Health Data Management and Health Services Organization and Delivery

1. **Definition, Purpose, Uses, and Users of the Health Record**
   a. Health Record Defined
       i. Also referred to as the medical record, patient record, resident record, or client record
       ii. Identifies the patient, the diagnosis, treatments rendered, and documentation of all results
       iii. Used as a documentation tool for continuous patient care
       iv. Serves as a communication tool for health care professionals
       v. Serves as a data and information collection tool for all health care services
       vi. Combination of discrete data elements and narrative in various media, including paper, electronic, voice, images, and waveforms
       vii. Electronic health record
           1. Health care information managed by electronic system(s) used to capture, transmit, receive, store, retrieve, link, and manipulate multimedia data
   b. Purpose of Health Record
       i. Primary source of health data and information for the health care industry
       ii. Created as a direct byproduct of health care delivered in a health setting and is the legal documentation of care provided by the health care professionals
       iii. A valuable source of aggregate data for research and program evaluation
       iv. Health care reimbursement
   c. Uses of Patient Record
       i. Documenting health care services provided to an individual in order to support ongoing communication and decision making among health care providers
           1. Planning and managing diagnostic, therapeutic, and nursing services
       ii. Establishing a record of health care services provided to an individual that can be used as evidence in legal proceedings
           1. Protects the legal interest of the patient, health care provider, and health care organization

        iii. Assessing the efficiency and effectiveness of the health care services provided

          1. Evaluating the adequacy and appropriateness of care

        iv. Documenting health care services provided in order to support reimbursement claims that are submitted to payers

        v. Supplying data and information that support the strategic planning, administrative decision making, and research activities as well as support the public policy development related to health care (regulations, legislation, and accreditation standards)

    d. Five Unique Roles of a Patient's Health Record

        i. A record of the patient's health status and the health services provided over time

        ii. Provides a method for clinical communication and care planning among the individual health care practitioners serving the patient

        iii. Serves as the legal document describing the health care services provided

        iv. A source of data for clinical, health services, and outcomes research

        v. Serves as a major resource for health care practitioner education

    e. Users of Patient Record and Health Data

        i. Patient

        ii. Health care practitioners

        iii. Health care providers and administrators

        iv. Third-party payers

        v. Utilization managers

        vi. Quality of care committees

        vii. Accrediting, licensing, and certifying agencies

        viii. Governmental agencies

        ix. Attorneys and the courts in the judicial process

        x. Planners and policy developers

        xi. Educators and trainers

        xii. Researchers and epidemiologists

        xiii. Media reporters

2. Format of the Health Record

    a. Source-Oriented Health Record

        i. Documents are organized into sections according to the practitioners and departments that provide treatment.

          1. Example

            a. Laboratory records are grouped together, radiology records are grouped together, clinical notes are grouped together, and so on.

    b. Problem-Oriented Health Record

        i. Developed by Dr. Lawrence Weed in the 1960s, in response to the lack of clarity of the patient's problems in the source-oriented record

        ii. Divided into four parts

          1. Database

          2. Problem list

          3. Initial plan

          4. Progress notes (SOAP)

            a. Subjective

              i. Patient states the problem to health care provider.

            b. Objective

              i. What the practitioner identifies

            c. Assessment

              i. Combines the subjective and objective to make a conclusion

      d. Plan

         i. The approach to be taken to resolve the patient's problem

  c. Integrated Health Records

      i. Documentation from various sources is intermingled and organized in strict chronological or reverse chronological order.

      ii. Advantage is that it is easy to follow the course of the patient's diagnosis and treatment.

      iii. Disadvantage is that the format makes it difficult to compare similar information.

3. Basic Principles of Health Record Documentation

  a. General Documentation Guidelines of the American Health Information Management Association (AHIMA)

      i. Uniformity of both the content and format of the health record

      ii. Organized systematically to facilitate data retrieval and compilation

      iii. Only authorized individuals should be allowed to document in the record.

      iv. Policies must identify which individuals may receive and transcribe verbal physician's orders.

      v. Documentation should occur when the services were rendered.

      vi. Entries should identify authors clearly.

      vii. Individuals making entries should use only abbreviations and symbols approved by the organization and/or medical staff.

      viii. All entries in the record should be permanent.

      ix. Error correction for paper-based records

         1. Never obliterate errors; original entry should remain legible, and corrections should be entered in chronological order.

         2. Draw a single line in ink through the incorrect entry. Print "error" or "correction" at the top of the entry along with a legal signature or initials, date, time, reason for change, and the title and discipline of the individual making the correction. Add correct information to the entry.

         3. Late entries should be labeled as such.

      x. Any corrections on information added to the record by the health care provider from verbal corrections from the patient should be inserted as an addendum or a separate note with no changes in the original entries in record.

      xi. Health information department should develop, implement, and evaluate policies and procedures related to the quantitative and qualitative analysis of the health record.

  b. Common Time Frames for Completion of Health Record Documents

      i. History and physical: within 24 hours of admission

      ii. Operative report: immediately following surgery

      iii. Verbal orders: cosigned within 24 hours

      iv. Discharge summary: immediately after discharge of patient

  c. The Joint Commission (TJC, formerly the Joint Commission on Accreditation of Healthcare Organizations, or JCAHO) Type I Recommendation

      i. Too many delinquent records may cause the hospital to receive a Type I Recommendation, which must be resolved in order to retain accreditation.

      ii. Guidelines that indicate a Type I Recommendation

         1. The number of delinquent records is greater than 50% of the average number of discharged patients per quarter, over the previous 12 months.

      2. All medical records must have a history documented within 24 hours.

      3. All medical records, including a surgery, must have an immediate postoperative note documented, and the operative report must be dictated immediately after surgery.

4. **Content of the Acute Care Health Record**

  a. Administrative Data (includes demographic and financial information as well as various consent and authorization forms related to the provision of care and the handling of confidential patient information)

    i. Registration record

    ii. Consent to treatment

    iii. Consent to release information

    iv. Consent to special procedures

    v. Advanced directives

    vi. Patient rights acknowledgment

    vii. Property and valuables list

    viii. Birth and death certificates

  b. Clinical Data (documents the patient's medical condition, diagnosis, and treatment as well as the health care services provided)

    i. Medical history and review of systems

    ii. Physical examination

    iii. Interdisciplinary patient care plan

    iv. Physician's orders

    v. Progress notes (clinical observations)

    vi. Reports and results of diagnostic and therapeutic procedures

    vii. Consultation reports

    viii. Discharge and interval summary that includes final instructions given to patient upon discharge

    ix. Operative data

      1. Anesthesia report

      2. Recovery room record

      3. Operative report

      4. Pathology report

    x. Obstetric data

      1. Antepartum record

      2. Labor and delivery record

      3. Postpartum record

    xi. Neonatal data

      1. Birth history

      2. Neonatal identification

      3. Neonatal physical examination

      4. Neonate progress notes

    xii. Nursing data

      1. Nursing notes

      2. Graphic sheet

      3. Medication sheet

      4. Special care units

    xiii. Ancillary data

      1. Electrocardiographic reports

      2. Laboratory reports

      3. Radiology and imaging reports

      4. Radiation therapy

      5. Therapeutic services

      6. Case management and social service record
      7. Patient and family teaching and participation
      8. Discharge and follow-up plan

5. Record Content for Alternative Health Care Sites
  a. Ambulatory Care
    i. Patient data items
    ii. Patient care provider data items
    iii. Encounter data items
  b. Emergency Room
    i. Identification
    ii. History of the present disease or injury
    iii. Physical findings and vital signs
    iv. Laboratory and radiology reports if needed
    v. Diagnosis
    vi. Treatment
    vii. Disposition of the case
  c. Long-Term Care
    i. Socio-demographic information
    ii. Database
    iii. Patient care plans
    iv. Ancillary reports
    v. Activities of facility-community living
    vi. Correspondence and third-party information
  d. Home Health Care
    i. Initial database
      1. Diagnoses and problems
      2. History and physical condition
      3. Current medication and treatment
      4. Activity limitations
      5. Dietary information
      6. Suitability of residence
    ii. Plan of treatment contains
      1. Identified patient problems and needs
      2. Goals and objectives for patient care
      3. Services provided, including type, frequency, and duration
      4. Plan implementation
    iii. Progress notes
    iv. Discharge summary
    v. Consent forms
    vi. Service agreement
  e. Hospice Care
    i. Initial database
    ii. Interdisciplinary team documentation
    iii. Ongoing documentation
    iv. Discharge/transfer record
    v. Bereavement record
    vi. Consents
  f. Mental Health Care
    i. Identification/face sheet
    ii. Evaluation for admission
    iii. Problem-asset list
    iv. Comprehensive evaluation
    v. Periodic summaries

       vi. Transfer and/or discharge summary
      vii. Death summary
     viii. History and physical examination
      ix. Consultations
       x. Diagnostic tests, including X-rays or other operations or procedures
      xi. Physician orders
      xii. Record of medication administered
     xiii. Progress notes
     xiv. Flow sheets
      xv. Electroshock observations documentation
     xvi. Seizures
    xvii. Issues related to infectious disease control
   xviii. Legal and administrative
    xix. Previous admissions

  g. Rehabilitative Care
       i. Identification data
      ii. Pertinent history
     iii. Disability diagnosis, rehabilitation problems, goals, and prognosis
     iv. Assessments
      v. Ancillary reports
     vi. Program manager information
     vii. Decision-making information
    viii. Evaluations
      ix. Staff conferences reports
      x. Program plans
     xi. Progress notes
     xii. Relative correspondence
    xiii. Release forms
     xiv. Discharge report
     xv. Follow-up report

6. **Data Quality Monitoring**
  a. The accuracy of data depends on the manual or computer information system design for collecting, recording, storing, processing, accessing, and displaying data, as well as the ability and follow-through of the individuals involved in each phase of the activities.
      i. Systems should be developed to ensure the accuracy and timeliness of documentation at the point of care, to monitor output, and to take appropriate correction action when needed.
     ii. Health information technicians may perform a quality improvement (QI) study to evaluate data quality of paper or computerized patient records; the study may assess the presence of reports and authentications as well as the quality of the information documented in the entries.
  b. Quantitative Analysis Ensures
      i. Patient identification on the front and back of every paper form or on every screen is correct.
     ii. All necessary authorizations or consents are present and signed or authenticated by the patient or legal representative.
    iii. Documented principal diagnosis on discharge, secondary diagnoses, and procedures are present in the appropriate form or location within the record.
     iv. Discharge summary is present when required, and authenticated.

     v. History and physical report are present, documented within the time frame required by appropriate regulations, and authenticated as appropriate.

     vi. When a consultation request appears in the listing of physician or practitioner orders, a consultation report is present and authenticated.

     vii. All diagnostic tests ordered by the physician or practitioner are present and are authenticated by comparing physician orders, financial bill, and the test reports documented in the patient's health record.

     viii. An admitting progress note, a discharge progress note, and an appropriate number of notes documented by physicians or clinicians throughout the patient's care process are present.

     ix. Each physician or practitioner order entered into the record is authenticated.

         1. Admitting and discharge physician or practitioner orders are present.

         2. Orders are present for all consultations, diagnostic tests, and procedures, when these reports are found in the record.

     x. Operative, procedure, or therapy reports are present and authenticated, when orders, consent forms, or other documentation in the record indicates they were performed.

     xi. A pathology report is present and authenticated when the operative report indicates that tissue was removed.

     xii. Preoperative, operative, and postoperative anesthesia reports are present and authenticated.

     xiii. Nursing or ancillary health professionals' reports and notes are present and authenticated.

     xiv. Reports required for patients treated in specialized units are present and authenticated.

     xv. Preliminary and final autopsy reports on patients who have expired at the facility are present and authenticated.

c. Qualitative Analysis Involves Checks

     i. Review for obvious documentation inconsistencies related to diagnoses found on admission forms, physical examination, operative and pathology reports, care plans, and discharge summary.

     ii. Analyze the record to determine whether documentation written by various health care providers for one patient reflects consistency.

     iii. Compare the patient's pharmacy drug profile with the medication administration record to determine consistency.

     iv. Review an inpatient record to determine whether it reflects the general location of the patient at all times or whether serious time gaps exist.

     v. Determine whether the patient record reflects the progression of care, including the symptoms, diagnoses, tests, treatments, reasons for the treatments, results, patient education, location of patient after discharge, and follow-up plans.

     vi. Interview the patient and/or family.

         1. Review recorded patient demographic information and medical history with the patient several hours or days after admission to determine completeness and accuracy.

         2. A patient may be too physically ill or mentally confused at admission or the family may be too preoccupied with the patient to provide valid data.

       vii. Compare written instructions to the patient that are documented in the record with the patient's or family's understanding of those instructions.

       viii. Review for other documentation as determined by the facility.

    d. AHIMA-Identified Characteristics of Data Quality

       i. Accuracy: data are the correct values and are valid.

       ii. Accessibility: data items should be easily obtainable and legal to collect.

       iii. Comprehensiveness

         1. All required data items are included.

         2. The entire scope of the data is collected and intentional limitations are documented.

       iv. Consistency: the value of the data should be reliable and consistent across applications.

       v. Currency

         1. Data should be up to date.

         2. A datum value is up to date if it is current for a specific point in time.

         3. It is outdated if it was current at some preceding time yet incorrect at a later time.

       vi. Definition

         1. Clear definitions should be provided so that current and future data users will know what the data mean.

         2. Each data element should have clear meaning and accepted values.

       vii. Granularity: the attributes and values of data should be defined at the correct level of detail.

       viii. Precision: data values should be just large enough to support the application or process. To collect data precise enough for application, acceptable values or value ranges for each data item must be defined (e.g., values for sex should be limited to male, female, or unknown).

       ix. Relevance: the data are meaningful to the performance of the process or application for which they are collected.

       x. Timeliness: determined by how the data are being used and their context

7. Forms Design

    a. Well-designed and controlled forms or computer views (information on screens) are important to reduce errors and recopying of data and to increase efficiency.

    b. Forms team (view team, forms committee) is charged to work on administrative and patient information applications and become involved in the selection of data collection technology.

       i. Forms team forwards its patient-related recommendations to the clinical information committee for approval, and its administrative recommendations follow the organizational chain of command.

       ii. Team members include

         1. Health information management

         2. Information systems

         3. Materials management

         4. Patient care services

         5. Quality improvement

         6. Others as need

c. General Forms Design Principles
  i. Need of users
    1. Forms should be designed to meet needs of all users (patients, health care providers, government agencies, health care facility staff).
  ii. Purpose of form or view
    1. Standardize, identify, and instruct, facilitate documentation and decision making, and promote consistency in data collection, reporting, and interpretation.
    2. Identify patients and practitioners and instruct them step by step in what data items to gather, where to obtain them, and how to record them.
    3. Good instructions that facilitate complete and accurate documentation should be provided for forms.
  iii. Selection and sequencing of items
    1. Construct a list or grid of required data to ensure the collection of all required data and elimination of unnecessary items.
    2. Flow should be logical and take into consideration the order of data collection or transfer.
    3. Numbering items makes references to both items and written instructions on completion of forms faster and easier.
  iv. Standard terminology, abbreviations, and format
    1. Words, numbers, and abbreviations should be standardized.
    2. A master format or template should be developed by the forms team or committee.
  v. Instructions
    1. Instructions should briefly identify who should complete the data items and provide guidance to the user of the form.
    2. Computer views typically provide this information on introductory screens and as needed throughout data entry.
  vi. Simplification
    1. Forms or views should be created only when there is an established need that is not being met by an existing form.
    2. All forms or views are documented and available.
  vii. Paper forms design
    1. Header and footer
    2. Introduction and instructions
    3. Body and close
    4. Other production considerations
      a. Only approved forms should be used in the health care record.
      b. There should be a master for each paper form and all copies should be made from the original or master.
      c. Using standardized paper size (8.5 by 11) keeps cost low and facilitates copying and filing.
      d. Multipart forms may require carbon sheets or NCR paper.
      e. Duplicating methods include in-house and commercial printing.
  viii. Computer-view or screen-format design considerations
    1. Needs of user
    2. Purpose of view
    3. Selection and sequencing of essential data items
    4. Standardization of terminology, abbreviations, and formats
    5. Provision of instructions

   6. Attention to simplification

   7. Views require the development of menus of alternatives and screen or window formats that may include spots to touch with a finger or light pen

  ix. Online system interfaces make it possible to

   1. Organize the data entry fields in logical format

   2. Include field edits

   3. Include passwords to add, delete, or modify data

   4. Allow simultaneous entry or updating in many tables at one time

   5. Include brief instructions on the screens or provide more lengthy help screens

   6. Make the screens attractive through the use of color, lines, and borders

   7. Use default values in a field to eliminate the need to key repeated data

   8. Allow automatic sequential numbering

   9. Show data on the screen from a different table when the key field is entered (e.g., for the Master Patient Patient Index (MPI), where the doctor's number, name, address, etc. can automatically appear on the screen)

   10. Develop or customize menus or submenus to add, delete, or change data

8. **Health Care Data Sets and Databases**

 a. The purpose of a minimum data set (MDS) is to promote comparability and compatibility of data by using standard data items with uniform definitions.

 b. The National Committee on Vital and Health Statistics has promulgated data sets that have influenced both the conditions of participation and claim forms on which Medicare and Medicaid data sets are based.

 c. Data sets facilitate uniformity in collection and analytical techniques of hospital data.

  i. Uniform Hospital Discharge Data Set (UHDDS): uniform collection of data on inpatients

  ii. Uniform Ambulatory Core Data Set (UACDS): improve ability to compare data in ambulatory care settings.

  iii. Minimum Data Set (MDS) for Long-Term Care (LTC) and Resident Assessment Instrument (RAI): comprehensive functional assessment of long-term care patients

  iv. Outcome and Assessment Information Set (OASIS): comprehensive assessment for adult home care patient and forms the basis for measuring patient outcomes

  v. Uniform Clinical Data Set (UCDS): data collection utilized by peer review organizations to determine the quality of patient care

9. **Data Quality and Technology**

 a. Electronic Health Record (EHR) or Computer-Based Patient Record (CPR)

  i. CPR defined by Institute of Medicine (IOM) as a record that resides in a system specifically designed to support users by providing accessibility to complete and accurate data, alerts, reminders, clinical decision support systems, links to medical knowledge, and other aids.

   1. 2003 core functionalities

    a. Health information and data

    b. Results management

   c. Order entry management
   d. Decision support
   e. Electronic communication and connectivity
   f. Patient support
   g. Administrative processes
   h. Reporting and population health management
  ii. The EHR has the ability to capture data from multiple electronic sources and is the primary source of information at the point of care.
  iii. Information is maintained online indefinitely, immediately retrievable, and continuously backed up.
 b. Data Versus Information
  i. Data
   1. A collection of elements on a given subject
   2. Raw facts and figures expressed in text, numbers, symbols, and images
   3. Facts, ideas, or concepts that can be captured, communicated, and processed, either manually or electronically
  ii. Information
   1. Data that have been processed into meaningful form, either manually or by computer, in order to make them valuable to the user
   2. Adds to a representation and tells the recipient something that was not known before
 c. Database Structure and Model
  i. Data model: a plan or pattern for an information system, including the database structure, known as a conceptual model, and the translation of the concept to the computer, known as the physical model
  ii. Entities: persons, locations, things, or concepts about which data can be collected and stored
  iii. Attribute: describes an entity or distinct characteristic about it
  iv. Relationship: associations between entities
  v. Character, field, record, and file
   1. Character: collection of bits make up a byte; a byte is a character such as a number, letter, or symbol.
   2. Field: made up of several characters such as name, age, or gender
   3. Record: made up of a series of fields about one person or thing
   4. File
    a. Made up of fields (columns) and records (rows) about an entity such as a patient
    b. Table is another word for file or entity
  vi. Database models
   1. Relational model
   2. Hierarchical model
   3. Network model
   4. Object-oriented model
 d. Data Quality and Computer Systems
  i. Edits, rules, or validation checks are added to the database, along with a message to be displayed when the data do not satisfy the condition.
   1. Checks look at the who, what, when, where, and why of transactions.

   2. Transaction is an event that takes place during the routine course of business.
   - **a.** Event validation
   - **b.** Transaction validation
   - **c.** Sequence checks
   - **d.** Batch tools
   - **e.** Audit trail
   - **f.** Duplicate processing
   - **g.** Format checks
   - **h.** Reasonableness checks
   - **i.** Check digits
- **ii.** Data characteristics
   - **1.** Validity
   - **2.** Reliability
   - **3.** Completeness
   - **4.** Recognizability
   - **5.** Timeliness
   - **6.** Relevance
   - **7.** Accessibility
   - **8.** Security
   - **9.** Legality
- **e.** Architecture
   - **i.** Open system: hardware, software, transmission, media, and database industry standards allow different computer vendor systems to communicate to each other.
   - **ii.** Closed system: communication is possible only on one vendor's system.
   - **iii.** Hardware
      - **1.** Physical equipment that makes up computers and computer systems
      - **2.** Mainframes, minicomputers, microcomputers
   - **iv.** Electronic data-entry technology
      - **1.** Keyed-entry devices
         - **a.** Keyboard and mouse
         - **b.** Light pen
         - **c.** Touch-sensitive screen
         - **d.** Graphics tablet
      - **2.** Portable and hand-held terminals
         - **a.** Point-of-care applications are well-suited to this technology.
      - **3.** Scanned entry
         - **a.** Optical scanners
         - **b.** Bar code readers
         - **c.** Optical character readers
         - **d.** Mark-sense readers
         - **e.** Magnetic-ink character readers
      - **4.** Other entry devices
         - **a.** Magnetic strips
         - **b.** Voice recognition
         - **c.** Biomedical devices
         - **d.** Electronic data interchange
   - **v.** Output
      - **1.** Terminal or workstation
      - **2.** Printers

      vi. Software
         1. Operating systems software
         2. Application software
   f. Communications Technology
      i. Local area network (LAN): multiple devices connected via communications media and located in a small geographical area
      ii. Wide area network (WAN): a computer network that connects separate institutions across a large geographical area
      iii. Internet
         1. Similar to a WAN in that it serves multiple users and connects with various communication channels, but structure is different
         2. Consists of thousands of loosely connected network servers (LANs and WANs), and no single group is responsible for it
         3. Web-based health care information systems make it possible for health care workers to search for and quickly find huge amounts of information on virtually any health-related topic
      iv. Intranet
         1. Private network that has its servers located inside a firewall

10. **Data Access and Retention**
   a. Assignment of Health Record Identification and Numbering
      i. Alphabetic identification: the patient's name identifies the patient's record.
      ii. Numeric identification
         1. Serial numbering: a new number is assigned to the patient for each new encounter at the facility.
         2. Unit numbering: the patient retains the same number for every encounter at the facility.
         3. Serial-unit numbering: a new number is assigned to the patient for each new encounter at the facility, but the former records are brought forward and filed under the new number.
   b. Filing Equipment
      i. Filing cabinets
      ii. Open-shelf files (least expensive option)
      iii. Motorized revolving units
      iv. Compressible units
   c. Space Management
      i. Centralized filing: records filed in one location
      ii. Decentralized filing: records filed in multiple locations
   d. Filing Methodologies
      i. Alphabetic filing starts with last names and then includes first name and middle initial (see Table 2-1).
      ii. Straight numeric filing: filing charts in sequential order; the records start with the chart with lowest number value and end with the chart with highest number value.
      iii. Terminal digit filing
         1. Numeric filing is divided into three parts.
         2. It is read from right to left instead of left to right (see Table 2-2).
   e. Calculating Storage Requirements
      i. Consider filing system, numbering system, filing equipment, average size of individual records, volume of patients, and the number of readmissions
      ii. Example: A hospital has 6000 discharges per year, uses the TDO unit numbering filing system, with open shelves. The open shelves have

Table 2-1 Alphabetic Filing Records

Last	First	Middle
Burns	Linda	Cooper
James	Annie	
James	Kiesha	
James	Kiesha	T.
Ramirez	Juan	
Zen	Lee	M.

8 shelves per unit that are 36 inches wide with 34 inches of actual filing space. The average record is 3 inches thick. The hospital requires 18,000 inches (6000 discharges at 3 inches each) of filing space. Each open shelf unit has 272 linear filing inches available (8 shelves with 34 inches each). Therefore, the hospital needs 67 open shelf units (18,000 inches divided by 272 filing inches per unit). Although 18,000 divided by 272 is 66.17, the hospital cannot purchase a fraction of a unit; therefore, they must purchase 67 units to file 6000 records.

f. Health Record Retrieval
- **i.** Audit filing area periodically to assure files are in order and all records are accounted for
- **ii.** Requested records are located, checked out, and tracked.
  - **1.** Calculating retrieval rate
    - **a.** Statistics are maintained to determine the accuracy, quantity, and quality of the filing and retrieval system.
    - **b.** The ratio of the number of records located to the number of records requested

Table 2-2 Illustration of Terminal Digit Filing (TDO)

		←	
Record 1	15	35	86
Record 2	16	35	86
Record 3	00	36	86
Record 4	01	00	87
	Tertiary Digits	**Secondary Digits**	**Primary Digits**

This table indicates how to read records (charts) in Terminal Digital Filing (TDO). The arrow illustrates that the numbers on the record are read from right to left. In filing or retrieving records, follow these steps:
1. Go to the primary section (terminal section). In the case of records 1, 2, and 3, the section is 86. In the case of record 4, the section is 87.
2. Within the primary digits, go to the subdivision of the secondary digits. In records 1 and 2, this is 35. In record 3, it is 36. In record 4, it is 0.
3. Lastly, go to the subdivision of the tertiary digits. Record 1 is subdivision 15, record 2 is subdivision 16, record 3 is subdivision 00, and record 4 is subdivision 01.

c. Example: The ambulatory care clinic requested 9043 records during the month of March. The filing area retrieved 9039 of the requested records. Therefore, the department had a 99.96 percent retrieval rate ([9039/9043] × 100).

g. Record Retention

    i. State statutes and regulations

      1. Statute of limitations

        a. Varies by state and determines the period of time in which a legal action can be brought against a facility

        b. It begins at the time of the event, or at the age of majority if the patient was treated as a minor.

        c. Retention schedule

          i. The American Hospital Association recommends retaining records for a minimum of 10 years.

          ii. If minor, 10 years past age of majority

    ii. Facility closure

      1. If the facility is sold to health care provider, the record is an asset of the sale.

      2. If the buyer is not a health care provider, the record is not to be sold, but other arrangements should be made.

      3. The state department of health may assume responsibility for the records.

    iii. Disasters such as fires, broken water pipes, blocked drains, malfunctioning equipment, environmental storms and floods

h. Image-Based Records Storage

    i. Magnetic disk

    ii. Optical disk platters

    iii. Optical scanning (Paper, X-rays, MRIs, or microfilm are scanned and converted into a computer-readable digital format.)

    iv. Jukebox device

    v. Micrographics

      1. Creating miniature pictures on film

      2. Microfilm, roll, jacket, microfiche

      3. Computer-assisted retrieval of microfilm

        a. Scanner

        b. Optical character recognition

11. **Secondary Health Information Data Sources**

  a. Indexes

    i. Listing or arrangement of data in a designated order; contains special types of information

    ii. Purpose is to assist in the location of desired information

    iii. Master patient index (MPI)

      1. Identifies all patients admitted to a health care facility for treatment, along with their identifying information

      2. Also referred to as master person index, master population index, master name file, enterprise-wide master person or patient index, regional master patient index, and master patient database

    iv. Number index: chronological list of patient's identification numbers issued to patients

    v. Physician index: provides every physician with a list of identifying medical cases

      vi. Disease index: list of diseases and conditions according to the classification system used in the facility

     vii. Procedure or operation index: list of surgical and procedural codes

  b. Registries

      i. Created to monitor various diseases and health problems with different goals and objectives

     ii. Each register serves a different purpose or is maintained for different outcomes (goals). As with the index outline, the register is identified and its purpose follows.

    iii. Admission and discharge register: kept permanently and in chronological order

    iv. Operating room register

       1. Maintained for 10 years

       2. Provides statistical data for caseload analysis and administrative reports

      v. Births and deaths registers: provide accessible information about births and deaths

     vi. Emergency room register: monitors the patients who enter the emergency room for services

    vii. Cancer or tumor registry

       1. System that monitors all types of cancer diagnosed or treated in an institution

       2. Database components

         a. Reference date: beginning date of data collection

         b. Case eligibility: cases that meet the eligibility criteria for inclusion into the database

         c. Patient eligibility: inpatients and outpatients diagnosed and/or treated for cancer who are eligible for inclusion in the database

         d. Patient index: permanent alphabetic file that identifies patients who have been entered into the registry database

         e. Case finding: method for locating and identifying every reportable case in the database

         f. Accession register

           i. List of numbers assigned by the facility to the patient

          ii. First two digits of accession number indicate the year when patient was eligible and added to the registry (Table 2-3)

         g. Abstracting: preparation of a brief summary on the patient

         h. Coding: code assigned to cancer diagnosis

Table 2-3 Accession Register

Accession Number	Patient's Name	Primary	Site	Date of Diagnosis
xx-0001/00	Smith, Robert	Liver	C22	01/02/xx
xx-0002/02	Williams, Joe	Colon	C18	01/03/xx
xx-0245/02	Chavez, Juan	Lung	C34	01/03/xx
xx-0004/01	Cruz, Tom	Prostate	C61	01/04/xx
xx-0004/02	Cruz, Tom	Colon	C18	01/04/xx

        i. Staging: recording the extent of the spread of the disease for every case entered into the registry database

        j. Primary site file: permanent file that contains an abstract of every primary neoplasm site for each patient

      3. Quality control: process of ensuring the completeness, accuracy, and timeliness of the data collected

      4. American College of Surgeons requires annual lifetime follow-up of the patient

      5. Patient information is confidential and protected from unauthorized access

      6. Use of cancer registry data

        a. Annual report

        b. Quality outcome and improvement

        c. Administrative reports

        d. Cancer conferences

        e. Marketing

        f. Request log or file

      7. Staffing includes certified tumor registrar (CTR)

      8. Cancer committee

        a. Policymaking body that meets at least quarterly

        b. Responsible for planning, initiating, stimulating, and assessing all cancer-related activities in the institution

    viii. Other registry subjects

      1. National and state cancer registries

      2. HIV/AIDS

      3. Birth defects

      4. Diabetes

      5. Implant

      6. Organ

      7. Trauma

12. **Health Information Management Organizations and Professionals**

  a. Health Care Information and Management Systems Society (HIMSS) provides leadership in health care for the management of technology and management systems.

    i. Certified Professional in Health Information Management Systems (CPHIMS)

    ii. Certified in Health Care Security (CHS)

  b. International Federation of Health Record Organizations (IFHRO) supports national associations and health record professionals to improve health records.

  c. International Medical Informatics Association (IMIA) promotes informatics in health care and biomedical research.

  d. National Cancer Registrars Association (NCRA) supports quality cancer data management.

    i. Certified Tumor Registrar (CTR)

  e. American Medical Informatics Association (AMIA) supports information technology professionals to improve health care.

  f. American Association for Medical Transcription (AAMT) is the largest association for medical transcription.

  g. College of Healthcare Information Management Executives (CHIME) serves needs of health care chief information officers and advocates for more effective use of information management in health care.

    h. American Health Information Management Association (AHIMA)
       i. Association for HIM practitioners
      ii. This association sets guidelines and standards for patient records and health information systems.
         1. Accreditation of education programs
           a. AHIMA accredits coding certificate programs.
           b. Commission on Accreditation of Health Information and Informatics Management (CAHIIM) accredits professional education programs at the associate, baccalaureate, and post-baccalaureate certificate levels at college and universities across the nation.
         2. Certification and registration programs
           a. Processes whereby the public can be assured that certified individuals have met or maintain a level of competency required to deliver quality health information
             i. Registered health information administrator (RHIA) has achieved a baccalaureate in HIM with 30 hours of continuing education within a two-year cycle.
             ii. Registered health information technician (RHIT) has achieved an associate degree in HIM with 20 hours of continuing education within a two-year cycle.
            iii. Certified coding specialist (CCS) must complete a formal self assessment process annually to maintain credentialed status.
            iv. Certified coding specialist-physician (CCS-P) must complete a formal self-assessment process annually to maintain credentialed status.
             v. Certified coding associate (CCA)
            vi. Certified in health care privacy and security (CHPS) designation signifies advanced competency in designing, implementing, and administering comprehensive privacy and security protection programs.
  13. **Health Services Organization and Delivery**
    a. Definitions
       i. Accreditation
         1. The professional organizations such as TJC and the AOA regulate and review the standards of health care organization.
      ii. Alternative delivery systems: health care provided by methods other than the traditional inpatient care, including home health, ambulatory, hospice, and other types of health care
      iii. Care: the management of, responsibility for, or attention to the safety and well-being of another person or other persons
      iv. Client: individual who is receiving professional services
       v. Inpatient: patient who is receiving health care services such as room, board, and continuous nursing service in a hospital
      vi. Health: defined by World Health Organization as a person who is in a state of complete physical, mental, and social well-being
     vii. Health care services: services such as hospital, ambulatory care, home setting, or other health-related services
    viii. Health information management (HIM): a health profession that is responsible for the uses of health information, accuracy, and protection of clinical information

    ix. Hill-Burton Act: legislation enacted in 1946 that provided funding for the construction of hospitals and other health care facilities

    x. Hospital: health care institution with an organized medical and professional staff and with inpatient beds available around the clock whose primary function is to provide inpatient medical, nursing, and other health-related services to patients for both surgical and non-surgical conditions and that usually provides some outpatient services, particularly emergency care

    xi. Hospital inpatient: a patient who stays in the hospital overnight and is provided room, board, and nursing service in a unit or area of the hospital

    xii. Hospital patient: a patient who receives or is utilizing health care services for which the hospital is liable or held accountable

    xiii. Outpatient: patient who is receiving ambulatory care services in a hospital or hospital-based clinic or department

    xiv. Patient: individual who is receiving health care services

    xv. Payer: individual or organization who pays for health care services

    xvi. Primary patient record: health care professionals use this record to review the patient data or documents.

    xvii. Provider: any entity that provides health care services to patients, such as a hospital or clinic

    xviii. Resident: a patient who resides in a long-term care facility.

    xix. Secondary patient record: a record used for selected data elements to aid in research conducted by clinical and non-clinical people

b. Historical Development

    i. People who are ill have always gone to people with reputations as healers.

    ii. Earliest written health record dates back to 2700 B.C. and is from an Egyptian physician and dentist.

    iii. Greek medicine became the forerunner of modern medicine 2500 years ago.

    iv. The concept of hospital is rooted in medieval Christendom, when religious orders cared for the sick.

    v. Term *hospital* originated in fifth century, from the Latin word *hospitium.*

    vi. During Middle Ages, the hospitium evolved from a Christian tradition of offering weary travelers a place to rest (called hospice); such places were funded by the churches and wealthy individuals.

    vii. Cortez founded the first permanent hospital in North America in 1554, which was the Jesus of Nazareth Hospital in Mexico.

    viii. First school in America dedicated to training physicians was founded in 1765 in Philadelphia.

    ix. To assure the quality of American medical education, the American Medical Association (AMA) was formed in 1847.

    x. The American Hospital Association (AHA) was established in 1848 to promote public welfare by providing better health care in hospitals.

    xi. In late 19th century, state governments established mental institutions for the confinement of the mentally ill rather than housing them in prisons and poorhouses.

    xii. In mid 1800s, plantation owners in Hawaii, mining companies in Pennsylvania and Minnesota, and lumber companies tried to attract and keep immigrant workers by offering medical care to the workers.

    xiii. In early 1900s, hospitals were funded by private beneficiaries, endowments, and donations.
- **1.** Hospitals viewed as boarding houses for poor and sick.
- **2.** Private sector had little interest in serving the population as a whole, assuming that the local government would pay for the poor.
- **3.** Physicians did not do history and physicals on the patients and seldom documented diagnoses, care, and treatment.

    xiv. Between 1870s and 1920s, the number of American hospitals increased from fewer than 200 to more than 6000.
- **1.** Private benevolence was responsible for establishing hundreds of new hospitals that were not interested in providing care to the poor.
- **2.** By 1910, there were as many hospitals per 1000 population as there are today.
- **3.** Not all of the population was being served.
- **4.** Hospitals operated on the principle that the more expensive the care, the more valuable the service, which resulted in the escalation of health care cost.

    xv. The Flexner Report of 1910 identified serious problems and inconsistencies in medical education.
- **1.** This resulted in the closing of many proprietary schools.
- **2.** Remaining schools underwent curriculum revision.
- **3.** AMA initiated accreditation process for medical education.

    xvi. In 1913, the American College of Surgeons (ACS) was founded to develop a system of hospital standardization to improve patient care and recognize hospitals that had the highest ideals.
- **1.** The ACS collected data from the health record to establish standards and improve quality of care.
- **2.** Upon analysis of the data, the ACS realized that the documentation was inadequate.
- **3.** In 1917, the ACS established the Hospital Standardization Program, which laid the groundwork for establishing standards of care.
- **4.** In 1919, the ACS adopted the minimum standards, which identified the standards that were essential for the "proper care and treatment of patients in any hospital."

    xvii. Due to the need for more hospitals and high-quality health care that was accessible to all Americans, in 1946 the Hill-Burton Act provided funding for the construction of hospitals and other health care facilities based on state need.

    xviii. The early 1950s saw an increase in the number and complexity of hospitals and nonsurgical specialties, which burdened the hospital standardization program.
- **1.** As a result, the Joint Commission on Accreditation of Hospitals (JCAH) (currently referred to as TJC) was founded in 1952 and adopted the hospital standardization program.

    xix. The 1950s experienced an increase in biomedical advances, technology, and patient demand for more health care services.
- **1.** Medical advances extended life expectancy, which resulted in an increasing elderly population.
- **2.** Hospitals became more expensive, and the uninsured and underinsured (primarily the poor and elderly) could not access the health care system.
- **3.** The federal and state government did little to control hospital costs.

xx. In 1965, Congress amended the Social Security Act of 1935, establishing both Title XVIII (Medicare) and Title XIX (Medicaid).
   1. Medicare is a federally funded program that provides health insurance for the elderly and certain other groups.
   2. Medicaid supports the states in paying for health care for people who are indigent.

xxi. The 1960s saw a proliferation of various health care facilities, including long-term care, psychiatric and substance abuse, and programs for people with developmental disabilities.
   1. JCAH redefined standards to reflect the optimal achievable as opposed to minimum acceptable and began to develop standards for various types of health care facilities.
      a. In the late 1980s, JCAH changed its name to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to reflect its broader scope.

xxii. Occupational Safety and Health Act was passed in 1970, which mandated that employers provide a safe and healthy workplace.

xxiii. In 1977, the AMA founded the Committee on Allied Health Education and Accreditation (CAHEA) for the purpose of accrediting allied health programs, but the Committee was disbanded in 1994.

xxiv. The federal Department of Health, Education and Welfare (HEW) was reorganized in 1980 to become the Department of Health and Human Services (DHHS). It is a federal, cabinet-level department responsible for health issues, including health care and cost, welfare of various populations, occupational safety, and income security plans.
   1. DHHS oversees but is not limited to the following: Centers of Disease Control and Prevention (CDC); Food and Drug Administration (FDA); Office of Inspector General; Substance Abuse and Mental Health Services Administration (SAMHSA); National Institutes of Health (NIH); Indian Health Service (IHS); and the Centers of Medicare and Medicaid Services (CMS), formerly the Health Care Financing Administration (HCFA).

xxv. In 1982, the Tax Equity and Fiscal Responsibility Act (TEFRA) established a mechanism for controlling the cost of the Medicare program and set limits on reimbursement and required the development of the prospective payment system.

xxvi. The Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1985, known as the antidumping statute, established criteria for the transfer and discharge of Medicare and Medicaid patients.

xxvii. The Patient Self-Determination Act of 1990 gave patients the right to set advance directives.

xxviii. In 1992, the Computer-Based Patient Record Institute was created for the purpose of developing strategy that supports the development and adoption of the computer-based patient record.

xxix. In 1996, the Health Insurance Portability and Accountability Act (HIPAA) provided for continuity of health coverage and attempted to control fraud and abuse in health care, reduce health care cost, and guarantee the security and privacy of health information.

xxx. The health care delivery system has evolved into a complex system composed of various and multiple types of facilities, providers, payers, and regulators.
   1. In 1990s, health care was costly and not accessible to all citizens, yet consumers demanded more and better care.

        2. The advances in technology and scientific developments have increased the life expectancy.

        3. Alternative medicine includes unconventional therapies that may or may not have been proven to be effective and herbal remedies, massage therapy, natural food diets, acupuncture, and biotherapy.

        4. Due to the escalating cost of health care, the rising number of uninsured and underserved in both urban and rural areas, reform of the health care delivery system is ongoing.

          a. Plans for health care reform address issues such as universal coverage, health care cost, and the quality of care provided.

c. Health care occupations licensed by states and/or certified or registered by accrediting agencies include but are not limited to the following

  i. Physicians: Doctor of Medicine (MD) and Doctor of Osteopathy (DO)

  ii. Nurses:

    1. Registered nurse (RN)

    2. Licensed practical nurse (LPN)

    3. Nurse practitioner

    4. Clinical nurse specialist

    5. Certified nurse midwife

    6. Certified nurse anesthetist

  iii. Dentist

  iv. Pharmacist

  v. Podiatrist

  vi. Chiropractor (DC)

  vii. Optometrist (DO)

  viii. Health care administrators

  ix. Allied health personnel

    1. Laboratory technologist and technicians

      a. Radiologic technologist

      b. Nuclear medicine technologist

      c. Histologic technician

      d. Diagnostic medical sonographer

      e. Cytotechnologist

      f. Clinical laboratory technician

      g. Cardiovascular technologist

      h. Ophthalmic laboratory technician

    2. Therapeutic science practitioners

      a. Physical therapist and physical therapist assistant

      b. Occupational therapist and occupational therapist assistant

      c. Speech language pathologist

      d. Physician assistant

      e. Surgeon assistant

      f. Respiratory therapist

      g. Music therapist

      h. Therapeutic recreation specialist

      i. Paramedic

    3. Behavior scientist

      a. Social worker

      b. Rehabilitation counselor

    4. Support services

      a. Health information managers

      b. Dental laboratory technologist

   c. Electroencephalographic technologist
   d. Food service administrator
   e. Surgical technologist
   f. Environmental health technologist
d. Hospitals (may be classified by ownership, population served, number of beds, length of stay, type, patients, or organization)
   i. Ownership
      1. Government (federal, state, or local)
         a. Federally owned hospitals receive funding as well as administrative direction from the branch of the government that owns them.
            i. Native Americans and native Alaskans
            ii. Facilities for active and retired military personnel and their dependents
            iii. Veterans (Department of Veteran Affairs medical centers)
            iv. Merchant marines
         b. State facilities for mental illness, mental retardation, chronic disease, and medical education
         c. County, district, and city hospitals: local facilities established to meet the health care needs of the community that are governed by elected officials
      2. Non-governmental
         a. For-profit
            i. Proprietary
            ii. Private
            iii. Investor
         b. Not-for-profit
            i. Churches and religious orders
            ii. Industries
            iii. Unions
            iv. Fraternal organizations
   ii. Population served (based upon the group to whom services are provided); examples include pediatric, women's, psychiatric, cancer, burn
   iii. Bed size
      1. Total number of inpatient beds with which the facility is equipped and staffed for patient admissions
      2. A facility is licensed by the state for a specific number of beds.
   iv. Length of stay
      1. If average length of stay is less than 30 days, hospital is short-term or acute-care facility.
      2. If average length of stay is more than 30 days, hospital is a long-term-care facility.
   v. Types
      1. General: provides patient with diagnostic and therapeutic services for a variety of medical conditions, including radiographic, clinical, laboratory, and operating room services
      2. Special: provides diagnostic and therapeutic services for patients with a specific medical condition such as diabetes, cancer, burns, sports injuries, or eye injuries or diseases
      3. Rehabilitation and chronic disease: provides diagnostic and therapeutic services to patients who are disabled or handicapped and require restorative and adjustive services

    4. Psychiatric: provides diagnostic and therapeutic services for patients with mental illness, including psychiatric, psychological, and social work services

    5. Critical access hospital (CAH): certified by the state as necessary to residents in the community, or no hospital or other CAH within 35 miles; no more than 25 beds, with an average length of stay of 96 hours

 vi. Patients

    1. Inpatients

    2. Observation patients

    3. Ambulatory care patients

    4. Emergency patients

    5. Newborn patients

vii. Organization (typical of traditional acute-care facility)

    1. Composition and structure

      a. Governing board

        i. Also called governing body, board of trustees, board of governors, or board of directors

        ii. Has ultimate legal authority and responsibility for the operation of the hospital, including the quality and cost of care

        iii. Functions according to bylaws established by the board, has regular meetings with documented minutes, and has sub-committees (standing and special) that assist in the responsibilities of the board

          1. Standing committees may include executive, finance, medical staff, nominating, personnel, physician recruitment, or long-range planning.

          2. Special committees may be created for specific projects or tasks and are disbanded upon completion.

      b. Administration

        i. Chief executive officer (CEO) is a hospital administrator or president who is selected by the governing board and is the principal administrative official of the health care facility.

        ii. Chief operating officer (COO) is also called the vice president or executive vice president and is an associate administrator who oversees the operation of specific departments.

        iii. Chief information officer (CIO) is responsible for information resources management, which includes design, integration, and implementation of health information systems (administrative, financial, and clinical).

        iv. Chief financial officer (CFO), sometimes called director of finance or fiscal affairs director, directs the financial operations.

      c. Medical staff

        i. Formally organized staff or licensed physicians, and other licensed providers as permitted by law (dentist, podiatrist, midwives)

        ii. Governed by its own bylaws, rules, and regulations, which must be approved by the hospital's governing board

        iii. TJC states the primary responsibility of the medical staff is the quality of the professional services provided by the members with clinical privileges and the responsibility of being accountable to the governing board

        iv. Recommends staff appointments and reappointments, delineates clinical privileges and continuing medical education, and maintains a high quality of patient care

        v. Medical staff is organized to include officers, committees, and clinical services.

       vi. Clinical services include, but not limited to, the following:

            1. Medicine (cardiology, dermatology, oncology, pediatrics, psychiatry, radiology)

            2. Surgery (anesthesiology, gynecology, obstetrics, orthopedics, urology)

  d. Essential services

      i. Nursing

      ii. Diagnostic radiology

     iii. Nuclear medicine

      iv. Dietetics

      v. Pathology and clinical laboratory

      vi. Emergency

     vii. Pharmaceutical

    viii. Physical rehabilitation

      ix. Respiratory care

      x. Social services

      xi. Other services

            1. Pastoral care

            2. Ethics

            3. Patient representatives (advocates)

            4. Patient escort

            5. Plant technology

            6. Safety management

            7. Central supply

     xii. Health information management (medical records department)

            1. Responsible for management of all paper and electronic patient information

            2. Develops and maintains an information system

            3. Responsible for the organization, maintenance, production, and dissemination of information, including data security, integrity, and access

            4. Functions include transcribing, coding, release of information, retrieving and storing health information, managing databases, and filing information

2. Hierarchical form

  a. Historical model for hospitals

  b. Individuals at the top have authority that passes downward through a chain of command.

3. Vertical operation

  a. The governing board has ultimate authority, followed by the CEO.

  b. The organization includes a governing board, administration, medical staff, department directors, supervisors, and numerous subordinates.

4. Matrix organizational scheme

  a. Flexible and supports multidimensional organization

  b. This scheme supports general managers who focus on managing people and processes, as opposed to strategy and structure.

   c. Horizontal information communication that embraces individual capabilities

   d. Employees have dual responsibilities and may have two or more supervisors, but they have a shared vision that supports the organization as a whole.

5. Product line management

   a. Hospital may be organized around product line categories, such as obstetrics/gynecology, rehabilitation, or cardiology, as opposed to departments such as nursing, pharmacy, or respiratory therapy.

e. Ambulatory Care

   i. Comprehensive term for all types of health care provided in an outpatient setting

   ii. Patient travels to and from the facility on the same day and is not hospitalized

   iii. Two major types

   1. Freestanding medical centers

   a. Physician solo practices

   b. Partnerships

   c. Group practices

   d. Public health departments

   e. Neighborhood and community health centers (NHCs, CHCs)

   i. Serve the needs of a catchment area (defined geographic area that is served by a health care program, project, or facility)

   ii. Funded by grants, DHHS, local and state health departments

   iii. Services provided at low or no cost to patients

   2. Organized settings (function independently of the physician providing the care)

   a. Hospital-owned clinics

   i. Satellite clinics: clinics located at a distance from the hospital

   ii. Observation units for patients who need assessment and monitoring but do not require admission to hospital

   iii. Outpatient departments

   b. Outpatient departments provide primary or specialized care, including preadmission testing, pediatrics, obstetrics, gynecology, psychiatry, surgery, neonatal care, sports medicine, oncology.

   c. Ambulatory treatment units

   d. Emergency rooms (emergency departments, emergency care areas)

   i. Provide care for urgent, life-threatening, or potentially disabling conditions

   ii. Patients are triaged (rapid assessment to determine urgency and type of care needed).

   iii. Ranked from level I (most comprehensive) to level IV (not required to operate 24 hours a day), based on the center's hours of operation, availability of physicians, nurses, and other trained staff, access to laboratory, radiology surgery, anesthesia, equipment and drugs

   iv. Mortality trauma center

   1. Specialized staff and equipment

   2. Air transport system

    e. Ancillary services
       i. Hospital diagnostic and therapeutic services that are provided to both outpatients and inpatients; exclude room and board
       ii. Hospital is able to charge patients or third parties directly.
    f. Health maintenance organizations (HMOs)
       i. Managed health care that integrates health care delivery with insurance for health care
       ii. Subscribers voluntarily enroll in plan.
       iii. Providers voluntarily agree to participate in plan.
       iv. HMO assumes an explicit contractual responsibility for providing care.
       v. Subscriber to HMO makes a fixed periodic payment that is independent of utilization of health care services.
       vi. HMO bears financial risk.
       vii. Four basic models
          1. Staff
             a. HMO employs salaried physicians to provide care to HMO subscribers.
             b. HMO owns and operates ambulatory care facilities (ancillary services and physician offices).
             c. Inpatient care is under contract with local health care facilities.
          2. Group
             a. HMO contracts with group practices and hospitals to provide care to subscribers
          3. Network
             a. HMO contracts with various providers to treat the HMO clients.
             b. Providers' clients may be HMO subscribers and non-HMO patients.
          4. Independent practice association (IPA)
             a. Legal, separate entity of health care providers that contract with HMO for provision of services and compensation for those services
             b. Patient population is HMO and non-HMO patients.
    g. Surgicenters: freestanding minor surgical facilities
    h. Urgent care centers
       i. Serve patients who need routine care or have minor but urgent health care problems
       ii. Patients may walk in, and appointments are not required.
f. Home Health Care Services
    i. Provision of medical and non-medical care in the home or place of residence to promote, maintain, or restore health or to minimize the effect of disease or disability
    ii. Mainly provide post-acute care and rehabilitation therapies
g. Long-Term Care
    i. Care provided over a long period of time (30 days or more) to patients who have chronic diseases or disabilities
    ii. Care includes personal, social, recreational, dietary, and skilled nursing services.
    iii. Patients are usually referred to as residents.

        iv. Historically, two types of facilities include skilled-nursing facilities (SNFs), which provide a higher level of care to sicker patients, and intermediate-care facilities (ICFs).

          1. In 1987, the Nursing Home Reform Act reduced the differences between the two types of facilities by mandating that ICFs provide the same level of care and staffing as SNFs.

       v. Several types of long-term care facilities

          1. Nursing: comprehensive term that describes nursing care and related services for residents who need medical, nursing, or rehabilitative care; sufficient number of nursing personnel employed on a 24-hour basis to provide care to residents according to the care plan

          2. Independent living: apartments and condominiums that allow residents to live independently; assistance includes dietary, health care, and social services

          3. Domiciliary (residential)

            a. Supervision, room, and board are provided for people who are unable to live independently.

            b. Most residents need assistance with activities of daily living (bathing, dressing, eating).

          4. Life care centers (retirement communities)

            a. Provide living accommodations and meals for a monthly fee

            b. Other services include housekeeping, recreation, health care, laundry, and exercise programs.

          5. Assisted living: offers housing and board with a broad range of personal and supportive care services

      vi. To be certified as a Medicare or Medicaid provider, a nursing facility must comply with the conditions of participation.

     vii. Facility is licensed by state to provide a designated level of care, which may be personal care, room and board, or skilled nursing care.

    h. Hospice Care

       i. Literally means "given to hospitality"

      ii. Provides palliative and supportive care to terminally ill patients and their families, with consideration for their physical, spiritual, social, and economic needs

     iii. Respite care: an intervention in which the focus of care is on giving the caregiver time off while continuing the care of the patient

   i. Adult Day Care

       i. Provides supervision, medical, and psychological care and social activities for older adult clients who reside at home

      ii. Clients either cannot stay alone or prefer social interaction during the day.

     iii. Services include intake assessment, health monitoring, occupational therapy, personal care, transportation, and meals.

   j. Sub-Acute Care

       i. Transitional level of care that may be necessary immediately after the initial phase of an acute illness

      ii. Commonly used with patients who have been hospitalized and are not yet ready for return to long-term care or home care

     iii. May be located in a designated area of the hospital or nursing facility, or provided by a home health agency

k. Mobile Diagnostic Services
   i. Health care services are transported to the patients, especially diagnostic procedures (mammography, magnetic resonance) and preventive services (immunizations, cholesterol screening).
l. Contract Services
   i. Health care organizations contract for services that include food, laundry, waste disposal, transcription, and housekeeping.
m. Multi-Hospital Systems
   i. Health care systems composed of two or more hospitals that are owned, contractually managed, sponsored, or leased by a single organization
   ii. Include acute, sub-acute, long-term, pediatric, rehabilitation, or psychiatric facilities; may provide diagnostic services

14. Regulatory Agencies
   a. Agencies review patient information to provide public assurance that quality health care is being provided and monitored.
   b. Data serve as evidence in assessing compliance with standards of care.
   c. Licensure
      i. Gives legal approval for a person to practice within his or her profession
      ii Gives legal approval for a facility to operate
      iii. Sets minimal standards for a facility to operate
      iv. Virtually every state requires hospitals, sanatoria, nursing homes, and pharmacies be licensed to operate, even though requirements and standards for licensure may vary by state.
      v. Addresses staffing, credentialing, physical aspects of facility, services provided, and review of health records
      vi. Typically reviewed annually
   d. Nongovernmental Agencies
      i. American Association of Ambulatory Health Care (AAAHC)
      ii. AHIMA
         1. Established the *Professional Practice Standards for Health Information Management Services*, which provides a structured model of standards, guidelines, and measures of quality and quantity
      iii. American Medical Association (AMA)
         1. Involved in accreditation of medical schools, residency programs, and some allied health programs
         2. Collaborates with the Committee on Allied Health Education and Accreditation (CAAHEP) in the accreditation of allied health programs
      iv. American Osteopathic Association (AOA)
         1. Bureau of Professional Education accredits osteopathic medical education.
         2. Has a voluntary program that accredits osteopathic hospitals
         3. HHS recognizes accredited hospitals as eligible for receiving Medicare funds.
      v. Commission on Accreditation of Rehabilitation Facilities (CARF)
         1. Accredits rehabilitation facilities
         2. Sets quality standards to improve care, shares aggregate data, identifies competent organizations that provide rehabilitation services, and provides an organized forum in which people served, providers, and others can participate in quality improvement

      vi. Community Health Accreditation Program (CHAP)
1. Accredits home health agencies
2. Subsidiary of the National League for Nursing
3. More emphasis on patient perspectives than on clinical care

      vii. The Joint Commission (TJC, formerly JCAHO)
1. Develops accreditation standards for various types of health care facilities

      viii. National Committee for Quality Assurance (NCQA)
1. Accrediting agency for managed care organizations
2. Mission is to improve quality of patient care and health plan performance in conjunction with managed care plans, purchasers, consumers, and the public.
3. The Health Plan Employer Data and Information Set (HEDIS), a component of the NCQA, is a standardized set of performance measures designed to allow purchasers and consumers to compare the performance of managed care plans.

      ix. National League of Nursing (NLN)
1. Accredits nursing schools from diplomas to doctorate degrees
2. Establishes standards for nursing curriculum

  e. Federal Regulatory Agencies

    i. DHHS is the branch of federal government primarily responsible for numerous health care regulatory programs and agencies.
1. Administration for Children and Families administers and funds state grants to support activities that improve the development of children, youth, and families.
2. Administration on Aging (AoA) advocates for older persons.
3. Agency for Healthcare Research and Quality (AHRQ) established by Omnibus Budget Reconciliation Act of 1989; purpose is to produce and disseminate scientific and policy relevant information that improves the quality, reduces cost, and enhances effective health care.
4. Agency for Toxic Substances and Disease Registry (ATSDR) protects workers and the public from exposure to adverse effects of hazardous substances.
5. CDC is concerned with communicable diseases, environmental health, and foreign quarantine activities.
   a. National Center for Health Statistics (NCHS)
     i. Under management of CDC
     ii. Federal government's principal vital and health statistics agency
     iii. Provides data to monitor the nation's health
6. CMS (formerly the Health Care Financing Administration, or HCFA) is responsible for the Medicare and Medicaid programs, with special emphasis on quality and utilization control.
7. FDA is responsible for the safety of foods, drugs, medical devices, cosmetics, and radiation-emitting equipment, and for proper labeling, product information, safety, and efficacy.
8. Health Resources and Services Administration (HRSA) distributes major grant funding to state governments and the private sector, especially funding for community-based health services.
9. IHS is responsible for providing health care through a network of hospitals, health centers, health stations, and schools health

centers, and through contracts with private providers to eligible Native Americans.

10. National Committee on Vital and Health Statistics (NCVHS)
    a. Statutory public advisory body on health data, statistics, and national health information policy
    b. Encourages the evolution of shared, public-private national health information infrastructure that will promote the availability of valid, credible, timely, and comparable health data
    c. Advises on HIPAA
    d. Standardizes health information by formalizing uniform data sets
        i. Data sets promulgated by the NCVHS
            1. UHDDS
            2. UACDS
            3. Minimum Data Set for Long-Term Care (MDS)
            4. OASIS
11. NIH
    a. Major research center composed of numerous departments and divisions
    b. Major source of funding for health-related research
12. Occupational Safety and Health Administration (OSHA)
    a. Created by the Occupational Safety and Health Act of 1970, which mandated that employers provide a safe and healthy work environment
    b. Responsible for developing standards and regulations and conducting inspections and investigations to determine compliance, and proposes corrective actions for noncompliance
13. Office of Inspector General is responsible for conducting and monitoring audits, inspections, and investigations regarding programs or projects sponsored by the DHHS.
14. SAMHSA is concerned with the effective prevention and treatment of addictive and mental disorders.
15. Clinical Vocabularies
    a. Nomenclature
        i. International Standards Organization (ISO) defines nomenclature as a system of clinical terms of preferred terminology.
        ii. Classification and nomenclature often used interchangeably.
    b. Clinical Terminology
        i. Provides for the proper use of clinical words as names or symbols
        ii. Equated with a nomenclature by AHIMA's Coding Policy and Strategy Committee
    c. Clinical Vocabularies
        i. A list or collection of clinical words or phrases, with their meanings
        ii. Used to represent concepts and to communicate these concepts; include symptoms, diagnoses, procedures, and health status
        iii. *Controlled vocabularies* refers to a code or classification system that requires information to be presented using a preestablished term.
        iv. Classification and nomenclature systems
            1. International Classification of Diseases, Ninth Revision Clinical Modification (ICD-9-CM); only used in United States; developed by World Health Organization (WHO) to code and classify diagnoses and procedures

2. International Classification of Diseases, 10th Revision, Clinical Modification contains substantial increases in content over ICD-9-CM.
3. International Classification of Diseases, 10th Revision, Procedural Coding System replaces tabular list of procedures, volume 3 of ICD-9-CM.
4. International Classification of Diseases for Oncology (ICD-O) is used for coding neoplasms in tumor or cancer registries.
5. International Classification on Functioning, Disability, and Health (ICF) is used to describe body functions, structures, activities, and participation.
6. Current Procedural Terminology (CPT) describes medical, surgical, and diagnostic services and was adopted by CMS as level I of the Healthcare Common Procedure Coding System (HCPCS).
7. Healthcare Common Procedure Coding System (HCPCS) is administered by CMS and includes two levels of codes.
   a. Level 1: current procedural terminology (CPT).
   b. Level 2: alphanumeric procedure and modifier codes represent items, supplies, and non-physician services not covered by the CPT codes.
   c. Level 3: were local procedure and modifier codes used prior to 2003. They are no longer used; additional Level 2 codes to compensate for the loss of the Level 3 codes.
8. Diagnostic and Statistical Manual of Mental Diseases (DSM-IV) is a five-axis coding system.
9. Diagnosis Related Groups (DRG) is used to bill for inpatient services rendered.
10. Ambulatory Payment Classification (APC) is used to bill for outpatient services and is based on the grouping procedures by CPT/HCPCS.
11. International Classification of Primary Care (ICPC-2) is a coding classification of primary care.
12. Current Dental Terminology is a national standard for reporting dental services by the federal government under HIPAA and is recognized by third-party payers.
13. Galen Common Reference Model is a computer-based clinical terminology developed in Europe for representing medical concepts.
14. National Drug Codes (NDC) was developed by the FDA as a universal product identifier for drugs used in humans.
15. ABC codes were created by Alternative Link; they describe alternative medicine, nursing, and other integrative health care interventions.
16. **Financing Health Care Services: Reimbursement Methodologies and Systems**
    a. DHHS is the largest purchaser of health care in the United States.
    b. Private prepaid health plans or federal health care programs cover about 85% of Americans.
    c. Prior to prospective payment system (PPS), individuals, insurance companies, and government plans reimbursed providers on a retrospective fee-for-service basis.
    d. Patient Payment Methods
       i. Direct pay (out-of-pocket): patient pays provider directly.

ii. A prepaid health plan (insurance) is considered indirect pay; it is a purchased policy in which the insured may pay a deductible and is protected from loss by the insurer's agreement to reimburse for such loss.

    1. In 1860, the Franklin Health Assurance Company of Massachusetts became the first commercial insurance company in the United States to provide health care coverage.

    2. In 1929, Baylor University Hospital in Dallas, Texas agreed to provide health care services to Dallas schoolteachers, which was the birth of Blue Cross.

    3. In the 1950s, Blue Cross and Blue Shield began to offer major medical insurance coverage for catastrophic illnesses and injuries.

    4. Health care insurance coverage expanded through the 1950s, and more Americans were covered by a major medical plan or indemnity plan (insurance coverage in the form of cash payment).

    5. Types of insurance

        a. Commercial

            i. Private health insurance plans; financed through the insured person's payment of premiums

            ii. Employer-based insurance; group health insurance coverage, in which companies contract with private insurers to provide coverage to employees

        b. Blue Cross Blue Shield

            i. Blue Cross (1929) covered hospital care.

            ii. Blue Shield (1939) covered physician services.

            iii. In 1982, Blue Cross and Blue Shield merged.

                1. First prepaid health care plan in the United States

                2. One of the largest nonprofit insurance companies in the United States

            iv. Offers health insurance to individuals, small businesses, seniors, and large employer groups

            v. Federal employees offered

                1. Preferred provider organizations (PPOs): health care services provided to members at a discounted rate.

                2. Point-of-service plan: subscribers select providers from a network, but allowed to use out-of-network providers at a higher copayment rate.

        c. Government-sponsored health care programs

            i. Medicare (1965)

                1. Title XVIII of the Social Security Act

                2. Part A: hospitalization insurance for those eligible for social security benefits

                3. Part B: voluntary supplemental insurance to help pay for physician services, medical services, and medical and surgical supplies

                4. Part C: Medicare advantage plans run by private companies

                    a. Similar to HMOs and PPOs

                    b. Provides all of Part A and Part B benefits

                    c. Copayments, coinsurance, and deductibles are charged to recipients.

                    d. Vision, hearing, dental, wellness, and prescription medications provided at extra cost to beneficiary.

      5. Part D: prescription drug coverage through private insurance companies

  ii. Medicaid (1966)

      1. Title XIX of the Social Security Act

      2. Medical assistance for individuals and families with low incomes

      3. Managed at the state level

  iii. Civilian Health and Medical Program-Veterans Administration (CHAMPVA): provides health care services for dependents and survivors of disabled veterans, survivors of veteran who dies from service-connected conditions, and survivors of military personnel who died in the line of duty

  iv. TRICARE (formerly CHAMPUS): provides coverage for dependents of armed forces personnel and retirees receiving care outside a military treatment facility

  v. Indian Health Service: provides federal health services to American Indians and Alaska natives

  vi. State Children's Health Insurance Program (SCHIP): Title XXI of the Social Security Act provides federal funds to states; these funds allow states to expand existing insurance programs to cover children up to age 19, thus expanding coverage to a greater number of children.

e. Reimbursement Methodologies

  i. Fee for service

    1. Third-party payers and/or patients issue payments to health care providers based on charges assigned to each service performed for each patient.

      a. Traditional fee-for-service: third-party payers and/or patients pay health care providers after services have been rendered.

      b. Managed fee-for-service: costs are controlled by the managed-care plan's management of members' uses of services; providers are reimbursed by fee schedules.

  ii. Episode of care

    1. Health care plan compensates providers with a lump-sum payment to compensate them for all services delivered to a patient for a specific illness and over a specific period of time.

    2. Also referred to as bundled payments, which cover multiple services and providers

    3. Capitation

      a. Based on per-person premiums instead of itemized for each procedure or service

      b. Calculated on projected cost per patient per month

    4. Global payment

      a. Utilized with procedures that involve professional and technical components (e.g., radiological services)

      b. Lump-sum payments distributed to health care providers and facilities that provided services, equipment, and supplies

    5. Prospective payment

      a. Tax Equity and Fiscal Responsibility Act (1982) modified Medicare's retrospective hospital inpatient payment system to a prospective payment system (PPS).

      b. In 1983, CMS implemented PPS for hospital care provided to Medicare patients.

    c. DRGs is a system used to control Medicare spending; DRG determines payment to facility.

    d. Omnibus Budget Reconciliation Act (1986) mandated CMS to develop a prospective system for hospital-based outpatient services rendered to Medicare beneficiaries.

    e. Effective October 2007, CMS implemented Medicare Severity Diagnosis-Related Groups (MS-DRGs).

       i. Expanded DRGs from 538 to 745

      ii. Revised complications and comorbidities list

     iii. Redistributed cardiac cases into lower-weighted DRGs

     iv. Instituted a 1.2% reduction in overall payments to offset any coding and documentation improvements, which drew the fire of many hospital associations

      v. Payment penalties proposed for complications that occur while a patient is in the hospital

6. Resource-based relative value scale (RBRVS): implemented in 1992 by CMS for reimbursement of physician services of beneficiaries covered under Medicare Part B

7. Medicare SNF PPS

    a. System was mandated by Balanced Budget Act and implemented in 1998.

    b. SNF paid according to a per-diem PPS based on case-mix-adjusted payment rates.

8. Medicare/Medicaid outpatient PPS

    a. Implemented in 2001 with authorization of Balanced Budget Act and applies to the following:

       i. Hospital outpatient services, including partial hospitalization

      ii. Certain Part B services to beneficiaries who have no Part A coverage

     iii. Partial hospitalization services provided by CHCs

     iv. Vaccines, splints, casts, and antigens provided by home health agencies (HHAs) that provide medical and health related services

      v. Vaccines provided by comprehensive outpatient rehabilitation facilities (CORFs)

     vi. Splints, casts, and antigens provided to hospice patients for the treatment of non-terminal illnesses

     vii. CPT/HCPCS codes used to calculate payment

9. Home health PPS

    a. Balanced Budget Act called for development and was implemented in 2001 for covered services to Medicare beneficiaries.

    b. OASIS data set and Home Assessment Validation and Entry (HAVEN) data entry software is used to conduct patient assessments.

    c. Home health resource groups (HHRGs) is the classification system for Home Health PPS.

10. Ambulance fee schedule

    a. Included in 2002 as part of the BBA

    b. Ambulance services are reported using HCPCS codes.

11. Inpatient rehabilitation facility (IRF) PPS

    a. Implemented in 2002 with authorization of BBA

    b. Patient assessment instrument (PAI) completed for all patients.

      c. Inpatient rehabilitation validation and entry (IRVEN) system collects PAI and transmits it to national IRF-PAI database.
        i. Patients are classified into case-mix groups (CMG).
        ii. The CMG relative weight is used to calculate payment.

    12. Long-term care hospitals (LTCHs) PPS: Balanced Budget Refinement Act of 1999, amended by Benefits Improvement Act of 2000, mandated a 2002 implementation of a DRG-based PPS for LTCHs.

    13. Inpatient psychiatric facilities (IPFs): Balanced Budget Refinement Act of 1999 mandated a per-diem PPS that became effective in 2005 and utilizes DRGs.

f. Reimbursement Claims Processing

    i. Patient accounts department is responsible for billing third-party payers, processing accounts receivable, monitoring payments, and verifying insurance.

    ii. Explanation of benefits (EOB) statement is sent to patient to explain services provided, amounts billed, and payments made by health plan.

    iii. Remittance advice (RA) sent to provider to explain payments made by third-party payers.

    iv. Either CMS-1500 (physician office visit) or UB-04 (CMS-1450) (inpatient, outpatient, home health, hospice, long-term care) claim form is submitted to third-party payer for reimbursement.

    v. Medicare carriers process Part B claims for services by physicians and medical suppliers, while Medicare fiscal intermediaries process Part A claims and hospital-based Part B claims for institutional services (Blue Cross and Blue Shield).

    vi. Support processes

      1. Management of fee schedules (MFS)

        a. Third-party payers update fee-for-service fee schedules (list of health care services and procedures using CPT/HCPCS codes) on an annual basis.

        b. Health care providers notify Medicare at the end of each year whether they are willing to participate in program.

        c. Non-participating providers may or may not accept assignment; if assignment is accepted, provider is paid 95% of MFS (5% less than participating providers).

      2. Chargemaster

        a. Also called charge description master (CDM); contains information about health care services and transactions provided to a patient

        b. Allows provider to accurately charge routine services and supplies to the patient

        c. Services, supplies, and procedures included on chargemaster generate reimbursement for approximately 75% of UB-04 claims submitted for outpatient service.

        d. Routinely updated and maintained by representatives from health information management, clinical services, finance, business office/patient financial services, compliance, and information systems

        e. HIM professionals provide expertise concerning CPT codes updates.

      3. Revenue cycle

        a. Assures facility is properly reimbursed for services provided

       b. Major functions include
- **i.** Admitting, patient-access management
- **ii.** Case management
- **iii.** Charge capture
- **iv.** Health information management
- **v.** Patient financial services, business office
- **vi.** Finance
- **vii.** Compliance
- **viii.** Information technology

       c. Revenue cycle indicators
- **i.** Value and volume of discharges
- **ii.** Number of accounts-receivable days
- **iii.** Number of bill-hold days
- **iv.** Percentage and amount of write-offs
- **v.** Percentage of clean claims
- **vi.** Percentage of claims returned to providers
- **vii.** Percentage of denials
- **viii.** Percentage of accounts missing documents
- **ix.** Number of query forms
- **x.** Percentage of late charges
- **xi.** Percentage of accurate registrations
- **xii.** Percentage increased point-of-service collections for elective procedures
- **xiii.** Percentage of increased DRG payments due to improved documentation and coding

  4. Documentation and coding quality
- **a.** Accurate coding is contingent upon complete, accurate, legible, and timely documentation.
- **b.** ICD-9-CM and CPT coding drives reimbursement and is a mechanism used to determine utilization of services and the quality of care rendered to patients.
- **c.** HIPAA authorizes the Office of the Inspector General (OIG) to investigate cases of health care fraud, which includes unnecessary services, upcoding, unbundling, and billing for services not provided.

g. Health Care Reform
- **i.** Due to increased health care expenditures in mid 1990s, hospitals and practitioners formed alliances, networks, systems, and joint ventures that made them more competitive.
  - **1.** Integrated delivery networks
  - **2.** Health care systems
  - **3.** Health care organizations
- **ii.** Comprehensive care models offer full range of health care services, including hospitals, primary care physicians, specialty care physicians, and other pertinent health care providers.
  - **1.** Accountable health plans
  - **2.** Coordinated care networks
  - **3.** Community care networks
  - **4.** Integrated health systems

h. HMOs
- **i.** Oldest of managed health care plans
- **ii.** Integrates health care delivery with insurance for health care

i. PPOs
  i. Network of physicians who enter into agreement to provide health care services on a discounted fee schedule
  ii. Patients pay a penalty fee for using nonparticipating physicians.
j. National Health Insurance
  i. In 1915, the American Association of Labor Legislation drafted model health insurance legislation that was never adopted into law.
  ii. In the 1930s, the Committee on the Cost of Medical Care was formed to address access to medical care; however, their recommendations were not followed.
  iii. In 1939, the Tactical Committee on Medical Care drafted the Wagner National Health Act, which supported a federally funded national health program that the state and local governments would manage; it was not enacted.
  iv. In 1945, President Truman introduced a universal comprehensive national insurance plan that was not adopted into law.
  v. In 1946, Hill-Burton Act initiated health care facility construction program under Title VI of the Public Health Service Act; it provided federal grants for modernizing hospitals, and in return, hospitals would provide free or reduced-cost medical services to those unable to pay.
  vi. In 1965, Title XVIII of the Social Security Act established Medicare, which covered most Americans over age 65.
    1. Overseen by CMS
    2. Health insurance to complement retirement, survivors, and disability insurance benefits
    3. Groups added in 1973 included
      a. Those entitled to Social Security or railroad retirement disability cash benefits for at least 24 months
      b. Most persons with end-stage renal disease
      c. Certain individuals over 65 who were not eligible for paid coverage but elected to pay for Medicare benefits
  vii. In 1966, Title XIX of the Social Security Act established Medicaid.
    1. Overseen by CMS
    2. Health care coverage was added to states' public assistance programs for low-income groups, families with dependent children, aged, and the disabled.
    3. Currently the program covers approximately 40% of indigent population.

PRACTICAL APPLICATION OF YOUR KNOWLEDGE

1. Define the following terms:
   a. Accreditation

   b. Inpatient

   c. Hospital

   d. Outpatient

   e. Patient

   f. Primary patient record

   g. Provider

   h. Resident

   i. Secondary patient record

2. In 1913 the American College of Surgeons was founded. What did it do to improve patient care?

3. What was the result of the Hill-Burton Act of 1946?

4. Describe Title XVIII of the Social Security Act.

5. Describe Title XIX of the Social Security Act.

6. Discuss the following:
   a. DHHS

   b. CMS

   c. TEFRA

   d. COBRA

   e. HIPAA

7. State the various ways that a hospital may be classified.

8. State the responsibilities of the following administrative leaders:

Governing Board	
CEO	
COO	
CIO	
CFO	

9. How is the medical staff managed?

10. Compare the following health care facilities:

Acute-Care	
Ambulatory Care	
Home Health Care	
Hospice	
Long-Term Care	
Urgent Care Center	
Adult Day Care	

11. Discuss the following regulatory agencies:

TJC (formerly JCAHO)	
AAAHC	
AMA	
AoA	
CARF	
CHAP	
NCQA	
NLN	

12. Match the government agency with its mission or purpose.

a. CDC   **e.** IHS   **h.** DHHS
b. NCHS   **f.** OSHA   **i.** AHRQ
c. CMS   **g.** FDA   **j.** ATSDR
d. OIG

i. _____ Responsible for numerous health care regulatory programs and encompasses various agencies

ii. _____ Produces and disseminates relevant scientific and policy information that improves the quality and reduces cost of effective health care

iii. _____ Protects workers and the public from exposure to adverse effects of hazardous substances

iv. _____ Concerned with communicable diseases, environmental health, and foreign quarantine activities

v. _____ Federal government's principal vital and health statistics agency

vi. _____ Responsible for the safety of foods, drugs, medical devices, cosmetics, and radiation-emitting equipment

vii. _____ Responsible for Medicare and Medicaid programs

viii. _____ Responsible for providing health care to Native Americans

ix. _____ Responsible for developing standards and regulations concerning safe and healthy work environments

x. _____ Conducts and monitors audits, inspections, and investigations sponsored by DHHS

13. What are the purposes of the health record?

14. Who uses the health record?

15. Distinguish between the source-oriented and the problem-oriented health record.

Source Oriented	Problem Oriented

16. Match the formats of the paper-based medical records:
- **a.** Source-oriented medical record
- **b.** Problem-oriented medical record
- **c.** Integrated medical record
  - **i.** _____ Most common paper-based health record
  - **ii.** _____ Medical record is organized into sections according to treatment and data collection.
  - **iii.** _____ Developed by Dr. Lawrence L. Weed
  - **iv.** _____ Recorded in strict chronological order without any divisions by source
  - **v.** _____ Medical record divided into database, problem list, initial plan, and progress notes
  - **vi.** _____ Progress notes written in SOAP format

17. State general documentation guidelines.

18. Compare the contents of the various health care records:

Acute-Care	
Ambulatory Care	
Emergency Room	
Long-Term Care	
Home Health Care	
Hospice	
Mental Health	

♪   **19.** Calculate the following:

       a. A health information management department currently using 2000 linear filing inches to store medical records plans to purchase new open-shelf filing units. Each of the shelves in a new 6-shelf unit measures 36 linear filing inches. It is estimated that an additional 500 filing inches should be planned to allow for 6-year expansion needs. How many new file-shelving units should be purchased?

       b. Out of 2694 records requested from the health information management department, 2588 were located. What is the record retrieval rate?

       c. A new health information department has purchased 300 units of 6-shelf files and plans to implement a terminal digit filing system. How many shelves should be allocated to each primary number?

       d. A health information management department has a total of 2000 filing inches. When using the unit numbering system, how much shelving space should remain open to allow for expansion?

       e. City General Hospital has been in operation for 20 years. It has 15,000 admissions per year. The health care facility has expanded and will allow for 500 more admissions per year from now on. There are 3000 linear feet of filing space available and half is being used. The facility expects a 35% readmission rate. If a unit numbering filing system is used, how many file folders will be needed for next year?

20. Contrast quantitative and qualitative analysis.

21. Describe the following data sets:

       a. UHDDS

       b. UACDS

c. MDS Long-Term Care and RAI

d. OASIS

e. UCDS

22. What is the difference between a LAN and a WAN?

23. Describe the following indexes and registries:
a. MPI

b. Number index

c. Physician index

d. Disease index

e. Procedure index

f. Admission and discharge register

g. Operating room register

h. Birth register

    i. Death register

    j. Emergency room register

    k. Cancer or tumor registry

24. How did TEFRA affect the reimbursement of health care?

25. How has the Balanced Budget Act affected the reimbursement of health care?

26. What are the purposes of the following classification systems?
    a. ICD-9-CM

    b. CPT

    c. HCPCS

    d. ICD-O

    e. APC

    f. DRG

    g. RBRVS

27. Discuss the Chargemaster.

28. Explain the revenue cycle.

29. Mark these statements as True or False.

a. _____ The primary criterion used to evaluate a filing system is the satisfaction of the file clerks.

b. _____ Movable open shelving saves a lot of filing space.

c. _____ In a centralized filing system, record control and security are easier to maintain than in a decentralized system.

d. _____ Color coding of medical record folders assists with the control of misfiles.

e. _____ A hospital with limited filing space should retain all records in hard copy indefinitely.

f. _____ The master patient index is the best source for locating patients with an ICD-9-CM diagnostic code of 250.01.

g. _____ According to the American Health Information Management Association, records of minor patients may be destroyed when the patient reaches the age of majority.

h. _____ In the family numbering system, records are best filed in alphabetical order.

i. _____ Straight numeric filing is a system for filing records in the exact chronological order in which the patients were admitted.

j. _____ The health information manager should develop a retention schedule for the transfer and destruction of medical records, registers, and indexes.

k. _____ If a patient's name cannot be found in the master patient index, then the patient was never admitted in the facility.

l. _____ A Health Maintenance Organization is an entity that combines the provision of health care insurance and the delivery of health care services at predetermined payment rates.

m. _____ A military hospital is a government-owned federal facility.

n. _____ The chief financial officer is responsible for overseeing all accounting and financial affairs of the facility.

o. _____ The attending physician has the major responsibility for assuring a complete and accurate medical record.

p. _____ Non-governmental for-profit proprietary hospitals provide the best overall quality health care.

q. _____ The forms committee often serves as the final approval of forms to be used in the medical record.

r. _____ In order to assure accurate communication, abbreviations should be avoided in the medical record.

s. _____ A certified coding specialist must have a least an associate's degree from an accredited college or university.

t. _____ The Commission on Accreditation of Rehabilitation Facilities accredits facilities that provide rehabilitative care.

u. _____ The terminal-digit filing system has 100 primary filing sections ranging from 00–99.

v. _____ Quantitative and qualitative analysis accomplish the same results for medical record completion.

w. _____ Accreditation by the Joint Commission of Accreditation of Healthcare Organizations is a voluntary process.

x. _____ A final progress note can substitute for a discharge summary for patients who expire within 48 hours of admission.

y. _____ If a physician expires, then his/her incomplete medical records may be filed as is, along with a written explanation.

z. _____ The primary focus of the screen format of computer-based patient records is the end user.

30. Compare the following credentials:
   a. RHIA

   b. RHIT

   c. CCS

   d. CHPS

TEST YOUR KNOWLEDGE

Select the best answer for the questions or incomplete statements.

1. The process by which an organization or agency performs an external review and grants recognition to the program of study or institution that meets certain predetermined standards is called:
  a. standardization.
  b. registration.
  c. formalization.
  d. accreditation.

2. In the following cancer registry accession register, what does the prefix of the patients' accession numbers represent?
  a. Date of accession
  b. Month of accession
  c. Year of accession
  d. Cancer stage

Cancer Registry Accession Register

Account Number	Patient's Name	Primary	Site	Date of Diagnosis
09-0001/00	Cantu, Bobby	Liver	C22	01/08/2009
09-0002/02	Wilson, Joan	Colon	C18	01/08/2009
09-0245/02	Tyler, Kenneth	Lung	C34	01/08/2009
09-0004/01	Mason, Andre	Prostate	C61	01/08/2009
09-0004/02	Mason, Andre	Colon	C18	01/08/2009

3. Dr. Barbette is delinquent, with 10 of her 15 medical records needing to be completed. What is her delinquency rate?
  a. 5%
  b. 10%
  c. 33%
  d. 67%

4. Upon discharge analysis of a patient's record, the analyst does not see a discharge order written by the physician. What can the analyst assume?
  a. The patient expired prior to discharge.
  b. The patient left against medical advice.
  c. The family members requested hospice care.
  d. The patient will continue treatment on an outpatient basis.

5. Which of the following is a secondary record for J. Pratt?
  a. ICD-9-CM code of 650 in the diagnostic index
  b. Emergency room record dated June 6
  c. Mental health record at Houston Honorary Adolescent Center
  d. Admitted and discharged same day with ICD-9-CM code of 650

6. How long should the master patient index be maintained?
  a. 5 years
  b. 10 years
  c. 20 years
  d. Indefinitely

7. The Hill-Burton Act of 1946:
   a. enacted legislation funding the construction of hospitals and other health care facilities.
   b. established the retrospective payment system.
   c. assured the provision of health care for the indigent.
   d. provided health care to Americans 65 years of age and older.

8. Dr. Thomas made an error in recording the progress notes in a patient's medical record. What is the first thing he should do to correct the error?
   a. Remove the page on which he made the error
   b. Tell the nursing staff to ignore the statement
   c. Draw a single line through the error
   d. Obliterate the error and enter correct entry

9. A patient is hospitalized for less than 48 hours. Which of the following is permissible in lieu of a discharge summary?
   a. Discharge order
   b. Final progress note
   c. Discharge diagnosis
   d. Final diagnosis

10. Who is responsible for developing bylaws governing physicians' completion of medical records?
   a. Governing board
   b. Chief of medicine
   c. Chief executive officer
   d. Medical staff

11. Which system avoids assigning a new number for each patient encounter?
   a. Straight numerical
   b. Serial numbering
   c. Unit numbering
   d. Serial-unit numbering

12. By signing a consent for treatment, the patient agrees to:
   a. allow the hospital to release information to his/her insurance company.
   b. treatments and procedures to be performed by health care providers.
   c. take all medications prescribed and dispensed by health care providers.
   d. allow hospital to dispose of property and values in the case of death.

13. Reviewing the record to assure the presence of a discharge summary is referred to as:
   a. legal analysis.
   b. qualitative analysis.
   c. documentation analysis.
   d. quantitative analysis.

14. A major advantage of the source-oriented medical record is the:
   a. speed at which individual sheets can be located.
   b. ease with which health care providers can follow the course of one problem.
   c. strict chronology that keeps episode of care clearly defined by date.
   d. forms are designed to support numbering and tracking of problems.

15. Which of the following would be most beneficial in locating a charged-out medical record?
   a. Outguide
   b. Transfer notice
   c. Requisition slip
   d. Master patient index

16. Which of the following filing systems would be most affected in the event of a divorce?
   a. Family
   b. Unit
   c. Serial
   d. Serial-unit

17. A patient had an appendectomy due to appendicitis. This operative report must be completed when?
  a. Immediately after surgery
  b. Within 24 hours of surgery
  c. Within 48 hours of surgery
  d. Within 15 days of discharge

18. A post-anesthesia note is required when?
  a. Immediately after surgery
  b. Within 24 hours of surgery
  c. Within 48 hours of surgery
  d. Within 15 days of discharge

19. A discharge summary:
  a. may be completed in lieu of a clinical resume.
  b. must be dictated and typed for ease of readability.
  c. is not required for a stay of 48 hours or less.
  d. is not required when death occurs within 48 hours or less.

20. Which of the following is an example of a government agency that has an interest in the standardization of records and data collection?
  a. The Joint Commission
  b. Department of Health and Human Services
  c. American Medical Association
  d. American Health Information Management Association

21. The health record may be used for personal and non-personal reasons. Which is an example of personal use of the health record?
  a. Patient reviews record with provider for understanding of health status.
  b. Health information professional assigns ICD-9-CM codes.
  c. Accrediting agency reviews record to assure quality health care.
  d. Employer reviews health care data to evaluate job injuries.

22. Place the following in terminal digit order: 01-34-54, 01-35-55, 02-05-49, 02-66-48
  a. 01-34-54, 01-35-55, 02-05-49, 02-66-48
  b. 02-05-49, 01-34-54, 01-35-55, 02-66-48
  c. 02-66-48, 02-05-49, 01-35-55, 01-34-54
  d. 02-66-48, 02-05-49, 01-34-54, 01-35-55

23. The condition that is primarily responsible for the patient's admission to the hospital is the _____ diagnosis.
  a. primary
  b. principal
  c. preliminary
  d. discharge

24. Which of the following is not a major hospital classification?
  a. General
  b. Special
  c. Psychiatric
  d. Cardiac

25. Which of the following would the physician include in the discharge summary?
  a. Blood pressure and pulse
  b. Review of systems
  c. Do not resuscitate order
  d. Instructions for future care

26. As the director of health information of a newly established acute care facility, where would you expect to find directives concerning the minimum health record contents?
  a. The Joint Commission
  b. Credentials committee meeting minutes
  c. Medical record committee meeting minutes
  d. Benchmarks from area acute care facilities

27. A health record analyst is reviewing the medical record for authentication of all entries. This process is commonly termed:
   a. qualitative analysis.
   b. quantitative analysis.
   c. closed record review.
   d. point of care review.

28. Information in a tumor registry is collected to:
   a. bill for treatment rendered.
   b. inform patients of their cancer status.
   c. improve patient care.
   d. determine the appropriate cancer stage.

29. LaToya wants to put her health care decisions in writing in the event she has an incurable or irreversible condition and is unable to communicate her wishes. What should she institute?
   a. Advance directive
   b. Executor of her estate
   c. Transfer on death
   d. Legal guardian

30. The automated record tracking system is a database that:
   a. locates misplaced health records.
   b. verifies the requested patient's name and health record number.
   c. stores current and past health record locations.
   d. records dissatisfaction of record requesters with service.

31. A health information technician wants to obtain a chronological list of all patients admitted to the facility during the third quarter with a diagnosis of appendicitis. Which database should the technician utilize?
   a. Accession register
   b. Master patient index
   c. Disease index
   d. Patient register

32. Which application is best suited for bar coding?
   a. Birth certificate registration
   b. Diagnostic and procedural coding
   c. Record tracking/location
   d. Misfiled records

33. During the month of December, there were 3489 discharges with 134 incomplete records. What was the incomplete record rate for the month?
   a. .384%
   b. 3.84%
   c. 26.03%
   d. 38.40%

34. Last month Houston Hospital discharged 517 patients. Each chart is approximately 1.8 inch thick. A shelving unit in the health information department has 7 shelves and each shelf is 36 inches. How many shelving units are needed to store one month of discharged records?
   a. 2.05
   b. 3.00
   c. 3.69
   d. 4.00

35. The arrangement that links health care financing and service delivery and allows payers to exercise significant economic control over how and what services are delivered is referred to as what?
   a. Medicare
   b. Medicaid
   c. Managed care
   d. Fee for service

36. Ellen, a 78-year-old end-stage renal cancer patient, is in need of palliative care. Which facility would best meet her needs?
   a. Skilled nursing facility
   b. Hospice
   c. Rehabilitation facility
   d. Home health care

37. At the close of World War II, the growth in the number of hospitals can be attributed to:
  a. Hill-Burton Act of 1946.
  b. Clinton Health Security Act of 1993.
  c. HIPAA of 1996.
  d. AARP, founded in 1958.

38. Which of the following agencies is concerned with communicable diseases, environmental health, and foreign quarantine activities?
  a. Centers for Medicare and Medicaid Services
  b. National Institutes of Health
  c. Health Resources and Services Administration
  d. Centers for Disease Control and Prevention

39. Which of the following organizations is responsible for developing standards and conducting investigations to determine compliance in matters related to occupational safety and health?
  a. DHHS
  b. CMS
  c. COBRA
  d. OSHA

40. Which act established the Patient Antidumping Law?
  a. HIPAA
  b. TEFRA
  c. COBRA
  d. OSHA

41. When this act was passed, it helped to improve the quality of health care, reduce cost, and enhance the effectiveness of health care.
  a. Health Information Portability and Accountability Act
  b. Tax Equity and Fiscal Responsibility Act
  c. Omnibus Budget Reconciliation Act
  d. Occupational Safety and Health Act

42. This hospital provides care to military personnel and their dependents. How is it classified?
  a. Voluntary
  b. Proprietary
  c. Government
  d. Not for profit

43. Manuel receives surgery in one day and is discharged to home. Where was he treated?
  a. Surgicenter
  b. Satellite clinic
  c. Ancillary department
  d. Observation unit

44. Hospital ownership is either:
  a. proprietary or government.
  b. charitable or government.
  c. stand alone or with clinics.
  d. government or non-government.

45. According to TJC (formerly JCAHO) standards, a hospital is required to:
  a. provide charitable care to the indigent.
  b. promote performance improvement.
  c. employ an RHIA or RHIT.
  d. review and update policies yearly.

46. Warren, a 12-year-old Boy Scout, breaks his leg while hiking with the troop. Which type of facility might Bob's Boy Scout leader take him to for emergent treatment?
  a. Surgicenter
  b. Ambulatory care clinic
  c. Specialty hospital
  d. General hospital

47. Dr. Lewis is retired. Which medical staff membership might he be awarded?
  a. Courtesy
  b. Honorary
  c. Tributary
  d. Consulting

48. The governing board is responsible for setting the overall direction of the hospital. Other responsibilities include all except which of the following?
   a. Selecting TJC standards to uphold
   b. Selecting qualified administrative leadership
   c. Monitoring the quality of care
   d. Establishing bylaws in accordance with license

49. Which of the following is considered a clinical support service?
   a. OB/GYN
   b. Cardiology
   c. Volunteer services
   d. Health information management department

50. Cecile, a 78-year-old female, needs intermittent skilled nursing care. Which facility would best meet her needs?
   a. Skilled nursing facility
   b. Hospice
   c. Rehabilitation facility
   d. Home health care