

Chapter 3

Content and Structure of the Health Record

Bonnie J. Petterson, PhD, RHIA

Learning Objectives

- To understand the content of health records in various healthcare settings
- To recognize the documentation requirements of accreditation organizations and state and federal government agencies
- To describe the different formats used for health records in healthcare organizations
- To understand the advantages of electronic health records over paper-based and hybrid health records

Key Terms

Accreditation

Accreditation Association for Ambulatory Health Care (AAAHC)

Advance directive

American Osteopathic Association (AOA)

Anesthesia report

Authorization to disclose information

Autopsy report

Care plan

Certification

Commission on Accreditation of Rehabilitation Facilities (CARF)

Computer-based patient record (CPR)

Conditions for Coverage

Conditions of Participation

Consent to treatment

Consultation report

Deemed status
Discharge summary
Electronic health record (EHR)
Electronic medical record (EMR)
Expressed consent
Hybrid health record
Imaging technology
Implied consent
Integrated health records
Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
Licensure
Medical history
Medical staff privileges
Medicare Conditions of Participation or Conditions for Coverage
Minimum Data Set (MDS) for Long-Term Care
National Committee for Quality Assurance (NCQA)
Operative report
Outcomes and Assessment Information Set (OASIS)
Palliative care
Pathology report
Patient assessment instrument (PAI)
Patient history questionnaire
Patient Self-Determination Act (PSDA)
Patient's bill of rights
Personal health record (PHR)
Physical examination report
Physician's orders
Problem list
Problem-oriented health records
Progress notes
Recovery room report
Resident assessment instrument (RAI)
Resident assessment protocol (RAP)
Source-oriented health records
Transfer record

Introduction

As explained in chapter 2, the health record has multiple purposes. One of its primary purposes is the documentation of patient care. It represents the main communication mechanism used by healthcare providers in the delivery of patient treatment. Without it, providers would be unable to provide safe and effective care.

For more than a century, health records were created and maintained in paper-based formats. In recent years, however, many healthcare providers have implemented computer-based health records. As the demand for health information increases and as healthcare facilities adopt advanced information technology, computer-based records will eventually replace most paper-based health records. A number of different terms have been used to describe computer-based records. Today, **electronic health record (EHR)** is the term used most widely by the federal government and other entities. It refers to a health record available electronically allowing communication across providers and permitting real-time decision making. It also allows for efficient reporting mechanisms. Other terms used more commonly in the past include **electronic medical record (EMR)** and **computer-based patient record (CPR)** (Mon 2004a). When a facility is transitioning from paper to electronic systems and uses components of both, the record is referred to as a **hybrid health record**. Chapter 4 discusses the EHR in more detail.

This chapter describes the basic content of acute care health records and then provides specialized information requirements of other healthcare settings. It also introduces the documentation methods required by government and accreditation organizations. Finally, the chapter discusses the formats of paper-based, hybrid, and electronic health records and compares their strengths and weaknesses.

Theory into Practice

Major shifts in the way physicians, organizations, hospitals, and other health settings manage health records are beginning to appear throughout the United States. The following real-life case is an example of the steps an organization takes in the transition from paper-based health record formats to computer-based systems.

Mayo Clinic Hospital, a 205-bed acute care hospital located in Phoenix, Arizona, has close to 350 physicians from more than 65 medical and surgical specialties on its medical staff.

The Phoenix hospital opened in the fall of 1998 with a hybrid health record. Much of the care record is entered and accessed via vendor-purchased, site-edited software. The conditions of admission, consents and authorizations, physician progress notes, physician orders, anesthesia and sedation reports, interoperative records, emergency and ambulatory surgery records, and patient discharge instructions and referrals are paper documents. Emergency visit documents are gathered six hours after patient release and are scanned into the electronic system. All dictated physician reports (history and physicals, operative reports, consultations, and discharge summaries) are immediately available in the electronic record after transcription. Paper versions of the reports are scanned into the imaging system upon patient discharge for purposes of obtaining physicians' electronic signatures. All other documentation, including that done by nursing, therapists, and other health professionals, and diagnostic or therapeutic testing, including imaging, are recorded and reported electronically. The facility is currently investigating a computerized physician order-entry (CPOE) component and anticipates that it, along with an automated prescription pad, will be its next electronic addition.

Discharge record analysis (reviewing the record upon patient discharge for missing elements) is done by health information personnel using a computer. The system filters documents so that only those needing review are accessed. Electronic signatures are used and physicians can enter the system at any of the Arizona Mayo sites. E-mail notices to physicians on record deficiencies are generated automatically upon completion of analysis. Although the parts of the record generated on paper are stored for a very short period of time after scanning, all release of information and other processes, including coding, use the computer-based record.

About fourteen miles away, Mayo Clinic's outpatient clinic practice uses the same electronic record. Computers are located in each examination room and in stations outside the rooms. Information such as current medications and allergies can be entered directly. Progress notes from all patient visits at the clinic and from the three primary care practice sites located elsewhere in the metropolitan area are dictated immediately after each visit. Similar to hospital-dictated reports, they are transcribed and made immediately available as part of the electronic record. Paper documents in the outpatient setting include consents, insurance cards, and miscellaneous specialty-specific documentation. All paper documents are picked up hourly by health information personnel, scanned and indexed into the imaging system, and reviewed for quality. The scanned material is available in the electronic record within two to four hours of the pickup time.

Kathie Falk, supervisor of medical records at Mayo Clinic Hospital, and Yolanda Nichols, her counterpart at the clinic, note, however, that the Mayo facilities in Rochester, Minnesota, and Jacksonville, Florida, currently have site-specific electronic records. There is some sharing of information (for example, Minnesota and Arizona have the same registration/billing systems, utilize the same transcription database, and all three sites use the same radiology system). Improving interoperability across the country is a Mayo goal.

Content of the Health Record

First and foremost, the health record is a tool for documenting patient care. The information in the health record is provided directly by the healthcare professionals who participate in the patient's care. This information is used for:

- Planning and managing diagnostic, therapeutic, and nursing services
- Evaluating the adequacy and appropriateness of care
- Substantiating reimbursement claims
- Protecting the legal interests of the patient, the healthcare provider, and the healthcare organization

In addition, the health record is a tool used by the patient's caregivers to communicate with each other. Finally, information collected from health records is used for research, public health, and educational and organizational activities such as medical research, professional training, performance improvement, risk management, and strategic planning.

The health record generally contains two types of data: clinical and administrative. *Clinical data* document the patient's medical condition, diagnosis, and treatment as well as the healthcare services provided. *Administrative data* include demographic and financial information as well as various consents and authorizations related to the provision of care and the handling of confidential patient information.

The content of the health record varies, depending on the healthcare setting and the provider's medical specialty. Record content is determined primarily by practice needs and pertinent standards. Standards are statements of expected behavior or reference points against which structures, processes, or outcomes can be measured. Standards for documentation can be found in the following four main sources:

- *Facility-specific standards:* Standards might be found in facility policies and procedures and, when a facility has an organized medical staff, in the medical staff bylaws, rules, and regulations. Facility-specific guidelines govern the practice of physicians and others within a specific organization.
- *Licensure requirements:* Before they can provide services, most healthcare organizations must be licensed by government entities such as the state or county in which they are located and must maintain a license as long as care is provided.
- *Government reimbursement programs:* Standards are applied to facilities that choose to participate in federal government reimbursement programs such as Medicare and Medicaid. These standards are titled **Conditions of Participation** or **Conditions for Coverage**. Facilities are said to be certified if the standards are met.
- *Accreditation standards:* Accreditation is the end result of an intensive external review process that indicates a facility has voluntarily met the standards of the independent accrediting organization (such as the **Joint Commission on Accreditation of Healthcare Organizations** [JCAHO]).

Standards of these groups not only address content, but often also outline time limits for completion of particular portions of the health record. Healthcare data sets also help determine elements of record content. For example, the Uniform Ambulatory Care Data Set outlines what data should be documented in facilities where ambulatory care is delivered. Data sets are discussed in chapter 5.

Content of Hospital Acute Care Records

This section describes the basic content of health records maintained by acute care hospitals. (See table 3.1 for a summary of the basic components of an acute care health record.) The basic components will be found in a record whether the record is paper based, hybrid, or computer based. The health record content requirements for other healthcare settings and medical specialties are discussed in the following section.

Clinical Data

The patient's attending or primary physician usually gives the hospital some preliminary information about the patient before he or she is admitted to the hospital. (Admission is the process of formal registration for hospital services.) Such information includes an admitting or working diagnosis, sometimes also called a provisional diagnosis. The diagnosis identifies the condition or illness for which the patient needs medical care. This information is recorded on an admission or registration record, also referred to as a face sheet in paper-based systems. The admission record also includes demographic and financial data about the patient. (See the administrative data section later in this chapter.)

Component	Function
Registration record	Documents demographic information about the patient
Medical history	Documents the patient's current and past health status
Physical examination	Contains the provider's findings based on an examination of the patient
Clinical observations	Provide a chronological summary of the patient's illness and treatment as documented by physicians, nurses, and allied health professionals
Physician's orders	Document the physician's instructions to other parties involved in providing the patient's care, including orders for medications and diagnostic and therapeutic procedures
Reports of diagnostic and therapeutic procedures	Describes the procedures performed and gives the names of clinicians and other providers; includes the findings of x-rays, mammograms, ultrasounds, scans, laboratory tests, and other diagnostic procedures
Consultation reports	Document opinions about a patient's condition furnished by providers other than the attending physician
Discharge summary	Concisely summarizes the patient's stay in a hospital
Patient instructions	Document the instructions for follow-up care that the provider gives to the patient or the patient's caregiver
Consents, authorizations, and acknowledgments	Document the patient's agreement to undergo treatment or services, permission to release confidential information, or recognition that information has been received

The following types of clinical data are documented in the health record during the patient's hospital stay:

- Patient's **medical history** and pertinent family history
- Report of the patient's initial physical examination
- Attending physician's diagnostic and therapeutic orders
- Clinical observations of the providers who care for the patient
- Reports and results of every diagnostic and therapeutic procedure performed
- Reports of consulting physicians
- Patient's **discharge summary**
- Final instructions to the patient upon discharge

Medical History

A complete medical history documents the patient's current complaints and symptoms and lists his or her past medical, personal, and family history. In acute care, the medical history is usually the responsibility of the attending physician. Medical histories obtained by specialists such as gynecologists and cardiologists concentrate on the organ systems involved in the patient's current illness. Table 3.2 shows the information that is usually included in a medical history.

Table 3.2. Information usually included in a complete medical history	
Components of the History	Complaints and Symptoms
Chief complaint	Nature and duration of the symptoms that caused the patient to seek medical attention as stated in his or her own words
Present illness	Detailed chronological description of the development of the patient's illness, from the appearance of the first symptom to the present situation
Past medical history	Summary of childhood and adult illnesses and conditions, such as infectious diseases, pregnancies, allergies and drug sensitivities, accidents, operations, hospitalizations, and current medications
Social and personal history	Marital status; dietary, sleep, and exercise patterns; use of coffee, tobacco, alcohol, and other drugs; occupation; home environment; daily routine; and so on
Family medical history	Diseases among relatives in which heredity or contact might play a role, such as allergies, cancer, and infectious, psychiatric, metabolic, endocrine, cardiovascular, and renal diseases; health status or cause and age at death for immediate relatives
Review of systems	<p>Systemic inventory designed to uncover current or past subjective symptoms that includes the following types of data:</p> <ul style="list-style-type: none"> • <i>General</i>: Usual weight, recent weight changes, fever, weakness, fatigue • <i>Skin</i>: Rashes, eruptions, dryness, cyanosis, jaundice; changes in skin, hair, or nails • <i>Head</i>: Headache (duration, severity, character, location) • <i>Eyes</i>: Glasses or contact lenses, last eye examination, glaucoma, cataracts, eyestrain, pain, diplopia, redness, lacrimation, inflammation, blurring • <i>Ears</i>: Hearing, discharge, tinnitus, dizziness, pain • <i>Nose</i>: Head colds, epistaxis, discharges, obstruction, postnasal drip, sinus pain • <i>Mouth and throat</i>: Condition of teeth and gums, last dental examination, soreness, redness, hoarseness, difficulty in swallowing • <i>Respiratory system</i>: Chest pain, wheezing, cough, dyspnea, sputum (color and quantity), hemoptysis, asthma, bronchitis, emphysema, pneumonia, tuberculosis, pleurisy, last chest x-ray • <i>Neurological system</i>: Fainting, blackouts, seizures, paralysis, tingling, tremors, memory loss • <i>Musculoskeletal system</i>: Joint pain or stiffness, arthritis, gout, backache, muscle pain, cramps, swelling, redness, limitation in motor activity • <i>Cardiovascular system</i>: Chest pain, rheumatic fever, tachycardia, palpitation, high blood pressure, edema, vertigo, faintness, varicose veins, thrombophlebitis • <i>Gastrointestinal system</i>: Appetite, thirst, nausea, vomiting, hematemesis, rectal bleeding, change in bowel habits, diarrhea, constipation, indigestion, food intolerance, flatus, hemorrhoids, jaundice • <i>Urinary system</i>: Frequent or painful urination, nocturia, pyuria, hematuria, incontinence, urinary infections • <i>Genitoreproductive system</i>: Male—venereal disease, sores, discharge from penis, hernias, testicular pain, or masses; female—age at menarche, frequency and duration of menstruation, dysmenorrhea, menorrhagia, symptoms of menopause, contraception, pregnancies, deliveries, abortions, last Pap smear • <i>Endocrine system</i>: Thyroid disease; heat or cold intolerance; excessive sweating, thirst, hunger, or urination • <i>Hematologic system</i>: Anemia, easy bruising or bleeding, past transfusions • <i>Psychiatric disorders</i>: Insomnia, headache, nightmares, personality disorders, anxiety disorders, mood disorders

Physical Examination Report

The **physical examination report** represents the attending physician's assessment of the patient's current health status. This report should document information on all the patient's major organ systems. Table 3.3 lists the components that are usually included in this report.

Diagnostic and Therapeutic Orders

Physician's orders are the instructions the physician gives to the other healthcare professionals who actually perform diagnostic tests and treatments, administer medications, and provide specific services to a particular patient. Admission and discharge orders should be found for every patient unless the patient leaves the facility against medical advice (AMA), but other orders will vary from patient to patient. All orders must be legible and include the date and the physician's signature. In electronic systems, signatures are attached via an authentication process. See figure 3.1 for an example of a physician's orders in an electronic format.

Standing orders are orders the medical staff or an individual physician has established as routine care for a specific diagnosis or procedure. Standing orders are commonly used in hospitals, ambulatory surgery facilities, and long-term care facilities. An example is shown in figure 3.2. Usually, standing orders are preprinted on a single sheet of paper or available via a standard computer screen. Like other physicians' orders, they must be signed and dated.

Physicians may communicate orders verbally or via the telephone when the hospital's medical staff rules allow. State law and medical staff rules specify which practitioners are allowed to accept and execute verbal and telephone orders. How the orders are to be authenticated as well as the time period allowed for authentication also may be specified.

Clinical Observations

In acute care hospitals, the documentation of clinical observations is usually provided in **progress notes**. The purpose of documenting the clinical observations of physicians, nurses, and other caregivers is to create a chronological report of the patient's condition and response to treatment during his or her hospital stay. The patient's condition determines the frequency of the notes.

The rules and regulations of the hospital's medical staff specify which healthcare providers are allowed to enter progress notes in the health record. Typically, the patient's attending physician, consulting physicians who have **medical staff privileges**, house medical staff, nurses, nutritionists, social workers, and clinical therapists are authorized to enter progress notes. Depending on the record format used by the hospital, each discipline may maintain a separate section of the health record or the observations of all the providers may be combined in the same chronological or integrated health record. (Source-oriented and integrated health records are discussed later in this chapter.)

Progress notes serve to justify further acute care treatment in the facility. In addition, they document the appropriateness and coordination of the services provided.

Special types of notes are frequently found in a record. For example, prior to the administration of anything other than local anesthesia, the anesthesiologist visits the patient and documents important factors about the patient's condition that may have an impact on the anesthesia chosen or its administration. Allergies and drug reactions would

Report Components	Content
General condition	Apparent state of health, signs of distress, posture, weight, height, skin color, dress and personal hygiene, facial expression, manner, mood, state of awareness, speech
Vital signs	Pulse, respiration, blood pressure, temperature
Skin	Color, vascularity, lesions, edema, moisture, temperature, texture, thickness, mobility and turgor, nails
Head	Hair, scalp, skull, face
Eyes	Visual acuity and fields; position and alignment of the eyes, eyebrows, eyelids; lacrimal apparatus; conjunctivae; sclerae; corneas; irises; size, shape, equality, reaction to light, and accommodation of pupils; extraocular movements; ophthalmoscopic exam
Ears	Auricles, canals, tympanic membranes, hearing, discharge
Nose and sinuses	Airways, mucosa, septum, sinus tenderness, discharge, bleeding, smell
Mouth	Breath, lips, teeth, gums, tongue, salivary ducts
Throat	Tonsils, pharynx, palate, uvula, postnasal drip
Neck	Stiffness, thyroid, trachea, vessels, lymph nodes, salivary glands
Thorax, anterior and posterior	Shape, symmetry, respiration
Breasts	Masses, tenderness, discharge from nipples
Lungs	Fremitus, breath sounds, adventitious sounds, friction, spoken voice, whispered voice
Heart	Location and quality of apical impulse, trill, pulsation, rhythm, sounds, murmurs, friction rub, jugular venous pressure and pulse, carotid artery pulse
Abdomen	Contour, peristalsis, scars, rigidity, tenderness, spasm, masses, fluid, hernia, bowel sounds and bruits, palpable organs
Male genitourinary organs	Scars, lesions, discharge, penis, scrotum, epididymis, varicocele, hydrocele
Female reproductive organs	External genitalia, Skene's glands and Bartholin's glands, vagina, cervix, uterus, adnexa
Rectum	Fissure, fistula, hemorrhoids, sphincter tone, masses, prostate, seminal vesicles, feces
Musculoskeletal system	Spine and extremities, deformities, swelling, redness, tenderness, range of motion
Lymphatics	Palpable cervical, axillary, inguinal nodes; location; size; consistency; mobility and tenderness
Blood vessels	Pulses, color, temperature, vessel walls, veins
Neurological system	Cranial nerves, coordination, reflexes, biceps, triceps, patellar, Achilles, abdominal, cremasteric, Babinski, Romberg, gait, sensory, vibratory
Diagnosis(es)	

Figure 3.1. Example of a physician's order in electronic format

File Edit View Window Help

John Doe Patient ID: 012 34 56789 3W 3D39I7 Provider: Smith, Jane

Medication: INSULIN REG

Dispense Drug: INSULIN REG HUMAN 100 U/ML I

Dosage: SEE COMMENTS

Route: SUBCUTANEUS, SUBCUTAN, INTRAMUS, INTRAVEN, AD (RIGHT), AS (LEFT)

Schedule: PRN, NOW, ON CALL, ONCE, PID, PRN

Priority: ROUTINE, ASP, ROUTI, STAT

Order Checks: Patient >65, CREA: 0.6 mg/dl, 9/22/03 6:30:20 am BUN: 2 mg/dl [L] 9/22/03 6:30:20 am Potential polypharmacy – patient currently receiving 17 medications

ACCEPT ORDER, QUIT

Chart, Orders, Demographics, Summary, In-basket, Document

be noted. A postanesthesia note also should be found describing the patient's recovery from the anesthetic. Similarly, the surgeon responsible for a major procedure must document a pre- and postsurgical patient evaluation. In addition, nurses are responsible for specific patient admission and discharge notes and, if a patient should die while hospitalized, both physician and nursing notes are important.

Just as physician documentation begins with the history and physical examination, nurses and allied health professionals may begin their care with assessments focused at understanding the patient's condition from the perspective of their specialized body of knowledge. Figure 3.3 provides an example of an admission nursing assessment. Often a **care plan** may then follow the assessment. A care plan is a summary of the patient's problems from the nurse or other professional's perspective with a detailed plan for interventions.

Nurses also maintain chronological records of the patient's vital signs (blood pressure, heart rate, respiration rate, and temperature) and separate logs that show what medications were ordered and when they were administered. Other chronological monitors also may be ordered depending on the patient's diagnosis. Sometimes these records are referred to as flow records because they show trends over time or the data may be represented in graphic form for ease in communication. (See figure 3.4 for an example of monitors in electronic format.) Special interventions such as the use of restraints also requires focused documentation.

Figure 3.2. Example of a physician’s standing order in paper format

Midwest Medical Center		PATIENT LABEL	
HEPARIN ORDER: REGULAR UNFRACTIONATED HEPARIN FOR ADULTS			
Diagnosis: _____ Allergies: _____ Total Body Weight: _____ lb = _____ kg	Warning: Due to an increased risk of serious bleeding, patients should not receive both regular heparin and low-molecular-weight heparin. Patients should also be evaluated for continuance of other medications such as aspirin, clopidogrel, and NSAID therapy.		
1. Check baseline PTT, PT/INR, heme panel			
2. Check the appropriate bolus regimen according to diagnosis/disease a. <input type="checkbox"/> No initial bolus b. <input type="checkbox"/> Acute coronary syndrome—heparin bolus 75 units/kg = _____ units IV (round to the nearest 1000 units—maximum bolus = 10,000 units) c. <input type="checkbox"/> In combination with thrombolytic therapy for acute MI (TNKase, Retavase, TPA) <input type="checkbox"/> 5000 units bolus if 65 kg or greater <input type="checkbox"/> 4000 units bolus if less than 65 kg d. <input type="checkbox"/> Treatment of DVT/PE—heparin bolus 80 units/kg = _____ units IV (round to the nearest 1000 units—maximum bolus = 10,000 units)			
3. Following bolus, begin IV heparin infusion (check the appropriate regimen): • Premixed IV bag contains heparin 25,000 units in 250 ml of D5W (100 units/ml) • Maximum initial infusion rate not to exceed 2000 units/h <input type="checkbox"/> All cardiology regimens: 16 units/kg/h = _____ ml/h <input type="checkbox"/> Treatment of DVT or PE: 18 units/kg/h = _____ ml/h			
4. Check PTT 6 hours after initiation of heparin infusion			
5. Adjust heparin based on guidelines below (document all changes on MAR and physician’s orders sheet):			
PTT (seconds)	Bolus Dose	Rate Changes	Repeat PTT after Each Dosage Change
PTT <35	Bolus 4000 units	Increase rate 200 units/h	6 h
PTT 35–45	Bolus 3000 units	Increase rate 200 units/h	6 h
PTT 46–70	No bolus	No rate change	Next a.m.
PTT 71–90	No bolus	Decrease rate 100 units/h	6 h
PTT 91–100	No bolus	Hold infusion 1 h, then decrease rate by 200 units/h	6 h
PTT >100	No bolus	Hold infusion 1 h, then decrease rate by 300 units/h	6 h
6. Check PTT and heme panel every morning (while patient is on heparin protocol).			
7. Check stools daily for occult blood and notify physician if positive.			
8. Notify physician for bleeding, hematoma, or heart rate above 120 bpm.			
Physician Signature: _____ RN Signature: _____		Date/Time: _____ Date/Time: _____	
HEPARIN ORDER 000013 (11/2002)			
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Figure 3.3. Example of an initial nursing assessment in paper format

Midwest Medical Center

INITIAL NURSING ASSESSMENT

PATIENT LABEL

Baseline Information										
Date:	Time:	Age:	Arrived: AMB WC Stretcher EMS Carried Other:					Primary MD:		
Initial/Chief Complaint/History of Present Illness:										
T: PO R TM	P:	R:	BP: R L		⊕ O ₂ Sats %	Sex: M F	Height:	Weight: Actual: Stated:		
⊕ Tetanus/Immunizations:					Pneumococcal Vaccine <input type="checkbox"/> No <input type="checkbox"/> Yes Most Recent Date:					
⊕ Pregnant <input type="checkbox"/> No <input type="checkbox"/> Yes LNMP:					Influenza Vaccine <input type="checkbox"/> No <input type="checkbox"/> Yes Most Recent Date:					
Allergies: <input type="checkbox"/> None <input type="checkbox"/> Medications <input type="checkbox"/> Latex <input type="checkbox"/> Food <input type="checkbox"/> Anesthesia <input type="checkbox"/> Other										
List Names and Reactions:										
TB Assessment (Initiate airborne isolation if 4 or more criteria are checked yes)										
Persistent Cough > 2 weeks <input type="checkbox"/> No <input type="checkbox"/> Yes			Abnormal Chest X-Ray <input type="checkbox"/> No <input type="checkbox"/> Yes			Respiratory Isolation Ordered <input type="checkbox"/> No <input type="checkbox"/> Yes				
Fever > 100.4 (night sweats) <input type="checkbox"/> No <input type="checkbox"/> Yes			Physician Order for AFB (smear/culture) <input type="checkbox"/> No <input type="checkbox"/> Yes			Recent Exposure to Person with Suspected TB or +PPD <input type="checkbox"/> No <input type="checkbox"/> Yes				
Unexplained Weight Loss <input type="checkbox"/> No <input type="checkbox"/> Yes										
RN/LPN Signature: _____										
<input type="checkbox"/> See Home Medication Orders Medication/Over the Counter/Herbal History <input type="checkbox"/> Investigation Drugs/Devices										
Medication	Dose	Freq	Last Dose	Medication	Dose	Freq	Last Dose			
Hospitalizations/Surgeries:										
Medical History										
Neurological <input type="checkbox"/> No <input type="checkbox"/> Yes			Sensory Impairment <input type="checkbox"/> No <input type="checkbox"/> Yes							
Cardiovascular <input type="checkbox"/> No <input type="checkbox"/> Yes			Endocrine <input type="checkbox"/> No <input type="checkbox"/> Yes							
Hypertension <input type="checkbox"/> No <input type="checkbox"/> Yes			Blood Disorder <input type="checkbox"/> No <input type="checkbox"/> Yes							
Respiratory <input type="checkbox"/> No <input type="checkbox"/> Yes			Cancer <input type="checkbox"/> No <input type="checkbox"/> Yes							
Gastrointestinal <input type="checkbox"/> No <input type="checkbox"/> Yes			Psychological <input type="checkbox"/> No <input type="checkbox"/> Yes							
Renal/Urological <input type="checkbox"/> No <input type="checkbox"/> Yes			Tobacco Use <input type="checkbox"/> No <input type="checkbox"/> Yes							
Gynecological <input type="checkbox"/> No <input type="checkbox"/> Yes			Alcohol/Drug Use <input type="checkbox"/> No <input type="checkbox"/> Yes							
Musculoskeletal <input type="checkbox"/> No <input type="checkbox"/> Yes			Infectious Disease <input type="checkbox"/> No <input type="checkbox"/> Yes							
Integumentary <input type="checkbox"/> No <input type="checkbox"/> Yes			Cough/Cold Past 2 Weeks <input type="checkbox"/> No <input type="checkbox"/> Yes							
EENT <input type="checkbox"/> No <input type="checkbox"/> Yes			Anesthesia <input type="checkbox"/> No <input type="checkbox"/> Yes							
Source of Information <input type="checkbox"/> Patient <input type="checkbox"/> Family <input type="checkbox"/> Unable to Obtain <input type="checkbox"/> Other <input type="checkbox"/> Medications Sent Home with Patient: _____										
Arrival Date:	Arrival Time:	T: PO R TM	P:	R:	BP: R L		O ₂ Sats %: (If applicable)			
RN Initial: _____			RN Signature: _____			Date: _____		Time: _____		Unit: _____
RN Initial: _____			RN Signature: _____			Date: _____		Time: _____		Unit: _____

INITIAL NURSING ASSESSMENT
000039 (10/2002)

Figure 3.4. Example of special progress notes in electronic format

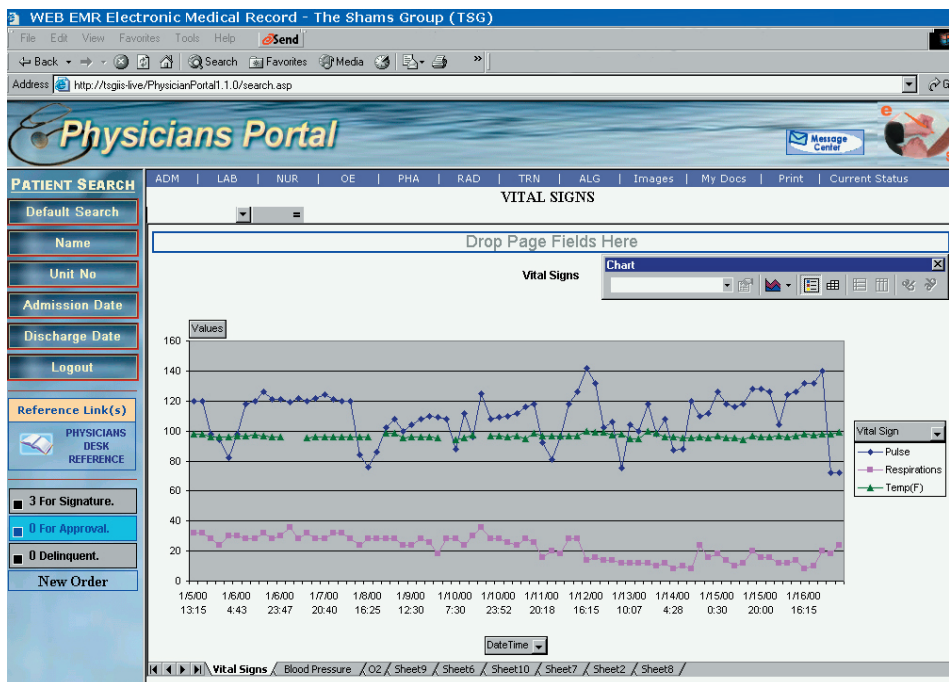
The screenshot shows the 'Physicians Portal' interface. The top navigation bar includes 'ADM', 'LAB', 'NUR', 'OE', 'PHA', 'RAD', 'TRN', 'ALG', 'Images', 'My Docs', 'Print', and 'Current Status'. The patient search results display the following information:

- Acct#: V84072636 Unit#: M000311654 Patient: WIGHET, MARI J
- Age / Sex: 78/F
- LOC: ST1 - -
- Status: IN Reg: 05/15/2001
- DIS: (blank)

The 'VITAL SIGNS' section contains a table with data for three dates: 04/30/2003, 04/30/2003, and 04/29/2003.

Vital Signs	04/30/2003	04/30/2003	04/29/2003
Blood Pressure:	118/70	158/74	100/60
Pulse:	72	60	98
Temp(F):	100.2	97.8	99.7
Respirations:	24	24	32
SPO2:			
Weight	LB: 172 OZ: 7	172.6	172.6
Height			

Below the table are sections for 'INTAKE & OUTPUT', 'NEURO ASSESSMENT', 'CARDIO ASSESSMENT', and 'RESPIRATORY ASSESSMENT'. The left sidebar contains search filters and action buttons like 'New Order'.



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Reports of Diagnostic and Therapeutic Procedures

The results of all diagnostic and therapeutic procedures become part of the patient's health record.

Diagnostic Reports

Diagnostic procedures include the following:

- Laboratory tests performed on blood, urine, and other samples from the patient
- Pathological examinations of tissue samples and tissues or organs removed during surgical procedures
- Radiological scans and images of various parts of the patient's body and specific organs
- Monitors and tracings of body functions

The results of most laboratory procedures are generated electronically by automated testing equipment. In contrast, the results of monitors, radiology, and pathology procedures require interpretation by specially trained physicians such as cardiologists, radiologists, and pathologists. These physicians document their findings in reports that then become part of the patient's permanent record, along with copies or samples of the tracing, images, and scans. (See figures 3.5 and 3.6.)

Figure 3.5. Example of a laboratory report in electronic format

The screenshot displays a web browser window titled "WEB EMR Electronic Medical Record - The Shams Group (TSG)". The address bar shows "http://tsgis-live/PhysicianPortal1.0/search.asp". The page header includes "Physicians Portal" and a navigation menu with options like ADM, LAB, NUR, OE, PHA, RAD, TRN, ALG, Images, My Docs, Print, and Current Status. The patient information section shows "Acct#: V84072636", "Unit#: N000640778", and "Patient: WIGHET, MARI J". The report is titled "LAB Test Report" and includes details such as "Spec#: 0517:H00002U", "Coll: 20010517 07:43:00", "Status: COMP", "Req#: 00461068", "Recd: 20010517 07:43:00", and "Subm Dr: JUDI, AMI L". A comment states "Comments: CAMPUS TO BE DONE AT: SPA". The main section is a table of CBC results:

Test	Result	Flag	Reference
WBC	11.2	H	4.8-10.8 X10 ³
RBC	4.84		4.70-6.10 X10 ⁶
HEMOGLOBIN	15.2		14.0-18.0 g/dl
HEMATOCRIT	45.4		42.0-52.0 %
MCV	93.8		80.0-94.0 fl
MCH	31.4	H	27.0-31.0 pg
MCHC	33.5		33.0-37.0 g/dl
RDW	12.2		11.5-14.5 %
PLATELET COUNT, AUTOMATED	192		130-400 X10 ³
MPV	9.5		7.4-10.4 FL
LYMPHOCYTES %	14.3	L	20.5-51.5 %
MONOCYTES %	5.4		1.7-9.3 %
NEUTROPHILS %	79.6	H	42.2-75.2 %
EOSINOPHIL %	0.3		0.0-10.0 %
BASOPHIL %	0.4		0.0-0.8 %
LYMPHOCYTES #	1.6		1.2-3.4 X10 ³
MONOCYTES #	0.60	H	0.11-0.59 X10 ³
NEUTROPHILS #	9.0	H	1.4-6.5 X10 ³

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Figure 3.6. Example of an electrocardiography report in paper format

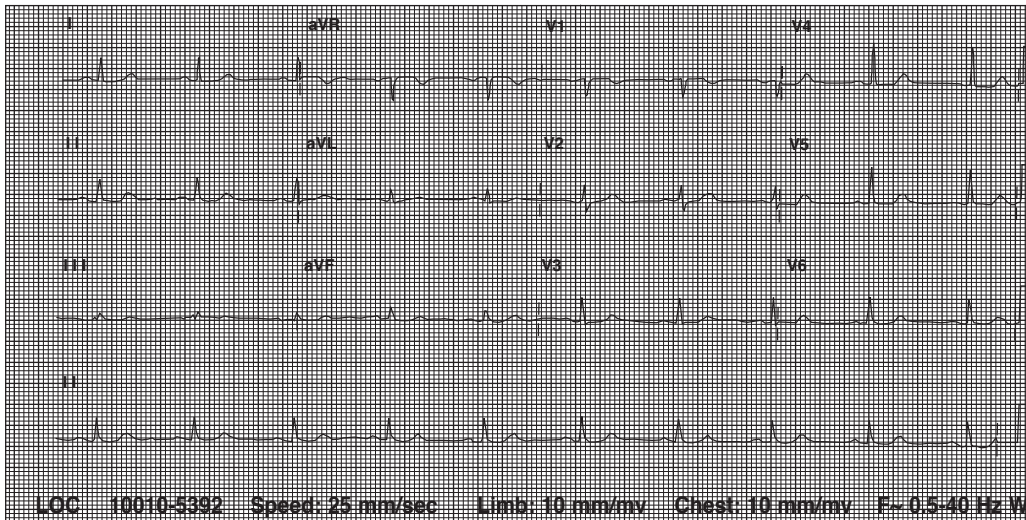
University of Anystate Hospitals

GRAPHIC EKG REPORT

PATIENT, PETUNIA P.
000000001
DOB: 08/14/1949

NAME: Patient, Petunia
TECHNICIAN: SKH
PROCEDURE DATE/TIME: 10/11/04 9:59:02
CARDIOLOGIST: Julius W. Cardiolini, MD
SEX/RACE: Female, White
REPORT DATE: 10/08/04
REQUESTED BY: M. Gynesurg, MD

RESULTS: Normal EKG
PR 200 Normal sinus rhythm rate: 59
QRST 73
QT 407
QTc 403
Axes
P 28
QRS 36
T 35



Julius W. Cardiolini

Julius W. Cardiolini, MD
Cardiologist

10/8/04

Date

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Operative Reports

Any major diagnostic procedure and surgical event requires special documentation. First, the patient must consent to the procedure after an explanation and an opportunity to ask questions. Often special documents or screens are designed to provide evidence of consent, including the appropriate signature. The need to obtain the patient's consent before medical and surgical procedures is based on the legal concept of battery. Battery is the unlawful touching of a person without his or her implied or expressed consent.

Implied consent is assumed when a patient voluntarily submits to treatment. The rationale behind this assumption is that one can reasonably assume that the patient understands the nature of the treatment or would not submit to it. **Expressed consent** is a consent that is either spoken or written. Although courts recognize both spoken and written consent, spoken consent is more difficult to prove.

It is primarily the physician's responsibility to make sure that the patient understands the nature of the procedure and alternative treatments as well as the procedure's risks, complications, and benefits before the procedure is performed. Medical staff rules or hospital policies usually list which types of services and procedures always require written consent from the patient. Generally, procedures that involve the use of anesthetics, the administration of experimental drugs, the surgical manipulation of organs and tissues, and significant risk of complications require written consent. In addition, some states have passed laws that require written consent forms for certain types of testing procedures (for example, HIV testing). Written consents should be witnessed by at least one individual and should be obtained prior to the service or procedure. The original copies of consent forms should always become part of the patient's health record. Figure 3.7 provides an example of an operative consent.

Preoperative notes are made by the anesthesiologist and surgeon prior to the procedure, and nurses report preoperative patient preparations. The entire procedure itself is then recorded, along with an anesthesia record, an operative report, and a postanesthesia or recovery room report. When tissue is removed for evaluation, a pathology report also must be present.

The **anesthesia report** notes any preoperative medication and response to it, the anesthesia administered with dose and method of administration, the duration of administration, the patient's vital signs while under anesthesia, and any additional products given the patient during the procedure. The anesthesiologist or nurse anesthetist is responsible for this documentation. An anesthesia record that includes the preanesthesia evaluation is shown in figure 3.8.

The **operative report** describes the surgical procedures performed on the patient. Each report usually includes the following information:

- Patient's preoperative and postoperative diagnosis
- Descriptions of the procedures performed
- Descriptions of all normal and abnormal findings
- Descriptions of any unique or unusual events during the course of the surgery
- Number of ligatures, sutures, packs, drains, and sponges used
- Descriptions of any specimens removed
- Names of the surgeons and their assistants
- Date and duration of the surgery

Figure 3.7. Example of an informed consent for operation with blood products

University of Anystate Hospitals

**INFORMED CONSENT FOR OPERATION/
PROCEDURE/ANESTHESIA INCLUDING
BLOOD AND BLOOD PRODUCTS**

PATIENT LABEL

1. I give permission to Dr.(s) _____ to perform
the following procedure(s): _____
_____ on _____ (patient's name).
2. I understand that during the procedure(s), new findings or conditions may appear and require an additional procedure(s) for proper care.
3. My physician has explained the following items:
 - the nature of my condition
 - the nature and purpose of the procedure(s) that I am now authorizing
 - the possible complications and side effects that may result, problems that may be experienced during recuperation, and the likelihood of success
 - the benefits to be reasonably expected from the procedure(s)
 - the likely result of no treatment
 - the available alternatives, including the risks and benefits
 - the other possible risks that accompany any surgical and diagnostic procedure (in addition to those already discussed). I acknowledge that neither my physician nor anyone else involved in my care has made any guarantees or assurances to me as to the result of the procedure(s) that I am now authorizing.
4. I know that other clinical staff may help my physician during the procedure(s).
5. I understand that the procedure(s) may require that I undergo some form of anesthesia, which may have its own risks.
6. Any tissue or specimens taken from my body as a result of the procedure(s) may be examined and disposed of, retained, preserved, or used for medical, scientific, or teaching purposes by the hospital.
7. I understand that my procedure(s) may be photographed or videotaped and that observers may be present in the room for the purpose of advancing medical care and education.
8. I understand that during or after the procedure(s) my physician may find it necessary to give me a transfusion of blood or blood products. My physician has explained the alternatives to, and possible risks of, transfusion.
9. I understand what my physician has explained to me and have had all my questions fully answered.
10. Additional comments: _____

After talking with my physician and reading this form, I give my consent to the procedure(s) described above.

Signature of Patient or
Legal Representative: _____ Date: _____ Time: _____

If Legal Representative, Relationship to Patient: _____

Witness: _____

Verbal or Telephone Consent

Name of Legal Representative: _____ Date: _____ Time: _____

Relationship to Patient: _____

Witness: _____ Witness: _____

I have explained the risks, benefits, potential complications, and alternatives of the treatment to the patient and have answered all questions to the patient's satisfaction, and he/she has granted consent to proceed.

Physician Signature: _____ Date: _____ Time: _____

INFORMED CONSENT FOR OPERATION
000015 (11/2002)

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Figure 3.8. Example of a preanesthesia and anesthesia record in a paper format

University of Anystate Hospitals

PATIENT LABEL

ANESTHESIA RECORD PAGE 1 OF 2

Date: _____ Time: _____
 Age: _____ Sex: _____ Height: _____ Weight: _____ BP: _____ P: _____ R: _____ T: _____
 Lab: _____ Status: _____
 Allergies: _____ Last Intake: _____
 Premedication: _____

Patient reassessed immediately prior to induction. Condition satisfactory for planned anesthesia.

Vital Signs

Time																																						
																																				Machine Check		
																																				Initials		
																																				Patient Position		
																																						<input type="checkbox"/> General
																																					<input type="checkbox"/> Regional	
																																					<input type="checkbox"/> Local	
																																					<input type="checkbox"/> Monitored	
																																					<input type="checkbox"/> IVs (spinal/EPI needle)	
																																					Position	
																																						Prep
																																						Site
																																						Agent
																																						Paresthesia
																																						Catheter
																																						Sensory Block TO
																																						<input type="checkbox"/> Heat/Moisture Exchanger
																																					<input type="checkbox"/> Warming Blanket	
																																						<input type="checkbox"/> Fluid Warmer
																																						<input type="checkbox"/> Bair Hugger
																																						Endotracheal Tube
																																						Cuff Inflated
																																						Laryngoscope Blade
																																						Stylet
																																						Direct Vision
																																						Blind

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Figure 3.8. (Continued)

University of Anystate Hospitals

ANESTHESIA RECORD
PAGE 2 OF 2

PATIENT LABEL

Monitors	Remarks
<input type="checkbox"/> NIBP <input type="checkbox"/> R <input type="checkbox"/> L	
<input type="checkbox"/> APB <input type="checkbox"/> R <input type="checkbox"/> L	
<input type="checkbox"/> T (site): _____	
<input type="checkbox"/> Pulse oximeter (site): _____	
<input type="checkbox"/> ECG (lead): _____	
<input type="checkbox"/> Airway gas monitor	
<input type="checkbox"/> FiO ₂ analyzer	
<input type="checkbox"/> Pulmonary artery	
<input type="checkbox"/> CVP	
<input type="checkbox"/> EEG	
<input type="checkbox"/> Stethoscope (site): _____	
<input type="checkbox"/> SSEP	
<input type="checkbox"/> Peripheral nerve stimulator	
<input type="checkbox"/> Capnography	

Fluid		Fluid		Fluid		Fluid		Fluid		Fluid		
Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	Start	Finish	
Operation								Recovery Room		Time: _____		
Surgeon		Anesthesiologist				Date		BP	P	T	°F	Endotracheal In <input type="checkbox"/> Out <input type="checkbox"/>
								Condition	SpO ₂	%		

Preanesthesia Evaluation

Review of Clinical Data			Pertinent Physical Exam					
			Normal	Abnormal	Comments			
<input type="checkbox"/> Yes <input type="checkbox"/> No	Patient Medical History Reviewed	EENT						
<input type="checkbox"/> Yes <input type="checkbox"/> No	Current Medications Reviewed							
<input type="checkbox"/> Yes <input type="checkbox"/> No	Allergies Reviewed		Respiratory					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lab Results Reviewed		Cardiac					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	CXR Results Reviewed		Mental Status					
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	EKG Results Reviewed							
Anesthesia History			ASA Classification					
<input type="checkbox"/> Yes <input type="checkbox"/> No	Past Hx of Anesthesia Complications		1	2	3	4	5	E
<input type="checkbox"/> Yes <input type="checkbox"/> No	Family Hx of Anesthesia Complications							
<input type="checkbox"/> Yes <input type="checkbox"/> No	History of Malignant Hyperthermia							
Airway Evaluation			Anesthesia Plan					
Dentures: <input type="checkbox"/> None <input type="checkbox"/> Upper <input type="checkbox"/> Lower			<input type="checkbox"/> General <input type="checkbox"/> Rapid Sequence Intubation					
Capped Teeth: <input type="checkbox"/> None <input type="checkbox"/> Yes			<input type="checkbox"/> Spinal <input type="checkbox"/> MAC					
Condition of Teeth: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor			<input type="checkbox"/> Epidural <input type="checkbox"/> Epidural for POPM					
Estimated Intubation Difficulty:			<input type="checkbox"/> Regional Block					
<input type="checkbox"/> Normal <input type="checkbox"/> Moderately Difficult <input type="checkbox"/> Difficult								
<input type="checkbox"/> Alternatives, risks of anesthesia, and potential complications were discussed. Patient and/or guardian state understanding and acceptance of anesthesia plan.								

Comments:

	Date
Anesthesiologist	ANESTHESIA RECORD 000017 (11/2002)

(See figure 3.9.) The operative report should be written or dictated by the surgeon immediately after surgery and become part of the health record. When there is a delay in dictation or transcription, a progress note describing the surgery should be entered into the patient's record.

Immediately after the procedure, the patient is usually evaluated for a period of time in a special unit called a recovery room. Monitoring is important to make sure the patient sufficiently recovers from the anesthesia and is stable enough to be moved to another location. The **recovery room report** includes the postanesthesia note (if not found elsewhere), nurses' notes regarding the patient's condition and surgical site, vital signs, and intravenous fluids and other medical monitoring.

A **pathology report** is dictated by a pathologist after examination of tissue received for evaluation. This report usually includes descriptions of the tissue from a gross or macroscopic (with the eye) level and representative cells at the microscopic level along with interpretive findings. Sometimes an initial tissue evaluation occurs while the surgery is in progress to give the surgeon information important to the remainder of the operation. A full written report then would follow. (See figure 3.10.)

Consultation Reports

The **consultation report** documents the clinical opinion of a physician other than the primary or attending physician. The consultation is requested by the primary or attending

Figure 3.9. Example of an operative report in electronic format

WEB EMR Electronic Medical Record - The Shams Group (TSG)

Address: http://tsgis-live/PhysicianPortal1.1.0/search.asp

Physicians Portal

PATIENT SEARCH

Default Search

Name

Unit No

Admission Date

Discharge Date

Logout

Reference Link(s)

PHYSICIANS DESK REFERENCE

3 For Signature.

0 For Approval.

0 Delinquent.

New Order

ADM | LAB | NUR | OE | PHA | RAD | TRN | ALG | Images | My Docs | Print | Current Status

Acct#: V84072836 Unit#: M000311654 Patient: WIGHET, MARJ J

Patient: V84072836 - WIGHET, MARJ J
Unit#: M000311654 Age / Sex: 62/F LOC: ST1 --
Status: IN Reg: 05/15/2001 DIS:

OPERATIVE REPORT

PREOPERATIVE DIAGNOSIS: Right Carotid Stenosis ICA, 99%.
POSTOPERATIVE DIAGNOSIS: Right Carotid Stenosis ICA, 99%.
SURGEON: N. PETERS, M.D. ASSISTANT: DR. ELASGHAT
DATE: 66-66-99
OPERATION: Right Carotid Endarterectomy.
ANESTHESIA: Cervical block supplemented with General Anesthesia.
ESTIMATED BLOOD LOSS: Negligible. Clamped times 12 minutes.
GROSS FINDINGS: DESCRIBE ALL PATHOLOGICAL FINDINGS AND ALL ORGANS EXPLORED, NORMAL AND ABNORMAL.

Patient brought to the operating room and identified by me. Prepped and draped in the usual fashion. After cervical block and general anesthesia, incision made in the right neck, deepened through the platysma. Sternomastoid muscle retracted laterally. The internal jugular vein was retracted laterally. The _____ vein was divided and ligated with silk ties and common carotid artery was exposed and then the resection proceeded superiorly to expose the bifurcation which was infiltrated with 1% Lidocaine. Vascular loops are fastened around the common ECA and then the ICA without any difficulty. Resection in the ICA proceeded beyond the block. Following this, systemic Heparinization of 6000 units of IV Heparin push given and was also crossclamped. Arteriotomy made and extended well into the ICA beyond the block. The block was removed from the common ECA and the ICA in one block. External back bleeding was noted in the ICA as well as ECA. Arteriotomy site was flushed with Heparinized saline, closed in routine fashion utilizing 6-0 Prolene sutures from either direction and the circulation was established into the ECA first and then into the ICA. Arteriotomy site was hemostatically adequate. Wound closure

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Figure 3.10. Example of a surgical pathology report in electronic format

The screenshot displays a web browser window titled "WEB EMR Electronic Medical Record - The Shams Group (TSG)". The address bar shows "http://tsgis-live/PhysicianPortal1.1.0/search.asp". The page header includes "Physicians Portal" and a navigation menu with options like ADM, LAB, NUR, OE, PHA, RAD, TRN, ALG, Images, My Docs, Print, and Current Status. The patient information section shows: "Acct#: V84072636", "Unit#: M000311654", and "Patient: WAGHET, MARI J". The specimen is identified as "Right Neck Mass", collected on 3/10/03, with a status of "Final". The patient's age and sex are "62/F", and the report was dated 3/15/03. The clinician is "Dr. Shams" at the "East / 202" location. The report text includes:

- PREOP/POSTOP DIAGNOSIS:** Mediastinal Lymphadenopathy. Chest radiograph revealed an ill-defined right lung opacity and mediastinal lymphadenopathy.
- FINAL DIAGNOSIS:** *Coccidioides immitis*
- GROSS FINDINGS:** Received specimen in cassette, labeled with the patient's name and identified as "lymph node samples for culture and histology"
- MICROSCOPIC DESCRIPTION:** The lymph node biopsy showed several thick walled spherules in a background of granulomatous inflammation. Two histology images are shown.
- CULTURE FINDINGS:** A single white mold grew in the Shaeidler broth. It was subbed to a mycological agar (Sabouraud dextrose agar). Growth on day 4 revealed delicate hyphae with early arthroconidia formation. Growth on day 9 revealed alternately staining barrel-shaped arthroconidia with disarticulation.
- COMMENT:** The differential diagnosis on tissue morphology includes Histoplasmosis, Cryptococcus and Blastomycosis. The differential on culture includes other arthroconidia producing organisms such as Malbranchea, Gymnoascus, Trichosporon and Geotrichum.

 The left sidebar contains a "PATIENT SEARCH" section with filters for Name, Unit No, Admission Date, Discharge Date, and Logout. It also includes a "Reference Link(s)" section, a "PHYSICIANS DESK REFERENCE" section, and a "New Order" button. At the bottom of the sidebar, it shows "3 For Signature", "0 For Approval", and "0 Delinquent".

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physician. The report is based on the consulting physician's examination of the patient and a review of his or her health record.

Some organizations make consultation requests by telephone and provide the consultant with selected information from the patient's record. The consultant then dictates his or her findings and returns them to the requesting physician.

Other organizations use a consultation form. The first part of the form communicates the consultation request and provides the consultant with pertinent patient history. The consultant then uses the second part to document and return his or her opinion to the requesting physician.

Deliveries and Newborns

Each individual that is admitted to a healthcare setting must have a health record. A record on a newborn is generated upon live birth. The mother's hospital obstetric record is separate from the infant's record and actually begins in her practitioner's office. In the case of a baby born deceased, however, all information about the baby and the mother is maintained in the mother's health record. (See information pertaining to obstetric/gynecologic care later in this chapter.)

Obstetric delivery records include a prenatal care summary provided by the practitioner's office, an admission evaluation by the attending physician to update the summary, and a record of labor, including information on contractions, fetal heart tones, examination

of the birth canal, medications given, and vital signs. The delivery record includes type of delivery; medications administered, including anesthesia, description of the birth process and any blood loss; evaluation of the placenta and cord; and information about any other delivery interventions. Data about the baby also will be recorded in the mother's record, including sex, weight, length, Apgar scores, any abnormal findings, and any treatments given. Postpartum care records begin after the birth and contain progress notes by physicians and nurses and other care providers in addition to the results of any diagnostic tests, treatments, and medications received by the mother.

The newborn record begins with the birth history, which may be the same or similar to the mother's labor and delivery data noted above. Newborn identification generally includes bands worn by both the mother and baby, which are regularly checked for matching information, and the infant's footprints. A thorough newborn physical examination is completed shortly after the baby's birth with periodic updates throughout hospitalization. Head and chest measurements are part of an evaluation of all body systems. Nursing documentation includes information on the baby's feeding and elimination status, weight, vital signs, appearance, response to environment, sleeping patterns, and condition of the cord stump. Any special tests, treatments, and medications will also be noted. More extensive documentation will be found if a baby is born prematurely or requires intensive care services.

Discharge Summaries, Patient Instructions, and Transfer Records

The **discharge summary** is a concise account of the patient's illness, course of treatment, response to treatment, and condition at the time the patient is discharged (officially released) from the hospital. Because it provides an overview of the entire medical encounter it:

- Ensures the continuity of future care by providing information to the patient's attending physician, referring physician, and any consulting physicians
- Provides information to support the activities of the medical staff review committee
- Provides concise information that can be used to answer information requests from authorized individuals or entities

The discharge summary is the responsibility of, and must be signed by, the attending physician. A paper-based record summary is found in figure 3.11. If the patient's stay is not complicated and lasts less than 48 hours or involves an uncomplicated delivery or normal newborn, a discharge note in place of a full summary is often acceptable.

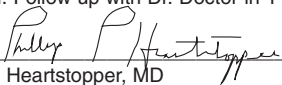
The summary also includes instructions for follow-up care to be given to the patient or his or her caregiver at the time of discharge. It is vital that the patient be given clear, concise instructions. Ideally, patient instructions are communicated both verbally and in writing. The healthcare professional who delivers the instructions to the patient or caregiver should sign the record to indicate that he or she has issued them. In addition, the person receiving the instructions should sign to verify that he or she understands them. A copy of the written instructions then becomes part of the health record. (See figure 3.12.)

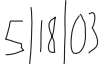
When someone other than the patient assumes responsibility for the patient's after-care, the record should indicate that the instructions were given to the responsible party. Documentation of patient education may be accomplished by using formats that prompt the person providing instruction to cover important information.

Figure 3.11. Example of a discharge summary in paper format**Midwest Medical Center****DISCHARGE SUMMARY**

SAYLORMEN, POPEYE T. 333333333 DOB: 02/09/1961
--

PHYSICIAN/SURGEON: Philip P. Heartstopper, MD**DATE OF DISCHARGE:** 05/18/2003**PRINCIPAL OPERATION AND PROCEDURE:** OPCAB × 3, left internal mammary artery of the LAD, saphenous vein graft to D-1, and saphenous vein graft to OM-1**HISTORY OF PRESENT ILLNESS:** Mr. Saylor men was seen at the request of Dr. Doctor regarding surgical treatment of ischemic heart disease. He is a 42-year-old male with a family history of coronary artery disease. He smokes a pipe and had a previous myocardial infarction approximately three years ago. His current status is postangioplasty. While working on a construction project, he developed anginal-type symptoms and was seen in the emergency room and then admitted to the hospital for further evaluation.**ADMITTING DIAGNOSIS:** Coronary artery disease**HOSPITAL COURSE:** The patient underwent cardiac catheterization and was found to have significant three-vessel coronary artery disease. It was felt that he would benefit from undergoing an OPCAB procedure. On 05/14/03, the patient underwent OPCAB × 3 as described above. The patient tolerated the procedure well and returned to the Cardiothoracic Intensive Care Unit hemodynamically stable. On postoperative day one, he was weaned from mechanical ventilation, extubated, and transferred to the Cardiothoracic Step-Down Unit, where he continued on a progressive course of recovery. On postoperative day four, he was up and about in his room and the halls without difficulty. Upon discharge, he was tolerating his diet well. His lungs were clear. His abdomen was soft, and his incisions were unremarkable. His vital signs were stable. He was in normal sinus rhythm. His heart rate was in the 70s and 80s. Blood pressure had been running consistently in the low 110s/60s. He was afebrile. Oxygen saturations on room air were reported at 97%.**LABORATORY DATA AT DISCHARGE:** BUN 14, Creatinine 0.9, H&H 8.8 and 25.4**MEDICATIONS AT DISCHARGE:** Lisinopril 5 mg q.d.; Lipitor 80 mg q.d.; metoprolol 50 mg q.d.; aspirin 81 mg q.d.; Darvocet-N 100—one to two tablets every 4–6 hours as needed for pain; iron sulfate 325 mg q.d. × 30 days; and Colace 100 mg b.i.d. × 30 days**DIET:** He may follow a regular diet.**FINAL DIAGNOSIS:** Coronary artery disease**DISPOSITION:** No lifting greater than 10 pounds. No driving for 4–6 weeks. He may shower but he should not take a tub bath. Follow up with Dr. Doctor in 1–2 weeks.


 Philip P. Heartstopper, MD


 Date

d: 05/18/2003
 t: 05/19/2003
 PPH, MD/mb

Figure 3.12. Example of patient instructions provided at discharge

University of Anystate Hospitals

PATIENT/FAMILY INSTRUCTIONS
PAGE 1 OF 2

PATIENT LABEL

This is a guide for your care. Call your doctor for any problems or changes that concern you.

Diet	Diet: _____ If on special diet and have questions, call dietitian.		Managing Your Meds Discussed (Place a checkmark if medication handouts given) ↓
Medications (list all medications)	Name/Dose	How to Take	
Activities/ Special Care	Activities (Check as indicated) <input type="checkbox"/> Crutches/walker <input type="checkbox"/> Walk with assistance <input type="checkbox"/> Gradually resume normal activity <input type="checkbox"/> Bedrest <input type="checkbox"/> Other _____		Dressing and Wound Care (Report increased pain, redness, swelling, drainage, or fever) <input type="checkbox"/> Doctor to change dressing <input type="checkbox"/> Keep dressing dry <input type="checkbox"/> If no dressing, keep incision clean and dry <input type="checkbox"/> Clean wound and change dressing _____
	Additional Instructions (PEARLS)		
Follow-Up (appointments/ equipment/referrals)	Agency	Phone	Arrangements (instructions provided by agency)
		Dr. _____	Date/Time _____
	Dr. _____	Date/Time _____	<input type="checkbox"/> Call for an appointment
	Dr. _____	Date/Time _____	<input type="checkbox"/> Call for an appointment

I understand the above instructions and have the ability to carry these out after discharge. I am aware of the importance of medical follow-up with my doctor.

Patient/Patient Rep. Signature: _____ Date: _____

RN Signature: _____ Date: _____

Figure 3.12. (Continued)

University of Anystate Hospitals

PATIENT LABEL

PATIENT/FAMILY INSTRUCTIONS
PAGE 2 OF 2

Discharge Date: _____ Time: _____ Mode: _____

Discharged With:

Family member Friend By self Other: _____

Escorted by: Hospital Attendant Ambulance Attendant

RN Discharge Assessment

Continuing Care Assessment

Care Plan	<input type="checkbox"/> All goals resolved on IPOC/clinical path/plan of care. Exceptions documented.
Discharge with:	<input type="checkbox"/> Self/family care <ul style="list-style-type: none"> • Patient and/or family verbalized an understanding of instructions. Person (s) to assist if needed: _____
Discharge with:	<input type="checkbox"/> Support services <ul style="list-style-type: none"> • Patient will receive follow-up with a referral agency or extended care facility. See front of form.
Discharge to:	<input type="checkbox"/> Home <input type="checkbox"/> Home with home health <input type="checkbox"/> Extended care facility <input type="checkbox"/> Other: _____

Patient Expired Date: _____ Time: _____ Valuables Given to: Family Funeral Home Security
 Patient Left without Permission Date: _____ Time: _____

RN Signature: _____ Date: _____

PATIENT INSTRUCTIONS
5435680 (03/2002)

When a patient is being transferred from the acute setting to another health care organization, a **transfer record** may be initiated. This record also is called a referral form. A brief review of the patient's acute stay along with current status, discharge and transfer orders, and any additional instructions will be noted. Social service and nursing personnel often complete portions of the transfer record.

Despite the best efforts of hospital caregivers and physicians, some patients die while they are hospitalized. In such cases, the attending physician should add a summary statement to the patient's health record to document the circumstances surrounding the patient's death. The statement can take the form of a final progress note or a separate report. The statement should indicate the reason for the patient's admission, his or her diagnosis and course in the hospital, and a description of the events that led to his or her death.

Autopsy Reports

An **autopsy report** is a description of the examination of a patient's body after he or she has died. Also called necropsies, autopsies are usually conducted when there is some question about the cause of death or when information is needed for educational or legal purposes. The purpose of the autopsy is to determine or confirm the cause of death or to provide more information about the course of the patient's disease.

The autopsy report is completed by a pathologist and becomes part of the patient's permanent health record. The authorization for the autopsy, signed by the patient's next of kin or by law enforcement authorities, must be obtained prior to the autopsy and also should become part of the record.

Administrative Data

As noted earlier in this section, an acute care health record contains the patient's demographic and financial information as well as a summary of the reason the patient is seeking treatment. Commonly, the administrative information is collected by hospital admitting personnel who personally ask the patient or the patient's representative for the information needed to complete the admissions form.

Today, most hospitals collect admissions information electronically. For hospitals that maintain a paper-based health record system, a printout of the admissions information is placed in the health record. In both paper-based and electronic health record systems, the admissions information then becomes a permanent part of the patient's record. The admissions information may be referred to as a face sheet, a registration form, or a registration record.

Demographic and Financial Information

Demographics is the study of the statistical characteristics of human populations. In the context of healthcare, demographic information includes the following elements:

- Patient's full name
- Patient's identification number or health record number as assigned by the healthcare facility
- Patient's address
- Patient's date of birth

- Patient's place of birth
- Patient's gender
- Patient's race or ethnic origin
- Patient's marital status
- Name and address of patient's next of kin
- Date and time of admission
- Type of admission (inpatient or outpatient)
- Hospital's name, address, and telephone number

The financial information maintained in the acute care health record is limited to the insurance information collected from the patient at the time of admission. This information includes the name of the expected payer, the name of the policy holder (or insured), the gender of the policy holder, the patient's relationship to the policy holder, the employer of the policy holder, individual and group insurance policy numbers, and the patient's Social Security number. (See figure 3.13.)

Consents, Authorizations, and Acknowledgments

Healthcare providers are required to obtain written consents or authorizations before they may provide invasive diagnostic procedures and surgical interventions or release confidential patient information.

Figure 3.13. Example of an admission record in electronic format

WEB EMR Electronic Medical Record - The Shams Group (TSG)

Address: <http://tsgis-live/PhysicianPortal1.1.0/search.asp>

Physicians Portal

ADM | LAB | NUR | OE | PHA | RAD | TRN | ALG | Images | My Docs | Print | Current Status

Acct#: V84072636 Unit#: M000311654 Patient: WIGHET, MARU J

Patient Information

Patient's Information	Employer
Street1 : 9 POPLAR ST	Name : RE
Street2 :	Street1 : 871 KOPLER ROAD
City : JONSONBURG	Street2 :
State : PA	City : ENGSTON
Home Ph : (672)808-1704	State : PA
Mar Status : M	Emp Ph : (232)652-9681
Soc Sec : 368-00-4801	PT Occup : REWELDER
Religion : CA	
Afil : NO PARISH-NO VISIT	

Next of Kin

Name : WIGHET, FILIP	Name : WIGHET, FILIP
Street1 : 9 POPLAR ST	Street1 : 9 POPLAR ST
Street2 :	Street2 :
City : JONSONBURG	City : JONSONBURG
State : PA	State : PA
Home Ph : (672)808-1704	Home Ph : (672)808-1704
Work Ph : (672)808-1704	Work Ph : (672)808-1704
Rel To Pt : HUSBAND	Rel To Pt : HUSBAND

Welcome, Dr. MAURUS! You have Delinquent, Ready to Sign and Ready to Approve documents that need your immediate attention.

Local intranet

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Consents for procedures were discussed in the operative reports section of this chapter. Acknowledgments usually apply to the patient's confirmation that he or she has received specific information from the healthcare facility.

Consent to Treatment

Many healthcare facilities obtain a **consent to treatment** from patients or their legal representatives before providing care or services except in emergency situations. This type of consent documents the patient's permission for routine services, diagnostic procedures, and medical care (Abdelhak 2001, 91). However, privacy legislation has made this step a matter of facility choice.

In 2001, the Department of Health and Human Services (HHS) published the first comprehensive set of federal rules dealing with health information privacy and security. The rules were established to implement the provisions of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and provide some uniformity to related practices across the country. (The privacy rule is discussed in detail in chapter 15; the security rule is discussed in chapter 19.)

The final privacy rule became effective October 15, 2002. It permits all covered entities (those to whom the regulations apply) to use and disclose patients' protected health information for their own treatment, payment, or healthcare operations and for treatment, payment, and certain healthcare operations of other parties without prior written permission from the patients or the patients' legal representatives. HHS stresses that covered entities may still voluntarily elect to obtain such consents. Many do because they are considered an integral part of healthcare professional ethical and practice standards. Covered entities have complete discretion in designing their consent process if they choose this alternative. When a consent is obtained, it must become part of the patient's record.

Notice of Privacy Practices

The privacy rule requires providers with a direct treatment relationship with a patient to secure the patient's written acknowledgment that he or she received the provider's notice of privacy practices. The signed acknowledgment of receipt of the notice of privacy practices should be obtained when service is first provided to a patient and should become part of the health record. When the first service is for emergency care and the patient is unable to sign, the provider is allowed to obtain the acknowledgment after the emergency treatment has been given. An example of a notice of privacy practices can be found in appendix E.

Authorizations Related to the Release and Disclosure of Confidential Health Information

In the past, the terms *consent* and *authorization* were used almost interchangeably to describe an individual's permission to disclose health information. The terms referred to the written documentation of the patient's formal permission to release his or her confidential health information to another party. As a standard of practice, healthcare providers only obtained the individual's permission to disclose health information when parties outside the organization were making the request. HIPAA privacy legislation now applies the term *authorization* to permission granted by the patient or the patient's representative to release information for other than treatment, payment or healthcare operations. The term *consent* is used when the permission is for treatment, payment or healthcare operations.

An **authorization to disclose information** allows the healthcare facility to verbally disclose or send health information to other organizations. The patient or his or her legal representative signs the authorization. Under the HIPAA privacy rule, covered providers

are required to obtain a written authorization for the use or disclosure of protected health information for purposes not related to treatment, payment, or healthcare operation. The HIPAA privacy rule establishes federal guidelines for the content and use of authorization forms. Guidelines also indicate who may provide consent and when an authorization can be revoked. (See chapter 15.) Individual states may have laws or regulations that define the content of authorizations. When such laws or regulations exist, the facility should consult the HIPAA privacy rule to determine how to apply the state requirements (Hughes 2001). Usually the most restrictive guideline is the one followed.

The HIPAA privacy rule also requires special handling when releasing some psychotherapy documentation. In addition, many states have laws and regulations that address the use and disclosure of behavioral health and psychotherapy records. A federal confidentiality rule for alcohol and drug abuse treatment records applies to the records of participants in federally assisted alcohol or drug abuse programs. Other laws may address those with the human deficiency virus (HIV) or acquired immune deficiency syndrome (AIDS) and other disorders. If these other laws and regulations more stringently protect individual health information or provide the individual greater access or control over their protected health information, they will not be preempted by HIPAA.

The HIPAA privacy rule requires most healthcare providers to obtain written authorization for specific disclosures not otherwise permitted by law. However, healthcare providers may require patients to give their permission as a condition of treatment and managed care organizations and health insurance plans may require authorization as a condition of service enrollment.

Advance Directives

An **advance directive** is a written document that names the patient's choice of legal representative for healthcare purposes. The person designated by the patient is then empowered to make healthcare decisions on behalf of the patient in the event that the patient is no longer capable of expressing his or her preferences. Living wills and durable powers of attorney for healthcare are two examples of advance directives. Physician orders for "do not resuscitate" (DNR) and "do not attempt intubation" (DNI) should be consistent with the patient's advance directives.

The federal **Patient Self-Determination Act (PSDA)** went into effect in 1991. The PSDA requires healthcare facilities to provide written information on the patient's right to execute advance directives and to accept or refuse medical treatment. Healthcare organizations that accept Medicare or Medicaid patients are required to adhere to the following provisions of the PSDA:

- Healthcare organizations must develop policies that meet the requirements of state law regarding the patient's right to accept or refuse medical treatment and to develop advance directives.
- Upon admission, healthcare organizations must provide written information to the patient that describes the treatment decisions that patients may make and the hospital's related policies.
- Healthcare organizations must document the fact that the patient has an advance directive in his or her health record. However, they are not required to make a copy of the directive a permanent part of the patient's health record.

Acknowledgments of Patient's Rights

Acknowledgment forms are used to document the fact that information about the patient's rights while under care was provided to the patient. Referred to as the **patient's bill of rights**, **Medicare Conditions of Participation** require hospitals to provide patients this information. The information must include the right to:

- Know who is providing treatment
- Confidentiality
- Receive information about treatment
- Refuse treatment
- Participate in care planning
- Be safe from abusive treatment

There are two common ways to document the receipt of rights' information in the health record. First, the patient or his or her legal representative can sign a document to indicate that the patient received the bill of rights. Second, the facility can have the patient sign and date the actual bill of rights and place it in the health record.

Other Administrative Information

Some healthcare facilities place property lists and birth and death certificates in health records. When a patient brings personal property and valuables to the healthcare facility, the facility may document them in the health record. Items such as eyeglasses, hearing aids, prostheses, and other special medical equipment should be documented. When items are kept in a secure location by the facility, that fact should be documented on the property/valuable list.

State governments use birth and death certificates to collect vital information and health statistics. The content requirements vary somewhat according to relevant state law. In some states, the certificates are prepared by hospitals. Copies of the certificates are often included in the patients' health records.

Check Your Understanding 3.1

Instructions: Choose the most appropriate answer for the following questions.

1. ____ Which two major types of data are contained in the health record?
 - a. Nursing and physician
 - b. Administrative and clinical
 - c. Demographic and financial
 - d. Surgical and medical

2. ____ Which of the following terms refers to state or county regulations that healthcare facilities must meet to be permitted to provide care?
 - a. Accreditation
 - b. Bylaws
 - c. Certification
 - d. Licensure

3. ____ Which of the following would not be found in a medical history?
 - a. Chief complaint
 - b. Vital signs
 - c. Present illness
 - d. Review of systems
 4. ____ An attending physician requests the advice of a second physician who then reviews the health record and examines the patient. The second physician records impressions in what type of report?
 - a. Consultation
 - b. Progress note
 - c. Operative report
 - d. Discharge summary
 5. ____ Which specialized type of progress note provides healthcare professionals impressions of patient problems with detailed treatment action steps?
 - a. Flow records
 - b. Vital signs record
 - c. Care plan
 - d. Surgical note
 6. ____ Written or spoken permission to proceed with care is classified as ____.
 - a. Expressed consent
 - b. Acknowledgment
 - c. Advance directives
 - d. Implied consent
 7. ____ Which of the following reports provides information on tissue removed during a procedure?
 - a. Operative report
 - b. Laboratory report
 - c. Pathology report
 - d. Anesthesia report
 8. ____ Sleeping patterns, head and chest measurements, feeding and elimination status, weight, and Apgar scores are recorded in which of the following records?
 - a. Obstetric
 - b. Newborn
 - c. Surgical
 - d. Emergency
 9. ____ Which of the following is not considered patient demographic information?
 - a. Patient's date of birth
 - b. Name of next of kin
 - c. Type of admission
 - d. Admitting diagnosis
 10. ____ Which of the following administrative documents names the patient's choice of legal representative for healthcare purposes?
 - a. Advance directive
 - b. Patient's bill of rights
 - c. Notice of privacy practices
 - d. Authorization for release of information
-

Specialized Health Record Content

There are differences as well as similarities among the health records maintained by different healthcare facilities. The healthcare setting (acute care, ambulatory care, long-term care, and so on) is one factor. For example, the records of residents in long-term care facilities often contain immunization records and must contain documentation of communication of patient's rights. Acute care records, in contrast, do not usually contain immunization records but do contain acknowledgment of receipt of a bill of rights.

The content of the health records in various healthcare settings also depends on external factors such as which accreditation standards apply. For example, JCAHO issues specific health information standards for acute care hospitals. However, the standards of the **Commission on Accreditation of Rehabilitation Facilities (CARF)** are more frequently used by rehabilitation hospitals.

State and local laws in the facility's specific geopolitical location also may affect record content. In addition, the content of records can be affected by the rules that apply to facilities that receive funding from the federal government. For example, some federal regulations only apply to healthcare facilities that treat Medicare enrollees.

The content of health records also depends on the type of medical services the patient requires. For example, the content of the record for an obstetrics patient would be different from the content of the record for a neurosurgical patient. Content also depends in part on the duration of medical services. For example, the content of a long-term rehabilitation record would be different from the content of an emergency services record.

Health record content also may be affected by the traits of individual patients (for example, age, functional status). Finally, the complexity of the patient's medical condition is yet another factor.

Information Pertaining to Emergency Care

The delivery of emergency care services occurs primarily in hospital-based emergency departments and freestanding urgent care centers. Emergency care documentation is limited to information about the patient's presenting problem and the diagnostic and therapeutic services provided during the episode of care. The services provided in emergency situations concentrate on diagnosing the medical problem and stabilizing the patient. Although minor injuries and illnesses may require no further medical treatment, emergency patients often must be referred to ambulatory care providers for follow-up care. Seriously ill patients are admitted to a hospital for ongoing acute care treatment.

For emergency care records, documenting the instructions given to the patient, as well as the patient's presenting complaint, evaluation, and assessment, is important. Thorough documentation is needed to justify reimbursement, protect the facility or the patient in potential legal proceedings, and ensure continuity of care.

The following information must be entered into the patient's health record for each emergency care visit:

- Patient identification (or the reason it could not be obtained)
- Time and means of the patient's arrival at the facility

- Pertinent history of the illness or injury and physical findings, including the patient's vital signs
- Emergency care given to the patient prior to arrival
- Diagnostic and therapeutic orders
- Clinical observations, including the results of treatment
- Reports and results of procedures and tests
- Diagnostic impression
- Medications administered
- Conclusion at the termination of evaluation/treatment, including final disposition, the patient's condition on discharge or transfer, and any instructions given the patient, the patient's representative, or another healthcare facility for follow-up care
- Documentation of cases when the patient left the facility against medical advice

Information Pertaining to Ambulatory Care

The records of healthcare services provided in physicians' offices, group practices, clinics, and outpatient settings typically include the following materials:

- Registration forms
- Problem lists
- Medication lists
- Patient history questionnaires
- History and physicals
- Progress notes
- Results of consultations
- Diagnostic test results
- Miscellaneous flow sheets (for example, pediatric growth charts and immunization records and specialty-specific flow sheets)
- Copies of records of previous hospitalizations or treatment by other healthcare practitioners
- Correspondence
- Consents to disclose information
- Advance directives

Many of the data found in ambulatory care settings are similar to those found in acute care hospitals. The registration record used in a physician's office, for example, includes the same demographic and financial information as a hospital admissions record.

Ambulatory care records, however, do include several elements unique to the ambulatory setting. For example, ambulatory records usually contain a **problem list** whose function is to facilitate ongoing patient care management. The problem list describes any significant current and past illnesses and conditions as well as the procedures the patient has undergone. Sometimes problems are separated into acute (short term such as otitis media) and chronic (such as diabetes mellitus) categories. The problem list also may include information on the patient's previous surgeries, allergies, and drug sensitivities. Some physician practices place information on the patient's current prescription medications on the problem list. Others maintain a separate medication list. (See figure 3.14 for an example of a problem list.)

Some physician practices also use a structured format to collect past medical history information from the patient. This is called a **patient history questionnaire**.

Ambulatory care settings may earn accreditation from the **Accreditation Association for Ambulatory Health Care (AAAHC)**, **JCAHO**, the **American Osteopathic Association (AOA)**, the **National Committee for Quality Assurance (NCQA)**, or other specialized groups. All have health information documentation standards. Most physician practices do not participate in voluntary accreditation programs, but some clinics, outpatient settings, and managed care organizations choose to do so.

Information Pertaining to Obstetric/Gynecologic Care

Some ambulatory care records have special requirements. According to the American College of Obstetricians and Gynecologists (ACOG), the documentation of obstetric care must include a comprehensive personal and family history, a detailed physical examination report, a treatment plan, and patient instructions (ACOG 1996). Specifically, the following kinds of information should be maintained for both obstetric and gynecologic patients:

- Medical history
 - Reason for visit
 - Health status
 - Dietary/nutritional assessment
 - Physical fitness and exercise status
 - Tobacco, alcohol, and drug usage
 - History of abuse or neglect
 - Sexual practices, including high-risk behaviors and method of contraception
- Physical examination
- Periodic laboratory testing, including Pap tests and mammography, cholesterol levels, and fecal blood test
- Additional laboratory testing needed for high-risk groups, including:
 - Hemoglobin levels
 - Bacteriuria testing
 - Fasting glucose testing
 - Testing for sexually transmitted diseases
 - HIV testing

Figure 3.14. Example of a problem list in paper format

PROBLEM LIST				
Identification Number				
Medical Record Number				
Last Name		First Name	Middle Initial	
Date of Birth				
PROBLEM NUMBER	DATE ENTERED	LIST SIGNIFICANT ACUTE AND CHRONIC CONDITIONS INCLUDING SURGICAL PROCEDURES	PROBLEM RESOLVED	DATE RESOLVED
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

- Tuberculosis skin testing
- Lipid profile
- Thyroid testing
- Colonoscopy

Information Pertaining to Pediatric Care

The records of infants, children, and adolescents also require special content. These ambulatory care records should include the following:

- Past medical history
- Birth history
- Nutritional history
- Personal, social, and family history
- Growth and development record
- Review of systems

In addition, the records should include documentation of well-child visits and immunizations as well as visits for medical concerns, including any medications prescribed.

Information Pertaining to Ambulatory Surgical Care

The operating room (OR) records maintained by freestanding ambulatory surgery centers are very similar to those maintained by hospital-based surgery departments. Specifically, Medicare regulations require that ambulatory surgery records include the following information:

- Patient identification
- Significant medical history and the results of the physical examination
- Preoperative studies (studies performed before surgery)
- Findings and techniques of the operation, including the pathologist's report
- Allergies and abnormal drug reactions
- Record of anesthesia administration
- Documentation of the patient's informed consent to treatment
- Discharge diagnosis

The ambulatory surgery record should also include documentation of the patient's course in the recovery room. Many ambulatory surgery centers also telephone patients at home after their surgery as a routine follow-up procedure. The patient's record should include records of any follow-up calls. In addition to JCAHO, the American Association for Accreditation of Ambulatory Surgery Facilities has standards that apply to this type of setting.

Information Pertaining to Long-Term Care

Long-term care is provided in a variety of facilities, including the following:

- Skilled nursing facilities (SNFs)
- Subacute care facilities
- Nursing facilities (NFs) (also known as convalescent care centers)
- Intermediate care facilities (ICFs)
- ICFs for the mentally retarded (ICF-MRs)
- Assisted-living facilities

The regulations that govern long-term care facilities have established strict documentation standards. Most SNFs, NFs, and ICF-MRs are governed by both federal and state regulations, including the Medicare Conditions of Participation. Assisted-living facilities are usually governed only by state regulations. Most long-term care providers do not participate in voluntary accreditation programs, although JCAHO does have long-term care facility standards.

The health records of long-term care patients are based on ongoing assessments and reassessments of the patient's (or resident's) needs. An interdisciplinary team develops a plan of care for each patient upon admission to the facility, and the plan is updated regularly over the patient's stay. The team includes the patient's physician and representatives from nursing services, nutritional services, social services, and other specialty areas (such as physical therapy), as appropriate.

In SNFs, the care plan is based on a format required by federal regulations. The care plan format is called the **resident assessment instrument (RAI)**. The RAI is based on the **Minimum Data Set (MDS) for Long-Term Care**. The overall RAI framework includes the MDS, triggers, utilization guidelines, and **resident assessment protocols (RAPs)**. The patient is assessed and reassessed at defined intervals as well as whenever there is a significant change in his or her condition.

The RAI is a critical component of the health record. In addition to development of the care plan, Medicare uses the MDS form to determine reimbursement. Many states also use it to determine Medicaid payments, and accreditation surveyors use information from it during the survey process.

The MDS is submitted electronically to each state health department and then on to the Centers for Medicare and Medicaid Services (CMS). At CMS, demographic and quality indicator information is compiled and provided as feedback to each facility.

The physician's role in a long-term care facility is not as visible as it is in other care settings. The physician develops a plan of treatment, which includes the medications and treatments provided to the resident. He or she then visits the resident in the facility on a thirty- or sixty-day schedule unless the resident's condition requires more frequent visits. At each visit, the physician reviews the plan of care and physician's orders and makes changes as necessary. Between visits, the physicians are contacted when nursing identifies changes in the resident's condition.

Other specialized assessments and interdisciplinary progress notes are included in the long-term care health record. The following list identifies the most common components of long-term care records:

- Identification and admission information
- Personal property list, including furniture and electronics
- History and physical and hospital records
- Advance directives, bill of rights, and other legal records
- Clinical assessments
- RAI/MDS and care plan
- Physician's orders
- Physician's progress notes/consultations
- Nursing or interdisciplinary notes
- Medication and records of other monitors, including administration of restraints
- Laboratory, radiology, and special reports
- Rehabilitation therapy notes (physical therapy, occupational therapy, and speech therapy)
- Social services, nutritional services, and activities documentation
- Discharge documentation

If paper-based records are found in a long-term setting, a process called record thinning may occur at intervals during the patient's stay. Records of patients whose stay extends to months or years become cumbersome to handle. Selected material may be removed and filed elsewhere according to facility guidelines. Any material removed must remain accessible when needed for patient care and service evaluation.

Information Pertaining to Home Health Care

Home health agencies provide medical and nonmedical services in the patient's home or place of residence. Home health care has seen an increase in the volume of patients due to growth in the aged population, the desire of Americans to live at home as long as possible, and cost savings over residential settings such as long-term care facilities.

Federal regulations govern the home care agencies that accept Medicare enrollees. States also have licensure regulations for home care agencies. Organizations such as JCAHO and the Community Health Accreditation Program of the National League for Nursing also provide accreditation services for some home health agencies.

Medicare regulations and accreditation standards have established documentation requirements. They also mandate periodic assessments. For agencies that are certified for Medicare, the home health certification/plan of care is a central component of documenta-

tion. This document is a plan of treatment established by a physician. It details the patient's diagnoses, impairments, goals, rehabilitation potential, and the type and frequency of services to be provided. The physician reviews and renews the home health certification/plan of care at least once during a sixty-day episode. Between renewals, certification is updated via the physician's telephone orders. There are no requirements for physician visits in home care; patients are responsible for seeing their physicians as necessary.

Medicare-certified home health care also uses a standardized patient assessment instrument called the **Outcomes and Assessment Information Set (OASIS)**. OASIS items are a component of the comprehensive assessment that is the foundation for the plan of care. OASIS is completed at the start or resumption of care, with each sixty-day episode, with a significant change in condition, and upon patient transfer or discharge. It is the basis for reimbursement under Medicare. OASIS is submitted electronically to the state health department and then to CMS. Unique to home care is a service agreement that details the type and frequency of services, the charges for the services, and the parties responsible for payment.

Other documentation in a home care record is driven by the services ordered by the physician and agreed to by the patient. Each visit to the patient is documented in his or her health record. Home health aides may assist the patient with activities of daily living such as bathing and housekeeping, which allows the patient to remain at home. Documentation of this type of intervention is also necessary.

Some parts of home care records may be kept in the patient's home to facilitate communication among multiple caregivers or services. Technology has affected home care through the use of portable computers such as laptops and personal data assistants (PDAs).

The home care record usually includes the following types of documentation:

- Initial database/demographics and service agreement
- Certification and plan of treatment
- Physician's orders
- Documentation per visit, documentation by each discipline involved in treatment plan, summaries, and other progress notes
- Comprehensive assessment (OASIS), plan of care, and case conference notes
- Consents and other legal documents
- Referral or transfer information from other facilities
- Discharge summaries

Information Pertaining to Hospice Care

Hospice care is similar to home care in that most services are provided to patients in their homes. However, hospices also may be located in other healthcare settings such as hospitals or long-term care facilities or in separate freestanding facilities. Hospice care is unique in that a hospice program provides **palliative care** to terminally ill patients and supportive services to patients and their families. This type of care focuses on symptom management (for example, pain) and patient comfort rather than life-prolonging measures.

When the patient is admitted to a hospice care program, his or her primary caregiver is identified. In addition, basic identification information, diagnoses, prognosis, attending physician, and emergency contact information are collected.

An interdisciplinary team establishes a plan of care, which is the foundation for the hospice services to be provided to the patient. The care plan is based on information collected in the physical and psychosocial assessments performed upon admission. The assessments are updated throughout the patient's participation in the program.

Documentation of a care plan review is required every thirty days. The hospice provider must prepare a summary when the patient is transferred between care settings (between hospital and home care, for example). Federal regulations require the hospice provider to follow the patient's care plan even when the patient receives inpatient services.

Federal regulations govern hospice providers, as do accreditation standards established by organizations such as JCAHO. Documentation requirements are based on federal regulations and accreditation standards, which are similar.

The payment rate for hospice services is based directly on the services provided and the level of care needed as documented in the health record. There are two basic episodes in hospice care. The first episode begins with the patient's admission to the program and ends when the patient dies, is discharged, or is transferred to another facility. The second begins with the patient's death and follows the family through the bereavement process until the survivors are discharged. Bereavement services can last as long as one year and must be documented.

Information Pertaining to Behavioral Healthcare

Behavioral healthcare is delivered in inpatient hospitals, outpatient clinics, physicians' offices, rehabilitation programs, and community mental health programs. Documentation reflects the type of facility and the level of care and services delivered. For example, an inpatient psychiatric hospital maintains documentation similar to an inpatient hospital in addition to documentation unique to behavioral health.

Following are the minimum documentation requirements unique to the behavioral health setting as established by JCAHO and federal regulations:

- Identification data
- Source of referral
- Reason for referral
- Patient's legal status
- All appropriate consents for admission, treatment, evaluation, and aftercare
- Admitting psychiatric diagnoses
- Psychiatric history
- Record of the complete patient assessment, including the complaints of others regarding the patient as well as the patient's comments
- Medical history, report of physical examination, and record of all medications prescribed

- Provisional diagnoses based on assessment that includes other current diseases as well as psychiatric diagnoses
- Written individualized treatment plan
- Documentation of the course of treatment and all evaluations and examinations
- Multidisciplinary progress notes related to the goals and objectives outlined in the treatment plan
- Appropriate documentation related to special treatment procedures
- Updates to the treatment plan as a result of the assessments detailed in the progress notes
- Multidisciplinary case conferences and consultation notes, which include date of conference or consultation, recommendations made, and actions taken
- Information on any unusual occurrences such as treatment complications, accidents or injuries to the patient, death of the patient, and procedures that place the patient at risk or cause unusual pain including restraints and seclusion
- Correspondence related to the patient, including all letters and dated notations of telephone conversations relevant to the patient's treatment
- Discharge or termination summary
- Plan for follow-up care and documentation of its implementation
- Individualized aftercare or posttreatment plan

CARF, the Council on Quality and Leadership in Support for People with Disabilities, and AOA also have standards for facilities that specialize in mental health, mental retardation, or developmental disabilities.

Information Pertaining to Rehabilitation Services

The documentation requirements for rehabilitation facilities vary because facilities range from comprehensive inpatient care to outpatient services or special programs. Health record documentation reflects the level of care and services provided by the facility.

Inpatient rehabilitation hospitals and rehabilitation units within hospitals are reimbursed by Medicare under a prospective payment system based on documentation. A **patient assessment instrument (PAI)** is completed shortly after admission and upon discharge. Based on the patient's condition, services, diagnosis, and medical condition, a payment level is determined for the inpatient rehabilitation stay.

Many rehabilitation facilities are accredited through CARF, although JCAHO or AOA also can be chosen. CARF requires the facility to maintain a single case record for any patient it admits. The documentation standard for the health record includes the following requirements:

- Identification data
- Pertinent history, including functional history

- Diagnosis of disability/functional diagnosis
- Rehabilitation problems, goals, and prognosis
- Reports of assessments and individual program planning
- Reports from referring sources and service referrals
- Reports from outside consultations and laboratory, radiology, orthotic, and prosthetic services
- Designation of a manager for the patient's program
- Evidence of the patient's or family's participation in decision making
- Evaluation reports from each service
- Reports of staff conferences
- Patient's total program plan
- Plans from each service
- Signed and dated service and progress reports
- Correspondence pertinent to the patient
- Release forms
- Discharge report
- Follow-up reports

Records of Healthcare Provided in Correctional Facilities

Correctional facilities often provide health services to inmates and thus maintain health records. These health records begin with the collection of certain baseline information obtained during the initial intake process. This information may include a history and physical, a chest x-ray, and laboratory testing as well as a dental examination and a psychological evaluation.

Additional information is added to the inmate's health record when he or she visits health services for treatment of illness or injury, therapy, or medication. Examples include interdisciplinary progress notes and physician's orders. Of note is the rule that inmates may not maintain their own over-the-counter medications. Thus, even these types of medications must be received from health services and documented in the health record.

Because some inmates are imprisoned for many years, paper records eventually may include numerous volumes. Therefore, health information staff must develop and adhere to procedures that keep the most current and comprehensive information readily available.

In some states, the inmate's original health record is transferred with the inmate when he or she moves to a different prison within the state system. As a result, HIM professionals in such states must work together to produce standardized policies, procedures, and formats. Federal facilities often have similar practices.

Correctional health services may choose to comply with the hospital accreditation standards of JCAHO or the standards developed by the American Correctional Association or the National Commission on Correctional Health Care.

Information Pertaining to End-Stage Renal Disease Service

Individuals with severe kidney disease requiring renal dialysis may be treated in outpatient settings of healthcare facilities, in independent dialysis centers, while residents of long-term care settings, or even in their own homes (self-dialysis). Medicare has specific **Conditions for Coverage** that apply to all these settings. The standards include criteria for record content as well as for record keeping.

Documentation begins with notification of patient rights. A unique component of that notification is inclusion of information on the facility's policy for hemodialyzer reuse. Treatment record elements include an interdisciplinary patient assessment and a plan of care with team members commonly consisting of a physician, nurse, social worker, registered dietitian, and the patient. Progress notes, laboratory test results, a discharge summary, and consents also must be found. Special emphasis is placed on recording the patient's nutritional, anemia, vascular access, transplant, and rehabilitation status, as well as social service interventions and dialysis dosages. Patient education and training are important for dialysis success and for continued service. Evidence of both must be documented.

Personal Health Records

A relatively new development, the **personal health record** has been defined by the AHIMA eHIM Personal Health Record Work Group (2005) as:

an electronic, universally available, lifelong resource of health information needed by individuals to make health decisions

The personal health record is unique in that it is maintained and controlled by each individual and is a compilation of information obtained from healthcare providers as well as through personal discovery. It could be found on a personal computer, the web, desktop and Web, or portable devices. The Work Group also identified minimum common data elements (2005) as:

- Personal demographic information
- General medical information
- Allergies and drug sensitivities
- Conditions
- Hospitalizations
- Surgeries
- Medications
- Immunizations

- Clinical tests
- Pregnancy history

Because it is a lifelong record, information also could include:

- Information from providers
- Genetic information
- Personal, family, occupational, and environmental history
- Health plans and goals
- Health status of the individual
- Documentation of choices in relation to organ donation, durable power of attorney, and advance directives
- Charges paid for services and products
- Health insurance information
- Provider directory

Although health information professionals may not have direct contact with personal records, they serve as patient advocates and can play important support and educational roles. In addition, in the electronic record environment, patients have portals to communicate with practitioners via such methods as e-mails, their personal health records, patient questionnaires and surveys, and transferring clinical information (AHIMA e-HIM Task Force 2004). Policies need to be in place to determine how much and what type of information actually becomes part of the organization's health record.

Check Your Understanding 3.2

Instructions: Choose the most appropriate answer for the following questions.

1. ____ Which type of health record contains information about care provided prior to arrival at a healthcare setting and documentation of care provided to stabilize the patient?
 - a. Ambulatory care
 - b. Emergency care
 - c. Long-term care
 - d. Rehabilitative care
2. ____ Patient history questionnaires, problem lists, diagnostic tests results, and immunization records are commonly found in which type of record?
 - a. Ambulatory care
 - b. Emergency care
 - c. Long-term care
 - d. Rehabilitative care

3. ____ The ambulatory surgery record contains information most similar to ____.
 - a. Physician office records
 - b. Emergency care records
 - c. Hospital operative records
 - d. Hospital obstetric records
 4. ____ Which standardized tool is used to assess Medicare-certified rehabilitation facilities?
 - a. Outcomes and Assessment Information Set (OASIS)
 - b. Resident assessment protocol (RAP)
 - c. Patient assessment instrument (PAI)
 - d. Minimum Data Set (MDS)
 5. ____ Records in which of the following settings would not include an interdisciplinary care plan?
 - a. Long-term care
 - b. End-stage renal disease
 - c. Hospice care
 - d. Ambulatory care
 6. ____ Portions of a treatment record may be maintained in a patient's home in which two types of settings?
 - a. Hospice and behavioral health
 - b. Home health and end-stage renal disease
 - c. Obstetric and gynecologic care
 - d. Rehabilitation and correctional care
 7. ____ A patient's legal status, complaints of others regarding the patient, and reports of restraints or seclusion would be found most frequently in which type of health record?
 - a. Rehabilitative care
 - b. Ambulatory care
 - c. Behavioral health
 - d. Personal health record
 8. ____ Paper records may require thinning in which two settings?
 - a. Home health and hospice
 - b. Rehabilitation and end-stage renal disease
 - c. Ambulatory care and behavioral health
 - d. Long-term care and correctional services
-

Documentation Standards

The importance of documentation to the quality of direct patient care cannot be over-emphasized. Documentation represents the primary communication among multidisciplinary caregivers for efficient and effective initial treatment, for continuing care, and for the evidence that care and treatment occurred.

Moreover, documentation promotes understanding of the whole patient in the long term. Health information management (HIM) professionals provide a valuable service in helping healthcare organizations to establish reasonable documentation policies and procedures. A

well-executed approach satisfies numerous needs and interests, including those of the provider, the healthcare consumer, and external parties.

Internally, timely and effective documentation has a number of indirect benefits beyond patient care. Performance improvement and risk management activities rely heavily on health record documentation. These activities result in direct improvements in patient care and operational processes. In addition, healthcare organizations use cumulative health data as the basis for making decisions on future services. (Risk management is discussed further in chapter 11; performance improvement is discussed in chapter 12.)

Health record documentation also is reviewed by external organizations. Regulatory agencies use documentation as a tool to measure the quality of services before granting accreditation or **certification** to healthcare organizations. Third-party payers depend on documentation as proof that chargeable services were actually received. The legal system searches the written record for evidence. It is generally assumed that a service that was not documented was not done.

Basic Principles of Health Record Documentation

The basic principles of health record documentation apply to both paper-based and electronic patient records. The principles address the uniformity, accuracy, completeness, legibility, authenticity, timeliness, frequency, and format of health record entries. The American Health Information Management Association (AHIMA) has developed the following general documentation guidelines (Smith and Dougherty 2001):

- Every healthcare organization should have policies that ensure the uniformity of both the content and the format of the health record. The policies should be based on all applicable accreditation standards, federal and state regulations, payer requirements, and professional practice standards.
- The health record should be organized systematically in order to facilitate data retrieval and compilation.
- Only individuals authorized by the organization's policies should be allowed to enter documentation in the health record.
- Organizational policy and/or medical staff rules and regulations should specify who may receive and transcribe verbal physician's orders.
- Health record entries should be documented at the time the services they describe are rendered.
- The authors of all entries should be clearly identified in the record.
- Only abbreviations and symbols approved by the organization and/or medical staff rules and regulations should be used in the health record.
- All entries in the health record should be permanent.
- Errors in paper-based records should be corrected according to the following process: Draw a single line in ink through the incorrect entry. Then print the word *error* at the top of the entry along with a legal signature or initials and the

date, time, and reason for change and the title and discipline of the individual making the correction. The correct information is then added to the entry. Errors must never be obliterated. The original entry should remain legible, and the corrections should be entered in chronological order. Any late entries should be labeled as such.

- Any corrections or information added to the record by the patient should be inserted as an addendum (a separate note). No changes should be made in the original entries in the record. Any information added to the health record by the patient should be clearly identified as an addendum.
- The HIM department should develop, implement, and evaluate policies and procedures related to the quantitative and qualitative analysis of health records.

(Quantitative and qualitative analysis are discussed in chapters 10 and 13.)

At the present time, accreditation organizations and regulatory agencies are still developing specific documentation guidelines for EHRs. In cases where no guidelines exist, HIM practitioners continue to apply basic documentation principles to every medium. However, the type of medium, paper or electronic, may require that specific details be handled differently to achieve the same documentation goals. For example, the method used to make corrections and amendments in EHRs may be different from the method used for paper-based records.

A number of laws, regulations, and standards requiring minimum levels of documentation exemplify the importance of high-quality documentation outside the organization as well as within. Healthcare organizations must comply in order to maintain licensure within their states, to remain certified for federal program reimbursement, to maintain current accreditation status with external agencies, and to avoid fines.

When developing documentation policies and practices, the healthcare organization is usually obligated to simultaneously follow legal, regulatory, and accreditation directives that pertain to its particular facility type within its geopolitical area. Generally, following the strictest directives that apply ensures adequate compliance. In all cases, the ultimate goal is quality of care for patients in every healthcare environment.

Significant overlap exists among the documentation requirements of accrediting bodies and federal and state regulations and laws. (See appendix C of this textbook for a comparison between various acute care documentation standards.) Although overlap may exist, differences among the standards must be recognized. When determining its policies, the organization must evaluate all relevant standards. Documentation requirements are usually recorded in medical staff rules and regulations and become a component of medical staff membership requirements.

Even with best efforts, it can be difficult to sort through multiple documentation directives. HIM professionals must turn to legal counsel for guidance when circumstances are unusual.

Accreditation Organizations

Many healthcare organizations seek public recognition through accreditation with recognized accrediting bodies. This status signifies that the facility has met patient care and

other standards for providing high-quality care. In some cases, it also allows facilities to participate in programs that affect their financial status, such as Medicare and Medicaid, Medical Resident Programs, and other training programs. Organizations seeking accreditation must meet specific documentation standards. Periodic surveys and detailed record review by the accrediting body evaluate how well the organization is complying with documentation standards.

Healthcare organizations voluntarily seek accreditation from a variety of private, not-for-profit accreditation organizations. Different types of organizations are accredited by different accreditation organizations.

Joint Commission on Accreditation of Healthcare Organizations

A number of healthcare settings are eligible for JCAHO accreditation, including hospitals (acute, critical care, children's, psychiatric, and rehabilitation), ambulatory care organizations, behavioral health organizations, home care including hospice providers, long-term care facilities, healthcare networks, clinical laboratories, and office-based surgery practices. Additional specialty settings are eligible for JCAHO certificate programs. Examples include disease-specific programs and primary stroke centers.

Beginning with its acute hospital standards in 2004, JCAHO initiated a new process called Shared Visions–New Pathways in its accreditation reviews. Among other changes, the survey focus moved from survey monitors every three years to a philosophy of continuous improvement and continuous standard compliance. Standards were streamlined and survey paperwork reduced, midcycle reviews were initiated, facility monitoring of sentinel (unexpected) events was encouraged, and following the hospital experience of selected patients (tracer methodology) during its surveys was instituted. Each accreditation standard is now accompanied by a rationale and steps to meet the standard called elements of performance. The scoring method also is new (Clark 2004).

JCAHO recognizes the appropriateness of applying documentation standards consistently across the healthcare continuum and has identified a number of common standards that apply to all healthcare settings. Frequently, these core expectations are supplemented by additional standards that represent the specific requirements of different settings and services. For example, a teaching hospital that hosts medical education programs for residents would be evaluated on its compliance with standards for supervision of residents, in addition to common standards and standards specific to acute care settings.

Many standards that apply to health records are found in accreditation manual sections called Management of Information. However, other sections that address rights and responsibilities of facilities, patient care, medication management, and responsibilities of the medical and nursing staffs, among others, also include pertinent information. To ensure compliance with all health information standards, review of all sections and monitoring all that are found is important. This concept applies to standards of other accreditation organizations as well. JCAHO also has addressed errors in interpretation of abbreviations commonly used in health records by publishing a prohibited abbreviation list. The abbreviations noted on the list should not be found in the patient health records of their accredited health providers. (A comparison of JCAHO, AOA, and Conditions of Participation record content standards for acute hospitals can be found in appendix C.)

American Osteopathic Association

AOA first initiated its hospital accreditation program to ensure the quality of residency programs for doctors of osteopathy. Today, AOA accredits a number of additional health-

care organizations and facilities, including laboratories, ambulatory care/ambulatory surgery, behavioral health, substance abuse, physical rehabilitation medicine, and critical care. Documentation standards are both broad as they pertain to common documentation requirements and specific as they address specialty services.

Accreditation Association for Ambulatory Healthcare

AAAHHC has established standards that are similar to common acute care documentation practices. The standards emphasize summaries for enhancing the continuity of care. This is especially important for the ambulatory patient. For example, summaries of past surgeries, diagnoses, and problems are helpful in transferring history information to new treatment settings for complex cases.

Commission on Accreditation of Rehabilitation Facilities

CARF accredits programs and services in medical rehabilitation, assisted-living, behavioral health, adult day-care, and employment and community services. Health record documentation is used to evaluate procedural issues surrounding special circumstances in the treatment and handling of patients and clients.

National Committee for Quality Assurance

NCQA began accrediting managed care organizations in 1991. The NCQA's standards focus on patient safety, confidentiality, consumer protection, access to services, service quality, and continuous improvement. More recently, NCQA expanded its program to include other types of organizations, such as preferred provider organizations.

Other Accreditation Groups

A number of other organizations accredit specific types of healthcare facilities. For example, the Commission for the Accreditation of Birth Centers accredits those groups and the Community Health Accreditation Program of the National League for Nursing accredits home healthcare agencies. Standards that affect health record content can be found in the guidelines for all accreditation programs.

Medicare and Medicaid Programs

The Medicare Conditions of Participation or Conditions for Coverage apply to a variety of healthcare organizations that participate in the Medicare program. In other words, participating organizations receive federal funds from the Medicare program for services provided to patients and thus must follow the Medicare Conditions of Participation. The regulations vary according to setting and address documentation conditions that must be met to continue participation. Standards currently exist for hospitals, SNFs, home health agencies, hospices, rehabilitation facilities, ambulatory surgery centers, clinics in rural areas, and some behavioral health providers. Additionally, Conditions for Coverage of Suppliers of End Stage Renal Disease (ESRD) Services standards apply to dialysis centers.

Medicare recognizes some accreditation organizations as having standards that sufficiently cover the related Conditions of Participation. After reviewing standards of accrediting groups that seek this recognition, Medicare may award them **deemed status**. As long as a healthcare setting maintains active accreditation by an accreditation body with deemed status, separate Medicare surveys are not required. For all other settings, surveys are performed. This task is often contracted to state government health reviewers.

Medicaid programs are funded jointly by federal and state governments but are administered by the individual states. Thus, Medicaid guidelines vary from state to state. Similar to Medicare participation, facilities are often required to meet federal Conditions of Participation or Coverage to receive these funds.

State Regulating Agencies

Individual states pass legislation and mandate regulations that affect how healthcare organizations within them operate and care for patients. The nature of such regulations varies from state to state.

Compliance with state licensing laws is required in order for healthcare organizations to begin or remain in operation within their states. To continue licensure, organizations must demonstrate their knowledge of, and compliance with, documentation regulations.

Check Your Understanding 3.3

Instructions: Choose the most appropriate answer for the following questions.

1. ____ Which of the following is not an accrediting organization?
 - a. Accreditation Association for Ambulatory Healthcare
 - b. American Osteopathic Association
 - c. National Committee for Quality Assurance
 - d. Centers for Medicare and Medicaid Services

 2. ____ An accrediting organization is awarded deemed status by Medicare. This means that facilities receiving accreditation under its guidelines do not need to _____.
 - a. Meet licensure standards
 - b. Undergo Medicare certification surveys
 - c. Undergo accreditation surveys
 - d. Meet Medicare certification standards

 3. ____ Which group focuses on accreditation of managed care and preferred provider organizations?
 - a. Accreditation Association for Ambulatory Healthcare
 - b. National Committee for Quality Assurance
 - c. Commission on Accreditation of Rehabilitation Facilities
 - d. Joint Commission on Accreditation of Healthcare Organizations

 4. ____ Which of the following regulations would most likely contain information on who is authorized to document in a patient's record?
 - a. Facility rules and regulations
 - b. Accreditation standards
 - c. Licensure standards
 - d. Conditions of Participation

 5. ____ Which of the following groups has instituted a health record–prohibited abbreviation list?
 - a. National Committee for Quality Assurance
 - b. Joint Commission on Accreditation of Healthcare Organizations
 - c. American Osteopathic Association
 - d. Centers for Medicare and Medicaid Services
-

Format of the Health Record

Health records are maintained in two basic formats, paper based or electronic. Records are referred to as hybrid if they have some paper and some electronic components. Today, most healthcare facilities are working toward an EHR system.

Traditional (Paper-Based) Health Records

The traditional paper-based health record has several limitations. One limitation is the need to adhere to a strict record format. Unlike the true EHR in which computer screen views can be tailored to the needs of the end user, the paper-based record does not allow for individual customization.

The EHR allows the system administrator to limit access to information, restructure information, and highlight key information that the end user may need. In contrast, the paper-based record lacks such flexibility. Because the paper-based record is lengthy and difficult to handle, management most often chooses to keep it in a single format that all end users can agree on. The greater the number of end users, the more important it is to follow a defined format.

Accreditation standards and state licensure regulations require every provider to develop specific guidelines on how the information in health records is to be arranged in its particular facility. State laws, regulations, and accreditation standards also require specific content elements.

As mentioned in chapter 2, three major types of paper-based health record are in use today: the **source-oriented health record**, the **problem-oriented health record**, and the **integrated health record**. It is important to realize, however, that no hard and fast rules exist for arranging the elements of a health record. The healthcare provider is free to select the arrangement that best suits its needs. For example, some ambulatory health organizations arrange the materials in active records in one way and closed records in another (AHIMA 2001).

Source-Oriented Health Records

In the source-oriented health record, documents are grouped together according to their point of origin. That is, laboratory records are grouped together, radiology records are grouped together, clinical notes are grouped together, and so on. Thus, physicians' progress notes for a single episode of patient care would be arranged in either chronological or reverse chronological order and placed together in the patient's health record.

The result is that those individuals charged with filing reports in the paper-based health record can do so easily simply by looking at the source and date of the report. However, the end users of information filed in the record do not have as easy a time. To follow or record information on the patient's course of treatment, they must search by date of occurrence in each of the groups of information (that is, laboratory, radiology, and every group of clinical notes). The more departments a facility has, the more sections a source-oriented health record can have. It is left to the end user to tie together information from the various sections of the record to get a picture of the entire course of treatment.

Problem-Oriented Health Records

The problem-oriented health record is better suited to serve the patient and the end user of the patient information. The key characteristic of this format is an itemized list of the

patient's past and present social, psychological, and medical problems. Each problem is indexed with a unique number.

In addition to a problem list, each problem-oriented health record contains a database, the initial care plan, and progress notes. The database is formatted much like the source-oriented health record and contains the following information:

- Chief complaint
- Present illness(es)
- Social history
- Medical history
- Physical examination
- Diagnostic test results

The initial plan serves as an overall road map for addressing each of the patient's problems. The plans are numbered to correspond to the problems they address.

The patient's healthcare provider uses progress notes to document how the patient's problems are being treated and how he or she is responding to treatment. Each progress note is labeled with the unique number assigned to the problem being addressed. Some providers also use a SOAP format for their problem-oriented progress notes. A subjective (S) entry relates significant information in the patient's words or from the patient's point of view. Objective (O) data includes factual information such as laboratory findings or provider observations. Professional conclusions reached from evaluation of the subjective or objective information make up the assessment (A), and any comments on or changes in plans (P) complete the framework. An example of a SOAP note can be found in figure 3.15. Not all SOAP components must be entered in every note. If the SOAP framework is used, only pertinent parts are documented. This problem-indexing system allows the healthcare provider to easily follow the patient's course of treatment regarding any specific problem. Ideally, other elements of the health record (for example, physician's orders) also would be numbered according to the problems they address.

Integrated Health Records

The third major type of paper-based health record is the integrated health record. The integrated health record is arranged so that the documentation from various sources is intermingled and follows strict chronological order. The advantage of the integrated format is that it is easy to follow the course of the patient's diagnosis and treatment. The disadvantage is that the format makes it difficult to compare similar information.

Strengths and Weaknesses of Paper-Based Health Records

The ultimate goal of every health record is to facilitate communication. A well-designed, well-maintained paper-based health record can significantly improve communication among healthcare providers and other health information end users. As the quality of healthcare services has advanced, so has the quality of health records. Advances in standardized format, standardized medical terminology, and improved information capture and delivery have improved the quality and value of the health record.

Figure 3.15. Example of a SOAP progress note

SOAP PROGRESS NOTE		
Identification Number		
Medical Record Number		
Last Name	First Name	Middle Initial
Date of Birth		
DATE	DEPARTMENT	PROGRESS NOTES
7-28-89	INT MEDICINE	#1 Diabetes Mellitus
		S: Occasionally gets hungry. No insulin reactions. Says she is following diet.
		O: Adequately controlled. FBS 110 mg %, urine sugar, no acetone.
		A: Insulin-dependent diabetes, controlled.
		P: Continue 40 units NPH insulin daily, 1,200 calorie diet, return visit in 2 weeks.
		#6 Hypertension
		S: No headaches, dizziness, etc.
		O: BP 140/90, (RA sitting); pulse 80
		A: BP satisfactory
		P: Continue with Diuril, 500 mg once daily. Return visit in 2 weeks.

Still, the paper-based health record has several weaknesses. Various quality, standardization, and timeliness issues need to be addressed and resolved. For example, the average health record is needed by approximately 150 end users. However, the paper-based health record can be viewed by only one user at a time and in only one place at a time. Thus, the valuable information recorded in the health record is often unavailable to individuals who need it.

Further, paper-based health records can be difficult to update. An active record of a patient receiving care moves often from provider to provider within the healthcare facility. The individual(s) responsible for updating its content must hand-carry paper documents to wherever the record is located in order to file them or wait until the record is returned. The result is that updates may be delayed.

Finally, paper-based health records are fragile and susceptible to damage from water, fire, and the wear and tear of daily use. They also can easily be misplaced or misfiled. For most organizations, it would be prohibitively expensive and difficult to maintain duplicate copies of paper health records as backups.

Electronic (Computer-Based) Health Records

The EHR can be seen as the natural evolution of the health record. By design, it not only addresses many of the paper-based health record's existing problems but also presents new capabilities. The discussion here focuses on the impact of the EHR on the generation of record content whereas a much broader description and analysis of the EHR is presented in chapter 4.

Definition of the Electronic Health Record

Although work is under way, there currently is no widely accepted definition for the EHR. As a result, it is often described in relation to the functions it should perform. Mon (2004b) provides this summary list as described by the Institute of Medicine:

- Collect clinical, administrative, and financial data at the point of care. When combined with alerts and evidence, this integrated view of patient data helps clinicians make better decisions.
- Exchange data more easily among providers to facilitate continuity of care.
- Measure clinical process improvement and outcomes, compare them against benchmarks, and facilitate clinical trials and research.
- Report health data to public health, regulatory agencies, and accreditation bodies to more quickly detect and monitor disease outbreaks, measure population health status, and assist with bioterrorism surveillance.
- Support enterprise-wide management reporting and other administrative and financial (for example, revenue cycle management) processes.

In fact, in July 2004, using the IOM's work as a foundation, a national standards group called Health Level Seven (HL7) introduced a list of about 130 different functions that would help define an EHR. Refinement of the functions will come as they receive rigorous review. However, the content of the record itself will continue to be based on the standards and regulations presented earlier in this chapter with amplification as other approved functions are determined.

Technological Basis of the Electronic Record

A number of technologies support EHR systems. Some of these technologies are discussed briefly in the following sections; health information systems and technology are discussed in detail in chapters 16 through 19.

Databases and Database Management Systems

Most electronic records are organized according to one of two unique data base models—the centralized record and the distributed record—or a mix of the two models. In the centralized model, patient health information and data are stored in a single central computer system. In the distributed model, patient health information and data are located in department-based computer systems or subsystems. Whichever model is used, it is important that the systems be able to communicate and share data elements.

Image Processing and Storage

The traditional paper-based health record included few photographs and diagnostic images. However, with the introduction of **imaging technology**, it is now possible to combine health record text files with diagnostic imaging files. This development has created the multimedia health record.

Electronic imaging solves many of the problems associated with traditional record keeping. For example, because the actual images never leave the control of the system administrator, lost files are no longer a problem. In addition, medical imaging allows more than one end user to view a document at the same time. Further, the digitized files make it possible to transfer images to remote locations quickly and easily.

Text Processing

Retrieving a single piece of information from a paper record can require a lot of time and effort. Many organizations have attempted to improve retrieval processes by standardizing chart formats or flagging documents to assist in locating key pieces of information. Although such methods are helpful, they have not completely resolved the problem of information retrieval.

The introduction of electronic applications has further improved text searching and retrieval because files now can be indexed. The introduction of database systems using query language applications has allowed end users to perform text searches and retrievals. The ability of computer applications to identify key words and phrases found in textual data has improved the ability to retrieve key pieces of information from the record.

However, progress in implementing this technology in healthcare has been delayed by the lack of a uniform vocabulary. Some of the early developers have said that a medical term can be expressed many different ways within a single organization. Even so, some progress is being made in the standardization of medical language. (See chapter 4.)

Data Input

Creating a workable data capture process has proved to be one of the major challenges facing EHR implementers. Transcription remains the most common type of data input mechanism. The end user either inputs the information or dictates it in report style to be transcribed.

Alternative data capture tools are being developed or refined to address the challenge of creating workable data capture processes.

Among these technologies are the following:

- Continuous voice recognition
- Optical character readers
- Bar code readers
- Document imaging
- Automated templates
- Structured data entry

In an ideal situation, the individual responsible for providing the service or treatment enters the data into the database at or near the time the service or treatment occurs. When recorded, the information is immediately available to all end users on a need-to-know basis.

Data Retrieval

The ultimate goal of any EHR system is to quickly deliver useful health information to the end user in the location where it is most needed. When developing a data retrieval system, the most effective approach considers the end user's needs. Designs must consider:

- *Presentation of data:* What is the most effective way to present the information—via text, graphs, or tables?
- *Need to know:* What information does the end user need to quickly understand the patient's condition and progress?
- *Quick-search capabilities:* What is the most effective way to enable the end user to retrieve factual information easily and quickly?
- *Analytical capabilities:* What is the best method to enable the end user to analyze and compare a full range of patient data, from historic information to current information?

Data Exchange and Vocabulary Standards

In the current healthcare information system (IS) environment, there are hundreds of IS vendors, limited industry IS standardization, and widespread use of proprietary software and technology. Healthcare professionals, managers, policy makers, regulators, and educators often struggle to share information among different computer systems. The problem faced by everyone wishing to share information is the lack of standardization. And in situations where IS standards do exist, there is a problem with noncompliance with existing standards. The slow progress toward industry standardization was a major contributing factor behind passage of the HIPAA legislation. Unlike industries such as banking and air travel, healthcare has been slow to accept standardization.

Recently, efforts toward the development of healthcare IS standards have gained momentum. Today, a number of standards organizations are working to develop IS standards for healthcare organizations, including:

- Health Level Seven (HL7)
- American Society for Testing and Materials (ASTM)

- The Institute of Electronic and Electrical Engineers (IEEE)
- American College of Radiologists/National Electrical Manufacturers Association (ACR/NEMA)
- International Standards Organization (ISO)
- Systematized Nomenclature of Medicine (SNOMED)
- National Library of Medicine (NLM)
- Unified Medical Language System (UMLS)

(AHIMA Workgroup on Core Data Sets 2004).

System Communications and Networks

The evolution of widespread networks of healthcare providers called integrated delivery systems (IDSs) and the initiation of voluntary regional health information organizations (RHIOs) have added another dimension to the EHR. By nature, the healthcare industry depends heavily on information. For an IDS or an RHIO to succeed, healthcare professionals must be able to readily communicate and transmit information to many different locations, sometimes across organizational lines.

Because of the importance of system communications and networks, IS administrators in healthcare must manage a number of existing and evolving communications technologies as well as balance the needs and wants of multiple end users. This variation in needs requires system administrators to juggle many technologies or to limit technology choices to only a few.

The various communication technology options include the following:

- Wireless
- Internet
- Extranet
- Broadband Internet
- Client server networks
- Fiber optics
- Application service providers

EHR Implementation: Benefits and Challenges

The benefits of EHR systems are obvious. For example, well-designed EHR systems:

- Make it possible to access information quickly and easily
- Allow multiple users to access the same information at the same time
- Permit view customization
- Increase ease of maintenance and updates
- Process large and difficult tasks quickly

- Permit ready access to volumes of professional resource information
- Maintain duplicate copies of information that can be retrieved should the originals be lost or damaged

Before EHR systems are successfully implemented, sizable challenges must be overcome. Among these challenges are the following:

- Lack of a clear definition
- Difficulty meeting the needs of multiple end users
- Lack of standardization
- Potential threat to privacy and security
- Development and implementation costs
- Organizational and behavioral resistance

Progress is being made in a number of these areas because of federal initiatives and cooperation among affected organizations.

Lack of a Clear Definition

Healthcare professionals can usually reach a consensus on a general description of an EHR. However, beyond that there are many unanswered questions. The current EHR lacks a common data model, a common set of data elements, a common vocabulary, and a common structure, although efforts are under way in a number of these areas. (See chapter 4.)

Difficulty Meeting the Needs of Multiple End Users

The ultimate goal of EHR developers is to create a system that is user-friendly. Such a system would be centered on users, networked across care settings, and specialized in terms of use and circumstances.

However, being all things to all end users creates a real challenge for system designers. For example, certain end-user specifications cannot coexist in the same application. The greater the amount of variation, the greater the complexity of the application programs. Moreover, as users learn more about computers, they place additional demands on system designers. Despite these challenges, user participation in computer system design and implementation is a prerequisite to success.

Lack of Standardization

The modern American consumer can purchase a toaster in any appliance store and be assured that it will plug into a wall socket as long as the wall socket is in the United States. This ability to use any toaster in any wall socket is the result of planned standardization. However, this level of standardization does not currently exist for the EHR, although the development of standards has been identified as a priority by the federal government. In 2005, the Certification Commission for Healthcare Information Technology, a private sector, voluntary effort was initiated. The group's first task is to develop standards to be applied to information technology products seeking certification for EHR use in the United States. It will use the HL7 functionality standards as a starting point (Mon 2004a). (See also chapter 4.)

Potential Threat to Privacy and Security

The characteristics that make the EHR a powerful tool also directly affect the privacy and security of the information contained within the system. The challenge is to find the balance between access and restriction. It would be easy to blame threats to privacy and security on the electronic record, but privacy and security issues have been around long before computerized records were introduced. Moreover, technology is not the only challenge to ensuring privacy and security. The challenges posed by society, human nature, policy, procedure, and legislation also must be taken into consideration.

Development and Implementation Cost

An important barrier to purchasing and installing EHR systems is cost. Many organizations would prefer to maintain the status quo rather than spend hundreds of thousands of dollars on a new system. In many cases, the benefits of the EHR system would more than justify the purchase and installation costs. However, uncertainty about the cost-to-benefit ratio of installing an EHR system prevents many organizations from committing to system implementation. Organizations must consider not only the software and hardware purchase costs, but also the staff training costs involved in EHR system implementation.

Organizational and Behavioral Resistance

Finally, healthcare professionals must realize that organizational change occurs more slowly than technological change. Working with practitioners to change long-standing habits is a challenge. Incremental steps must be encouraged and celebrated. The technology is available now and standards are being addressed, but organizations must develop their own time line for implementation that involves their specific provider population.

Hybrid Health Records

One method of overcoming some of the EHR hurdles is for the healthcare setting to move in steps from paper-based systems to full EHR adoption. If planned appropriately, this allows the facility to thoroughly investigate the needs of its users and gradually address the weaknesses and challenges of an EHR. A record in this type of system is referred to as a hybrid health record.

Definition of the Hybrid Health Record

In a series of practice briefs on hybrid records, the AHIMA e-HIM Workgroup used the following description (2003b):

A hybrid health record is a system with functional components that:

- include both paper and electronic documents
- use both manual and electronic processes

On the basis of this description, a hybrid record has many formats. For example, one facility may have laboratory and other diagnostic reports reported electronically, but the remainder on paper. This facility may take an EHR step by scanning all the paper documents upon patient discharge to make a full record accessible electronically for subsequent users. Another organization may have most record components generated electronically by providers as care is delivered, scan all other documents that are not part of the system, and have alerts and reminders that assist in clinical and care decision support.

Transitions in Record Practices

Hybrid records are positive steps toward the EHR, but they also create special challenges. Both manual and computer processes must be supported, policies and procedures are needed for both types of systems, and appropriate safeguards must be in place for privacy and security of both systems. A definition of what constitutes a record in each system must be developed. As the transition occurs, it also is important to regularly update system descriptions, including the location of all care documents, so that patient health information remains readily available to users. The AHIMA e-HIM Workgroup (2003) suggests a matrix for this step and provides an example. (See table 3.4.)

As the electronic system develops, different versions of documents may exist and these also must be monitored and logged for both legal and practice purposes. Additionally, the AHIMA e-HIM Task Force (2004) describes in detail changes in health information processes and procedures that are required as a record transitions from paper to hybrid to fully electronic formats.

Examples of Hybrid Systems

Many different types of healthcare organizations use hybrid systems. The following sections present some actual applications.

Physician Office Systems

Kaiser Permanente-Colorado is a large medical network located in the Denver-Boulder area. The network consists of 17 medical offices, 600 physicians, 2,500 staff, and 350,000 members. Network executives report that 25,000 health records must be delivered across its 100-square-mile service area every day.

To address this challenge, Kaiser Permanente-Colorado implemented a networkwide EMR. This system is based primarily on electronic imaging system technology. Before introduction of the EMR, the 152 HIM staff members spent 90 percent of their time tracking down and delivering paper records. Today, they spend most of their time scanning documents and cataloging them for reference within the electronic system.

Implementation of the new system has resulted in a reduction in the number of HIM staff members to seventy-five. Not surprisingly, many of the eliminated positions were medical record couriers. However, through careful planning, all the displaced employees have found new jobs within the network. The most significant change in terms of care delivery is that two physicians involved in the care of the same patient now can view the patient's records at the same time and consult with each other immediately (Burgess et al. 1999, 33).

Ambulatory Record Systems

Hall Health Primary Care Center (HHPCC) is a community-based primary care center at the University of Washington in Seattle. By the mid-1990s, HHPCC had outgrown its paper-based health record system. It had become difficult to share information among the University of Washington Academic Medical Center, HHPCC, and the multiple clinics that served patients daily.

In December 1995, HHPCC began implementing its new electronic system one clinic at a time. The women's clinic was chosen as the first site for implementation because it was the smallest, with only four clinicians. The implementation process began with the automation of progress notes. Some time later, scanner technology was introduced.

Table 3.4. Hybrid health record legal source legend

Organization's Name HYBRID HEALTH RECORD LEGAL SOURCE LEGEND				
Report/Document Types	LHR Media Type (P)aper/ (E)lectronic	Source System Application (nonpaper)	Electronic Storage Start Date	Stop Printing Start Date
Admission History & Physical	P/E	System 1	1/1/2002	1/1/2003
Attending Admission Notes	P			
Physician Orders	E			
Inpatient Progress Notes	P			
Discharge Summary	E	System 1	1/1/2002	4/1/2002
Inpatient Transfer Note	E	System 1	1/1/2002	
Outpatient Progress Notes	P			
Clinical Laboratory Results— (Preliminary/Interim)	E	System 2	1/1/1999	1/1/1999
Clinical Laboratory Results (Final)	E	System 2	1/1/1999	1/1/2000
Radiology Reports	E	System 3	7/1/2003	
Care Flow Sheets	E	System 1	6/1/2003	
Medication Records	E	System 1	7/1/2003	
Clinical Consult Reports	E	System 1	1/1/2002	
Pre-operative, Pre-procedure Notes	P			
Pathology Reports	E	System 2	1/1/1999	1/1/2000
Organ/Tissue Donation or Transplants	P			
Patient Problem List (Summary List)	E	System 1	8/1/2003	
Urgent Care and Emergency Records	P			
Consents ¹	E	System 4	TBD	
Advance Directive				
Correspondence ¹	E	System 4	TBD	
Pre-operative Anesthetic Assessments and Plans	P			
Intra-operative Documentation	P			
Post-Operative Documentation	P			
Brief Post-Operative Note	P			
Surgical Operative Reports	E	System 1	1/1/2002	
¹ Scanned electronic documents Source: AHIMD 2003.				

HHPCC soon discovered that it faced many challenges, including:

- Software incompatibility
- Provider resistance
- Changes in work flow
- Too much paper

However, as a result of the implementation, HHPCC has seen many benefits and improvements, including:

- Improved chart legibility
- Ability to integrate practice guidelines
- Increased access by multiple users
- Reduced duplication of services
- No more lost charts
- Improved communication
- Access to professional resources

Using the computer-based record changed the way that HHPCC worked. Changes occurred at all levels (Burgess et al. 1999, 33). In some cases, employees saw changes in their job descriptions and were required to learn new skills.

Hospital Systems

For the 570-bed Stanford University Medical Center in Palo Alto, California, the move to an electronic record was a gradual one. The medical center began by installing imaging technology and scanning for all the medical records produced by the system. Later, it added a clinical data repository. Next, the center addressed clinical results reporting and physician order entry. “If you come to our medical records room now, all you will see is space, as there is no longer a file room,” reports Russ Peckenpaugh, interim chief information officer.

The electronic record implementers at Stanford have found that some of the greatest challenges they face are cultural, organizational, and even psychological. Computer-based record implementation at Stanford created a strong partnership between the IS department and the HIM department. The HIM staff members found that they became more IS sophisticated as they focused on how the “customers” use the information (Burgess et al. 1999, 33).

Department of Veterans Affairs

Physical size is the most glaring difference between the electronic implementation efforts at the Department of Veterans Affairs and the work being done at the organizations discussed above. The Veterans Health Administration (VHA) encompasses 173 medical centers, 450 outpatient clinics, 131 nursing homes, and 39 domiciliaries (group homes). To be successful, the electronic record system had to capture and exchange data throughout the

nationwide organization, as well as with other government entities. For the VHA system to be all things to everyone, flexibility and portability had to be key characteristics.

The developers of this EHR focused on the VHA's three main missions: patient care, research, and education. In the area of patient care, the EHR system fosters coordinated care among providers at different locations, improves the legibility of records, and enhances the timeliness of information access. In support of research activities, the EHR system offers standardized data and improved data accuracy. Finally, the EHR system enhances the VHA's educational programs by increasing communication among staff, residents, and interns. It also enables the use of decision support tools and enhances the efficiency of clinical management.

Check Your Understanding 3.4

Instructions: Choose the most appropriate answer for the following questions.

1. ____ Which type of health record includes both paper and computerized components?
 - a. Hybrid
 - b. Electronic
 - c. Problem oriented
 - d. Source oriented
2. ____ Which of the following is not an advantage of an EHR over a paper-based record?
 - a. Allows customization to user needs
 - b. Permits multiple users at the same time
 - c. Enables duplicate copies to be made easily
 - d. Requires privacy and security measures
3. ____ In an integrated health record, documentation by health professionals is organized _____.
 - a. In sections by type of professional
 - b. In sections by problem number
 - c. Intermixed in date sequence
 - d. Depends on facility policy
4. ____ The patient indicates that her pain is worse. In which part of a SOAP note would this information be recorded?
 - a. Subjective
 - b. Objective
 - c. Assessment
 - d. Plan
5. ____ Which of the following electronic record technological capabilities would allow an x-ray to be sent to a physician in another state?
 - a. Database management
 - b. Image processing
 - c. Text processing
 - d. Vocabulary standards
6. ____ Which of the following is true of paper-based records?
 - a. They are susceptible to damage from fire or floods.
 - b. They lack standardization.
 - c. They are easy to access and update.
 - d. They require a limited number of personnel to process.

7. ____ A definition of what constitutes a record, recording where each component is located, and noting dates of format changes are particularly important in ____.
 - a. Electronic records
 - b. Integrated records
 - c. Paper records
 - d. Hybrid records
 8. ____ In a problem-oriented health record, problems are organized by ____.
 - a. Letter
 - b. Number
 - c. Patient name
 - d. Body system
 9. ____ Health Level Seven (HL7) has developed guidelines that address which aspect of the electronic record?
 - a. A standard vocabulary
 - b. Network communication standards
 - c. Definition of functions
 - d. Overcoming resistance
 10. ____ Which type of data input mechanism is commonly used in both paper and electronic environments?
 - a. Voice recognition
 - b. Transcription
 - c. Bar code readers
 - d. Automated templates
-

Real-World Case

When St. James Hospital began developing its electronic record, system designers set out to capture every bit of information available. The unofficial goal of the implementation team was to compile all available health information into a single system and provide the means to deliver the information instantaneously to end users on demand. However, the large volumes of information, overcrowded computer screens, and lack of uniform structure soon proved overwhelming for the system's end users. Their feedback called for useful information formatted in a usable structure.

In response to end-user frustration, designers took a hard look at the information that was being captured. They considered the following questions:

- How is health information formatted and structured?
- How long is health information retained?
- What information is purged from the system?
- What health information is archived?
- How much control should end users have over the information they are allowed to access?

Summary

The records maintained by healthcare providers for patients—no matter the illness or healthcare setting—all contain similar information (for example, chief complaint/reason for visit, history and physical or assessment and plan, progress notes, diagnostic test results, and orders). However, some settings and medical specialties have documentation requirements that are unique to their fields.

Accreditation standards, state and federal laws, and facility policies all affect the content of the health record. Although standards and policies must be complied with, facilities should not lose sight of the primary purpose of the health record: to facilitate effective patient healthcare. Facilities must organize and maintain health records in a way that ensures that the information in them is complete and easy to retrieve. The end result is that healthcare providers can use the information effectively to make wise treatment decisions.

HIM technicians are often positioned within their employment settings to significantly influence established documentation practices. Their knowledge of quality coding principles clarifies the impact of documentation on reimbursement. Their experience in performance improvement clarifies the impact of documentation on the quality and continuity of patient care. And their expertise in release-of-information functions clarifies the impact of documentation on liability issues.

Bringing order to chaos is the primary justification for formalizing the content and structure of the health record. Health records that lack structure are of little use to the healthcare providers who use the information in them to make decisions about patient care. Thus, for health information to be useful, it must be expressed in a vocabulary that end users understand and organized in a predictable format. It also must provide details specific to the problem being addressed. In addition, the information must be current, legible, and accurate.

The challenge for EHR system designers is to develop computer systems that are flexible, accessible, and portable enough to meet the unique needs of every healthcare provider, administrator, researcher, educator, and policy maker.

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