

# Clinical Practice Applications: Community Based



NUR 308

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# Clinical Practice Applications: Community Based

- Community care is fast growing in healthcare.
- Health reform meant to:
  - Decrease in the number of hospital beds
  - Increase in home care;
  - Increasing in community health promotion & illness prevention programs

# Informatics nurse

- Playing an integral role in facilitating community-based care.
- Many community organizations have information systems that mirror those of hospital facilities.
- Pt.'s appointment- identification found in many community based setting. In this; computer play important functions

# Automated system

- Three functions are performed to support nursing:
  1. Pt appointment system helps scheduling pt's clinic visits to minimize waiting time, smooth clinic load, & establish pt appointments priorities.
  2. Maintain pt. registry & determine the extent to which the pt. must pay for services
  3. To maintain security & guarantee the privacy & confidentiality of the remainder of pt. record

# Telecommunications

- Linkage with telecommunication provides the greatest gains in applying informatics to the community setting ? How?
- Similar information are needed by the nurse in the community & in the hospital to deliver the required pt care.
- Both require pt demographic data, past medical hx, Dx, lab & radiology test results, & a treatment &/or care plan

- Additionally, the delivery of pt care is facilitated by the availability of pt teaching materials, policies & procedures, drug & treatment information, technical data, community services listings, & current contact directions.

# Challenges , what is the problem?

- The pt's medical record, policy & procedure manuals, teaching materials, & clinical reference books are inaccessible because they are kept in the agency offices.
- Another key missing link in community-based care, is collaboration with a multidisciplinary health team during delivery of pt care. What is the solution??



# Solution

- Telehealth offers technological & information systems solutions to many of the challenges of community-based nursing practice.

# *What is Telehealth*

- *Telehealth* is defined as “the use of communications & information technology to deliver health & healthcare services & information over large & small distances” (Picot, 1997).

# Factors influencing telehealth development

- *Aging population*: The needs of aging healthcare consumers have initiated efforts to develop & adopt better telehealth systems
- *Cost containment*: Telehealth systems are facilitating redistribution of healthcare services, reducing duplication, & reducing numbers of drug interactions

- *Access*: Demand is increasing for equitable access to healthcare services for inhabitants of isolated geographic areas
- *Technology*: Ever more powerful technologies & communications bandwidths are becoming available at decreasing costs.

- *Demand:* Increasing consumer demand for wellness & health information of all kinds has fueled increased access to the Internet & the WWW
- *Information explosion:* Exponential increase in medical & health information has given rise to demands for better information management systems, faster & more efficient electronic access, & better on-line research networks

# Telehealth

- Encompasses practices, products, & services bringing healthcare & health information to remote locations.
- Remote can mean across the street or across the globe.

# Telehealth

- It extends the services for people at home & provides health services direct to consumers.
- It offers continuing medical, nursing, & health education & assists consumers in obtaining emergency assistance wherever they may be.

- Nursing telepractice is nursing-specific application of telehealth includes all client-centered forms of nursing practice & the provision of information, conferences, & courses for health professionals occurring through, or facilitated by, the use of telecommunications or electronic means (CNA, 2001)



# Nursing Role

- Nursing role in telehealth is found in a variety of applications including:
  - call centers
  - specific disease management
  - community health

# Telehealth Components

- The technologies & systems used for telehealth vary greatly from one application to another. However, each application, even the simplest, contains
  1. A device or means to capture, process, & store content (*input*)—whether sound only, electronic or digital images, tracings, alpha-numeric data, or a combination

2. Content & a means to transfer or exchange the content (*throughput*)—communications, telecommunications, or network technologies of all kinds & their associated software

3. A means for receiving, storing, & displaying the content (*output*)—possibly a video monitor, a computer file server, or a recorder of some kind.

# Telehealth applications

<b>Healthcare procedure, process</b>	<b>Possible telehealth application</b>
face-to-face consultation between healthcare provider	Videoconferencing, computer-based e-mail
Physical transfer of any medical image	Electronic transfer of images
Handwritten, paper-based patient files and charts	pen-based computer tablets, desktop workstations, computerized patient records
Handwritten, paper-based prescriptions	Electronic ordering of the prescription using a CPOE
Home visits unassisted by technology	portable computer with modem to communicate with healthcare institution
Referrals from general practitioner	Appointments by e-mail or by electronic scheduling
Patient traveling from remote location	Video consultation with specialist
Literature search in medical library	Electronic search from home or office
Home care, elder care	Telemonitoring from the home; assisted devices and technologies

# Specific telehealth applications.

Category	User
1. All forms of healthcare at a distance: teleconsultations, telepathology, teleradiology, telecardiology	Physicians, Nurses, Other healthcare professionals, Healthcare institutions
2. Interinstitutional patient and clinical records and information systems: EHR and databases accessible by network	Healthcare institutions and organizations, Healthcare professionals, Researchers
3. Public Health and Community Health Information Networks (CHINs) and multiple-use health information networks	Government, Epidemiologists, Public health professionals, Pharmacies
4. Tele-education and multimedia applications for health professionals, and patients, and networked research databases. Internet services	Healthcare professionals, Patients and consumers, Universities and colleges
5. Telemonitoring, telecare networks, remote home care and emergency networks	Consumers, Elderly, Chronically ill Telenurses

- Telecounseling using videoconferencing or videophone technology has been reported as having high user satisfaction & reducing travel costs to both pt. & professional.
- Some pts. prefer the television monitor or videophone to the face-to-face experience
- Video & telecommunications technology, sometimes but not always coupled with telemonitoring, helped the development of many remote home care programs for the elderly

- The benefits of this type of program are identified as follows
  - Empowerment & independence of the elderly pt
  - Return to the comfort of home with the security of flexible healthcare
  - Great savings to nations

# Challenges Related to Telehealth

- ***Obsolescence:*** Many of the technologies have a short shelf life. Rapid obsolescence is a major concern for managers & administrators because most information technologies come in 18- to 36-month cycles
- ***Access:*** Even with user acceptance & available funding, telehealth is not accessible to any & all who need it. Technical infrastructure dictates at least in part the if, how, where, when, & what of telehealth technologies that can be implemented



- ***Health information infrastructures:***

The creation of a health information infrastructure requires integration of existing & new architectures & application systems & services.

- ***Provider reimbursement:***

The issue of physician & other provider compensation for telehealth services has yet to be resolved in most jurisdictions.

- ***Interdisciplinary & interinstitutional collaboration:***

Jurisdictional conflicts between institutions & among physicians, nurses, pharmacists, radiologists, & nuclear medicine specialists must be resolved.

- ***Documentation standards:***

Telehealth documentation standards must be developed for use by all providers to ensure a useful & usable pt record.

- ***Data security.*** Confidentiality, privacy, & security issues related to the collection, storage, & transmission of patient information must be resolved to the satisfaction of professionals & consumers alike.
- ***Liability issues.*** Medical & nursing responsibility issues related to continuing responsibility for a pt's care.

# Summary

- The development of inexpensive, reliable telecommunications technology enables health professionals, pts, & consumers to access HI, healthcare resources, & health service delivery directly from & in their homes.

# Summary

- Telehealth applications exist as discrete nursing interventions & provide pathways for nurses to reach pts & provide nursing interventions.
- Nurses can use technology to assist them in providing home care & in-home monitoring.

# Summary

- Networks serve as educational vehicles whereby nurses can reach pts & clients with health promotion, disease & prevention, information, & illness management nursing interventions.
- Telehealth applications hold, great promise for extending the ability of nurses to reach individuals in communities & the communities themselves