### Health Management Information Systems

Unit 6 Patient Monitoring Systems

### Objectives

- Describe the purpose, attributes, and functions
- · Discuss the primary applications
- Analyze how the integration of data from many sources assists in medical decision making

# m-Health Technology

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- Patient monitoring systems
- Telehealth

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## Patient Monitoring Systems

- Patient monitor
  - "An instrument that collects and displays physiological data, often for the purpose of watching for, and warning against, lifethreatening changes in physiological state."

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Shortliffe, E., Biomedical informatics: computer applications in health care and biomedicine

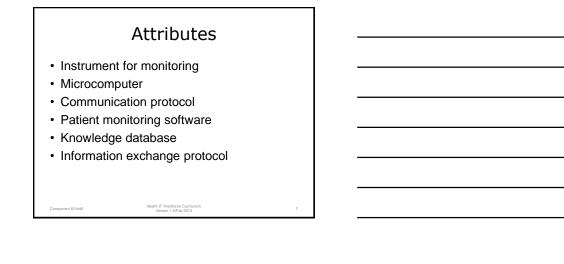
Patient Monitoring Systems

- · Patient monitoring
  - "Repeated or continuous measurement of physiological parameters for the purpose of watching for, and warning against, lifethreatening changes in physiological state."

Shortliffe, E., Biomedical informatics: computer applications in health care and biomedicine

### Purpose

- · Assist providers with
  - Diagnostic decisions
  - Therapeutic choices
- · Support decision-making
- · Improve care delivery



# Functions

- · Monitors physiological data
- · Capture raw data
- Process raw data
- Communicate data
- · Display data

# **Primary Applications**

- Intensive/critical care units, operating suites, recovery rooms
- · Other locations within the hospital
- Remote locations

# Primary Applications Application Intensive/Critical Care Units, Operating Suites/Recovery Rooms Example: bedside monitor Outcome Strengthen the caregivers' clinical expertise Reduces mortality risk

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### **Primary Applications**

- Application
  - Other hospital locations
  - Example: respiratory therapy
- Outcome
  - Facilitate early diagnosis and timely decisions

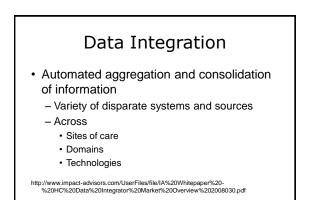
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- Remote
- Glucometer
- Outcome
  - Better tracking of patient conditions, medication regimen adherence, and follow-up scheduling

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- Improves compliance



### Data Integration

· Use of wireless technology

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- · Physiological data with other clinical data
- Systems with algorithms help put into context the vast amount of data collected

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 Information distributed throughout the enterprise

# Summary

- Patient monitoring systems
  - Purpose
  - Attributes
  - Functions

Component 6/Unit6

- Primary applications
- Data integration

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