



مؤسسة حمد الطبية
Hamad Medical Corporation

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Communication Technology in Nursing

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Introduction

Patient care relies on communication among and between caregivers. In fact, the ability to communicate with the right people quickly cannot only save time, but may mean the difference between life and death.

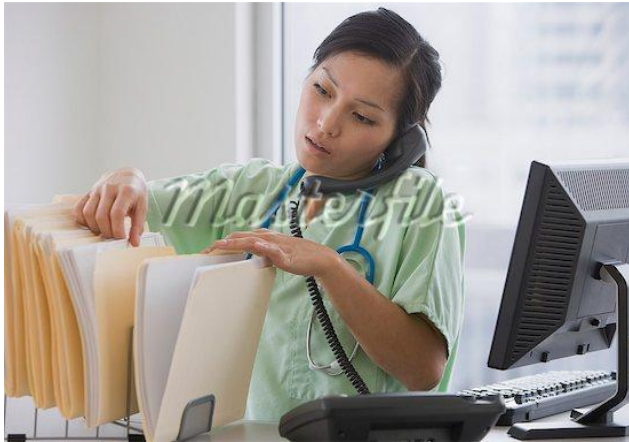


Communication



Effective communication occurs when the receiver interprets the sender's message in the same way the sender intended it.

(Patton and Giffin ,1977).



Nursing and Communication

In order to provide the best level of patient care, nurses need to be constantly accessible by several sources at any given time:

- Nurses need to be aware of patient and family requests.
- Maintaining ongoing communication with physicians.
- Nurses must also keep track of patient conditions that are communicated through mechanical devices such as patient monitors.

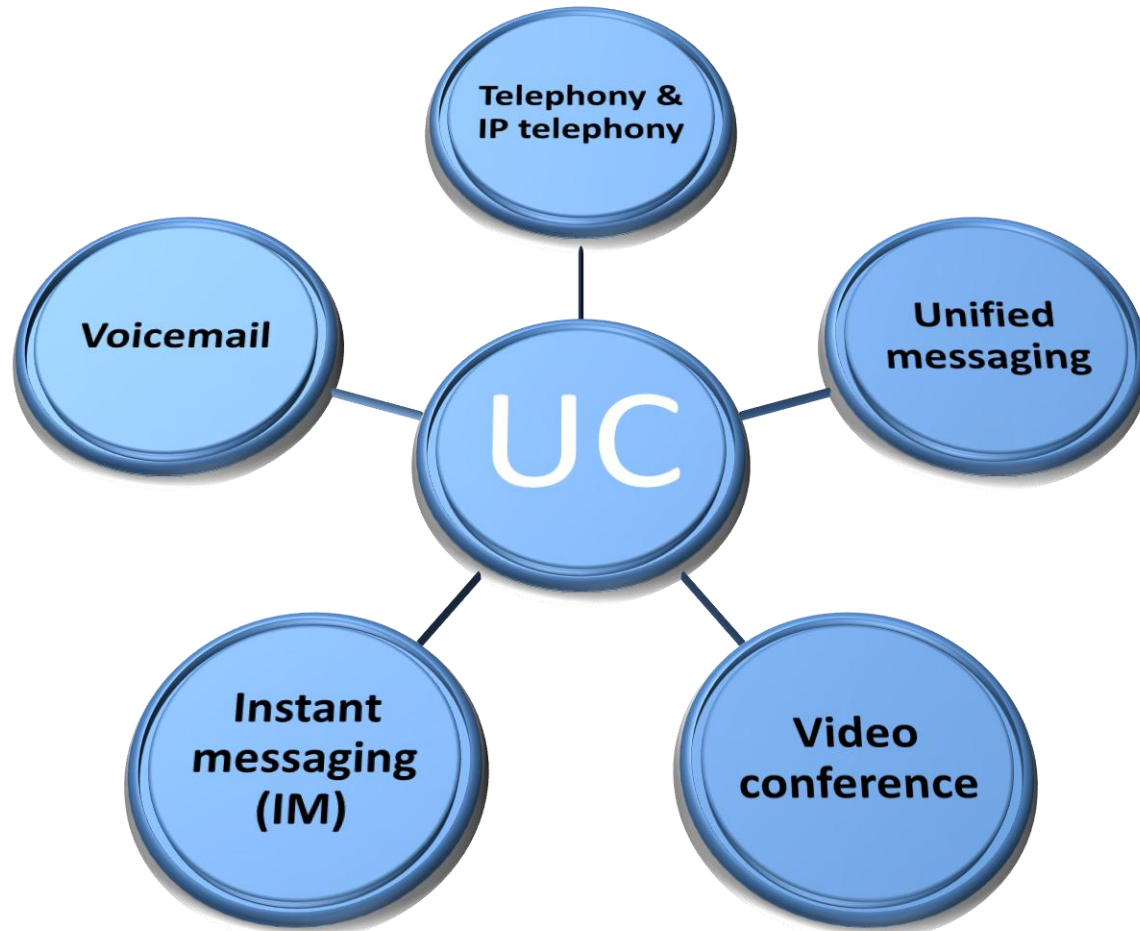


Unified Communications (UC)

It is the integration of real-time communication services such as instant messaging (chat), telephony (including IP telephony), video conferencing, data sharing (including web connected electronics), call control and speech recognition with non-real-time communication services such as unified messaging (integrated voicemail, e-mail, SMS and fax).



Components of Unified Communications (UC)



IP Telephony (Internet Protocol Telephony)



- Popular alternative to traditional telephone service
- Transmits voice data using the Internet.

Unified Messaging (UM)

It is the integration of different electronic messaging and communication media (e-mail, SMS, fax, voicemail, video messaging) technologies into a single interface, accessible from a variety of different devices.



Instant Messaging

It is the exchange of text messages through a software application in real-time.



Video Conferencing

Video Conferencing enables the patient to see a specialist during a remote consultation plus the related patient records such as x-rays, ECG scan recording, and browser-based applications like EMR / EHR / PACS and can be shared in real time .



Video Conferencing

Telemedicine
(telecommunications plus
medicine)



Voice Mail

Known as voice message or voice bank) is a computer-based system that allows users and subscribers to exchange personal voice messages.



Benefits of Unified Communications



Increase patient care and safety



Increase staff job satisfaction



Reductions in patient length of stay

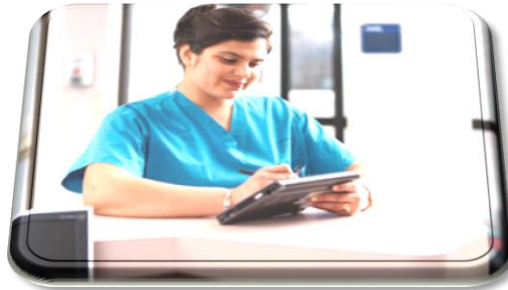
Benefits of Unified Communications



Workflow and process improvements



Reduce medical errors and promote patient safety



Integrate and transfer medical information from various systems

Benefits of Unified Communications



Enable effective
communication between
caregivers and patients



Improve real-time
collaboration among care
teams



Support staff training and
continuing medical
education

Nursing and Communications Technology

Nurses can reduce time spent walking and manage workflow by using wireless technologies - phones, badges or pagers.



Nursing and Communications Technology





Wireless Handsets

- Communication badge
- Mobile technology

Communication Badge

It is a wearable, hands-free device providing instant communications for voice, text or alert indications.



- It is a hands-free communication.
- It accepts voice activated commands enabling the user to respond to calls using only her voice, and to make calls by pressing one button only.

Mobile Technology



Operates over a Wi-Fi network, allows nurses to locate each other and their patients, sends call alerts to caregivers, and improves scheduling and bed management.

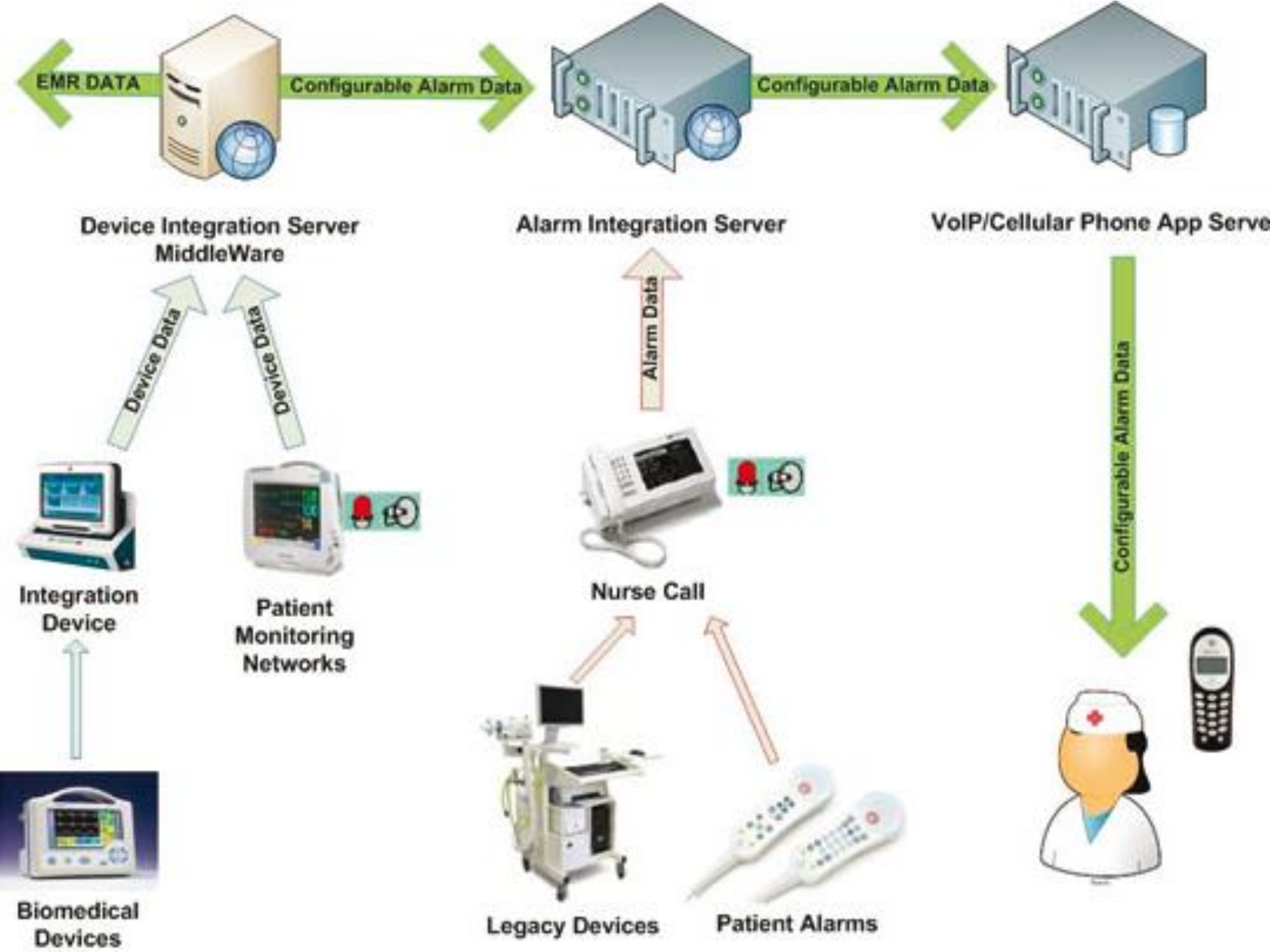


Physicians connect directly with nurses by voice and text via wireless phones



Direct nurse-physician communications allow nurses to provide both high speed and high quality patient care





Systems Integrated with Wireless Technology

These phones which operate over a Wi-Fi network, allow nurses to:

- Locate each other and their patients.
- Send call alerts to caregivers,
- Improve scheduling and bed management.
- Easy to communicate with patient.



The result is communication that's fast and direct.

Real Time Location

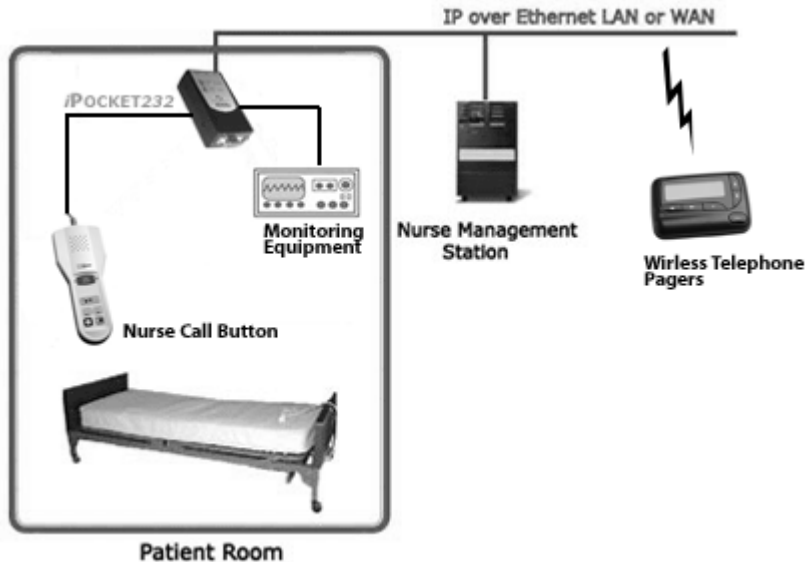


The screenshot displays the PreAdmit Tracking software interface. At the top, there is a navigation bar with tabs for 'PreAdmitTracking', 'AdmissionTracking', 'Admin Tool', and 'Reports'. Below this is a toolbar with various icons for functions like 'New', 'Find', 'Print', 'Export', etc. The main window shows a list of admissions with columns for 'Requested', 'Single Inst', 'Cancel Loc', 'Age', 'Sex', 'Date of Birth', 'ID', 'Admit Status', 'In Type', 'Program', 'Admit Date', 'Admit Loc', 'Admit Time', and 'Admit Fee'. The list is filtered by 'All Placements' and shows 10 rows of data. The bottom of the screen displays the date '10/10/2010' and the company name 'Task Tracking Technologies, Inc.'.

| Requested | Single Inst | Cancel Loc | Age | Sex | Date of Birth | ID | Admit Status | In Type | Program | Admit Date | Admit Loc | Admit Time | Admit Fee |
|---------------------|-------------|------------|-----|-----|---------------|------|--------------|----------|----------|---------------------|-----------|---------------------|---------------------|
| 10/10/2010 08:31 AM | DIAG RAD | | 45 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | PACU | | 47 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | PACU | | 51 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | PACU | | 56 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | PACU | | 61 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | 10H ED | | 52 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | 10H ED | | 70 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | 10H ED | | 73 | F | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |
| 10/10/2010 08:31 AM | 2C ACUTE | | | | 12/12/2009 | 2519 | Accepted | 28 ACUTE | 28 ACUTE | 10/10/2010 08:31 AM | 28 ACUTE | 10/10/2010 08:31 AM | 10/10/2010 08:31 AM |

The figure displays two screenshots of the iPad application interface. The left screenshot shows the 'Patients - Floor5' screen, which lists four patients: sotrnhtq, Burnett,Tate, Hunter,Abdul, and Montgomery,Tanner. Each patient entry includes their name, age, ID, and admission time, along with buttons for 'Charge1 Nurse', 'Nurse1 Test', 'Nurse2 Test', and 'Gaura, Lisa'. The right screenshot shows the 'Staff' screen, which lists seven staff members: Andrullis, Clare; Baechle, Erick; Beecher, Lauren; Butryman, Patricia; Carfiro, Melissa; Charge1 Nurse; Charge2 Nurse; Cheney, Lisa; Clinkscales, Catherine; Demo3 Test; Demo4 Test; Demo5 Test; Demo6 Test; Demo7 Test. Each staff entry includes their name, role, and a button for 'Charge1 Nurse' or 'Charge2 Nurse'. A callout box highlights the 'Demo5 Test' entry.

Nurse Call System



It is designed to reduce communication gaps and delays between patients and staff and between staff members. So whenever there is a need, the appropriate people are notified and can respond immediately.

Nurse Call System Features



These systems typically feature two components:

- A bedside call button, telephone or intercom for the patient.
- Alarm received at a nursing station's alarm board' or via pager/telephone.

Nurse Call System Components



Touch Screen Panel



Nurse Call Display LED Panel



Nurse Call Point Lead

Nurse Call System Components



Bathroom Wireless
Ceiling Pull Cord




Wireless Nurse
Door Alarm



Infrared Staff ID
Tag


Nurse Call System Benefits

Benefits to patients are as follows:

- Ability to request care previously with high process overhead
 - Ability to rapidly contact and converse directly with assigned care provider
 - Ability to deliver voice, video, and data services directly to residents and/or patients .
 - Quicker and more accurate response to alarms, more effective access to patient care
- 


Nurse Call System Benefits

Benefits to caregivers are as follows:

- Voice, video, and data communication anywhere in a hospital or connected remote office.
 - Greatly improved workflow.
 - Ability to receive alerts.
 - Improved clinical staff mobility (freeing staff from specific physical locations).
 - Ability to rapidly assemble specialty teams through nurse call system group paging function.
 - Optimizes caregiver time use, allowing better focus on primary job functions.
- 

Conclusion

In the future, the nurse will have a mobile communication device that allows them to communicate no matter where they are located within a hospital. When the physician, or anyone else, needs to connect with the nurse, they contact them directly rather than through a centralized phone at the nurse's station. In addition to voice calls, this device also allows for other methods of communication. As a result, the nurse can be alerted to changes, needs or requests in multiple ways.



Questions





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Thank you

