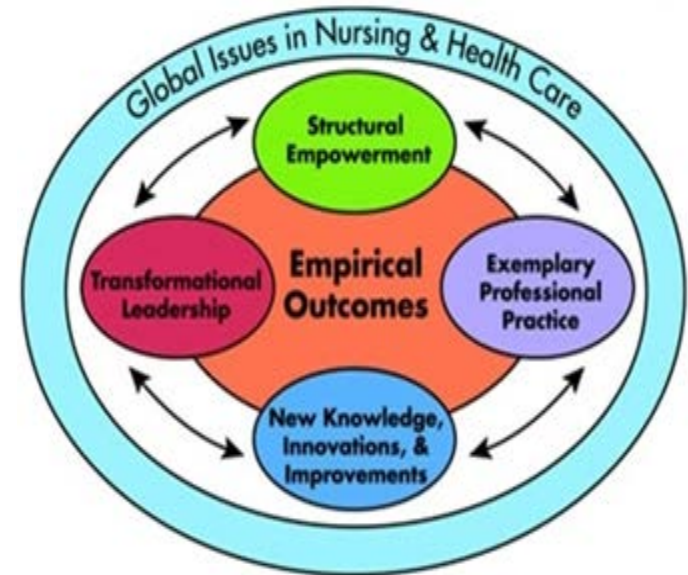# Linking importance of nurse call project to outcomes ....

Social Capital

Magnet

Sum of the standing and trust that develops from an individual's network of relationships

Facilitates individuals access to resources, trust, belonging, and mobilizes the working unit
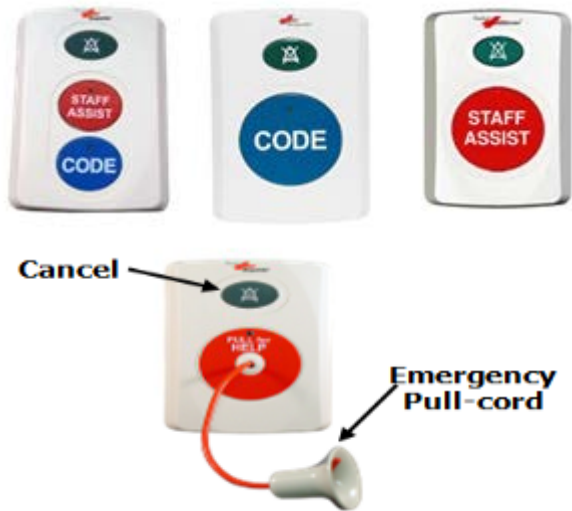
(Bourdieu, 1986)

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Solution Nurse Call System

Life Safety

- Patient Call Nurse
- Code Button
- Bathroom & Shower Pull Cord

Enhanced

- Communication – Phone solution
- RFID Badges
- Dome light notification(s)
- Phones (texting available)

Scenarios & Demonstration

Workflows for addressing patient calls

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Communication between care providers

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Communicating monitor alarms

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Implementation: Data to consider regarding Provisioning

- **Nurse Call/Wireless Phone account set-up:**
  - Who should have access?
  - Does each staff member receive their own extension or do they sign into an extension each day?
    - Obtain staff lists from Human Resources
    - Apply same process for all integrated pieces
  - Multiple issues with Provisioning:
    - Married/maiden names
    - Terminated staff still included in lists
    - Departments merging/dividing to create new departments
    - Need consistency with names/usernames across systems

Implementation: Data to consider regarding Provisioning

– <u>RFID account Set up</u>

- Which staff should carry RFID?

- Naming of badges – generic versus personal identifiers

- Assigning badges – permanent versus rotating

Maintenance Requirements– Account Provisioning

- Process
  - Password request submitted by management
  - Nurse Call integrated with Active Directory

- Informatics team assigns Staff Level, View access, Wireless Phone extension, and RFID badge in Nurse Call
  - Staff information/role uploaded to Wireless phone directory manually
  - RFID badges configured by Biomedical Engineering and sent to Informatics team for assignment

- All information documented in Master Spreadsheet

Implementation:

- **Prior to Move Day – This was tracked data (Diffusion of Innovation):**

  - On-line course work introducing concepts (Knowledge)

  - Instructor-led classes provided by vendors and educators (Persuasion)

  - Format of education - Simulation at the new hospital (Decision)

  - Super-User training – Developed Quick Reference sheets/booklets) (Implementation)

  - Post Live Support – (Confirmation)

- **Move Day and Beyond**:

  - Vendor representative and Nursing Informatics team assigned to cover specific areas – issue logs

  - Equipment guides placed outside each patient room

Work to Maintain – Resources Required

In Summary: Define for the products/vendors involved

- Time commitment
- Equipment maintenance
  - ✓ Batteries
  - ✓ Prevention of loss
  - ✓ Repair/replacement

Data to consider – Resources Required
Shared responsibility across departments

- Information Management
  - Access team
  - Server Maintenance
- Nursing Informatics (4 team members)
  - Account provisioning
  - Workflow design and optimization
  - Education
  - Coordination between vendors
- Biomedical Engineering
  - Maintenance of hardware
  - Configuration of RFID badges
  - 24 hour coverage for support – triage issues

Enhanced Communication – Monitor alarms

- Old Hospital

- New Hospital

- Loud alarm volume on monitor in patient rooms

- Disruptive to patients/families

- No direct notification to staff

- "Red" monitor alarm generates call to nurse's phone

- Reduced overhead noise

- Decreased response time to alarms

Enhanced Communication – Nurse to Nurse

- ## Old Hospital

  - Overhead page
  - Manual page to pager
  - Walking from room to room

- ## New Hospital

  - Wireless phone call/text directly to another nurse using escalation logic
  - Wireless calls directly to another nurse
  - Group text functionality
  - Dome lights display staff presence in room with RFID badge
  - Staff location displayed in Nurse Call and RFID applications online

Enhanced Communication – Wireless Phone

- Statistics on usage
  - Average 300,000 text messages/month
  - 10,000 text messages/day
  - Phone calls
  - Phone calls vs. text messages
- Other uses for Wireless Phone messages
  - Downtime communication
  - Reminders: required documentation, flu vaccine for staff
  - Pharmacists call/text nurses when sending up time-sensitive medications
  - Trialing messaging from Blood Bank

Ongoing staff involvement

- Key learning – Stool with 3 interdependent legs

    1. Biomedical engineering

    2. Information Management

    3. Nursing Informatics/Nursing Staff

- Partner/Communication with Vendor

- Problem-Solving, Discussions, Planning next steps/Changes

Partnering – Making it work

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Next Steps –Reducing Alarm fatigue

Expected Practice and Nursing Actions

– Proper preparations and application of electrodes

– Alarm parameters

– Customize delay settings and thresholds (SpO2)

– EDUCATE/EDUCATE/EDUCATE – rounding

– Next step – Implement a Middleware Solution – increase specificity

Another data consideration for time at bedside........

Acuity Data October 6 to 19, 2013							
	LCPICU	LCCCU	LCNICU	LC17	LC19	LC20	LC21
TYPE I	0	0	0.01	0.01	0	0.05	0
TYPE II	0.95	2.14	0	1.6	1.69	3.17	7.79
TYPE III	3.9	6.07	19.09	8.25	7.15	14.53	18.03
TYPE IV	11.13	6.76	12.25	4.48	6.62	10.81	3.06
TYPE V	7.95	1.73	2.08	2.39	1.32	1.16	0.43
TYPE VI	4.76	3.71	2.27	0.65	0.13	0	0.03
CLASSIFICATION CENSUS	34.71	23.14	37.36	21.93	22	37.79	42.21
LOS ADJUSTED CENSUS	28.69	20.41	35.7	17.37	16.91	29.71	29.33
MN CENSUS	28.57	20.14	35.64	18.07	17.07	30.43	28.64
WORKLOAD INDEX	81.04	49.54	72.08	33.96	31.61	52.55	42.59
ACUITY	2.83	2.43	2.02	1.95	1.87	1.77	1.45
ACTUAL HPPD	16.29	13.38	12.91	9.42	11.83	9.53	9.58
RECOMMENDED HPPD	17.3	12.79	13.15	9.84	11.82	9.72	9.7
QUADRAMED PRODUCTIVITY equals Recommended HPPD/Actual HPPD Productivity goal to run between 95% to 105%	106.20%	95.59%	101.86%	104.46%	99.92%	101.99%	101.25%

We can rest a little easier because we know our nurses are alerted immediately when we need them most.

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