

# Communications Equipment

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## OBJECTIVES / RATIONALE

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Today's technology allows almost instantaneous communication throughout the world. Effective communication is vital in providing appropriate treatment to a patient. It is essential for the health care professional to be competent at utilizing today's communications equipment. The student is expected to utilize telecommunications technology with appropriate supervision.

TEKS 121.4 (c) 2F

TAKS ELA 1, 3, 4, 5, 6

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## KEY POINTS

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- I. Telephone (see [Telephone Skills Unit](#))
- II. Intercom Systems
  - A. Means of communication for patients and staff even though they cannot see each other.
  - B. Proper etiquette should be used. Communications should be calm, courteous, and pleasant.
  - C. Each client should be instructed on how to operate the intercom system. The intercom control panel is connected to a cord which is attached to the wall near the client's bed or exam table. It should be placed within easy reach of the client. The client's call should be answered immediately and cancelled at the control panel. Emergency call signals are usually located at the bedside and in the bathroom. All emergency call signals should be answered immediately.
- III. Two - Way Radios
  - A. Used between a mobile unit and a base location to transmit and/or receive information or instructions.
- IV. Pagers
  - A. When a message is urgent, paging is an efficient means of contacting team members.
  - B. A pager is a small electronic communication device which beeps, buzzes, or vibrates to indicate that a signal has been picked up or a call has been made.
  - C. Procedure:
    - 1. Keep a list of pager numbers close to the phone
    - 2. Dial the number for the pager.
    - 3. Listen for a high pitch sound indicating there is a connection between the phone and the pager.
    - 4. Dial the number you wish to have the call returned to followed by the pound sign (#). or give the message to the operator service.
    - 5. Listen for a series of beeps, then hang up the phone. Message has been transmitted.

- V. Dictation - Transcription Equipment
  - A. Audio - recording machine used to convert verbal communication into written words. Recorded message is played and a transcriptionist types the information using a typewriter or computer word processor.
- VI. Computers
  - A. Computers process information with speed and accuracy and are able to store vast amounts of information in a small space.
  - B. Three types of computers:
    - 1. mainframe computers
      - \* largest and most expensive
      - \* used by large institutions
      - \* process and store huge amounts of information
    - 2. minicomputers
      - \* smaller than mainframe - larger than personal computers
      - \* used in network settings, linking several computers together
      - \* acts as centralized storage for shared information
    - 3. personal computers / microcomputers
      - \* desktop, notebook, palmtop
  - C. Uses:
    - 1. process and store information
    - 2. monitor patient care
    - 3. email - immediate transmission of information worldwide
    - 4. research
    - 5. internet
  - D. Telemedicine - transmission of video images of client and information to provide support to physicians globally, especially in rural areas
  - E. CD-Rom technology (compact - disc recordable) - capable of storing vast amounts of information.
  - F. Speech-recognition technology - user speaks into a microphone to input information instead of using a keyboard
  - G. Computerized Client Records
- VII. Fax Machines
  - A. Critical for transmitting patient records or test results which must be sent immediately to other locations.
  - B. A fax machine scans each page, translates the information into electronic impulses, and transmits these impulses over the phone lines. When received by another fax machine, the impulses are converted into an exact duplicate of the original document.
  - C. The fax machine should have a designated line in medical locations to avoid telephone interruptions.
  - D. Procedure:
    - 1. Prepare a cover sheet with the following information:
      - a. name of sender
      - b. phone number of sender
      - c. fax number of sender
      - d. fax number of receiver
      - e. date
      - f. number of pages being transmitted
      - g. mark as "confidential" if necessary

2. Place pages to be transmitted in fax machine's sending tray.
3. Dial phone number of receiving fax machine using either the attached phone or number keys on the fax machine.
4. \*If using the phone, listen for a high-pitched tone. Then press "Send" or "Start" and hang up the phone.  
\*If using the number keys on the fax machine, press "Send" or "Start" after dialing the number.
5. Observe the machine, watch for a signal that the connection has been made.
6. When the fax has been successfully transmitted, a confirmation page will usually be printed. If transmission was unsuccessful, the machine may print an error message or indicate such an error on the screen.
7. When a fax is received, the telephone rings shortly to signal a document is being received.  
Printing of the incoming document begins.  
When printing is complete, the machine may print a report which includes date, time, number of pages, and originating fax number.

### VIII. Videoconferencing

- A. Videoconferencing is a networking communication system which connects a number of locations to simultaneously share information, resources, and/or services. It has the ability to connect those in geographically remote areas with others and overcomes the constraints of time, distance, and severe climatic conditions.
- B. In the health care industry, videoconferencing is used:
  1. to coordinate existing resources within the health care delivery system
  2. for referrals and consultations: allows a face to face meeting between the patient, doctor, and the consultant.
  3. to access continuing education and professional development opportunities
- C. Equipment required at each participating site depends on system used  
Some examples are:
  1. desktop videoconferencing system or small group system
  2. computer
  3. monitor
  4. multimedia loudspeakers
  5. camera
  6. illumination system

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## ACTIVITIES

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- I. Research, in groups, different telecommunications equipment (intercom, email, internet, etc.).
- II. Prepare scripts and skits demonstrating function and proper use of the equipment chosen. Video skits as each group "performs".
- III. Combine all skits on one video to be used in a "mock" videoconference.

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## **MATERIALS/RESOURCES**

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Access to communication technology (phone, fax, computer, internet, email)  
Access to a computer and presentation software.

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## **ASSESSMENT**

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### **Writing Rubric**

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## **ACCOMMODATIONS**

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For reinforcement, identify and describe the function of various telecommunications equipment.

For enrichment, attend a telemed or videoconference at a local hospital or city-county health department.

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## **REFLECTIONS**

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