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An American National Standard

Standard Guide for Content and Structure of the Electronic Health Record (EHR)[1]

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ε[1] NOTE—Editorial corrections were made throughout the Annex and in Table 6 in February 2000.

1. Scope

1.1 This guide covers all types of healthcare services, including those given in acute care hospitals, nursing homes, skilled nursing facilities, home healthcare, and specialty care environments as well as ambulatory care. They apply both to short term contacts (for example, emergency rooms and emergency medical service units) and long term contacts (primary care physicians with long term patients). At this time, the standard vocabulary reflects more traditional care. As the standard evolves in the next revisions, the vocabulary will more adequately encompass the entire continuum of care through all delivery models, health status measurement, preventive case, and health education content.

1.2 This guide has five purposes. The first is to identify the content and logical structure of a Electronic Health Record (EHR). The record carries all health related information about a patient over time. It includes such things as observations or descriptions of the patient (for example, the physician's or nurse practitioner's history and physical, laboratory tests, diagnostic imaging reports), provider's orders for observations and treatments, documentation about the actions carried out (for example, therapies or drugs administered), patient identifying information, legal permissions, and so on.

1.2.1 The second goal is to define the relationship of data coming from diverse source systems (for example, clinical laboratory information management systems, order entry systems, pharmacy information management systems, dictation systems), and the data stored in the Electronic Health Record. Recalling that the EHR is the primary repository for information from various sources, the structure of the EHR is receptive to the data that flow from other systems.

1.2.2 Third, in order to accelerate the adoption of EHRs, this guide provides a common vocabulary, perspective, and references for those developing, purchasing, and implementing EHR systems, but it does not deal either with implementation or procurement.

1.2.3 Fourth, this guide describes examples of a variety of views by which the logical data structure might be accessed/displayed in order to accomplish various functions.

1.2.4 Fifth, this guide relates the logical structure of the EHR to the essential documentation currently used in the healthcare delivery system within the United States in order to promote consistency and efficient data transfer. It maps to the clinical data currently in existing data systems and patient care records.

2. Referenced Documents

2.1 *ASTM Standards:*

E 792 Guide for Selection of a Clinical Laboratory Information Management System[2]

E 1238 Specification for Transferring Clinical Observations Between Independent Computer Systems[2]

E 1239 Guide for Description of Reservation/Registration-Admission, Discharge, Transfer (R-ADT) Systems for Automated Patient Care Information Systems[2]

E 1381 Specification for Low-Level Protocol to Transfer Messages Between Clinical Instruments and Computer Systems[2]

E 1394 Specification for Transferring Information Between Clinical Instruments and Computer Systems[2]

E 1460 Specification for Defining and Sharing Modular Health Knowledge Bases (Arden Syntax for Medical Logic Modules)[2]

E 1467 Specification for Transferring Digital Neurophysiological Data Between Independent Computer Systems[2]

E 1633 Specification for the Coded Values Used in the Computer-Based Patient Record[2]

E 1712 Specification for Representing Clinical Laboratory Test and Analyte Names[2]

E 1715 Practice for an Object-Oriented Model for Registration, Admitting, Discharge, and Transfer (RADT) Functions in Computer Based Patient Record Systems[2]

E 1769 Guide for Properties of Electronic Health Records and Record Systems[2]

2.2 *ISO Standards:*[3]

[1] This guide is under the jurisdiction of ASTM Committee E-31 on Healthcare Informatics and is the direct responsibility of Subcommittee E31.19 on Electronic Health Record Content and Structure.

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[2] *Annual Book of ASTM Standards*, Vol 14.01.

[3] Available from ISO, 1 Rue de Varembe, Case Postale 56, CH 1211, Geneve, Switzerland.

IS 5218 1977 Information Interchange—Representation of Human Sexes
IS 1000 1981 SI Units and Recommendations for the Use of Their Multiples and of Certain Other Units
IS 2955 1983 Information Processing—Representation of SI and Other Units in Systems with Limited Character Sets
IS 8072 1984 Information Processing Standard—Open System Interconnection Transport Service Definition
IS 8601 1988 Data Elements and Interchange Formats—Information Interchange (Representation of Dates and Times)
IS 6937:1994 Information Technology—Coded Graphic Character Set for Text Communication (Revision of Parts 1 and 2)
IS 10367:1991 Standardized Coded Graphic Character Sets for Use in 8 Bit Codes

2.3 *Other Health Informatics Standards:*
HL7 Health Level Seven (HL7) Version 2.2 1994[4]
ACR/NEMA DICOM Version 3.0[5]
NCPDP National Council for Prescription Drug Programs (NCPDP) Telecommunication Standard Format Version 3 Release 2, 1992[6]
ANSI ASC X12: Version 3, Release 3 (1992)[7]
X12.84 Healthcare Enrollment and Maintenance Transaction Set (834)[8]
X12.85 Healthcare Claim Payment Transaction Set (835)[8]
X12.87 Healthcare Claim Transaction Set (837)[8]

2.4 *ANSI Standards:*[8]
X3.30:1985 [R 1991] Representation for Calendar Date and Ordinal Date
X3.4:1986 [R 1992] Coded Character Sets—American National Standard Code for Information Interchange (7-bit ASCII)
X3.43:1986 [R 1992] Information Systems Representation of Local Time of Day for Information Interchange
X3.50:1986 [R 1992] Representations for U.S. Customary, SI, and Other Units to Be Used in Systems with Limited Character Sets
X3.51:1994 Representations of Universal Time, Local Time Differentials, and United States Time Zone References for Information Interchange

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *admitting diagnosis*—a statement of the provisional condition given as the basis for admission to the hospital for study.

3.1.2 *ambulatory care*—also called "outpatient care," that preventive or corrective healthcare, or both, provided in practitioner's office or clinic setting, or in the hospital on a nonresident basis (that is, not requiring overnight stay and not included in the census). While many inpatients may be ambulatory, the term ambulatory usually implies that the patient has come to a location other than his or her home and has departed that same day. (Ambulatory care includes non-medical healthcare sites, for example, acupuncture.)

3.1.3 *ambulatory surgery center*—a free-standing or hospital-based facility offering surgical procedures on patients who are admitted and discharged from the facility on the day of the surgery.

3.1.4 *ancillary service visit*—appearance of an outpatient in a unit of a hospital or outpatient facility to receive service(s), test(s), or procedures; it is ordinarily not counted as an encounter.

3.1.5 *clinic*—an outpatient facility providing a limited range of healthcare services, and assuming overall healthcare responsibility for the patients.

3.1.6 *clinic patient*—admitted for diagnosis or treatment or follow-up on an ambulatory basis; the clinic assumes overall medical responsibility for the patient.

3.1.7 *continuing care retirement community*—an organization established to provide housing and services, including healthcare, to people of retirement age.

3.1.8 *electronic health record (EHR)*—an electronic patient record that resides in a system specifically designed to support users by providing accessibility to complete and accurate data, alerts, reminders, clinical decision support systems, links to scientific knowledge, and other aids.

3.1.9 *emergency patient*—a patient admitted to emergency room service of a hospital for diagnosis and therapy requiring immediate healthcare services.

3.1.10 *emergency services*—immediate evaluation and therapy rendered in emergency clinical conditions, sustained until the patient can be referred to his or her personal practitioner for further care.

3.1.11 *encounter*—(*1*) An instance of direct (usually face-to-face) interaction, regardless of the setting, between a patient and a practitioner vested with primary responsibility for diagnosing, evaluating or treating the patient's condition, or both, or providing social worker services. (Encounters do not include ancillary services visits or telephone contacts.) (*2*) A contact between a patient and a practitioner who has primary responsibility for assessing and treating the patient at a given contact, exercising independent judgment.

3.1.12 *episode*—one or more healthcare services received by an individual during a period of relatively continuous care by healthcare practitioners in relation to a particular clinical problem or situation.

3.1.13 *health maintenance organization*—an organization which provides health coverage to voluntary enrollees in return for prepayment of a set fee, regardless of the services used.

3.1.14 *home healthcare*—clinical care provided or supervised by a practitioner, administered at the patient's home or place of residence, thus allowing the patient to remain at home during an illness. Home healthcare also addresses care for people with permanent alterations in their health or functional status.

[4] Available from HL7, Mark McDougall, Executive Director, 900 Victors Way, Suite 122, Ann Arbor, MI 48108.
[5] Available from ACR/NEMA.
[6] Available from NCPDP, 4201 North 24th Street, Suite 365, Phoenix, AZ 85016.
[7] Available from DISA (Data Interchange Standards Association).
[8] Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

3.1.15 *hospice*—a program emphasizing psychosocial support and home physical care, with inpatient care when needed, for terminally ill patients and their families.

3.1.16 *hospital*—an establishment with an organized medical staff with permanent facilities that include inpatient beds and continuous medical/nursing services and that provide diagnosis and treatment for patients.

3.1.17 *hospital-based outpatient care*—a subset of ambulatory care utilizing the hospital staff, equipment, and resources to render preventive or corrective healthcare, or both.

3.1.18 *inpatient admission*—the formal acceptance by a hospital of a patient who is to be provided with room, board, and continuous nursing service in an area of the hospital where patients generally stay at least overnight.

3.1.19 *intermediate care facility (ICF)*—an institution which primarily provides health-related care and services to individuals who do not require the degree of care or treatment which a hospital or skilled nursing facility is designated to provide, but who, because of their physical or mental condition, require care and services.

3.1.20 *length of stay (LOS)*—the total number of patient days for an inpatient episode, calculated by subtracting the date of admission from the date of discharge. If a patient is admitted and discharged on the same date, the LOS is one day.

3.1.21 *licensed practitioners*—an individual at any level of professional specialization who requires a public license/certification to practice the delivery of care to patients. A practitioner can also be a provider.

3.1.22 *long-term care*—healthcare rendered in a non-acute-care facility and to a patient in resident or non-resident status; such illness is not severe enough to require an acute care facility, but is in need of continual supervision and assistance by healthcare practitioners.

3.1.23 *longitudinal patient record*—a permanent, coordinated patient record of significant information, in chronological sequence. It may include all historical data collected or be retrieved as a user designated synopsis of significant demographic, genetic, clinical and environmental facts and events maintained within an automated system.

3.1.24 *non-licensed practitioner*—an individual without a public license/certification who is supervised by a licensed/certified individual in delivering care to patients.

3.1.25 *outpatient care*—see *ambulatory care*.

3.1.26 *partial hospital program*—facilities of the hospital are regularly used on a scheduled care basis for a substantial number of daytime or nighttime hours.

3.1.27 *patient health record*—the primary legal record documenting the healthcare services provided to a person, in any aspect of healthcare delivery. This term is synonymous with: medical record, health record, patient care record (primary patient record), client record, resident record. The term includes routine clinical or office records, records of care in any health-related setting, preventive care, life style evaluation, research protocols, special study records and various clinical databases.

3.1.27.1 *Discussion*—As the repository of information about a single patient, this information is generated by healthcare professionals as a direct result of interaction with a patient or with individuals who have personal knowledge of the patient (or with both). The record contains information about the patient and other individuals as they relate to the health of the patient, for example, family history, caregiver support.

3.1.28 *patient record system*—the set of components that form the mechanism by which patient records are created, used, stored, and retrieved. A patient record system is usually located within a healthcare provider/practitioner setting. It includes people, data, rules and procedures, processing and storage devices (for example, paper and pen, hardware and software), and communications and support functions.

3.1.29 *primary diagnosis*—the diagnosis of the condition that is primarily responsible for the patient's symptoms and signs and has the greatest impact on the patient's health, or is the most resource-intensive to treat.

3.1.30 *primary patient record (primary record of care)*—the record that is used by healthcare professionals while providing patient care services to review patient data or document their own observations, actions, or instructions. (Same as patient health record.)

3.1.31 *principal diagnosis*—a statement of the condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

3.1.32 *provider*—a business entity which furnishes healthcare to a consumer; it includes a professionally licensed practitioner who is authorized to operate a healthcare delivery facility.

3.1.33 *referred*—admitted exclusively to special diagnostic/therapeutic service of the hospital for diagnosis/treatment on an ambulatory basis. Responsibility remains with the referring practitioner.

3.1.34 *resident care facility*—a residential facility that provides regular and emergency health services, when needed, and appropriate supporting services on a regular basis.

3.1.35 *school special education*—specifically designed instruction provided by qualified teachers within the context of school, aimed at the acquisition of academic, vocational, language, social, and self-care skills. Includes adapted physical education and use of specialized techniques to overcome intrinsic learning deficits.

3.1.36 *secondary diagnosis*—a statement of those conditions coexisting during a hospital episode that affect the treatment received or the length of stay.

3.1.37 *secondary patient record*—a record that is derived from the primary record and contains selected data elements to aid nonclinical (that is, persons not involved in direct patient care) in supporting, evaluating, or advancing patient care. Patient care support refers to administration, regulation, and payment functions. Patient care evaluation refers to quality assurance, utilization review and medical or legal audits. Patient care advancement refers to research. These records are often combined to form what the committee terms a secondary data base (for example, an insurance claims data base).

3.1.38 *sheltered employment*—employment provided in a special industry or workshop for the physically, mentally, emotionally, or developmentally handicapped.

3.1.39 *short stay ambulatory care*—a patient admitted to the hospital for an intended stay of less than 24 h, considered to be

an outpatient and not included in inpatient hospital census statistics.

3.1.40 *UB-92 uniform bill*—a standardized uniform billing form required by federal authorities for Medicare claims and is used as an industry standard. It replaces the 1982 (UB-82) version.

3.1.41 *vocational rehabilitation*—evaluation and training aimed at assisting a person to enter or reenter the labor force.

4. Significance and Use

4.1 *The Body of This Guide has Four Parts*:

4.1.1 The first part (Section 5) identifies all items of information carried in the traditional paper record using the source oriented structures common to paper records. For example, physician notes are recorded in one place, nurses' notes in another and EKG's in still another, according to the department that produces the report. The purpose of this section is to remind users of the spectrum of information that shall be accommodated by the logical structure of a EHR and to present a point of reference for the more abstract description of the patient record that follows.

4.1.2 The second part (Section6) presents a number of operational principles, including such matters as privacy and security that should guide the implementation and operation of EHRs.

4.1.3 The third part (Section 7) describes a logical organization and content (common data model) of a EHR that is presented as a model. It is not a blueprint for constructing or implementing a EHR system. The model deals with the major structures and content of the EHR and with the relationships of the data elements that comprise it. The focus is on the structure required to store all clinically relevant patient information: those that describe the patient's state; the actions directed at the patient variables; and the actions initiated to diagnose, educate, or treat the patient. These are regarded as repository functions of the EHR. This standard does not describe all of the data structures required by applications that might use information contained in the EHR. In particular, the data structures used to control and guide the process of care such as utilization review or quality assurance, and the goals or thresholds (for example, mean length of stay) that might be used to judge the patient's care are not included.

4.1.3.1 Data structures used to store goals and criteria which are used to control the process (for example, quality assurance, utilization review, etc.) are complex, and are evolving very rapidly at the present time; they will merely be referenced in this standard. Likewise, explicit structures for dealing with all special cases (for example, observations made on twins in utero and the record created after they are born) are also not included. They are mentioned to suggest compromises that trade complexity with feasibility. However, as experience with EHRs is gained these objects will be more fully defined **1-3.**[9] There are many different ways to implement physical structures that could map into the model presented. It is emphasized again that this standard should neither impede technical progress nor define the precise manner in which the EHR system is implemented. However, implementations should be mappable to the model presented here, especially when considering interfaces to outside systems.

4.1.3.2 At this time, this model defines neither all of the detailed implemented physical structures in some systems nor all of the functional capabilities that may have been implemented. This standard should not limit the inventiveness of developers, and we can not presume to know the capabilities that future technologies may bring. The focus is both upon the kinds of information that should be included and upon a global description of the organization of that data within the EHR. This guide does not deal in detail with issues related to charges and billing for patient care, only the documentation required to support usual charging and administrative issues.

4.1.3.3 This standard deals with the health information as it would be stored in the EHR, not as it would be sent as a message to or from the EHR. Pains have been taken to be sure that the information content from existing healthcare informatics messages that lie within the scope of the EHR can be mapped into the EHR structure. Where mappings are one-to-one, the EHR data elements have been cross referenced with the message fields. However, the EHR is not just a collection of messages. It makes stronger assumptions about the context in which it exists, so there is not perfect correspondence between the structure and content of messages on the one hand and the EHR on the other.

4.1.3.4 This guide applies across a range of scales. Though the ultimate goal is a EHR that spans the entire nation and the lifetime of an individual, the reality is that EHRs are mostly of much smaller scope (for example, within institutions, communities, or states) and these can be implemented much sooner. This standard is intended to apply equally to all scopes of time and place. Within the scope of a EHR all master tables and code systems (for example, service catalog, patient registry, patient identifier) will be held in common. At the outset it cannot be guaranteed that independent EHRs will have the same degree of commonality but it is assumed that any mappings between different patient identifiers, different test or location identifiers occurs at the interface to the EHR. This perspective does not imply any lack of support for national conventions for these entities but rather provides an evolutionary path to their adoption.

4.1.4 The fourth part (Sections 8, 9, 10) describes some alternative views (subsets of information presented in various orderings) of the content and considers what should be the minimum data elements contained in the EHR. What has been described as the "Longitudinal Health Record" (a very short precis of the patient's entire history) falls into this category. A set of "views" will serve as the user interface to the EHR for various customers. When all of the data is available in a EHR, providing different views of that data to satisfy various user needs and perspectives will be easy. Further, the kinds of views that are "required" and their dependencies (differing by institution, by specialty, by health/medical problem, by practitioner) will evolve over time. Section 10 is a repository of data elements to be used as a electronic health record data dictionary (Annex A1).

[9] The boldface numbers in parentheses refer to the list of references at the end of this standard.

4.2 *General—Healthcare Documentation*:

4.2.1 A patient's health record plays five unique roles: (*1*) It represents that patient's health history, that is, a record of the patient's health states and the health services provided, over time. (*2*) It provides a method for clinical communication and care planning among the individual healthcare practitioners serving the patient. (*3*) It serves as the legal document describing the healthcare services provided. (*4*) It is a source of data for clinical, health services, and outcomes research. (*5*) It serves as a major resource for healthcare practitioner education.

4.2.2 Keeping complete and accurate records is an essential part of patient care management. Increasing specialization in healthcare and population mobility has increased the fragmentation of the traditional health record. Ad hoc health records are generated and kept at the site of the service. This fragmentation of the health records is medically undesirable: it leads to duplication of data gathering for patient histories, it obscures long term clinical trends, it leads to duplication of tests and unnecessary diagnostic studies, and it results in delays in needed testing and treatment. Also, it causes annoyance, dissatisfaction, and concerns about quality and safety on the part of the patient. The EHR offers a unified, coordinated, complete repository of patient health information. It includes such things as treatments, prescriptions, test results, diagnostic impressions, and significant genetic, environmental, and clinical healthcare data. The primary goal of this guide is to characterize the patient health record and to define the necessary aspects of the primary medical care documentation.

4.2.3 The patient's health record consists of the original documentation of the services provided at the various care sites. Ideally it should also include the results of tests and outcomes of treatments prescribed at any of those encounters. Each care site will require basic data that may be common to all care sites, data specific to that particular type of care site, and data unique to the individual care site. It should also include the rationale for services.

4.2.4 The EHR serves all of the functions of the traditional primary record of care but has many advantages.

4.2.4.1 It will solve the logistic problems of the paper health/medical record. Information can be accessed from multiple locations.

4.2.4.2 It will provide efficient communication of information to support coordination of services between care practitioners.

4.2.4.3 For information that is stored in a structured and computer understandable fashion, the EHR will provide automatic reminders and alerts to avoid errors of omission and commission, improve the usage of preventive care services, and shape practice patterns to more uniform standards.

4.2.4.4 By providing cross-patient retrievals it will provide the statistics needed by clinical, outcomes, health services and policy researchers as well as administrators and managers, to define better policies and practices to improve the healthcare process and make it efficient.

4.2.5 The longitudinal healthcare record, which is the brief synopsis of the significant facts derived from the primary documentation, can be constructed from views of the elements described here.

4.3 *The Role of Standards in Healthcare Documentation*:

4.3.1 Healthcare informatics standards are essential for an efficient and affordable EHR. Even within a single institution, much of the information that should be stored in the EHR will come from other electronic sources. Message standards are needed to ensure that this data can be transmitted from a source system and received and stored with a EHR without requiring human intervention. The need for information from other healthcare facilities (the hospital would like nursing home records when the patient is admitted and vice versa when the patient is discharged) is even greater. Finally, standard terminology, codes, and formats are the sine qua non for aggregating many EHRs for research and policy purposes.

4.3.2 The model for a EHR described here provides a general guideline regarding storage of different kinds of information, suggests minimal content requirements in specified circumstances and promotes common approaches to documentation in other care settings. The model should be flexible enough to permit the storage of any kind of patient information deemed important by an individual provider, ensure that a minimum set of patient data is maintained, as well as information required by diagnostic and therapeutic services of the future.

TABLE 1 Contents of the Traditional Patient Record

Category	Subcategory	Examples and Components
Patient registration information	Identifying information	Sex, birth date, race
	Locating information	Home address, home phone, work phone
	Insurance information	Name of plan
	Guarantor information	...
Patient problem list	...	Problem number
		Problem name
		Date of onset, status
Patient extended encounters	Hospitalization admission records	Insurance information (for current encounter), guarantor information (for current encounter), chief complaint, diagnoses, clinical variables (observations, tests, measurements), final diagnosis/problem, corrections to registration information, procedures performed, etc.
	Practitioner hospital notes	
	Practitioner visit notes	
	Home healthcare notes	
	Hospital discharge summary	
Encounters	Office/clinic visit	

TABLE 1 *Continued*

Category	Subcategory	Examples and Components
	Home healthcare visit	
	Practitioner visit within	
	Extended stay	
	Emergency room visit	
Patient care plans	Clinical roadmaps	Assessment data
	Chronic disease management	Plans delineating therapy, education, scheduled appointments
	Plans for specific patient problems	
Orders	Medication orders/prescription	
	Test orders	(both continuing orders, for example, Hgb QAM, and point orders, for example, glucose stat)
	Diet orders	
	Other treatment orders	
	Physical therapy order	
	Occupational therapy order	
	Respiratory therapy order	
	Nursing treatments order	
	Other observation orders	
	Nursing observations (also independent of orders)	
	Consults (to variety of clinical specialists)	
	Nursing interventions	
Service Instances	Confirmation of receipt of orders	
	Documentation of completion of each step of process (for example, MAR report)	
Procedures	Surgical procedure	Pre-procedure orders, pre-operative diagnosis, procedure identifier, provider(s) performing procedures, permissions for procedure, procedure note, duration of procedure, medication used, immunizations, complications, final diagnosis, post-operative orders, after care plans
	Outpatient procedures	
	Invasive diagnostic studies	
	Bedside procedures	
	Imaging studies	Thyroid scan, chest X-ray, cardiac echoes, OB ultrasound, vascular dopplers, cardiac catheterizations
	Physiologic tracings	EEGs, EKGs, prenatal monitors, cardiac monitors
	Other special studies	Glaucoma fields, pulmonary function, sleep studies
	Practitioner notes	Physicians', nurses', physical therapists', etc., notes
	Provider discrete observation	Blood pressure, heart rate, skin fold thickness, eye tonometry, infant's head circumference
	Identifying information	Patient's name and identifying number
	Health history	Chief complaint
		Source of history
		Present illness
		Family Hx
		Social Hx
		Functional status Hx
		Travel Hx
		Occupational Hx
		Childhood disease Hx
		Surgical procedures Hx
		Allergy Hx
		Medication Hx
		Review of systems
		Smoking Hx total
		Smoking Hx current, etc.
	Physical exam	General status Px
		Vital signs Px
		Skin Px
		Head Px
		Eyes Px
		Ears Px
		Nose Px
		Mouth/throat/teeth Px
		Thorax/lungs Px
		Breasts Px
		Heart Px, etc.
	Toxic exposures	
	Nursing assessments	
Legal documents	Surgical releases	...
	Organ donor permissions	
	Advance directives (release of documents)	

TABLE 1 *Continued*

Category	Subcategory	Examples and Components
Schedules (surgery/clinic, etc.)	Requests for resource Assignment of resource Documentation of delivery to resource and return	Send patient to eye clinic
Supplies and equipment	Consumables (4×4's) Attachments	...

5. Catalog of Primary Record Contents by Source

5.1 This section describes the content of the current paper oriented record by source of data. The purpose of this section is to depict the full range of data that will compose the EHR but described in familiar terms.

5.2 Within the traditional record of care we find the kinds of information shown in Table 1. As Table 1 shows, many categories of information exist, and they can often be broken down into ever more detailed categories depending upon who collects the information and how it is to be used. For example, the physical examination can be broken down into the traditional categories, but subcategories may be possible and, indeed, required. For example, the physical exam of the eye might be recorded as a family of procedures or as a single unit. While one ophthalmologist might break the exams into many subcategories; for example, lid and exterior muscles, conjunctiva, cornea, anterior chamber, and retina; another might not. When more completely structured, the granularity of such exams can be very fine. Table 2 lists just a few of the many separate variables that can be required to record the eye exam particulars required for detailed outcomes assessment. See Appendix X1 on Universal (AS4) Identifiers for Common Test Battery Components that do not have Uniquely Defined CPT-4 Codes in Specification E 1238 for the full listing.

5.3 In the traditional record the degree of granularity and the degree of structure may vary considerably depending upon specialty, the particular provider, the clinical problem, the kind of care (hospital, office visit, nursing home). The spectrum runs from complete free text (some visit notes) to free text broken down by subheadings of differing degrees of granularity to fully structured data collection instruments (where all questions have multiple choice, coded, or numeric answers). But the degree of granularity can vary among structured data collection instruments, and free text may or may not be allowed as an "escape." Thus, the EHR must also accommodate varying degrees of granularity in the recording of the same clinical information within one patient's record.

TABLE 2 Ophthalmology Exam Variables

Pupils	
OD pupil	OS cornea cannot be assessed
OS	OS shallow anterior chamber
	OS cornea cannot be assessed
Amsler Grid	
OD Amsler Grid	Anterior Chamber Findings
OS Amsler Grid	OD AC normal
	OD AC flare only
Corneal Examination	OD AC cells only
OD normal cornea	OD AC keratic precipitates
Guttata w/o edema	OD AC posterior synechiae
OD confluent guttata w/o edema	OD pupil mydriatis
OD corneal edema	OD pupil irregular
OD central corneal opacity	OD shallow AC
OD corneal dystrophy or degeneration	OD Transillumination defects, etc.

5.4 *Structured Data versus Free Text*—It is important to distinguish between two main ways of recording patient information. Some is recorded as free text (for example, the dictated visit note) and some structured data, that is, the information is broken into discrete data elements (single concept types) and the values of each data element is recorded as discrete values (that is, terms codes, or surrogate codes such as multiple choice responses) or number values (for example, laboratory test results). Practically, the computer can "understand" structured data because it has a defined context, but it cannot easily understand free text because it has to determine a context. However, the computer can "process" free text and convert it into a structured form.

5.5 Further complicating matters is the great variation among institutions, specialties, and practitioners in the degree to which they record patient information as free text versus structured responses. Test results are commonly represented as fully structured (see lab report in Fig. 1).

5.6 In some hospitals nursing notes are highly structured, with many separate questions calling for multiple choice options for recording patient's status; in other hospitals the notes are currently pure text. Major portions of obstetrical histories are recorded on multiple choice instruments in some institutions, as free text in others. Surgical pathologists describe the gross and microscopic results and the diagnosis in free text, but often additionally record the diagnosis as SNOMED codes. Radiologists usually break their reports of X-ray studies into description and impression, both of which are recorded as free text (Fig. 2). Echocardiograms and obstetrical images, on the other hand, are usually reported as a set of discrete measurements (for example, left ventricular diameter, ejection fraction for echocardiograms, see Fig. 3). Indeed, these imaging results look more like a Chem12 report than a radiologist's imaging report.

5.7 There are many reasons for preferring structured to free

	Chem 12	
Sample Patient: 999999	26-Oct-93	0600
Bun	11	MG/DL
Glucose	94	MG/DL
Creatinine	0.8	MG/DL
Calcium	7.4 *L	MG/DL
Phosphorus	2.6	MG/DL
Uric Acid	3.2 *L	MG/DL
Cholesterol	62 *L	MG/DL
Protein-Total	4.6 *L	G/DL
Albumin	2.3 *L	G/DL
Bilirubin Total	0.7	MG/DL
Alk Phos	75	Units/L
SGOT (AST)	85 *H	Units/L

FIG. 1 Lab Report Sample

Sample Patient: 999999
Requested by: Location: B226-A
Exam done: 03 JUL 1993 at 1200 hrs Transcription Date: 08 JUL 1993
Dictation Date: 03 JUL 1993
CHEST X-RAY PA&LAT Case ID 57115-93RA
Description:
Comparison: 7/1/93

There has been interval placement of a NG tube whose tip is in the stomach. Again, this examination demonstrates the marked dextroscoliosis of the upper thoracic spine and levoscoliosis of the lower track and upper lumbar spine. There has been interval development of a right pleural effusion as well as a predominately right apical and posterior segment right upper lobe infiltrate. There is also a probably right middle lobe infiltrate. There are lower lung volumes compared to the previous study with atelectasis versus infiltrate present in the left base.

Staff Radiologist: Donald L. Kreipke, MD Resident: Ryan V. Piper, MD

FIG. 2 Radiology Report

Sample Patient: 999999		
Measurements		
LV Diameter (LAX)		Normals
Diastolic	4.65 cm	(3.6–5.2)
Systolic	3.21 cm	(2.3–3.9)
%Shortening	0.31	(0.18–0.42)
IVS Thickness		Normals
Diastolic	1.34 cm	(0.6–1.1)
LVPW Thickness		Normals
Diastolic	1.25 cm	(0.6–1.1)
SAX Endocardial Area		Normals
Diastolic	20.34 cm^2	(9.5–22.3)
Systolic	11.40 cm^2	(4.0–11.6)
% Change	0.44	(0.36–0.64)
LA Diameter		Normals
Systolic	4.17 cm	(2.1–3.7)
Diagnostic Impressions		
Left Atrial Dilatation		
Left Ventricular Hypertrophy		
Overall Normal LV Systolic Function		
Severely hypokinetic inferior, posterior, and proximal lateral walls		
Overall Normal LV Systolic Function		
No intracardiac masses or vegetations noted		
Minimal Mitral Regurgitation		

FIG. 3 Echocardiograph Consultation

text observations, and professional societies should encourage their members to use structured reports. (At the very least, the impressions of imaging studies diagnosis reported at visits and surgeries should be reported in structured forms.) However, rigorous structuring imposes time cost on the observer. Further, for some domains (for example, history and physical) there is lack of both code systems and experience with structuring. There is also yet no empirical basis for deciding how much to structure and how much to leave as free text. Given these realities, historical preferences, and the mass of existing free text information, the EHR must accommodate both structured and free text reporting for the foreseeable future. It may even have to accommodate structured or free text values, or both, for the same variable, depending upon who does the recording. Free text processing is available through several approaches. The encoding of text into machine codes has been one approach. Term analysis, internal coding, and pattern mapping for clinical fact extraction can be done in several ways. This area is in rapid development and should be monitored for application to EHR systems design. In particular, when reporting a patient's perceptions, anxieties, or other conversationally acquired information, it is impossible to predict what will be said. Forcing such information into a predetermined structure will/may degrade the richness of the content and could lead to erroneous interpretation of meaning.

6. Operational Considerations

6.1 Because the record of care is a working tool in clinical practice, the day-to-day operational aspects that affect the record's structure need to be considered before assembling components of the EHR into an integrated whole. A number of these considerations enumerated here include: General Principles, Data Types, Identifiers, Initiation of the Record, Access to the Record, Essential Data Elements, Retention of the Record, and Referential or Master Tabular Data.

6.2 *General Principles*—In identifying and defining the general content and structure of the patient health record for the design of systems, certain operational issues must be addressed at the organizational level. The tasks are:

6.2.1 Identify the patient record as the main patient-specific clinical repository component of all health information systems and, as such, the primary source of all documentation of clinical care.

6.2.2 Establish the standard minimal components of all patient records, and their content, in all healthcare delivery environments.

6.2.3 Propose views (synopses) of the patient care record, visits or episodes which might be prepared in each healthcare delivery setting and which should be accessible locally or sent to included in the unified longitudinal record, or both.

6.2.4 Ensure that the standardized content conforms to the known health data standards.

6.2.5 Define the logical structure of the patient record which, when used for electronic health record systems, enables consistency in the data organization and promotes efficient data transfer through adoption of a common record transfer convention.

6.2.6 Specify data element definitions that conform to standard nomenclature and are harmonized with related formally approved standards.

6.2.7 Identify and reference appropriate coding systems consistent with current health reporting retrieval, analysis, and reimbursement needs.

6.2.8 Specify data security and confidentiality measures to be addressed through consideration of the required data access, update, and retrieval procedures.

6.2.9 Identify the long-term and short-term clinical value of the data elements contained in the patient health record.

6.2.10 Ensure a patient role in contributing all reported data as appropriate for EHR content development and outcomes assessment.

6.3 *Data Types*—Each of the data elements identified have representations of their data values that fit into a limited number of classes called data types. These include person names, addresses, text, phone numbers, numeric values, dates and times and "coded" (terms and their surrogate codes from a variety of systems). Refer to Table 3 for a complete list. Coded values, particularly, point to referential master tables. In those tables, the term that is human understandable may have a

TABLE 3 Data Types

Value	Description
AD	Address
CE	Coded entry (for example, Test Ids, Dx codes)
CK	Composit ID with check digit
CM	Composit miscellaneous
CNA	Composit ID and person name
CQ	Composit quality with units <number>^ <units>
ID	Identifier
MO	Money
NM	Numeric
PN	Person name
RP	Reference pointer
ST	String for short text and numerics
TN	Telephone number
TS	Time stamp (date and time)
TX	Bulk text

number of code values from different coding systems associated with it. Indeed, they may even be in different languages. When communicating with other systems using messages, a coding system identifier and the code value for that term in the identified system must all be associated with the value for the data element of interest. The date-time data type permits varying degrees of granularity from day, hours to even decimal seconds; a time zone offset from Greenwich Mean Time can also be used. These conventions have been codified in a joint standards document issued by the ANSI HISPP but are also included in the standards documents issued by the Health Information Standards Planning Panel—Standards Development Organizations (HISPP-SDO) members. Suffice it to say that in defining the data elements of the EHR in Section 7 one of these values sets will be used for each data element defined. Messaging standards may require additional subtypes which will be defined within those standards. See, for example, Specification E 1238 or the HL7 standards.

6.4 *Identifiers*— Identification of persons (patients, practitioners) and places (healthcare facilities, locations, and workstations) is an important component of the data collection process. The original source healthcare location information shall be captured for each event of care by using provider identification elements that are established for each setting. Check digits for the provider and patient record number should be included.

6.4.1 *National Patient Health Identifier*—Each individual patient should be assigned a unique healthcare code number. Fields for the identifiers for blood relatives and, where appropriate, spouses **(11)** should be included in the patient record to allow these related records to be found when appropriate. The number attributes should be unique, permanent, atomic (a single data item), concise, controllable, assignable, universal, unambiguous, used solely for healthcare and compatible with current standards. It shall provide protection of confidentiality and privacy.

6.4.2 *Identification of the Healthcare Setting*—The healthcare location and setting information shall be captured by using specific synopsis data sets that are preestablished for each setting; such data also serves as an index of the individual's pattern of healthcare. Information technology can be used to facilitate the recording of these data sets. The system shall be capable of receiving and storing this data regardless of the medium but in conformance with the standard transfer format to be defined by ASTM.

6.5 *Initiation and Construction of the Patient Health Record*:

6.5.1 *Registration/Reservation Establishing the Patient Health Record*—Patients must be registered into an established EHR system by capturing the demographic information which identifies the patient and opens a formal patient record **(7)**. This information allows repeated and accurate identification of patients from one care setting in another; it also provides the link for the collection of additional healthcare information over time.

6.5.2 *Identification of Patients*:

6.5.2.1 The original source health care location information shall be captured for each event of care by using provider identification elements that are preestablished for each setting. Software may be used to identify and collect a health status survey of salient clinical facts that will be tagged and stored as a longitudinal view of the original source record or transferred to a patient designated longitudinal health record system.

6.5.2.2 *Authentication of Data Entries*—All data entries will be authenticated by user identification, and date and time entries will be recorded automatically.

6.5.3 *Registration and Establishment of the EHR Record for Newborns*—At birth, a newborn record will be initiated as a patient health record. From the obstetric record of the mother the following data shall be transferred to the newborn's record:

6.5.3.1 Infant's full name,

6.5.3.2 Date of birth,

6.5.3.3 Sex,

6.5.3.4 Explicit identification of both parents,

6.5.3.5 Synopsis of abnormal prenatal findings and events,

6.5.3.6 Synopsis of perinatal abnormal events,

6.5.3.7 Genetic synopses of both parents, and

6.5.3.8 Significant socioeconomic facts on family circumstances.

6.6 *Access to Records*—Policies and procedures for access to patient computer-based records must be established within the organizational policy structure. This policy must provide for privacy protection for both patients and providers which conforms to published confidentiality statutes, standards, and professional guidelines; direct professionals practicing in the facility; provide physical security for data use; and provide software support which identifies and monitors all user access to the system. (See Guide E 1769 and other ASTM standards for confidentiality and privacy.)

6.6.1 *Privacy of Patient Health Records*—Access to patient health records is controlled to maintain privacy. The major axioms of patient health record privacy are:

6.6.1.1 All patients and healthcare professionals with access to patient records shall have the right to be informed about EHR content maintained.

6.6.1.2 Every adult patient, or his or her legal representative, shall have the right to inspect and copy all information stored in his/her electronic health record.

6.6.1.3 Standards for patient authorization to disclose information from their record shall be established.

6.6.1.4 Every patient shall have the right to amend their

record to correct incomplete or inaccurate data.

6.6.1.5 An administrative policy should be used to enforce need-to-know access. This policy should include appropriate sanctions for unauthorized access, use, or release of information.

6.6.2 *Release of Records for Clinical, Administrative and Research Purposes*—Records shall be released for clinical uses that provide direct care services to patients in line with appropriate consent policies and procedures. Administrative needs for patient data to be drawn from the electronic health record shall be processed within appropriate legal guidelines and established health facility patient data confidentiality and security programs. Research use of patient data which is drawn from the EHR shall be provided as aggregate, unidentified data whenever possible. Research projects which seek the use of identified patient data shall be reviewed by the research committee of the organization maintaining that data and such release shall conform to the patient data confidentiality and security program guidelines. Automated systems shall provide the necessary checks needed.

6.7 *Essential Data Elements*:

6.7.1 Minimum data sets for descriptive purposes have been determined from the health records in major clinical settings and these have been previously published. They are:

6.7.1.1 Department of defense/composite healthcare system **(1)**,

6.7.1.2 Uniform hospital discharge data set **(2)**,

6.7.1.3 Basic ambulatory medical care data set **(3)**,

6.7.1.4 Minimum uniform data set for home care **(4)**,

6.7.1.5 Minimum hospice data set **(5)**,

6.7.1.6 Minimum data set for long-term care **(6)**,

6.7.1.7 Health record core data set **(7)**,

6.7.1.8 Occupational health data set **(8)**,

6.7.1.9 Emergency medical information data set **(9)**,

6.7.1.10 Summarized health profile **(10)**, and

6.7.1.11 The nursing minimum data set **(11)**.

6.7.2 Recommended content of patient care records has also been developed and published by accrediting and certifying organizations. These include the Joint Commission on Accreditation of Healthcare Organization (JCAHO), the National Committee on Quality Assurance (NCQA) and others.

6.8 *Retention of Records*—Patient health record retention criteria for both written and electronic records must be established to conform to the requirements of Federal and state statutes; these criteria should also specify retention according to clinical value. The clinical value of data elements over time and those designated for a longitudinal record should likewise be identified.

6.9 *Master Tables*:

6.9.1 A basic approach to defining EHR content is through master tables and data views. These can be used within the construct of this guide. A master table is a list of variables that represent the range of attributes currently defined for a given subject. Table 2 is an example of an excerpt from a master table. Others are standard coding systems such as ICD9, a problem list directory, a catalogue of risk assessment questions organized as reference for patient reported status as well as short tables illustrated within this standard and discussed in Specification E 1238. By using master tables we can provide both a short term and a long term approach to methodically addressing EHR content so it can be coordinated and implemented through organizational systems development plans. By developing the master tables from these resources, users can apply the standard in diverse settings. Users would use this guide with the appropriate master tables to select standard recommended and optional vocabulary to define the EHR vocabulary in their organization. It is recognized that overlap will occur among the tables. Master tables can be developed and refined as necessary. They also provide the means of proposing minimum content as well as the more detailed and comprehensive content by EHR areas. Master tables examples that reflect EHR content vocabulary are:

6.9.1.1 Complete patient health history variables,

6.9.1.2 Complete patient self reporting history questions catalogue,

6.9.1.3 Complete patient assessment/physical exam variables,

6.9.1.4 Patient self reporting functional status reporting items (for example, SF-36, Dartmouth 9),

6.9.1.5 Health outcomes variables,

6.9.1.6 Master table of vital signs variables,

6.9.1.7 Master table of instrument monitoring variables, and

6.9.1.8 Master table of laboratory tests, etc.

6.9.2 Tests, supplies and equipment have attributes when considered in the abstract (separately from results or use in a particular patient). These are attributes that would be listed in a catalogue of the available tests, supplies or equipment. The attributes of a test might be when it could be obtained, the preparation requirements for specimens, the price, the normal range, the units and so on. Much of the same applies to supplies and equipment. The idea of maintaining a “catalogue” or definition table for items such as supplies, orders, observations and equipment is a powerful construct. It permits easy additions and extensions to the universe of items in a given class. (New tests and observations can be created without having to redefine the universe, or rewrite programs.) More attributes can also be added to the item to give the universe of entities new behaviors with little or no effect on the previous version of the world. Catalogue tables were widely used to implement pharmacy systems (where each drug in the formulary is represented in the catalogue) and laboratory systems (where each orderable battery and each discrete reportable test has its own catalogue entry). Most laboratory systems, pharmacy systems, billing systems, inventory systems and other systems that must deal with large numbers of discrete items use a general object, or file to carry context-insensitive attributes and “pointers,” or indexes, to refer to the entry of interest. Tables are used by the long-surviving EHRs. They are an essential (though abstract) component of an EHR as described here, where they will be used to represent (at least) the various species of observations and their attributes.

6.9.3 The notion of observations in its most general sense is used to mean any aspect of a patient that can be described at a particular time. It follows Allan Rector’s idea of an observation **(12)** a serum glucose, a chest X-ray impression, a Glasgow coma score, each of the questions on a health or functional

status, (for example, SF-36, D-9), a history of present illness, urine output and nurses notes are each an observation. An observation is an attribute of a patient, that is, an atomic unit or "chunk" in which clinical information is recorded. The observation, however, cannot stand alone. It has a context and general attributes that define that context that are independent of the particular patient's observation, such as: units of measure in which it is reported, its name and synonyms, its class, information about how it is grouped in reports or where it is stored and so forth. This context-independent data is stored in master tables. These tables make it possible to accommodate different degrees of granularity and easily adapt to change. New entries are easily added to these tables since new concepts arise continually in patient care. It is again important to note that this document describes observations in an implementation independent fashion using a notation that depicts logical relationships but implies no implementation technique. Data element segments and grouping are used but other logical relationships could also be used. In any case master tables hold the context insensitive data while the groupings of data elements deal with the context sensitive relationships that establish the observation's meaning.

6.9.4 When selected few observations are gathered in a particular setting, a simpler structure can be employed. For example, if a diabetes clinic wished to capture only 20 variables (for example, diastolic and systolic blood pressure, blood glucose, hemoglobin Alc, weight, pulse, foot lesions (present/absent) etc.) one record per visit might be created and specific fields defined for just those specific observations. A master term table would not be needed. But if other requirements arise, this approach is very rigid, limited and does not work well in the general case. A EHR may have 10 000, or more kinds of observations (there may be 5000 different laboratory tests that could be recorded, for example). Further, observations may be recorded multiple times by different providers during the same visit. The rigid structure cannot accommodate that situation.

7. The Overall Structure of the Electronic Health Record

7.1 The discussion of the structure of the EHR must relate the major entities (objects) of the record to the identified record segments. The clinical heart of the EHR is the core of the entities: patient, provider, problem, encounters, orders, services and observations. The record segments that relate to these entities are shown in Fig. 4. The focus of these relationships is the RADT object model, dealt with in Practice E 1715, that provides the foundation for linking the entities in Fig. 4 to the detailed inventory of data elements given in Annex A1. Table 4 shows how the segments currently accommodate the entities.

7.1.1 Notice that most of the entities listed in Fig. 4 have their own attributes. For example, the patient has the attributes of sex, race, birthdate, etc. Each order includes attributes that identify the item(s) ordered, the date of the order, the ordering provider, the urgency of the order (stat, now, routine, etc.), the ordering instructions can be further broken down into amount, frequency, duration, special conditions for many orders. These will all be presented in detail in Section 9.

7.1.2 For some of these entities, the industry has enough experience with them that the overall structure is well understood and easy to describe. In some information areas, especially those that are represented by free text in the traditional record, much is yet to be learned.

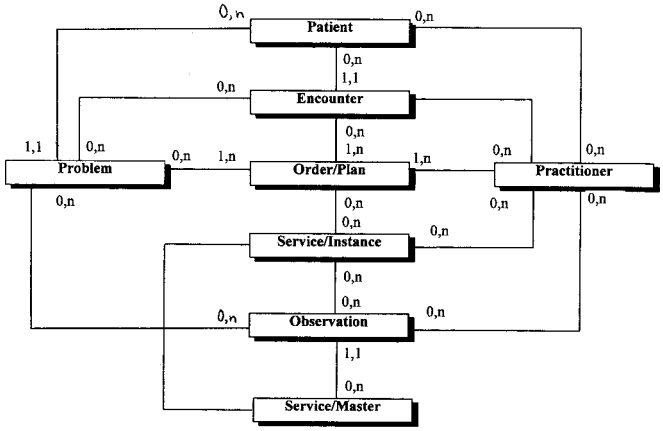

FIG. 4 Patient Record Object Model

TABLE 4 Patient Record Content Structure Data Categories, Segments and Entity Relationships

Data		Category and Segments	Entity
Administrative Data			
I		Demographics	Patient
II		Legal agreements	Patient
III		Financial information	Patient
IV		Provider/practitioner	Provider
Clinical Data: Problem/Diagnoses			
V		Problem list	Problem
Clinical Data: History			
VI		Immunization	Service instance
VII		Hazardous stressor exposure	Observation
VIII		Health history	Observation
Clinical Data: Assessments/Exams			
IX		Assessments	Observations
*		Patient reported data	Observation
Clinical Data: Care/Treatment Plans			
X		Clinical orders	Orders
Clinical Data: Services			
XI		Diagnostic tests	Observations
XII		Medications	Service instance
XIII		Scheduled appointment/ events	Encounter
Administrative Data: Encounters			
XIV	a	Administrative data	Patient
	f	Encounter disposition[A]	Encounter
Clinical Data: Encounters			
	b	Chief complaint/ diagnoses	Observation
	c	Clinical course	Observation
	d	Therapy/procedures	Service instance

[A] These are new concepts or reordered data, or both. Note that the clinical heart of the EHR is the core of the entities (Objects). The record segments that relate to these are shown.

7.2 *Perspective*— Representing the overall structure of the record is difficult since it is complex and has a number of dimensions. It also can be viewed from many perspectives. Four of these are: chronological, by encounter/episode, by problem, and by topic. Each of these views looks at the same stored data in a different way. There can be many perspectives

and even more ways of displaying the same data. This guide must represent the complex storage structure in two dimensions. Therefore, in Appendix X1 several notational conventions are used. One of these is a "pointer" followed by a target segment or external master table. This allows data values in these tables to be referenced without clouding the basic structure being illustrated. These representations are not intended to imply implementation techniques but, rather, logical relationships. Another difficult task is that of representing the data needs of different settings in a manner that captures the diversity and complexity of the observations as they relate to service instances and requests. These aspects will be further expanded in the discussion of the appropriate segments.

7.3 *Segment Categories*:

7.3.1 In order to provide a comprehensive structure for the EHR record, it must be organized into major segments that are clearly identified and to which information can be consistently added from one setting and episode to another over time. The segments were identified through analysis of the content of the existing data sets and each segment describes and represents a category or type of information that can be seen in all patient care records.

7.3.2 As noted in Table 4, these segments have been regrouped for a more universal understanding of administrative and clinical. The following discussion deals with the essential data elements in each segment. The entire list is summarized in Appendix X1 and each element's attributes are detailed in Annex A1, which gives a definition and form of representation. These elements may be utilized in different constellations in different settings, but each element's meaning remains the same wherever it is used.

7.3.3 Segments 1 to 13 (see Table 4) contain elements that are widely used in all settings and apply to both patient record and the longitudinal precis regardless of setting. They are not specific to any one episode or encounter though they may be initiated or updated during an encounter. The way they reflect the relationships shown in Fig. 4 and Table 4 will be discussed in the following sections.

7.4 *Occurrence and Utilization of Record Segments in Different Settings*—Table 5 outlines the classes of settings that maintain a patient record of care which contains the identified segments to some degree.

7.5 *Segment One, Demographics*—These are personal data elements, sufficient to identify the patient, collected from the patient or patient representative and not related to health status or services provided. Some of these elements may require updating at each encounter or episode and must satisfy various national standards and regulations such as a Joint Commission Standard, conditions of participation for medicare, uniform hospital discharge, ambulatory, and long term care data sets.

7.6 *Segment Two, Legal Agreements*—This includes data elements indicating legally binding directions or restraints on patient healthcare, release of information and disposal of body or body parts, or both, after death.

7.7 *Segment Three, Financial*—This segment contains the references to the financial bodies that will cover the cost of care. This segment may be referred to from within the record, as during encounters/episodes. Such reference would obviate the need for a redundant collection of such data during the visit.

TABLE 5 Sites of Care

Ambulance/aid-car	Hospital, government
Ambulatory surgery facility, free-standing	Hospital, outpatient department
Ambulatory surgery facility, hospital-based	Hospital, psychiatric
Birthing center, free-standing	Hospital, rehabilitation
Birthing center, hospital-based	Hospital, trauma center LVL 1
Clinic/health center, comp outpatient rehabilitation	Imaging services facility, free-standing
Clinic/health center, dental	Independent laboratory
Clinic/health center, free-standing	Industrial health/occupational health center
Clinic/health center, health maintenance organization	Intermediate care facility
Clinic/health center, outpatient mental health	Intermediate care facility-mentally retarded
Clinic/health center, pain	Mental health multiservice organization
Clinic/health center, rural	Mental health partial care organization
Clinic/health center, urgent care center, walk-in, free-standing	Private office, group, fee-for-service
	Private office, group, prepaid
Clinic/health center, vision	Private office, solo practice
Custodial care facility	Residential treatment center, emotionally
Day care center	Disturbed children
End-stage renal disease treatment facility	Residential school
Home health	Retirement center
Hospice, free-standing	School clinic/infirmary
Hospital, acute care	Sheltered employment workshop
Hospital, acute care with psychiatric services	Skilled nursing facility/nursing home
Hospital, burn center	Special education program
Hospital, cancer	Substance abuse treatment facility, resident
Hospital, children's	Nursing center
Hospital, emergency room	Vocational rehabilitation unit

7.8 *Segment Four, Provider/Practitioners*:

7.8.1 This segment contains in one place the descriptive data about each provider/practitioner and may then be referenced when recording data about the events of healthcare. This includes the provider identifying data on the primary organization, or establishment responsible for the availability of healthcare services for a specific episode or encounter.

7.8.2 Practitioner identifying data elements are those associated with the individuals licensed or certified to deliver care to patients, who had face-to-face contact with the patient, and provided care based on independent judgment.

7.9 *Segment Five, Problem List*:

7.9.1 This includes specified clinical problems, a diagnosis summary and stressor exposure, an ongoing list of clinically significant health status events and factors, resolved and unresolved, in a patient's life. This list should contain all past and existing diagnoses, pathophysiological states, potentially significant abnormal physical signs and laboratory findings, disabilities, and unusual conditions. Other factors such as social problems, psychiatric problems, risk factors, allergies, reactions to drugs or foods, behavioral problems or other health alerts may be included. The problem list is to be amended as more precise definitions of the problems become available. Controlled vocabulary for problem lists may be contained in a problem list directory master table.

7.9.2 This segment contains a master list of all of a patient's problems or diagnoses. It may be referenced, as noted in 7.18.2 in presenting the diagnostic summary beginning each encounter/episode. All problems or diagnoses initially recorded in a specific encounter/episode will also be entered in this master list.

7.9.3 Whenever possible, identification of risk factors (health alerts) that should be known prior to implementing any health services should be included in this section. They can be considered to be instances of a special type of patient problem and include allergies, contagious conditions, and adverse reaction to specified treatments.

7.10 *Segment Six, Immunizations*—Considered a component of patient health history, this segment contains, chronologically, all immunizations administered to the patient and their current status. This synopsis may also be copied to an emergency record to accompany medical alert data. Acquired (active or passive) or induced immunity or resistance to particular pathogens produced by deliberate exposure to antigens is included.

7.11 *Segment Seven, Exposure to Hazardous Substances*:

7.11.1 The what, where, when, and how data on actual orpotential exposure to all biological, physical or chemical agents that might be associated with adverse health effects are listed in this segment. This segment should provide data for epidemiological studies to determine correlation of disease with exposure to environmental stressors.

7.11.2 Because of the potentially long latency period in exposure to hazardous substances before the appearance of effects, the chronological record of exposure—both in the workplace and out, where appropriate—to hazardous chemical, physical, biological, or radiologic stressors to the body is contained in this segment. It has particular importance when accessed as part of the synoptic record because its completeness acts as a prompt to providers/practitioners long removed in time or space, or both, from the original entry that the signs and symptoms of health conditions may be due to previous exposure. Absence of such data does not rule out such exposure but presence provides direct clues needed to identify the possible causes of an observed condition.

7.12 *Segment Eight, Family/Prenatal/Cumulative Health/ Medical/Dental Nursing History*—The long term relevant natural family and patient history and signs which would aid practitioners in predicting or diagnosing illness, or actual or potential alterations in health, or predicting outcome of the patient's care are all the focus of this segment. The historic record of previous signs and symptoms complements the problem list in itemizing, in an integral way, the manifestations of prior disease, illness or health status not yet documented in the problem. It characterizes those already present in that list and it takes the form of a categorized list of questions of the form: "Have you ever_____? If so, when?" During each encounter/episode this list may be updated by the preface: "Since the last visit have you ever_____? If so, when?" so that the most recent observations can be added to the growing list. This integral process then collects the most reliable observations from the patient, (historically categorized in patient records) review of systems, and nursing history or other method, and adds them to the historic body of (at the time) freshly collected data. Ideally, this process begins during gestation and the initial observations are transferred from the mother's record to that of the newborn at birth. Fresh observations are added throughout the patient's lifetime. If continuity can be maintained, the practitioner need not have to reconstitute the early record, at least not often, at each encounter. Recommended and optional attributes of patient history are included in a master table.

7.13 *Segment Nine, Assessments/Exams*:

7.13.1 Assessments/exams characterizes the patient's health status in tandem with the history. Depending upon the setting, this segment may include a general or specialty medical or dental exam or assessments by nursing, dietary, social service, therapy or dental hygiene specialists, or all of these. The assessments may be all-inclusive or may relate only to hands-on care of very special problems (that is, particular body systems, psycho-social assessment, dental, vision communication, etc.). All data pertinent to pre- and perinatal care including monitoring during delivery are also included in a post-delivery exam assessment. Details of the actual delivery for the newborn are to be entered in the specific section containing health factors of the neonate. Recommended attributes of assessments/exams are identified in master tables.

7.13.2 This segment records the observations of the practitioner during structured and systematic examinations of the patient's body during encounters/episodes. It contains objective observations and measurements that quantify attributes of each body system. These are the same body systems about which patient questions are asked during the history. Such common categories allow characterization of expressed problems with observational evidence in explicit common terms and measures that, over time, allow practitioners to follow the course of illness and recovery. This focuses on the physical assessment of the patient and is combined with appropriate psycho-social assessment to compose over-all patient assessment status. These observations complement the diagnostic terms described in 7.15. They also relate to the effects of therapeutic interventions, such as medications, as described in 7.16.

7.14 *Segment Ten, Care/Treatment Plans and Orders*:

7.14.1 Data entries that direct a patient's treatment includes detail data on deliverance of orders and compliance with any diagnostic or therapeutic treatment plans, whether written, oral or standing.

7.14.2 A care treatment plan may be a broad perspective program that identifies planned clinical encounters, education and scheduled events related to specific diagnosis or set of problems (for example, diabetes). It may also be a short term tool applied, for instance, in acute care or other setting that arranges interdisciplinary roles to carry out therapies, nursing services and other activities. While not always explicitly defined, care plans are typically based on protocols and guidelines. In some cases, they are developed via consensus.

7.14.3 A clinical order is an action-oriented message describing an intervention in the health of a specific patient originated by, or under the supervision of, a practitioner. A clinical order has legal implications regarding responsibilities

for the ordered intervention as well as quality of care implications that may be assessed by supervisory bodies or clinical researchers, or both. It is therefore necessary to specify the logical structure of this message and to define the representations to be used for each constituent data element. The clinical order acts also as a communication and coordination mechanism for all of the practitioner and ancillary professionals who may participate in the actions set in motion by the order. The clinical order structure is complex and may be thought of as a network structure because of the complexity of relationships between specific data elements within the clinical order and other data elements located elsewhere in the care record. Because this complex structure is difficult, and perhaps practically impossible, to represent by means of two dimensional paper forms, there is no explicit manual-mode model for this kind of data structure. Paper records have relied on plain text representations in recording the order. In practice these relationships among the data elements have been implicit in the inculcated practices of professional training. This guide attempts to explicitly define this structure.

7.14.4 Since a clinical order is a message, it has a heading and a body. The heading specifies the originator, the object patient, the routing and the addressee(s). The body contains a structure that is greatly dependent upon the action addressee but does have a large degree of commonality across all types of orders. Since the message objective is a specific patient, a copy of all orders for that patient shall be filed in the patient's care record. This follows current accountability practice regarding the manual record and its legal status as the record of care received by a patient. Other copies may be stored for use by the action or information addressees, as appropriate. A given clinical order may be more appropriately created by means of preexisting templates, or sets of templates, that contain preassigned data.

7.14.5 The data elements in each order are in the following functional groups:

7.14.5.1 Those that identify the patient,

7.14.5.2 Those that identify the action or ancillary service,

7.14.5.3 Those that identify the orderer(s),

7.14.5.4 Those that control the timing or delivery of services, or both,

7.14.5.5 Those that describe the requested service and conditions of delivery,

7.14.5.6 Those that document the delivery of results, and

7.14.5.7 Those that are used for quality assurance.

7.14.6 The logical structure in Appendix X1 lists these data elements showing their structural relationships within the message and the data elements to which they may be related in other segments of the clinical record.

7.14.7 *Orderer Group of Data Elements*—The elements in this group provide a means of tracking the initiation and responsibilities for each order. This group also helps ensure that various subordinate practitioners do not exceed the bounds of their training by ordering, unaided, procedures they have not yet been qualified to use. At the same time, these steps must, many times, be started in the absence of a practitioner having adequate authority to fully initiate the procedure or service ordered. In hospitals, the actions of the nursing staff and health practitioner students or those in training may require review and validation by cosigning for services having major health or cost implications from the aspect of accountability. Institutional policy must provide the criteria for expeditious action in identifying services needing higher permission levels from the responsible staff; this two-tier approach allows actions to be initiated in a timely fashion but yet rescinded, if appropriate. Therefore, the data elements in this group identify the needed information applying to a wide variety of situations. Nevertheless, not all elements may apply in a given situation.

7.14.8 *Action/Ancillary Service Data Elements*—The elements in this group identify the action performers and the type and priority of the order.

7.14.9 *Order Content Data Elements*—This group of data elements conveys the explicit service/actions desired for the patient. It may include patient data extracted from other segments of the record, as required to conduct the services or to carry out the action. Each ancillary service or treatment site must be able to define the data which will be required in this group in order to be able to carry out the ordered actions. Such data requirements will be found in appropriate subordinate files and will control, by prompting, the construction of the text of the order to meet these requirements. Modifications to the order shall be appended to the original text while other data elements shall document the course of each modification.

7.14.10 *Result Group*— This group of data elements documents the delivery of the result data from the service or action, as appropriate, while the results themselves are stored separately in the appropriate segments of the record.

7.14.11 *Quality Assurance Group of Data Elements*—This group of data elements documents the circumstances of actions that are exceptions to the routine process for each ordered action or service. They assume that a process is evaluating the specific criteria for each clinical order in order to establish the regular bounds. Because healthcare must deal with the unexpected and the unusual, recording of events that are unusual because they are outside the bounds of routine experience in no way implies that they are not required for treatment. Rather, these data elements flag such events so that they can be easily recognized for review. That they were reviewed is also documented in order to ensure that significant findings are not overlooked.

7.15 *Segment Eleven, Diagnostic Tests*—Significant details of tests performed aid the practitioner in the diagnosis, management and treatment of the patient. Documentation of the results from the clinical laboratory, radiology, nuclear medicine, pulmonary function and any other diagnostic examinations would be included. This segment contains the chronological list of all diagnostic tests ordered and conducted on the patient. The attribute data about each such test reference the order, problem list, appropriate physical exam or medication segments, or all of these, that may relate to the monitoring of therapeutic interventions to either measure therapeutic effects or detect adverse affects. It should be remembered that the problem list, encounters and physical exam segments may, likewise, contain references to specific dates and types of tests that are associated with those problems, encounters or examinations and which help document the full implications of the

meaning of such tests.

7.16 *Segment Twelve, Medications*:

7.16.1 A list of all long term medications and significant details on all medications prescribed or administered, or both, in the course of, or as a consequence of, an encounter or episode.

7.16.2 This segment contains data about the therapeutic chemical substances and treatments that have been prescribed as interventions in the disease process. All of the attributes of the order described in 7.14 are linked to this record by reference to the orders segment. Additional attributes provided by the pharmacist are also added to the record, including adverse affects reported in the history or the physical exam segments, or both. The problem list that identifies the problem being treated may also be referenced.

7.17 *Segment Thirteen, Scheduled Appointments/Events*—This segment includes the list of planned or scheduled appointments that implement a treatment plan. It includes attributes that characterize the planned services, location and practitioners that constitute the plan.

7.18 *Segment Fourteen—Encounters/Episodes*:

7.18.1 The concept of an encounter is usually defined to be a face-to-face session of the patient with a practitioner during which information about the patient's health status is exchanged. The encounter record should capture the facts relating to the events that took place—whether they occur in an inpatient setting or an ambulatory care environment. Certain information that characterizes the time, place and circumstances of the initiation of the encounter are first required. Then the information characterizing the patient's condition and reason for seeking care must be recorded. Next, the identification and characterization of the patient's problem(s), including referencing the encounter to the problem list must be included. Finally, the interventions ordered, the response to the actions performed, the departure condition and the required follow-up actions must be recorded, including a record of the services rendered. Because the circumstances leading to an encounter may be as direct as inpatient rounds by the attending physician to emergency room care (for example, traumatically injured patients), the data collected in the encounter may vary from brief to extensive. The collected data may not include all data elements identified, if these elements are not applicable to a given encounter. The logical structure shown in Appendix X1, however, identifies the minimal essential data elements that may comprise the ambulatory portion of the encounter record.

7.18.1.1 A discussion of this segment must first explain that the pointer arrows leading from the identified data elements to a logical file mnemonic is intended to portray that that element is represented in a lexicon. The lexicon has associated attributes that are not dependent upon the context of the term in the encounter record, and the recorded element is the index into this lexicon. This notation enables discussion of the complexity of interrelationships among data elements of the record that occur across and within segment boundaries. In order to reflect how the structure of the record parallels the practitioner's thought processes, these logical inter-relations must be depicted using a generic convention and the data that are global to the individual encounter must be so identified in order to foster data independence wherever possible. This means avoidance of recording redundant data when that data are independent of the context. It also means using a key identifier or term to represent that invariant data which is stored in a logical list that can be referenced from within the context. This procedure avoids a common error in forms design in which specific instances, or data values, of a given data element are identified as separate data elements. A specific instance of a class name, for example, might be a specific drug or a unique lab test name. Use the above notation to convey membership in a lexicon name class.

7.18.2 *Segment Fourteen A, Administrative/Diagnostic Summary*:

7.18.2.1 These are the data elements clarifying time/date, location, type and source of encounter or episode as they differ from information already contained in the related major segments (7.5-7.17). These should include the problems and the list of admitting and all other diagnoses which are a factor in the patients care during the specific episode or encounter and which should be added to the patient's problem list in 7.9.

7.18.2.2 This subsegment contains all of the data that characterizes the origin of the episode and the manner of arrival at the provider's facility, including the condition of the patient. It also summarizes the administrative conditions concerning the termination of treatment, excepting the disposition that is contained in 7.18.6.

7.18.3 *Segment Fourteen B—Chief Complaint Present Illness/Trauma Care*—This contains health/medical/nursing dental history reference to Section 8 and history of chief complaint and reasons why the patient came in for care. This will include a review of systems as appropriate to the individual case and reference Section 9 as described in 7.13. It also includes reported pre-hospital care of emergency patients and assessment of the nature of traumatic injury and the results of stabilizing interventions.

7.18.4 *Segment Fourteen C, Progress Notes/Clinical Course*:

7.18.4.1 This includes the components that form an ongoing chronological picture and analysis of the clinical course of the patient during an episode or encounter. This segment is applicable for any healthcare setting. These elements serve as a means of communication and interaction between members of the healthcare team. They may also occur as narrative or flow sheets. They constitute the record of patient response to therapies, procedures and other events.

7.18.4.2 This subsection contains all those data elements that characterize the clinical course of care and the condition of the patient. They will link to tests, therapies and procedures and will be represented by test or flow sheets.

7.18.5 *Segment Fourteen D, Therapies*:

7.18.5.1 This includes significant details on all preventive or therapeutic, or both, services performed at the time of the episode or encounter or scheduled to be performed before the next episode or encounter. This subsection would not include any surgery performed in an operating room or that could be

documented under either Segment 12 (7.16) or 7.18.6. Transfusions, physical, occupational, nursing, respiratory, rehabilitative and mental health therapies would be included.

7.18.5.2 These elements are recorded to characterize all of the conditions of non-medication therapy, and they represent interdisciplinary therapy programs and results.

7.18.6 *Subsegment Fourteen E, Procedures*:

7.18.6.1 This includes significant details on all procedures performed in an operating room for diagnostic, exploratory, or definitive treatment purposes.

7.18.6.2 This subsection contains data that characterizes those procedural events that accompany treatment of the patient, exclusive of laboratory phases of diagnostic procedures, which are recorded in segment 11.

7.18.7 *Segment Fourteen F, Disposition*:

7.18.7.1 This subsection identifies the circumstances under which the patient terminated the encounter or episode and includes data about the length of stay, condition of patient on disposition, recommended treatment and other information necessary for follow-up care.

7.18.7.2 This subsection contains that data that characterizes the conditions under which the encounter or episode was completed and the arrangements for appropriate follow-up either by the current or by other providers. It contains information needed to maintain continuity of care over several episodes or multiple encounters.

8. Alternative Views of the Logical Structure

8.1 The EHR requires content depth and retrieval flexibility. The proposed approach expands the idea of user specific data views to reflect the range of content from sparse to highly detailed. A data view is a specific collection of a set of data to meet user needs. This guide poses a minimum essential data view and a longitudinal precis view. The basic structure of this guide is expressed through the segments, now being adapted to the current perspective of objects. Content vocabulary is being assembled into master tables. Users are expected to begin with the standard as framework, build on the basic minimum data view and draw from the many master tables to specify their unique EHR requirements. As noted earlier in this guide, standard data views (such as uniform hospital discharge data, standard home health data set, etc.) were collected and incorporated into Annex A1. Additional views serve as ongoing resources to this work. Table 6 is a list of minimum essential data content or a minimum data view. It is organized according to currently proposed objects. Note that data items are intended for all EHR record sites unless marked as “conditional.” This allows the variance between outpatient and inpatient as with a surgical procedure case. The “conditional” notation applies when the related events occur.

8.2 Just as master tables are a way in which to develop vocabulary depth within a framework, the data views provide the window for flexibility within a unified framework. This approach builds from the original work in this guide. Because the notation for conveying a common reference logical structure for the EHR depicts only a selected view of the complex interrelationships among the data elements, many readers may feel that their perspective is not represented. The selection of the notation used in Section 7 involved many compromises in selecting a reference representation. This section attempts to rectify the omission of many other valid representations of the same elements and their relationships. Since it cannot be comprehensive, it fails in representing all views. It is intended as a guide to those whose view is not adequately depicted to provide an illustration that can be developed to represent their perspective. There are many aspects that are involved. One is selecting the grouping of data elements that captures the data about the care of a patient involved in the user’s setting. Another is understanding how these data are used and whether there is colloquial vernacular involved and, if so, which data elements are affected. A third aspect is how these data are desired to be viewed. These views control how the index hierarchy represented in Section 7 would be transformed to logically represent the index priority desired. The notation of Section 7 groups certain elements together and links them together with pointer notation. A new view can represent these linkages differently by moving groupings and indexing using different key data elements that lead to the same logical outcome as Section 7. These new structures can be displayed differently but have the same logical implications.

8.3 Data views can represent unique care areas, subsets of the data to meet specific care needs and alternative displays of data. For instance, clinical flowsheets show the clinical results and treatments as a matrix (spreadsheet) in which the individual observations and treatment events are recorded in the bins of the matrix and the row and column labels identify the date-time and the variable.

8.3.1 The following are examples of alternative data views:

8.3.1.1 Clinical flowsheets,

8.3.1.2 Focused patient assessment/physical/mental exam data set by specialty/setting,

8.3.1.3 Prevention: risk factor data sets (pediatric, adolescent, adult, geriatric),

8.3.1.4 Healthcare outcomes data sets: diabetes care, obstetrical care, low back pain care, hypertension, benign prostatic hypertrophy,

8.3.1.5 Long term care data set,

8.3.1.6 Mental health data set,

8.3.1.7 Clinical program/clinical specialty data set (for example, breast cancer screening/monitoring),

8.3.1.8 Standard data elements for hospital drug surveillance,

8.3.1.9 Electronic health record for anesthesiology data set,

8.3.1.10 Electronic health record for emergency care data set,

8.3.1.11 National Committee on Quality Assurance patient record data set,

8.3.1.12 Longitudinal precis, and

8.3.1.13 Nursing minimum data set.

8.4 The EHR needs to be a reliable source of patient information in which a consistent base content can be found regardless of care setting. Work has been done to reduce the initial minimum content data items to reflect the basic essential data that should be present in the EHR. In Table 6, the general list is noted. The proposed content reflects the minimum required to serve as a guide for developers and clinicians. This serves as a basic content foundation for EHRs.

8.5 *The Longitudinal Precis*—One common and important view of the EHR containing all data recorded about a patient is what has been termed the longitudinal precis, or, in other terms, the longitudinal health record or other synonyms. Management of chronic diseases; recognition of occupational illnesses; the outcome of traumatic injuries; the tracking of persons who have been exposed to environments later recognized as hazardous; and a ready synopsis of previous healthcare for each new practitioner who provides services to a patient, all are examples of the need for a longitudinal perspective. All of these uses require an accurate contiguous summary record of the significant events of care received by each individual. The goal of the longitudinal precis is to provide this integrated summary record. The first purpose of a longitudinal precis is to assist the clinical practitioner in assessment of the patient's past clinical problems by summarizing the documented primary data of the conditions that may be used in clinical judgments. It serves as a unified, coordinated, synopsis of the clinically significant genetic, environmental and clinical healthcare data and events aggregated over a person's lifetime.

8.5.1 *Properties of a Longitudinal Precis*—The salient facts from the original EHR should be assembled systematically, summarized, ordered by clinical importance and indexed to the original EHR. A longitudinal precis should be brief. Positive patient identification and significant socio-demographic data should begin the longitudinal precis. It should next summarize the patient's family history and genetic profile and should include hereditary and familial disorders potentially harmful family events such as childhood abuse, alcoholism and drug abuse. The patient's past health history should include past and current illnesses and surgeries, ranked by clinical significance as well as significant care problems experienced as a result of illness, injury or other health altering events. The genetic profile should name the finding(s) of specific laboratory studies and, if it represents an uncommon condition, an expanded description as part of the display of data. The longitudinal precis should link any past environmental exposure with potential or observed health problems. Exposure to environmental stressors should be named and followed briefly by quantitative details of the exposure and any suspected or clinical sequel. The longitudinal precis should next catalog past clinical episodes and diagnostic studies in order to facilitate retrieval of specific data such as EKG or laboratory tests.

TABLE 6 Minimum Essential Data Set—EHR Data View for All Settings

Entities	Data Elements	Segments	Conditional Status
Patient		Segments I, II, III	Conditional (c) notation for designated items conditional to the event occurring
	Patient name		
	Universal patient health number		
	Record holding location ID		
	Date of earliest held entry		
	Date of latest held entry		
	Date-time of birth		
	Birthplace		
	Sex (gender)		
	Race		
	Ethnic group		
	Religion		
	Marital status		
	Education level		
	Occupation		
	Family member name		
	Family member relationship		
	Patient permanent address		
	Consent signed/admit agreement		
	Patient rights acknowledgment		
	Directive to physician (primary healthcare practitioner)		(c)
	Release of information action date		
	Type of record action		
	Person authorizing release		
	Payment source		
	Payor group number		
	Payor ID number		
	Principal payment sponsor		
	Address of principal sponsor		
Encounter		Segments XIII, XIV	...
	Date time encounter/admission		
	Treatment facility name		
	Encounter type		
	Episode ID		(c)
	Encounter diagnosis(es)		
	Disposition date time		(c)
	Disposition type (master table)		(c)
	Disposition destination		(c)
	Disposition patient instructions		
	Text of note/report		
	Authentication/signature		
Problem		Segment V	...

TABLE 6 *Continued*

Entities	Data Elements	Segments	Conditional Status
	Problem number(s)		
	Problem name		
	Problem date of onset		
	Problem current status		
	Problem name @ encounter		
	Problem name @ care/treatment or plan/order		
Order-Care/treatment plan		Segment IV	...
	Treatment Plan		
	Treatment Plan Id		(c)
	Date-time		
	Care/treatment plan (text)		
	Clinical order(s) (full text)		
	Date-time of order		
Provider		Segment IV	...
	Provider/practitioner name		
	Provider address		
	Provider type		
	Provider ID number		
	Provider agency ID code		
	Practitioner name		
	Practitioner's universal ID number		
	Practitioner's profession		
	Practitioner's address		
	Practitioner's current role		
	Practitioner's authentication (signature)		
	Admission/encounter surgeon	Segments XIVA	(c)
	Admission/encounter surgeon role		(c)
	Therapy perf practitioner		(c)
	Anesthesiologist/Nurse anesthetist		
Observation—History			
	Health history—previous illnesses	Segment VIII	
	History taking event date		
	Source of history—contact name		
	History relationship source to patient		...
	History—social (text)		
	Current habits/oral health practices (master table)		
Observation—Assessment/ Exams		Segment IX	(c)
	Date-time of exam		
	Health assessment/exam present illness/inj history		
	Exam review of systems (Master table)		
	Exam finding(s)		...
	Exam finding comment(s)		
	Patient generated functional health status (Master table)		
	Exam summary (text)		
Observations—Diagnostic Tests		...	...
	Test requested (Master table)	Segment XI	
	Test/exam/spec-collection date-time		
	Test request ordering treatment facility		
	Test request performing facility		
	Test date-time result reported		
	Test report text		
	Numeric measurement/analyte name		
	Numeric measurement analyte value		
	Numeric measure/analyze interpretation		
	Test request microbial organism		(c)
	Microrg attribut		(c)
	Microbiol org resist patt		(c)
	Microbiol org spec comment		(c)
	Test comments		(c)
Observation—Encounter/ episode detail		Segment XIV	...
	Chief complaint (text)		
	Reason for visit (Master table)		
	Clinical progress note date-time (text)		
	Clinical progress note (encounter)		
	Authenticator/signature		
Service Instance		Segment VI, XII, XIVD/E	...
	Immunization name (Master table)		
	Immunization date		
	Medication pres/ord odate time		
	Medication name (Master table)		
	Medication prescriber		

TABLE 6 *Continued*

Entities	Data Elements	Segments	Conditional Status
	Medication dose		
	Medication vehicle/form (table)		
	Medication route (table)		
	Medication freq		
	Medication instructions (text)		
	Medication date of last refill		(c)
	Medication notes, for example, patient response (text)		
	Name of therapy/service (Master table)		
	Therapy start date-time		
	Therapy finish date-time		
	Therapists response assessment (text)		(c)
	Therapists recommendations		(c)
	Operation date-time		(c)
	Post-op diagnosis (Master table)		(c)
	Operative procedure name (Master table)		(c)
	Anesthetic agent (Master table)		(c)
	Post anesthesia assessment		(c)
	Operation complications		(c)

8.5.1.1 A longitudinal precis should be current, updated in a cost effective manner, and be an integral part of the EHR. Although it is a secondary record, it will require the same confidentiality and privacy protection as episodic patient records. Table 7 shows a sample general logical view of the precis according to the objects and segment's sources.

8.5.2 *Minimum Content and Data Categories*—The order of the categories of data utilized from the EHR by the longitudinal precis should begin with sociodemographic data and a list of long-term major health problems/risk factors which may then be directly accessed by practitioners to determine access to the remaining record. To provide a comprehensive structure for the longitudinal precis it must have access to all segments identified for the EHR in Section 7 and must organize that information is groupings optimized for its synoptic function. Table 7 summarizes these logical associations.

8.5.3 *Implementation*— A longitudinal precis could be a separate computer-based document or it could be the front part of the original source EHR. While the first level of presentation should be condensed and brief, an expanded presentation of selected data must be possible. Dates of service and clinical diagnoses/problems should serve as indexes to detailed data existing either in the longitudinal precis or the EHR itself.

9. Viewing the Overall Structure of the EHR from an Object Perspective

9.1 The purpose of this section is to initiate convergence and blending of data and terminology between the content and message standards for the EHR. Specific data item matches are noted where they occur with the specific originating standard codes. Section 9 organizes the basic information segments explained in Section 7 into major objects and defines direct mapping with the message standards data contained in Specification E 1238 and the comparable items contained in Health Level Seven Version 2.2. For example, 9.2.1.1 Name of patient P-6 (PN) from Specification E 1238 is matched to 01001 patient name from Annex A1 in this guide. Similarly, where term matches occur among this guide and HL7, the term is also labeled accordingly, for example, observation (OBR). This helps direct the users to see how this work is developing. It should be noted that many items directly relate to messages and not to content. Refer directly to the dictionary annex Annex A1 for the details for Specification E 1384. All tables contained in this section are illustrations from Specification E 1238 or are examples from HL7, or both. All tables will be reviewed for inclusion in Specification E 1633, which maps out the coded values and pointers to established code systems or related code tables, or both. Note also that in this section, the parent-child relationship refers to a process (parent) that generates a follow-on process (child.)

TABLE 7 Content and Data Categories

Object	Category	CPR Segment
Patient	Socio-demographic	I
Encounter	Episode/encounter index	XIV
Problem	Diagnoses/problems	V
Orders	Most recent treatment plan	X
Provider	Provider/practitioner	IV
Observation	(Health status and prevention risk)	IX
	Environmental exposures	VII
	Patient health history	VIII
	Diagnostic test results	XI
Medication profile	Immunizations	VI

9.1.1 This section is still evolving, but it reorders and combines information to reflect another perspective.

9.1.1.1 The term electronic health record is used in this section to represent the specific content drawn from Specification E 1238.

9.1.1.2 The major entities (objects) of the EHR are shown listed in Table 8 and their interrelationships in Fig. 5.

9.1.1.3 The heart of the EHR is orders, encounters, services, and observations. Most of the other objects identify the persons (organizations) and places by whom, to whom and where care is given.

9.1.2 *Major Objects Within the Patient Record*:

9.1.2.1 The following subsections record the major "objects" that constitute a EHR and their principal attributes.

9.1.2.2 In the computer vernacular, entities with attributes can be represented as records where the set of entities correspond to the file. Each record represents a single entity, and the attributes of a single entity are stored in the fields of that record. A more general formulation is to consider the entity

TABLE 8 Objects of EHR

1. Patient	9.2
2. Problem list	9.3
3. Orders (General)/Interventions/Treatment Plan	9.4
Treatment orders	9.4.2
Observation orders	9.4.3
Diet order specialization	9.4.4
4. Service instances	9.5
Specimen collection instances	9.5.2
Observation service instances	9.5.3
Observation battery instances	9.5.4
Treatment instances	9.5.5
5. Observations	9.6
6. Encounters	9.7
7. Appointments	9.8
8. Procedures	9.9
9. Legal agreements	9.10
10. Service order concept master	9.11
11. Provider master	9.12

TYPE	VALUE
EARLY	Early tray
LATE	Late tray
GUEST	Guest tray
NO	No tray
MSG	Tray message

FIG. 5 Values for Type

to be an object that accommodates more general data, structures and permits the bundling of behaviors (executable programming code) with the data **(13)**.

9.1.2.3 In the modeling context, consider the entities described above to be related globally as shown in Fig. 4.

9.1.2.4 The model in Fig. 4 is very global, a submodel of the MSDS JWG global model. It supplies a framework for the following paragraphs.

9.1.2.5 Notice that most of the entities listed in Table 8 have their own attributes. For example, the patient has the attributes of sex, race, birthdate, etc. Each order includes attributes that identify the item(s) ordered, the date of the order, the ordering provider, the urgency of the order (stat, now, routine, etc.), the ordering instructions (can be further broken down into amount, frequency, duration, special conditions for many orders. These will all be presented in detail in this section.

9.1.2.6 For some of these entities, the industry has enough experience with them that the overall structure is well understood and easy to describe. In some information areas, especially those that are represented by free text in the traditional record, much is yet to be learned.

9.1.3 *Data Types*—In the model that we describe, we are very explicit about an attribute's data type, and these are precisely defined. (See Table 3 for a brief description. See Specification E 1238 and the MSDS JWG common data types document for full details.)

9.1.3.1 Three of the data types require special attention. The coded entry (CE) is a data type used to report coded entities (for example, ICD-9 diagnoses or NDC drug codes). However, a coded entry contains up to three pieces of information: the code, a text description (optional if the code is also stored) and a code that identifies the source book for the code (that is, it identifies the code as an ICD-CM or an ICD-10 or a CPT4 code). This ensures that a code will never be misinterpreted when code systems are replaced (for example, ICD-9 to ICD-10). The date-time data type permits varying degrees of granularity, from days down to hours, minutes or even decimal seconds; it can also specify the offset from Greenwich Mean Time when the time is not local time. A person's name is recorded as a five part data type (last or family name, first or given name, etc.).

9.1.3.2 Though the data types are precisely defined, this does not mean that a real implementation of an EHR would, for example, use strings to represent dates, or would have to provide a field for recording the offset Greenwich Mean Time. For the date/time an implementor might have one integer field for date and another for time, and always translate any time zone offsets into the local time for storage. But an implementor's storage structures should be able to represent the same information recorded in the model data type and be able to import and export data in these prescribed data types.

9.1.4 A number of devices have been employed to ease reader assimilation of the model shown in Fig. 4. The use of complex data types (for example, person's name) is one, because it reduces the number of atomic attributes that readers have to absorb and ensures that person's names will be treated uniformly throughout the model. The model allows repeating values for some attributes when they are appropriate (following CEN TC251 and the ASN.1's lead). Finally, most entities (for example, patients, providers, or services) can have many identifiers. For example, a patient might be identified by his state driver's license number (fifty possibilities), a credit card number (many people possess a great number of these) and so forth. So most of these objects will have an attribute for the preferred EHR identifier and a CE attribute with a variable number of values, each of which will include the identifier and the producer of the identifier. However, such simplifying approaches should not be interpreted as prescriptions for the implementation of real world systems.

9.1.4.1 In 9.2, Specification E 1238 and HL7 message segment cross-references are detailed. The alphanumeric (Line 1) catalogue number for the 1384 matched item is listed in Line 2. For example, HL7 objects are designated "observation (OBR), observation order (OBR), Patient (PID ...) etc."

9.2 *Patient (Identifying and Contact Information)*:

9.2.1 These are personal data elements, sufficient to identify the patient, collected from the patient or patient representative, and not related to health status or services provided. More information on incorporating demographic information into an EHR can be found in Guide E 1239:

9.2.1.1 *Name of Patient*:

P-6 (PN)
01001. PATIENT NAME

Person receiving healthcare services and about whom records containing data about those services are collected. The patient's name shall be presented as last name, first name, middle name or initial, suffix, prefix, and degree, and each of these six components shall be separated by a component delimiter as defined in Specification E 1238 and the MSDS task group on data types.

9.2.1.2 *Multiple Birth Indicator*:

PV2–11 (ID)
01035. MULTIPLE BIRTH MARKER

Multiple birth marker (a term to distinguish identical individuals produced in the same gestation period.

9.2.1.3 *Patient Health Identifier*:

01016. UNIVERSAL PATIENT HEALTH IDENTIFIER

Unique personal identifier (unique number used by all providers/practitioners and third party payers in conjunction with establishing and using the longitudinal record. It will link services for the individual across care systems).

9.2.1.4 *Other Patient Identifying Numbers*—A multi-valued field that would accommodate any other identifiers. SSAN could be one voluntary option if privacy act notification is provided.

Social security number
01020. SSAN

Social Security Account Number—A pseudo social security number may be assigned if patient does not have an SSAN.

9.2.1.5 *Date of Birth*:

P-8 (DT)
01032. DATE-TIME OF BIRTH

Patient's birthdate shall be presented in the standard date format (YYYYMMDD). In the case of neonates, for whom the age in hours might be relevant, the birth can be recorded with the time of birth YYYYMMDDHHMM. Age can be generated from date of birth (DOB) if needed.

9.2.1.6 *Place of Birth*:

01033. BIRTHPLACE

The city, state, nation where the patient's birth records may be found.

9.2.1.7 *Sex*:

P-9 (ID)
01040. SEX

(As recorded at the start of care.) Distinction of gender. Field shall be represented by M for males, F for female patients. Record U when the gender is unknown.

9.2.1.8 *Race*:

P-10 (ID)
01042. RACE

The major biologic class to which the patient belongs as a result of a pedigree analysis or with which the patient identifies him/herself in cases where the data are not conclusive. Codes are W (White); B (Black); NA (Native American); O (Oriental or Asian); H (Hispanic); OTH (Other).

9.2.1.9 *Ethnic Group*:

(TX)
01045. ETHNIC GROUP

That cultural group with which the patient identifies him/herself either by means of recorded family data or personal preference. A patient may belong to several such groups depending upon heritage, language, nationality or social association. Full text names may be entered, and multiple entries are allowed, separated by repeat delimiters.

9.2.1.10 *Religion*:

P-28 (ID)
01047. RELIGION

Current religious affiliation of the patient at the start of care. A particular system of faith or worship. Codes or names may be sent; full names of religions may also be sent as required. Examples of religious codes and abbreviations are: P (Protestant); C (Catholic); M (Church of Latter Day Saints); J (Judaism); H (Hinduism); A (Atheist). When a full name is sent it should be preceded by a component delimiter, for example, Methodist or C Coptic Rite.

9.2.1.11 *Marital Status*:

P-29 (ID)
01052. MARITAL STATUS

Marital status of patient at start of care. NEVER MARRIED (S): includes annulment of only marriage. MARRIED (M): includes common law. SEPARATED (A): married persons living apart except institutionalized. WIDOWED (W): spouse died and not remarried. DIVORCED (D): legally divorced and not remarried. Undetermined (U): status unknown.

9.2.1.12 *Educational Level*:

01060. EDUCATIONAL LEVEL

The highest level, in years, within each major (primary, secondary, college, post-baccalaureate) educational system, irrespective of any certifications achieved.

9.2.1.13 *Occupation*:

01065. CURRENT OCCUPATION

Employment, business, or a course of action in which on is engaged (that is, "student").

9.2.1.14 *Mother's Full Name at Birth*:

P-7 (PN)
01090.07. FAMILY MEMBER FEMALE PARENT

This is the biologic female parent of the patient to be used for family pedigrees. It is the full birth name of a newborn infant's mother, recorded as described in 6.5.3.

9.2.1.15 *Father's Full Name*:

01090.05. FAMILY MEMBER MALE PARENT

This is the biologic male parent of the patient to be used for family pedigrees. (Universal parent identifiers will be added when they are available.)

9.2.1.16 *Patient's Permanent Address*:

P-11 (AD)
01095. PATIENT PERMANENT ADDRESS

Usual residence or address of the patient, or both. May be referred to as the mailing address. Shall include the patient's city, state, province, country and zip or postal code of the patient's mailing address separated by component delimiters (see address data type in Specification E 1238).

9.2.1.17 *Patient's Telephone Number*:

P-13 (TN)
01100. HOME PHONE

This text value shall record the patient's day telephone and optionally the patient's night telephone, using the standard telephone number specification (see 6.6.18, TN Telephone and Beeper Number, of Specification E 1238), that includes options for area code, extensions, and beeper codes. The first telephone number will be the number at which the patient can be reached during the day. The second number (if required) is the number where the patient can be reached at night. When both are sent

they should be separated by repeat delimiters.

9.2.1.18 *Date/Time of Registration/Reservation*:

P-33 (TS)
01197. REGISTRATION REVIEW DATE

This is the date when the registration record was reviewed by a responsible official for its accuracy. (In Specification E 1238, this field contains the date-time when the patient registration data being transmitted was last changed. This value is of use to peer-to-peer systems where both may register patients. When the registry data delivered by the sending system differs from that in such a receiving system, this field can help the receiving system decide when to overwrite its existing patient data with the newly received registry data. This is not the same as this field.)

9.2.1.19 *Patient's Language*:

P-31 (ST)

The value of this field indicates the patient's primary language. This may be needed when the patient is not fluent in the local language.

9.2.1.20 *Confidentiality Class*:

P-32 (ID)

This field indicates the degree to which special confidentiality protection should be applied to the patient.

V — Very restricted
R — Restricted
U — Usual control

9.2.1.21 *Death Date/Time*:

P-34 (TS)

When applicable, record the date (and the time, if known) of the patient's death in this field. The addition of this field to the patient segment provides a mechanism for communicating the date-time of death to various clinical systems. It is a critical piece of information when the data is being requested for clinical research as well as for many administrative and operational purposes, for example, appointment reminders.

9.3 *Problem List*:

9.3.1 This set constitutes a master list of all of a patient's problems or diagnoses. It may be referenced by many of the other objects: orders, encounters, and so on, as noted in 6.16.1 in presenting the diagnostic summary beginning each encounter/episode. All problems or diagnoses initially recorded in a specific encounter/episode will also be entered in this master list.

9.3.1.1 A problem such as "cough" can be recorded as the value of a simple observation or as a formal problem. In the first case it is an observation: someone observed that the patient coughed. When recorded as a problem, it is a conclusion: the cough is an important issue in this patient and needs to be followed, diagnosed, or treated, or all of these. This distinction is subtle but important.

9.3.1.2 The problems within the problem list are broken down as separate objects, both because they have so much significance in the traditional patient record and because many events in the care process can (or must) be labeled by problem. Making the problem list a separate object class (table) facilitates such labeling.

9.3.1.3 The problem list (stressor exposure), as discussed in Section 7, is an on-going, up-to-date list of clinically significant health status events and factors, resolved and unresolved, in a patient's past and existing life. The list should contain all past and existing diagnoses, pathophysiological states, potentially significant abnormal physical signs and laboratory findings, disabilities, and unusual conditions. Other factors such as social problems, psychiatric problems, risk factors, allergies, reactions to drugs or foods, behavioral problems or other medical alerts may be included. The problem list is amended as more precise definitions of the problems become available.

9.3.2 *Attributes of a Problem*:

9.3.2.1 *Problems Number*:

(ST)
05001 PROBLEM NO.

This is the practitioner assigned sequence number for a particular problem. For the present it is simply for the convenience of the problem recorder and is used to define the order in which the problems are ranked. The number can be written as a hierarchy (for example, 1.1, 1.2, 1.3 ...) to provide a hierarchical structure to the problem list. A systematic procedure for assigning these numbers across all practitioners has not been agreed upon.

9.3.2.2 *Problem Indication*:

(CE)
05001.01. CLINICAL PROBLEM INDICATION

This is the name or ID of the reason for establishing a separate problem, or both. The reason may be either a diagnosis, a finding, or a symptom. The identity can be recorded as free text, as ID (code) or both. Where the code is included the code source should also be identified in the third component of the CE data type. See 6.6.4, Test/Observation Identifiers, in Specification E 1238.

9.3.2.3 *Diagnosis Onset Date/Time*:

DG1-5 (TS (optional))
05001.03. EST DATE OF PROBLEM ONSET

This is the estimated date that the problem first occurred.

9.3.2.4 *Date of Problem Resolution*:

(TS (optional))
05001.15. DATE PROBLEM RESOLVED

This is the date that this particular problem is considered resolved and no longer needs active consideration.

9.3.2.5 *Current Status (Active, Resolved)*:

(ID (optional))
05001.20 PROBLEM CURRENT STATUS

Active versus inactive.

9.4 *General Orders*:

9.4.1 Orders are requests for a particular service to be performed once, repeatedly, or continuously on a patient. They are usually written by health care professionals and include the name of a service (for example, glucose test, vital signs, penicillin) that can be an observation (glucose test), a medication (penicillin), a nursing treatment (wet to dry dressings), a consultation, a patient amenity (stationery), and instructions that specify the amount of the service, the frequency, the duration, and the urgency of the service, and special circumstances that should control the dispensing of the service.

9.4.1.1 A single order may request the performance of a

package of predefined services. Orders for "routines stat" in many emergency rooms implies the performance of many separate tests (for example, CBC, electrolytes, glucose, and blood urea nitrogen). Orders often ask that a service be repeated many times at intervals, for example, "vitals TID" asks for blood pressure, pulse, and respiratory rate to be observed and recorded three times a day indefinitely.

9.4.1.2 Thus one order can spawn many service instances (for example, a particular point in time when a specific service is performed). We define the service instance as a separate object because a place is often needed to record specific information about that instance. For example, when a practitioner in a hospital orders ampicillin 250 mg three times a day, a service instance is needed to record the time each dose is dispensed, the person who dispensed, etc. (The paper equivalent for drug dispensing is the MAR.) Service instances are not required for all ongoing orders, however.

9.4.1.3 Another complexity of orders is that the service requested may not be the service provided. A practitioner may order drug A, but because of formulary policies, patient wishes, etc., a related but different drug may be dispensed. Many other examples exist. The EHR has to have a place to record both what is requested when the order is first written and what is delivered by the service provider.

9.4.1.4 Finally, orders come in many types: orders for observations, for treatments, for teaching, etc. These subtypes have different attributes that are accommodated by different subobjects.

9.4.1.5 An order as recorded in the EHR is not the same as a message required to transmit that order to an independent computer. The message will often have to contain much of the information in the patient object, information about other encounters (if needed for billing purposes), or information about past observations (if needed to interpret the results of a test order). These do not become part of the order as it resides in the EHR because they are already recorded elsewhere in the EHR.

9.4.2 *Attributes of All Orders*:

9.4.2.1 *Place Order Number*:

Placer Order Number
ORC-2 (CM)

This field holds the unique identification number for the order.

9.4.2.2 *Universal Service ID*:

OBR-5 (CE)
Ordered Item

This field should contain an identifier code for the requested observation/test battery. This can be based on local or "universal" codes, or both. The "universal" procedure identifier is recommended. The structure of this CE data type is described in HL7 Page II-10 (<identifier>ˆ <text>ˆ <name of coding system>).

9.4.2.3 *Text Comment*:

C-4 (TX)
10001.100. CLINIC ORDER FULL TEXT

The textual content of the order detailing what action is to be taken and the means to go about it.

9.4.2.4 *Order Status*:

ORC-5 (ST)
10001.055 ORDER CONFIRMATION RECD

This field describes the status of an order. Refer to Table 9 for valid entries. The purpose of this field is to report the status of an order either upon request (solicited), or when the status changes (unsolicited). It does not initiate action. It is assumed that the order status always reflects the status as it is known to the EHR.

9.4.2.5 *Response Flag*:

ORC-6 (ST)

This field allows the placer (sending) application to determine the amount of information to be requested from the filler. Sometimes the requested level of response may not be possible immediately, but when it is possible, the filler (receiving) application must send the information. When the field is null, D is the default value of the field. Refer to Table 10 for valid entries.

9.4.2.6 *Quantity/Timing Fields*—A quantity/timing field provides a means of specifying when the service described by the order segment is to be performed and how frequently. Nine separate quantity/timing fields are required to fully specify some complex orders. More than one quantity-timing specification, separated by repeat delimiters, may appear. It should be considered a subrecord of sorts and a distinct data type. The components of a single quantity-timing specification are described in 9.4.2.7.

9.4.2.7 *Quantity Component*:

ORC-7.1 (CQ)

Indicates the quantity of the service that should be provided at each service interval. For example, if 2 blood cultures are to be obtained every 4 h, the quantity would be 2. If 3 units of blood are to be typed and cross-matched, the quantity would be 3. The default value is one. When units are required, they can be added, specified by a subcomponent delimiter.

NOTE 1—The component delimiter in this CQ is demoted to a subcomponent delimiter.

9.4.2.8 *Interval Component*:

ORC-7.2 (CM)
10001.067 CLIN ORDER EXECUTION FREQUENCY

Determines the interval between repeated services. The default is one time only, the first subcomponent is the repeat pattern, and the second subcomponent is the explicit time at which pattern is to be executed:

Repeat Pattern

TABLE 9 Order Status

Value	Description
CA	Order was canceled
CM	Order is completed
DC	Order was discontinued
ER	Error, order not found
HD	Order is on hold
IP	In process, unspecified
RP	Order has been replaced
SC	In process, scheduled

TABLE 10 Response Flag

Value	Description
E	Report exceptions only
R	Same as E, also replacement and parent-child
D	Same as R, also other associated segments
F	Same as D, plus confirmations explicitly
N	Only the MSA segment is returned

NOTE 2—Alternative settings may differ on standard intervals. Hospitals, hospices, and home care programs determine specific times to best meet their patient needs.

Here are some suggested codes:

Q<integer>S	every <integer> seconds
Q<integer>M	every <integer> minutes
Q<integer>H	every <integer> hours
Q<integer>D	every< integer> days
Q<integer>W	every <integer> weeks
Q<integer>L	every <integer> months (lunar cycle)
Q<integer>J<day#>	repeats on a particular day of the week, from the French jour (day). If <integer> is missing, the repeat rate is assumed to be 1. Day #'s are counted from 1 = Monday to 7 = Sunday. So Q2J2 means every second Tuesday; Q1J6 means every Saturday.
BID	twice a day at standard-specified times (for example, 9 am to 4 pm)
TID	three times a day at standard-specified times (for example, 9 am to 4 pm to 9 pm)
QID	four times a day at standard-specified times (for example, 9 am to 11 am to 4 pm to 9 pm)

(Note that none of the above three specifications are equivalent to their Q <integer> H counterpart. QUID is not Q6H. The former is unequally spaced; the latter is equally spaced.)

QAM	in the morning at specified time
QSHIFT	during each of three eight-hour shifts at institution-specified times
QOD	every other day (same as Q2D)
QHS	every day before the hour of sleep
QPM	in the evening at standard-specified time
C	service is provided continuously between start time and stop time
U <spec>	for future use, where <spec> is an interval specification as defined by the
Once	one time only. This is also the default when this component is null

9.4.2.9 *Explicit Time Interval Subcomponent*—This subcomponent will explicitly list the actual times referenced by the code in the first subcomponent, in the following format: HHMM,HHMM,HHMM, ... This second component will be used to clarify the first component in cases where the actual administration times vary within an institution. If the time of the order spans more than a single day, this new component is only practical if the same times of administration occur for each day of the order. If the actual start time of the order (as given by the fourth component of the QT field) is after the first explicit time, the first administration is taken to be the first explicit time after the start time. In the case where the patient moves to a location having a different set of explicit times, the existing order may be updated with a new QT field showing the changed explicit times:

Ex: 2nd component of QT field:
...^ QID&0230,0830,1430,2030^ ...

9.4.2.10 *Duration Component* :

ORC-7.3

10001.069 DURATION OF SERVICE

Indicates how long the service should continue after it is started. The default is INDEF (do indefinitely). This component is coded as follows:

S<integer> = <integer> seconds
M<integer> = <integer> minutes
H<integer> = <integer> hours
D<integer> = <integer> days
W<integer> = <integer> weeks
L<integer> = <integer> months
X<integer> = <integer> times at interval specified in the order. A request for 2 blood cultures Q2H X3 would imply obtaining 2 blood cultures 3 different times at 2-h intervals for a total of 6 blood cultures.
T<integer> = at the interval and amount stated until a total of <integer> "DOSAGE" is accumulated. Units would be assumed to be the same as in the QUANTITY field.
INDEF = do indefinitely—also the default.

9.4.2.11 *Start Date-Time Component*:

ORC-7.4 (TS)
Date/Time of treatment plan execution
10001.23 CLINIC ORDERS RELATED ORDERS

This may be specified by the orderer, in which case it indicates the earliest D/T at which the services should be started. In many cases, however, the start date time will be implied or will be defined by other fields in the order record (for example, urgency—STAT). In such a case, this field will be empty. The filling service will often record a value in this field after receipt of the order, however, and compute an end time on the basis of the start date-time for the filling service's internal use.

9.4.2.12 *End Date-Time Component*:

ORC-7.5 (TS)

When filled in by the requester of the service, this field should be the latest date-time that the service should be performed. If it has not been performed by the specified time, it should not be performed at all. The requester may not fill in this value, yet the filling service may fill it in on the basis of the instruction it receives and the actual start time.
Regardless of the value of the end date-time, the service should be stopped at the earliest of the date-times specified by either the duration or the end date-time.

9.4.2.13 *Priority Component*:

ORC-7.6

Describes the urgency of the request. Five values are suggested (the default for priority is R):

S = Stat. With highest priority.
A = ASAP. Fill after S orders.
R = Routine.
P = Preop.
T = Timing critical. A request implying that it is critical to come as close as possible to the requested time, for example, for a trough antibiotic level.

If using the value "T" (timing critical), the degree of criticality can be specified thus:

Format:
TS<integer> = Timing Critical within <integer> seconds
TM<integer> = Timing Critical within <integer> minutes
TH<integer> = Timing Critical within <integer> hours
TD<integer> = Timing Critical within <integer> days
TW<integer> = Timing Critical within <integer> weeks
TL<integer> = Timing Critical within <integer> months

For the sequential orders specification, these values specify

the time criticality with which the predecessor order must be followed by the given order.

9.4.2.14 *Condition Component*:

ORC-7.7 (ST)

Free text description of conditions under which the service should be done, for example, “PRN pain” or “as needed to control blood pressure.”

9.4.2.15 *Text Component*:

ORC-7.8 (TX)

Full text version of the instruction (optional).

9.4.2.16 *Conjunction Component*:

ORC-7.9

A non-null component indicates that a second timing specification is to follow using the repeat delimiter. This field can take three values:

S = Synchronous do the next specification after this one (unless otherwise constrained by the START D/T and END D/T). An “S” specification implies that the second timing sequence follows the first, for example, when an order is written to measure blood pressure Q15 min for the first hour, then every 2 h for the next day.

A = Asynchronous do the next specification in parallel with this one (unless otherwise constrained by the START D/T and END D/T). The conjunction of “A” specifies two parallel instructions, as are sometimes used in medication, for example, prednisone given at one tab on Mon, Wed, Fri, and at one-half tab on Tues, Thurs, Sat, Sun.

C = Actuation time it will be followed by a completion time for the service. This code allows one to distinguish between the time and priority at which a service should be actuated (for example, blood should be drawn) and the time and priority at which a service should be completed (for example, results should be reported).

For continuous or periodic services, the point at which the service is actually stopped is determined by the components END D/T, DURATION, whichever indicates an earlier stopping time. Ordinarily, only one of these components would be present, but if one requested an EKG with the specification:

^1^ QAM^ X3^ D10

then the EKG would be done for only three days since the number of repeats (three) defined the earlier stopping time.

9.4.2.17 *Examples of Quantity/Timing Usage*:

(*1*) 3^ once

Perform the service at one point in time, for example, order three units of blood to be given once.

(*2*) 1^ QHS^ X2

Perform the service twice at bedtime, for example, give a unit of blood at bedtime on two sequential nights.

(*3*) 1^ C^ 3D

Do a service continuously for three days.

(*4*) 1^ Q1H^ X4^^^^ PVCs>10/min

Perform an EKG every hour up to a maximum of four EKGs, if patient is having more than ten PVCs per minute.

(*5*) 1^ Q2J^^ 1432

Perform a service every Tuesday at 2:32 p.m.

(*6*) 1^^^^ 198911210800

Perform a test before 11/21/89 0800, for example, some preop laboratory tests.

(*7*) 1^ Q3600S^ X5^ 198911051030

Perform a service every hour for 5 h starting at 10:30 a.m. 11/5/89, for example, draw a blood glucose.

(*8*) 1^ QAM^ X3^^^^^ S\1^ QOD^ 4D^^^ if K + > 5.5.

Perform a service every morning for three days and then do it every other morning for four days (that is, max twice) if the serum potassium is greater than 5.5.

(*9*) ^^^ 198812120800^^ T^^ Trough specimen for MIC^ C\^^^^^ R

Draw a blood specimen exactly at 8:00 a.m. on 12/12/1988 and report results routinely.

9.4.2.18 *Parent*:

ORC-8 (CM)

Parent’s placer order identification. This field relates a child to its parent when a parent-child relationship exists (for example, when one order spawns another). (See Specification E 1238.)

9.4.2.19 *Date/Time of Transaction*:

ORC-9 (TS)

This field contains the date and time the current order was completed. For other messages, this is the date and time the current transaction (for example, cancellation) enters the sending application. This date and time is for the current transaction and is not a “replacement” time for a correction to the original order. Similarly, the Entered By, Verified By, and Enterer’s Location fields of this segment relate to the current transaction, not the original order.

9.4.2.20 *Entered By*:

ORC-10 (CNA)

ID number and Name (PNA). This field contains the identity of the person who actually keyed the order into the application. It provides an audit trail in case the order is entered incorrectly and the ancillary department needs to clarify the request. By local agreement, either the ID number or name component may be omitted.

9.4.2.21 *Verified By*:

ORC-11 (CNA)

ID number and name (PNA). This field contains the identity of the person (CNA data type) who verified the accuracy of the entered order. It is used in cases where the order is entered by a technician and needs to be verified by a higher authority (for example, a nurse). By local agreement, either the ID number or name component may be omitted.

9.4.2.22 *Ordering Practitioner*:

ORC-12 (CN)
Name/credentials of practitioner ordering Tx or authorizing the treatment plan.
10001.033 CLIN ORDER ORDERING PRACTITIONER NAME

This field contains the identity of the person who is responsible for creating the order (for example, ordering physician).

9.4.2.23 *Enterer’s Location*:

ORC-13 (CM)

This field contains the location (for example, department, floor) of the person who entered the order. It is a composite field that may be used on a site-specific basis to include some subcategory of department. For example, ICU4 might be the

designation for a fourth-floor ICU location.

9.4.2.24 *Order Effective Date/Time*:

ORC-15 (TS)

The order effective date/time field contains the date/time that the changes to the order took effect or are supposed to take effect.

(1) If the transaction date/time (ORC;9) is after or equal to the order effective date/time (ORC;16), the data values in the ORC and its subordinate segments took effect on the order effective date/time.

(2) If the transaction date/time (ORC;9) is before the order effective date/time, the data values in ORC and its subordinate segments are planned to take effect on the order effective date/time.

(3) If the order effective date/time is left blank, its value is assumed to be equal to the transaction date/time or the message date/time (MSH;7) if the transaction date/time is blank.

(4) In the case where the order effective date/time (for order control code event in the same ORC segment) is different from the corresponding date/time in the quantity-timing field, the order effective date/time takes precedence. Thus if the ORC event is a discontinue request to the filler for a continuing order, and the order-effective date/time is prior to the end date/time of the quantity timing field, the order effective date-time should take precedence. If the order identified in the ORC has children, the children which have not started should be canceled; if there is a child in process, it should be discontinued; if a child has progressed beyond the point where it can be discontinued, its status is unaffected.

9.4.2.25 *Entering Organization*:

ORC-17 (CE)

This field contains the organization that the enterer represents at the time he/she enters/maintains the order.

9.4.2.26 *Entering Device*:

ORC-18 (CE)

This field shall contain the identifier of the physical device (terminal, PC) used to enter the order.

9.4.2.27 *Call-Back Phone Number*:

ORC-21 (TN)

This field contains the telephone number to call for clarification of an order or other information regarding the order.

9.4.2.28 *Relevant Clinical Information*:

OBR-14 (ST)
Plan of action (text)
10001.099. ORDER PRINCIPAL PROBLEMK

The main problem that occasioned this order. This will include the rationale and plan of action that lead to this order, including clinical goals and objectives. (From HL7: Additional clinical information about the patient or specimen will be provided here. This field is used to report the suspected diagnosis and clinical findings on requests for interpreted diagnostic studies.)

9.4.2.29 *Serv Sect ID 00548*:

OBR-25 (ID)
Order Text

This optional identifier shall denote the section of the diagnostic service where the observation was performed. If the study was performed by an outside service, the identification of that service should be recorded here. Refer to Table 11 for valid entries.

9.4.2.30 *Result Copies to (CNA) 00551*:

4.2.1.2.28, Specification E 1238
OBR-29

In case a report is produced as a result of the order, this field identifies the people who are to receive copies of the report. The individuals are identified through code or by name.

9.4.2.31 *Transportation Mode (ID) 00625*:

4.2.1.2.30, Specification E 1238
OBR-31

When a service requires transportation, this attribute indicates how (or whether) that transportation should take place. Refer to Table 12 for appropriate values.

9.4.2.32 *Reason for Study (CE) 00626*:

4.2.1.2.31, Specification E 1238
OBR-32

Required for some studies to receive reimbursement.

9.4.2.33 *Sender Name or ID*:

[6.14.1.3
H-5 (ST)

9.4.2.34 *Source Facility Identification*:

11001.01.06. TEST REQ ORDERING TREAT FAC

The name or identifier of the facility from which the test was requested in a clinical order.

9.4.3 *Treatment Orders*— Extra attributes required when the order is for a drug or treatment:

4.5.3.1.1 Requested Give Code, Specification E 1238
RXO-1 (CE)

9.4.3.1 *Medication (Generic or Brand Name)*:

12001.06. MEDICATION NAME

Description of the current product. This is the identifier of the medical substance ordered to be given to the patient; it is

TABLE 11 Diagnostic Service Section ID

Code	Description	Code	Description
AU	Audiology	OUS	OB ultrasound
BG	Blood gasses	OT	Occupational therapy
BLB	Blood bank	OTH	Other
CUS	Cardiac ultrasound	OSL	Outside lab
CTH	Cardiac catheterization	PHR	Pharmacy
CT	CAT scan	PT	Physical therapy
CH	Chemistry	PHY	Physician (Hx, Dx, admission note, etc.)
CP	Cytopathology	PF	Pulmonary function
EC	Electrocardiac (for example, EKG EEC Holter)	RX	Radiograph
EN	Electroneuro (EEG EMG)	RUS	Radiology ultrasound
HM	Hematology	RC	Respiratory care (therapy)
IMM	Immunology	RT	Radiation therapy
MB	Microbiology	SR	Serology
MCB	Mycobacteriology	SP	Surgical pathology
MYC	Mycology	TX	Toxicology
NMS	Nuclear medicine scan	VUS	Vascular ultrasound
NMR	Nuclear magnetic resonance	VR	Virology
NRS	Nursing service measure	XRC	Cineradiograph

TABLE 12 Transportation Mode

Value	Description
CART	Cart—patient travels on cart or gurney
PORT	The examining device goes to patient's location
WALK	Patient walks to diagnostic service
WHLC	Wheelchair

equivalent to the Universal Service ID code of the OBR in function. The request-to-dispense fields, which define the type and amount of what is to be issued to the patient (see Fields 10 to 12 below) do not necessarily correlate with the instructions of what amount is to be "given" or administered with each dose, and may or may not be specified with the order. For example, the "give" part of the order may convey the field-representation of *give 15 mg of Librium* every 6 h, while the request to dispense part of the order may convey *issue 30 tablets of 10 MG generic equivalent for this outpatient prescription*. When the give code does not include the dosage form, use the requested dosage form field.

9.4.3.2 *Requested Give Amount—Minimum*:

4.5.3.1.2, Specification E 1238
RXO-2 (NM)
[6.15.1.5
12001.30. MEDICATION DOSE

Strength, dosage, concentration. The ordered amount. In a variable dose order, this is the minimum ordered amount. In a nonvarying dose order, this is the exact amount of the order.

NOTE 3—This field is not a duplication of the first component of the quantity/timing field, since in non-pharmacy orders, that component can be used to specify multiples of an ordered amount.

Another way to say this is that, for pharmacy orders, the quantity component of the quantity/timing field refers to what is to be given out at each service interval; thus, in terms of the RX order, that first component always defaults to one. Hence, in the actual execution of the order, the value of one in the first component of the quantity/timing field always refers to one administration of the amount specified in this field (the requested give amount field).

9.4.3.3 *Requested Give Amount—Maximum*:

4.5.3.1.3, Specification E 1238
RXO-3 (NM)

In a variable dose order, this is the maximum ordered amount. In a nonvarying dose order, this field is not used.

9.4.3.4 *Requested Give Units*:

4.5.3.1.4, Specification E 1238
RXO-4 (CE)

The units for the given amount.

NOTE 4—These units can be a "compound quantity"; that is, the units may contain the word "per." For example, micrograms per kg (micg/kg) is an acceptable value, which means that the units are micrograms per kg (of body weight). See Section 7 for full definition of ISO + units.

9.4.3.5 *Requested Dosage Form*:

4.5.3.1.5, Specification E 1238
RXO-5 (CE)
[6.15.1.6 Dosage form
12001.36. MEDICATION VEHICLE/FORM

The form of the medication including vehicle (for example, syrup). Use the requested dosage form field when both the give codes and the dispense code do not specify the drug form.

9.4.3.6 *Practitioner's Pharmacy Instructions*:

4.5.3.1.6, Specification E 1238
RXO-6 (ST)
[6.15.1.12 Text Instruction
12001.45. MEDICATION INSTRUCTIONS

The ordering provider's instructions to the pharmacy as a free text field.

9.4.3.7 *Practitioner's Administration Instructions*:

4.5.3.1.7, Specification E 1238
RXO-7 (ST)

The ordering provider's instructions "sig" to the patient or to the provider administering the drug as a free text field, that is, in a form understandable to the patient.

9.4.3.8 *Deliver-to Location*:

4.5.3.1.8, Specification E 1238
RXO-8 (ID)

This is a two-component field:

Nurse__Unit&Room&Bed&Facility__ID
Street__Address&Other__Designation&
City&State<or>Province&ZIP Code&Country

The first component contains the inpatient or outpatient location to which the pharmacy is to deliver the drug (if applicable). The default (null) value is the current census location for the patient. Site specific table. This field has the same form as PV1;3, "assigned patient location."

NOTE 5—The facility ID subcomponent is under current discussion for inclusion as part of the various location fields. It is optional.

The second component can be used to specify an address. This could be used to fill mail orders to a patient or provider, or to account for home health care.

9.4.3.9 *Substitution Flag*:

4.5.3.1.9, Specification E 1238
RXO-9 (ID)

Values are the following:

N	Substitutions are NOT authorized. (This is the default—null.)
G	Allow generic substitutions.
T	Allow therapeutic substitutions.

9.4.3.10 *Requested Dispense Code*:

4.5.3.1.10, Specification E 1238
RXO-10 (CE)

This is what is to be/was dispensed; it is equivalent to the universal service ID code of the OBR in function. It may be present in the order or not, depending on the application. If not present, and values are given for Fields 10 and 11 (requested dispense amount and units), the requested give code (Field 1) is assumed. If the dispense code does not include the dosage form, use the requested dosage form field.

9.4.3.11 *Requested Dispense Amount*:

4.5.3.1.11, Specification E 1238
RXO-11 (NM)

The amount to be dispensed.

9.4.3.12 *Requested Dispense Units*:

4.5.3.1.12, Specification E 1238
RXO-12 (CE)

The units for the dispense amount (for example, tabs, suppositories). This must be in simple units that reflect the actual quantity of the substance to be dispensed. It does not

include compound units.

NOTE 6—On request-to-dispense fields, sometimes an order will be written in which the total amount of the drug requested to be dispensed has no direct relationship with the give amounts and schedule. For example, an outpatient pharmacy order might be *take four pills a day of <drug name, value>, O6H (every 6 h)—dispense 30 tablets*. An inpatient order might be *NS/D5W (normal saline with 5 % dextrose) at 1000 cc/hour—dispense three 1-L bottles of NSD5W solution*. The request-to-dispense fields support this common style of ordering.

9.4.3.13 *Number of Refills*:

4.5.3.1.13, Specification E 1238
RXO-13 (NM)
[6.15.1.10 Number of refills authorized
12001.51. MEDICATION NO OF REFILLS

Number of times the prescription is authorized to be refilled. Outpatient only.

9.4.3.14 *Pharmacist Verifier ID*:

4.5.3.1.15, Specification E 1238
RXO-15 (CN)
[6.15.1.11 Dispensing person's name
12001.54.01. MEDICATION REFILL DISP FACIL

Practitioner ID of pharmacist verifier. Use if required by the pharmacy application or site on orders (or some subgroup of orders), in addition to the "verified by" practitioner in the ORC. Each facility dispensing a refill of a specific prescription must be uniquely identified. Example: The site requires a "verified by" practitioner (such as a nurse) and a "verifying pharmacist" on the order. In this case the first field, "verified by," is already present in the ORC segment, but the second field, "verifying pharmacist," is needed on the RXO.

9.4.3.15 *Needs Human Review*:

4.5.3.1.16, Specification E 1238
RXO-16 (ID)

This field has the following values:

Y	Indicates that the pharmacist filling the order needs to pay special attention to the text in the provider's pharmacy instructions field. A warning is present.
N	No warning is present. This is the equivalent default (null) value.

An example of the use of this field is given by the following case:

A *smart* order entry application knows of a possible drug interaction on a certain order, but the provider issuing the order wants to override the condition.
In this case, the pharmacy application receiving the order will want to have a staff pharmacist review the interaction and contact the ordering physician. A value of" Y" in the needs human review field serves to signal the need for such a review, as described in the practitioner's pharmacy instructions field.

9.4.3.16 *Requested Give Per (Time Unit)*:

4.5.3.1.17, Specification E 1238
RXO-17 (ST)
Frequency of Administration
12001.32 MEDICATION FREQ

The time unit to use to calculate the rate at which the pharmaceutical is to be administered or the interval between doses:

Format:

S<integer>	=	<integer> seconds
M<integer>	=	<integer> minutes
H<integer>	=	<integer> hours
D<integer>	=	<integer> days
W<integer>	=	<integer> weeks
L<integer>	=	<integer> months

Note that this is the same as the format specified for the DURATION component of the quantity/timing field, excluding the "X" specification. This field is required when relevant (for example, certain IVs). For example, if the "give amount/units" are 300 mL and the "give per" time unit is H1, the rate is 300 mL/h and the duration of this dose is 1 h. Thus the give amount and give per time unit define the duration of the service. This field is distinct from the "interval" component of the quantity/timing field, but it could be used in conjunction with it, as in give 300 mL of NS per hour for 1 h, repeat twice a day.

9.4.3.17 *Route*:

4.5.3.2.1, Specification E 1238
RXR-1 (CE)
[6.15.1.7 Route of administration
12001.39. MEDICATION ROUTE

A term identifying the route of administration. Refer to Table 13 for appropriate values. Some current "route codes" such as some of the NDC-derived codes include the site already. In such cases, the entire code can be included in this field as a "locally defined code" for the CE data type.

9.4.3.18 *Administrative Site*:

4.5.3.2.2, Specification E 1238
RXR-2 (CE)

The site of the administration route. Refer to Table 14 for appropriate values. As a CE data type, this field may be extended to cover a wide variety of body site codes (for example, when SNOMED is used as the table source).

9.4.3.19 *Administration Device*:

4.5.3.2.3, Specification E 1238
RXR-3 (CE)

Mechanical device used to aid in the administration of the drug. Common examples are IV-sets of different types. Refer to Table 15 for values.

9.4.3.20 *Administration Method*:

4.5.3.2.4, Specification E 1238
RXR-4 (CE)

The administration method identifies the specific method requested for the administration of the drug to the patient. Refer to Table 16 for values.

TABLE 13 Route

Code	Description	Code	Description
AP	Apply externally	IV	Intravenous
B	Buccal	NS	Nasal
DT	Dental	NG	Nasogastric
GTT	Gastrostomy tube	OP	Ophthalmic
GU	GU irrigant	OT	Otic
IA	Intra-arterial	PO	Oral
IC	Intracardiac	PR	Rectal
ID	Intradermal	SC	Subcutaneous
IH	Inhalation	SL	Sublingual
IM	Intramuscular	TP	Topical
IN	Intranasal	TD	Transdermal
IO	Intraocular	TL	Translingual
IP	Intraperitoneal	UR	Urethral
IS	Intrasynovial	VG	Vaginal
IT	Intrathecal		

TABLE 14 Site

Code	Description	Code	Description
BE	Bilateral ears	LVL	Left vestus lateralis
OU	Bilateral eyes	NB	Nebulized
BN	Bilateral nares	PA	Perianal
BU	Buttock	PERIN	Perineal
CT	Chest tube	RA	Right arm
LA	Left arm	RAC	Right anterior chest
LAC	Left anterior chest	RACF	Right antecubital fossa
LACF	Left antecubital fossa	RD	Right deltoid
LD	Left deltoid	RE	Right ear
LE	Left ear	REJ	Right external jugular
LEJ	Left external jugular	OD	Right eye
OS	Left eye	RF	Right foot
LF	Left foot	RG	Right gluteus medius
LG	Left gluteus medius	RH	Right hand
LH	Left hand	RIJ	Right internal jugular
LIJ	Left internal jugular	RLAQ	Right lower abd. quadrant
LLAQ	Left lower abd. quadrant	RLFA	Right lower forearm
LLFA	Left lower forearm	RMFA	Right mid forearm
LMFA	Left mid forearm	RN	Right naris
LN	Left naris	RPC	Right posterior chest
LPC	Left posterior chest	RSC	Right subclavian
LSC	Left subclavian	RT	Right thigh
LT	Left thigh	RUA	Right upper arm
LUA	Left upper arm	RUAQ	Right upper abd. quadrant
LUAQ	Left upper abd. quadrant	RUFA	Right upper forearm
LUFA	Left upper forearm	RVL	Right vastus lateralis
LVG	Left ventragluteal	RVG	Right ventragluteal

TABLE 15 Administration Device

Code	Description	Code	Description
AP	Applicator	IVS	IV solution
BT	Buretrol	MI	Metered inhaler
HL	Heparin lock	NEB	Nebulizer
IPPB	IPPB	PCA	PCA pump
IVP	IV pump		

TABLE 16 Administration Method

Code	Description	Code	Description
CH	Chew	NB	Nebulized
DI	Dissolve	PT	Pain
DU	Dust	PF	Perfuse
IF	Infiltrate	SH	Shampoo
IS	Insert	SO	Soak
IR	Irrigate	WA	Wash
IVPS	IV piggyback	WI	Wipe
IVP	IV push		

9.4.4 *Observation Orders*—Attributes needed for observation orders. To be added in the revision of this guide.

9.4.5 *Diet Orders*— This section is still being developed and will be added to the next revision of this guide. Attributes needed for diet orders. This needs to be better harmonized with the treatment orders.

9.4.5.1 *Type—Diet, Supplement, or Preference*:

ODS-1 (ID)

This ID tells whether the segment specifies a diet, nourishment, or supplement (D, S, or P).

9.4.5.2 *Service Period*:

ODS-2 (CE)

When blank, the modifier applies to all service periods. Diet orders, for example, typically apply to all service periods. This field will usually be specified for nourishments and supplements. This field allows you to designate a modification for one or more of the service periods during a day by combining service specifications as needed. The service periods will be local CEs, normally numbers. Typically, Service 1 is breakfast, Service 2 is mid-a.m. snack, Service 3 is lunch, Service 4 is mid-afternoon snack, Service 5 is dinner, and Service 6 is bedtime snack. Ex: |1 ~ 5| means Service 1 and Service 5, whatever these are locally defined to be.

9.4.5.3 *Diet, Supplement or Preference Codes*:

ODS-3 (CE)

This is the identifier of the ordered item for a patient; it is equivalent to the universal service ID code of the OBR in function. Since ODS is a repeating segment, multiple entities get multiple segments. For example: |^REG^L&FD7,| |023^^L&FD6| , |^NOLACT^L&FD5| , |^TUBEFD^L&FD4| , and |009^ADA20^L&FD3| . In the case of supplements (S), it is a specification for a particular item or class of items. If institutional codes for patient food preferences (P) have been codified, they are also expressed as coded segments; otherwise, the information is passed as a text string in the fourth component of the ODS segment, described below.

9.4.5.4 *Text Instruction*:

ODS-4

This allows specific instructions for dietary. These instructions may address specific patient needs, such as isolation.

9.4.5.5 *Tray Type*:

ODT-1 (CE)

The type field says what kind of information follows in this particular segment. The defined values for type are given in Fig. 5. Tray specifications are useful for early and late tray delivery in cases where a patient undergoes a procedure during normal feeding times. Tray specifications can also be used for guest trays, no trays, and messages.

9.4.5.6 *Service Period*:

ODT-2 (CE)

When blank, the modifier applies to all service periods. This field allows you to designate one or more of the feeding periods during a day by combining the codes as needed. It can also combine with quantity/timing to give such information as which service period the order belongs with.

9.4.5.7 *Text Instructions*:

ODT-3 (CE)

Instructions associated with the tray. For example, plastic silverware.

9.5 *Service Instances*:

9.5.1 This object represents the specific service performed at a specific time. An order often is associated with one or more service instance. When, for example, penicillin is ordered as 250 mg every 6 h, a service instance is generated four times a day, one for each dispensing of the 250 mg pill. When a glucose test is ordered every morning for three days, three separate service instances occur. The service instance carries information about what was done by whom. The service instance documents that a service was performed and by whom. Orders for tests that require specimens to be drawn

almost always generate a service instance related to the specimen (separate from the observation service instance). This contains information about the specimen and who drew it. The relation between an order and its service instance may vary with the setting. Continuing inpatient medication orders generate service instances. Outpatient prescriptions usually do not.

9.5.1.1 The attributes that apply to a service instance depend upon the kind of order. From the perspective of the EHR, the service instances that require specimens will have attributes related to the specimen. Drug orders (in the inpatient area) will have attributes related to the drug dispensed and by whom. These attributes are presented for the two subobjects of treatment service and test services in two separate sections.

9.5.2 *Specimen Collection Instances*—Providers write orders for observations in order to obtain information to diagnose, treat and manage their patients. This includes orders for pathology and clinical laboratory, radiology, nuclear medicine, respiratory therapy studies, for vital signs, special measurements, etc. An observation order can request a single measurement (for example, glucose), or a battery of measurements (for example, CBC, vital signs). An observation can request such a measure at a point in time (for example, glucose—stat), at intervals over time (for example, vital signs three times a day) or continuously (for example, cardiac monitoring).

9.5.2.1 *EHR Order Number*— Link to the order (see 5.1) that triggered this specimen collection. (One order may trigger many separate collections.)

9.5.2.2 *Specimen Identifier Number*—Unique identifier for each specimen.

9.5.2.3 *Date/Time Specimen Collection Planned*—Time when collection was requested or specified.

9.5.2.4 *Observation Date/Time*:

4.2.1.2.7
OBR-8 (TS)
11001.01. DATE OF SPECIMEN COLLECT

In the case of a specimen-associated study, this field shall represent the date and time the specimen was collected or obtained.

9.5.2.5 *Observation End Date/Time*:

OBR-9 (TS)

This field shall contain the end date and time of a study or timed specimen collection. If an observation takes place over a substantial period of time, it will indicate when the observation period ended. For observations made at a point in time, it will be null. This is a results field except when the placer or a party has already drawn the specimen.

9.5.2.6 *Collection Volume 00532*:

4.2.1.2.9, Specification E 1238
OBR-10 (CQ)

The volume of a specimen. The default unit is ML. Specifically, units should be expressed in the ISO standard unit abbreviations (see the table on Single Case ISO Units Abbreviations in Specification E 1238 or ISO 2955-1983a). This is a results-only field except when the placer or a party has already drawn the specimen. (See Section 7 for full details about units.)

9.5.2.7 *Collector Identifier 00533*:

4.2.1.2.10, Specification E 1238
OBR-11 (CN)

This field identifies the person, department, or facility that collected the specimen. Either name or ID code, or both, may be present.

9.5.2.8 *Specimen Action Code 00534*:

4.2.1.2.11, Specification E 1238
OBR-12 (ID)

Indicates the action to be taken with respect to the specimen. The purpose of this field is to further qualify (when appropriate) the general action indicated by the order control code contained in the order segment which triggered the specimen collection. For example, when a new order (ORC—"NW") is sent to the lab, this field would be used to tell the lab whether or not to collect the specimen ("L" or "O"). Refer to Table 17 for valid entries.

9.5.2.9 *Danger Code 00535*:

4.2.1.2.12, Specification E 1238
OBR-13 (CM)

This field shall contain a code or text, or both, indicating any known or suspected patient or specimen hazards, for example, patient with active tuberculosis or blood from a hepatitis patient. Either code or text, or both, may be absent. However, the code is always placed in the first component position and any free text in the second component. Thus, free text without a code must be preceded by a component delimiter.

9.5.2.10 *Specimen Received Date/Time 00537*:

4.2.1.2.14, Specification E 1238
OBR-15 (TX)

For observations requiring a specimen, the actual login time at the diagnostic service. (This is a results-only field.)

9.5.2.11 *Specimen Source*— The source of the specimen (the site where the specimen should be obtained or where the service should be performed) is transmitted in five fields:

9.5.2.12 *Specimen Source Name or Code*:

OBR-16.1 (CE)

Contains the specimen source name or code (as a CE data type component). (Even in the case of observations whose name implies the source, a source may be required, for example, blood culture-heart blood.)

9.5.2.13 *Additives*:

OBR-16.2 (ST)

Additives to the specimen such as Heparin, EDTA, or Oxlate, when applicable.

9.5.2.14 *Method of Collection*:

OBR-16.3 (TX)

A free text component describing the method of collection when that information is a part of the order.

9.5.2.15 *Body Site*:

TABLE 17 Specimen Action Code

Value	Description
A	Add ordered tests to the existing specimen
G	Generated order; reflex order
L	Lab to obtain specimen from patient
O	Specimen obtained by service other than lab
P	Pending specimen (order sent prior to delivery)
R	Revised order
S	Schedule the tests specified below

OBR-16.4 (CE)

The body site from which the specimen was obtained.

9.5.2.16 *Site Modifier*:

OBR-16.5 (CE)

The site modifier. For example, the site could be antecubital fossa, and the site modifier "right." Refer to Table 18 for valid entries.

9.5.3 *Observation Service Instances*:

9.5.3.1 *Observation Service Instance ID*:

OBR-5 (CE)

The identity of the requested diagnostic test, represented as a code, a text name, or both. See definition of CE data type. This field should contain an identifier code for the requested observation battery. An observation battery may represent a set of observations (test) or a single observation; for example, vital signs, or serum potassium. This can be based on local or "universal" codes, or both.

TABLE 18 Source of Specimen

Code	Description	Code	Description
ABS	Abcess	MILK	Breast milk
AMN	Amniotic fluid	NAIL	Nail
ASP	Aspirate	NOS	Nose (nasal passage)
BPH	Basophils	OTH	Other
ABLD	Blood arterial	PRT	Peritoneal fluid ascites
BBL	Blood bag	PER	Peritoneum
BON	Bone	PLC	Placenta
BRTH	Breath	PLAS	Plasma
BRO	Bronchial	PLB	Plasma bag
BRN	Burn	PLR	Pleural fluid (thoracentesis flu)
CALC	Calculus	PMN	Polymorphonuclear neutrophils
CDM	Cardiac muscle	PUS	Pus
CNL	Cannula	SAL	Saliva
CTP	Catheter tip	SEM	Seminal fluid
CSF	Cerebral spinal fluid	SER	Serum
CVM	Cervical mucus	SKN	Skin
CVX	Cervix	SKM	Skeletal muscle
COL	Colostrum	SPRM	Spermatozoa
CBLD	Cord blood	SPT	Sputum
CNJT	Conjunctiva	SPTC	Sputum coughed
CUR	Curettage	SPTT	Sputum tracheal aspirate
CYST	Cyst	STON	Stone
DRN	Drain	STL	Stool = Fecal
EAR	Ear	SWT	Sweat
ELT	Electrode	SNV	Synovial fluid = Joint fluid
ENDC	Endocardium	TEAR	Tears
ENDM	Endometrium	THRT	Throat
EOS	Eosinophils	THRB	Thrombocyte (platelet)
RBC	Erythrocytes	TISS	Tissue
FIB	Fibroblasts	TISB	Tissue bone marrow
FLT	Filter	TISG	Tissue gall bladder
FIST	Fistula	TISL	Tissue lung
FLU	Body fluid—unspecified	TISP	Tissue peritoneum
GAST	Gastric fluid	TISU	Tissue ulcer
GEN	Genital	TISC	Tissue curettage
GENC	Genital—cervix	TISPL	Tissue placenta
GENL	Genital lochia	ULC	Ulcer
GENV	Genital vaginal	UMB	Umbilical blood
HAR	Hair	URTH	Urethra
IT	Intubation tube	UR	Urine
LAM	Lamella	URC	Urine clean catch
WBC	Leucocytes	URT	Urine catheter
LN	Line	VOM	Vomitus
LNA	Line arterial	BLD	Whole blood
LNV	Line venous	BDY	Whole body
LYM	Lymphocytes	WICK	Wick
MAC	Macrophages	WND	Wound
MAR	Marrow	WNDA	Wound abscess
MEC	Meconium	WNDE	Wound exudate
MBLD	Menstrual blood	WNDD	Wound drainage

9.5.3.2 *Results Report/Status Change—Date/Time*:

OBR-23 (TS)

Date-time results reported or status changed. This field is used to indicate the date and time that the results are composed into a report and released, or that a status, as defined in order status, is entered or changed. (This is a results field only.) When other applications (such as office or clinical database applications) query the laboratory application for untransmitted results, the information in this field may be used to control processing on the communications link. Usually, the ordering service would want only those results for which the reporting date/time is greater than the date/time the inquiring application last received results.

9.5.4 *Observation Battery Instances*:

9.5.4.1 *Result Status 00734*:

4.2.1.2.25, Specification E 1238
OBR-26 (ID)

The purpose of this field is to report the status of results for this order. The status applies to ALL results associated with the order. This field would typically be used in a response to an order status query where the level of detail requested does not include the OBX segments. This field can only be valued by the filler. When the individual status of each result is necessary, the observe result status field in the OBX segment may be used. Refer to Table 19 for valid entries.

9.5.4.2 *Parent Results 00550*:

4.2.1.2.26, Specification E 1238
OBR-27 (CM)

To make it available for other types of linkages (for example, toxicology) this field is defined as coded observation ID Sub-ID of parent. This important information, together with the information in OBR:29 (parent access number) uniquely identifies the parent result's OBX segment related to this service instance order. The value of this OBX segment in the parent result is the organism or chemical species about which this battery reports. For example, if the current battery is an antimicrobial sensitivity, the parent result's identified OBX contains a result which identifies the organism on which the sensitivities were run. This indirect linkage is preferred because the name of the organism in the parent result may

TABLE 19 Result Status Codes (OBR;25)

Code	Description
O	Order received; specimen not yet received
I	No results available; specimen received, procedure incomplete
S	No results available; procedure scheduled, but not done
P	Preliminary; A verified early result is available, final results not yet obtained
R	Results stored; not yet verified
F	Final results; order is complete and verified
X	No results available; order canceled (used only on queries)
Y	No order on record for this test (used only on queries)
Z	No record of this patient (used only on queries)

undergo several preliminary values prior to finalization. The third component may be used to record the name of the microorganism identified by the parent result directly. The organism in this case should be identified exactly as it is in the parent culture. This field is present only when the parent result is identified by Field 29, parent accession number. (See Section 7 for more details about this linkage.) A second mode of conveying this information is to use a standard observation result segment (OBX). If more than one organism is present the sub ID field is used to distinguish them. In this case, the first OBX with subid *N* will contain a value identifying the Nth microorganism, and each additional OBX with subid *N* will contain sensitivity values for a given antibiotic test on this organism.

9.5.4.3 *Parent Identifier Number 00737*:

4.2.1.2.29
OBR-30 (CM)

This field is identical to the parent number of the ORC segment. This field relates a child to its parent when a parent-child relationship exists. For example, observations that are spawned by previous observations, for example, antibiotic susceptibilities spawned by blood cultures, need to record the parent (blood culture) Filler Order Number here. The parent-child mechanism is described under the order Control field notes (see Segment ORC field notes in 4.1.4.2.1). It is required when the order is a child. Parent is a two-component field. The first component contains the placer order number of the parent order. The second component is optional and contains the filler order number of the parent. The components of the placer order number and the filler order number are transmitted in subcomponents of the two components of this field.

9.5.4.4 *Other Participating Persons*:

OBR-33 (CN)

The identity of the other clinician who interpreted the observation and is responsible for the report content. Include the identity and the role of the persons in the observation production (OBR33, OBR34, and OBR35 in the observation order section).

9.5.4.5 *Assistant Result Interpreter 00628*:

4.2.1.2.33, Specification E 1238
OBR-34

When applicable, record the clinical observer who assisted with the interpretation of this study.

9.5.4.6 *Technician 00630*:

4.2.1.2.34, Specification E 1238
OBR-35

When applicable, record the performing technician.

9.5.4.7 *Transcriptionist 00629*:

4.2.1.2.35, Specification E 1238
OBR-36

When applicable, record the report transcriber.

9.5.4.8 *Scheduled—Date/Time 00736*:

4.2.1.2.36, Specification E 1238
OBR-37

When applicable (for example, action code in field 11 = "S"), record the date/time the filler scheduled an observation. This is a result of a request to schedule a particular test and provides a way to inform the placer of the date/time a study is scheduled (result only).

9.5.5 *Treatment Instances*:

9.5.5.1 *Treatment Instances Unique ID*:

Prescription Number
RXD-7 (NM)
[6.15.1.3 Prescription number
12001.12. MEDICATION PRESCRIPTION NO.

Unique number assigned to identify each prescription.

9.5.5.2 *Administration Sub-ID Counter*:

4.5.11.1.2, Specification E 1238
RXA-2 (NM)xxxxx

Starts with "1" the first time that medication is administered for this order. Increments by one with each additional administration of medication. Note that more than one RXA segment can be "matched" to a single RXG segment, as is the case when recording a change of the rate of administration of an IV solution.

9.5.5.3 *Administered Code*:

4.5.11.1.5, Specification E 1238
RXA-5 (CE)xxxxx

This is the identifier of the medical substance administered. It is equivalent to the Universal Service ID code and links to the master service catalogue.

9.5.5.4 *Administered Amount*:

4.5.11.1.6, Specification E 1238
RXA-6 (NM)xxxxx

The amount administered.

9.5.5.5 *Administered Units*:

4.5.11.1.7, Specification E 1238
RXA-7 (CE)xxxxx

This must be in simple units that reflect the actual quantity of the substance administered. It does not include compound units.

9.5.5.6 *Administered Dosage Form*:

4.5.11.1.8, Specification E 1238
RXA-8 (CE)xxxxx

Use this field when the administered code does not specify the dosage form.

9.5.5.7 *Administration Notes*:

4.5.11.1.9, Specification E 1238
RXA-9 (ST)xxxxx
[6.15.1.13 Medication notes
12001.63. MEDICATION NOTES

Free text notes from the provider administering the medication. This may contain free text describing a custom IV, mixture, or salve.

9.5.5.8 *Administering Provider*:

4.5.11.1.10, Specification E 1238
RXA-10 (CN)xxxxx

Provider ID of the person administering the pharmaceutical.

9.5.5.9 *Administered at Location*:

4.5.11.1.11, Specification E 1238
RXA-11 (ID)xxxxx

This is a two-component field:

Nurse__Unit&Room&Bed&Facility__ID
Street__Address&Ot__Designation&
City&State<or>Province&ZIP Code&Country

(1) The first component contains the inpatient or outpatient location at which the drug was administered (if applicable). The default (null) value is the current census location for the patient. Site specific table.

(2) The second component can be used to specify an address. This could be used to fill mail orders to a patient or provider, or to account for home health care.

9.5.5.10 *Administered Per (Time Unit)*:

4.5.11.1.12, Specification E 1238
RXA-12 (ST)xxxxx

Rate at which this medication was administered as calculated by using the administered amount and the administered units fields.

9.6 *Observations*:

9.6.1 We use the notion of observations in its most general sense to mean any aspect of a patient that can be described at a point in time. It follows exactly Allen Rector's idea of an observation **(14)**. A serum glucose result, a chest X-ray impression, a Glasgow coma score, each of the questions in the SF-36, a history of present illness, urine output, and nurses' note are each observations. An observation is an attribute of a patient at a point in time. An observation is the atomic unit or "chunk" in which clinical information is recorded. When a report is divided into well defined sections or variables, each section or variable should be reported as a separate observation, so the computer can manipulate it individually.

9.6.2 The observation object cannot stand alone. General attributes (those that are independent of a particular patient's observation), such as: the units in which a numeric object is reported; the name and synonyms for the observation; information about how the observation is grouped and sequenced in reports with other observations; the class of the observation (for example, laboratory test, X-ray report), and so forth are associated with a master file or service catalogue. Most laboratory systems, pharmacy systems, billing systems, inventory systems and other systems that must deal with large numbers of discrete items use a general object (file) to carry all patient observations with a "pointer" to master tables (*s* service master table, a term dictionary, a table of detailed provider information) that identifies the observation. It is also the approach used by all long surviving medical record systems.

9.6.3 Using a master dictionary makes it possible to accommodate different degrees of granularity; it also easily accommodates change. As new variables are invented they can be added to the master table without requiring any restructuring of the objects contained in the data base. The observation object has provisions for storing free text comments (paragraphs), as well as for storing more specific data types. It also has provisions for linking to more complex objects (for example, images, tracings, etc.).

9.6.4 When a selected few observations are recorded in a data base, a simpler structure can be employed. If a diabetes clinic, for example, wanted to capture 20 variables (for example, diastolic blood pressure, systolic blood pressure, blood glucose, hemoglobin A1c, weight, pulse, foot lesions (yes/no), etc.), they could create one record per visit, and define specific fields for each of those twenty variables. A master term dictionary would not be needed. However, this approach does not work well in the more general case. An EHR may have 10 000 or more different kinds of observations. (Laboratory results alone can account for 5000 different variables.) Further, an observation may be recorded more than once during the visit by different providers. The flat structure, with fields corresponding to different observation, cannot accommodate the volume or the complexity of such data.

9.6.5 The master term dictionary is defined for the objects contained in the orders, procedures, and problems object classes in the same general manner.

9.6.6 These components form an ongoing chronological picture and analysis of the clinical course of the patient during an episode or encounter. This segment is applicable for any health care setting. These elements serve as a means of communication and interaction between members of a health care team. They may also occur as narrative or flow sheets.

9.6.7 *Observation Record ID*:

Link to Order Instance

9.6.8 *Observation Identifier*:

OBX-4 (CE)

Unique identifier for the observation. The format is that of the coded element (CE). Example: 93000.3 P-R interval. The identifier will "point" to a master observation table that will provide other attributes of the observation that may be used to define the possible orders and groupings of observations from "fixed" ???? ???? to problem lists. The relation of an observation ID to a master observation table is analogous to the relationship between a charge code (in a billing record) and the charge master.

9.6.9 *Observation Sub-ID (Repeat Identifiers)*:

OBX-5 (ST)

This field is also used to distinguish between multiple observations with the same observation ID and observation timing, for example, repeat measurements on one sample.

9.6.9.1 The sub-identifier is also used to group related components in reports such as surgical pathology. It is traditional for surgical pathology reports to include all the tissues taken from one surgical procedure in one report.

9.6.10 *Observation Date/Time*:

OBX-15 (TS)
11001.01.45 DATE-TIME RESULT REPTD

9.6.10.1 This field is required in two circumstances. The first is when the observations reported beneath one report header (OBR) have different dates. This could occur in the case of queries, timed test sequences, or clearance studies where one measurement within a battery may have a different time than another measurement.

9.6.10.2 It is also needed in the case of OBX segments that are being sent by the placer to the filler, in which case the date of the observation being transmitted is likely to have no relation to the date of the requested observation. In France, requesting services routinely send a set of the last observations along with the request for a new set of observations. The date of these observations is important to the filler laboratories.

9.6.10.3 In all cases, the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time. In the case of tests performed in specimens that

the relevant date-time is the specimen's collection date-time. In the case of observations taken directly on the patient (for example, X-ray images, history and physical), the observation date-time is the date-time that the observation was performed.

9.6.11 *Observation Data-Type*:

OBX-3 (ID)

The value type field defines the format of the observation value in OBX. If the value is CE then the result must be a coded entry. If the value type is TX then the results will be bulk text. The valid values for the value type of an observation are listed in Table 4.

9.6.11.1 The observation value must be represented according to the format for the data type defined in Chapter II, Control Section. For example, a PN consists of six components, separated by component delimiters.

9.6.11.2 Although NM is a valid type, observations which are usually reported as numbers will often have the string (ST) data type because non-numeric characters are often reported as part of the result, for example, >300 to indicate the result was off-scale for the instrument. In the example, ">300," ">" is a symbol and the digits are considered a numeric value.

9.6.11.3 All HL7 data types are valid except CM, because it is not a specific data type, CQ, because units for the value (OBX;5) are always specified explicitly in an OBX segment (in OBX;6), and sequence ID, because it only applies to segments.

9.6.12 *Observation Value*:

OBX-6 (Data type depends upon the observation data type)

This field contains the value observed by the observation producer. The value type field (OBX;2) contains the data type according to which observation value is formatted. It is a required field in the OBX segment.

9.6.13 *Representation*— This field contains the value of observations identified in the observation identifier field. Depending upon the observation, the data type may be a number (for example, a respiratory rate), a coded answer (for example, a pathology impression recorded as SNOMED), or a date-time (the date-time that a unit of blood is sent to the ward). An observation value is always represented as the data type specified in the observation field of the same segment. Whether numeric or short text, the answer shall be recorded in ASCII text.

9.6.13.1 *Producer ID*:

OBX-16 (CNA)
Observation performance site

This field contains a unique identifier of the responsible producing service. It should be reported explicitly when the test results are produced at outside laboratories, for example. When this field is null, the receiving system assumes that the observations were produced by the sending organization. This information is needed to satisfy CLIA regulations in the United States. The code for producer ID is recorded as a CE data type. In the United States, the Medicare number of the producing service is suggested as the identifier.

9.6.13.2 *Responsible Observer*:

OBX-17 (CNA)

When required, this field contains the identifier of the individual directly responsible for the observation (that is, the person who either performed or verified it). In a nursing service, the observer is usually the professional who performed the observation (for example, took the blood pressure). In a laboratory, the observer is the technician who performed or verified the analysis. The code for the observer is recorded as a CE data type. If the code is sent as a local code, it should be unique and unambiguous when combined with the producer ID in P10.45.

9.6.13.3 *Observation Result Status*:

OBX-12 (ID)

Refer to Table 20 for valid codes. This field reflects the current completion status of the results for one observation identifier.

9.6.13.4 *Abnormal Flags*:

OBX-9 (ID)

This field indicated the normalcy status of the result. The characters for representing significant changes either up or down or abnormal values are as shown in the table on Abnormal/Change Code in Specification E 1238. For interpretation of antibiotic sensitivities, the codes in the table on Interpretive Codes for Antibiotic Sensitivities in Specification E 1238 may be used.

9.6.13.5 *Probability*:

OBX-10 (NM)

This field provides a place to report the probability that a result or diagnostic impression is true. It gives the reporter's confidence in his/her impression. It only applies to categorized (coded) results. It is a decimal number represented as an ASCII string that must be between zero and one inclusive.

9.6.13.6 *Nature of Abnormal Checking*:

OBX-11 (ID)

The table on Codes for Nature of Abnormal Range Checking in Specification E 1238 contains the codes that identify the kinds of normal range checking employed by the observation producer. As many of the codes as apply shall be included and be separated by component delimiters.

9.6.13.7 *Units*:

OBX-7 (CE)
Observation units

In this version of the specification, units have a data type of CE. The default coding system for the units codes consists of

TABLE 20 Observation Result Status Codes Interpretation (OBX;11)

Code	Description
C	Record coming over is a correction and thus replaces a result.
D	Treat the result as deleted.
F	Final results. Take as always true. Producer service believes this is a complete order.
I	Specimen in lab; results pending.
P	Preliminary results.
R	Results entered—not verified.
S	Partial results.
X	Results cannot be obtained for this observation.
U	Results status change to final. Results did not change (don't retransmit test). For example, radiology changes status from preliminary to final.

the ISO + abbreviation for a single case unit (see ISO 2955-83) plus extensions, that do not collide with ISO abbreviations (see introductory section to this chapter). We designate this coding system as ISO + . Both the ISO unit's abbreviations and the extensions are defined in 7.1.5.1 and listed in Table 7, Codes for Diagnostic Classification, of Specification E 1238. The ISO + abbreviations are the codes for the default coding system. Consequently, when ISO + units are being used, only ISO + abbreviations need be sent, and the contents of the units field will be backward compatible to HL7 version 2.1.

9.6.13.8 *Reference Range*:

OBX-8 (ST)
Observation reference range

Numeric values should be reported in the following form:< lower limit-upper limit>, for example, for potassium, 3.5 to 4.5. For results with alphabetical values, the normal value may be reported in this location. If the observation quantifies the amount of a toxic substance, then the upper limit of the range identifies the toxic limit. If the observation quantifies a drug, the lower limits identify the lower therapeutic bounds and the upper limits represent the upper therapeutic bounds above which toxic side effects are common.

9.6.13.9 *Confidentiality Code*:

(OMI-31) (ID)

This field indicates the degree to which special confidentiality protection should be applied to the observation. For example, a tighter control may be applied to an HIV titer than to a CBC. Examples of possible codes are the following:

V — Very restricted
R — Restricted
U — Usual control

9.6.13.10 *Observation Comments*:

C-4 (TX)

This field contains the actual text of a comment. The comment applies to the observation segment that immediately precedes it. The comment field is of type TX, therefore its contents may be of virtually unlimited length, and a long comment need not be broken into a series of separate comment segments. However, long comment segments must be broken into lines of less than 220 characters to satisfy the line length limits of some receiving systems. (See 5.3, Maximum Line Length, of Specification E 1238.)

9.7 *Encounters*:

9.7.1 Every encounter and episode included in the primary patient record in the course of a patient's lifetime is sequenced for each encounter or episode by means of a date-time. The subsections under Section 7 of Specification E 1238 are organized to reflect the logical iterations of care events that make up the continuing development of the patient record. Levels of detail depend upon the specific care site.

9.7.2 The concept of an encounter is defined to be a face-to-face session of the patient with a practitioner during which information about the patient's health status is exchanged. Under certain circumstances, telephone evaluations should also be recorded. The encounter record should capture the facts relating to the events that took place and whether they occur in an inpatient setting or an ambulatory care environment. Certain information that characterizes the time, place, and circumstances of the initiation of the encounter are first required. Then the information characterizing the patient's condition and reason for seeking care must be recorded. Next, the identification and characterization of the patient's problem(s), including referencing the encounter to the problem list must be included. Finally, the interventions ordered, the departure condition and the required follow-up actions must be recorded, including a record of the services rendered. Because the circumstances leading to an encounter may be as direct as inpatient rounds by the attending physician to emergency room care (for example, traumatically injured patients), the data collected in the encounter may vary from brief to extensive. The data actually collected may not include all data elements identified, if these elements are not applicable to a given encounter.

9.7.3 A discussion of this representation must first explain that the pointer arrows leading from the identified data elements to a logical site mnemonic is intended to portray that element is represented in a lexicon that has associated attributes that are not dependent upon the context of the term in the episode or encounter record and that the recorded element is the index into this sublexicon. In order to reflect how the structure of the record parallels the practitioner's thought processes, these logical interrelations are depicted using a generic convention and the data that are global to the individual encounter must be so identified in order to foster data independence wherever possible. This means avoidance of recording redundant data when that data is independent of the context.

9.7.4 Data elements clarifying time/date, location, type, and source of encounter or episode as they differ from the information already contained in the related major SEGMENTS in 6.4 through 6.15 of Specification E 1238. These should include the problem list, narrative, and coded descriptions of admitting and principal diagnoses following the standardized definitions of these terms. Narrative and coded descriptions of all other diagnoses which are a factor in the patient's care during the specific episode or encounter are also listed here to be added to the problem list segment (see 6.9).

9.7.5 Some of these elements may require updating at each encounter or episode and must satisfy various national standards and regulations such as Joint Commission Standard, Conditions of Participation for Medicare, Uniform Hospital Discharge, Ambulatory, and Long Term Care data sets.

9.7.6 *Attributes of Encounters*:

9.7.6.1 *Encounter Identifier*:

(ST)

A number or string that uniquely identifies each encounter.

9.7.6.2 *Type of Encounter*:

(ID)

Sample Values:
I Inpatient
O Outpatient
E Emergency Ambulatory Care
H Home Visit
X Other
T Telephone
C Teleconference
V Televideo

9.7.6.3 *Patient ID*:

(CE)

Identifies patient in this encounter. Uses the EHR's patient identifiers.

9.7.6.4 *Admit/Visit Date-Time*:

PV1–44 (DT)

Admit date-time. To be used if the event date-time is different than the admit date and time, that is, a retroactive update.

9.7.6.5 *Discharge Date-Time*:

OBX-4 (CE)

PV1–45 (TS)

Discharge date-time. To be used if the event date/time is different than the admit date and time, that is, a retroactive update.

9.7.6.6 *Attending Practitioner*:

PV1–7 (CE)

In the form PHYSICIAN IDˆ NAMEˆ UPIN. Depending on local agreements, either ID or NAME may be absent.

9.7.6.7 *Site of Encounter*:

(TYPE?)

Table 16 outlines the classes of settings that maintain primary record of care that contain the identified information segments in some degree.

9.7.6.8 *Patient Class*:

PV1–2 (ID)

Generally as denoted below, subject to site-specific variations:

Value	Description
E	Emergency
I	Inpatient
O	Outpatient
P	Preadmit
R	Recurring Patient
B	Obstetrics
X	Other

9.7.6.9 *Admit Reason*:

PV2–3 (ST)
Chief complaint/reason for visit
14001.A023. CHIEF COMPLAINT

Reason for episode/encounter and patient's complaints and symptoms reflecting his/her own perceptions of his needs. The nature and duration of symptoms that caused the patient to seek medical attention, as stated in the patient's own words.

NOTE 7—The five fields (PV1–3 through PV1–6 and PV1–11) in 9.7.6.10 through 9.7.6.13 apply to inpatients only.

9.7.6.10 *Assigned Patient Location*:

PV1–3 (ID)

Format is NURSE UNIT ˆ ROOM ˆ BED ˆ FACILITY ID ˆ BED STATUS. New location is the patient's initial assigned location, or the location to which he/she is being moved. For canceling a transaction or discharging a patient, the current room number should be in this field.

9.7.6.11 *Admission Type*:

PV1–4 (ID)

This code indicates the circumstances under which the patient was or will be admitted.

Value	Description
E	Emergency
R	Routine

9.7.6.12 *Pre-Admit Number*:

PV1–5 (ST)

The number that uniquely identifies the patient's pre-admit account. Some system will continue to use the pre-admit number as the billing number after the patient has been admitted.

9.7.6.13 *Prior Patient Location*:

PV1–6 (ID)

The format contains up to five components: NURSE UNIT ˆ ROOMˆ BEDˆ FACILITY IDˆ BED STATUS. The old location is null if the patient is new. It contains the prior patient location if the patient is being transferred.

9.7.6.14 *Temporary Location*:

PV1–11 (ID)

A location other than the assigned location required for a temporary period or time (for example, OR). In the form NURSE UNITˆ ROOMˆ BEDˆ FACILITY IDˆ BED STATUS.

9.7.6.15 *Referring Practitioner*:

PV1–8 (CE)

In the form PHYSICIAN IDˆ NAMEˆ UPIN. Depending on local agreements, either ID or NAME may be absent.

9.7.6.16 *Consulting Practitioner*:

PV1–9 (CE)

Depending on local agreements, either ID or NAME may be absent.

9.7.6.17 *Hospital Service*:

PV1–10 (ID)

The treatment or type of surgery the patient is scheduled to receive.

9.7.6.18 *Pre-Admit Test Indicator*:

PV1–12 (ID)

The code indicates that the patient must have pre-admission testing done in order to be admitted.

9.7.6.19 *Re-Admission Indicator*:

PV1–13 (ID)

"R" for re-admission or else null. The code used to indicate that a patient is being re-admitted to the facility and the circumstances.

9.7.6.20 *Admit Source*:

PV1–14 (ID)

This code contained in this field indicates where the patient was admitted.

9.7.6.21 *Ambulatory Status*:

PV1–15 (ID)

Value	Description
A0	No functional limitations
A1	Ambulates with assistive device
A2	Wheelchair/stretcher bound
A3	Comatose/non-responsive
A4	Disoriented
A5	Vision impaired
A6	Hearing impaired
A7	Speech impaired

A8	Non-English speaking
A9	Functional level unknown
B1	Oxygen therapy
B2	Special equipment (tunes, IVs, catheters)
B3	Amputee
B4	Mastectomy
B5	Paraplegic
B6	Pregnant

9.7.6.22 *VIP Indicator*:

PV1–16 (ID)

This coded field identifies type of VIP. Appropriate values are given below.

V	—	Very restricted
R	—	Restricted
U	—	Usual control

9.7.6.23 *Admitting Doctor*:

PV1–17 (CE)

In the form PHYSICIAN ID NAME UPIN. Depending on local agreements, either ID or NAME may be absent.

9.7.6.24 *Patient Type*:

PV1–18 (ID)

Site specific values.

9.7.6.25 *Visit Number*:

PV1–19 (NM)

The unique number assigned to each patient visit.

9.7.6.26 *Discharge Disposition*:

PV1–36 (ID)

The disposition of the patient at time of discharge.

9.7.6.27 *Discharged to Location*:

PV1–37 (ST)

A composite value indicating a facility to which the patient was discharged in the form code description.

9.7.6.28 *Servicing Facility*:

PV1–39 (ID)

Used in a multiple facility environment to indicate the facility with which this visit is associated.

9.7.6.29 *Bed Status*:

PV1–40 (ID)

Value	Description
C	Closed
H	Housekeeping
O	Occupied
U	Unoccupied
K	Contaminated
I	Isolated

9.7.6.30 *Pending Location*:

PV1–42 (ID)

This field indicates the nursing station, room, bed, facility ID and bed status to which the patient may be moved.

9.7.6.31 *Prior Temporary Location*:

PV1–43 (ID)

This field can be used when a patient is arriving or departing or for general update events. The format contains up to five components: NURSE UNIT^ ROOM^ BED^ ^ FACILITY^ BED STATUS.

9.7.6.32 *Encounter Attributes Related to Financial Matters*—This segment contains the references to the financial bodies that will cover the cost of care. This segment may be referred to from within the record, as during encounters/episodes. Such reference would obviate the need for redundantly collecting such data during the visit.

9.7.6.33 *Current Patient Balance*:

PV1–46 (NM)

Visit balance due.

9.7.6.34 *Total Charges*:

PV1–47 (NM)

Total charges.

9.7.6.35 *Total Adjustments*:

PV1–48 (NM)

Total adjustments.

9.7.6.36 *Total Payments*:

PV1–49 (NM)

Total payments.

9.7.6.37 *Present Employer Name*:

01075. PRESENT EMPLOYER NAME

Name of workplace (organization) or employer's full name. That part providing a position (and compensation) for an employee.

9.7.6.38 *Primary Payment Source*:

03010. PRIMARY PAYMENT SOURCE

Responsible for largest percentage of patient's current bill. May include address.

9.7.6.39 *Insurance Plan ID*:

IN1–3 (ST)

This field contains the insurance plan identification number.

9.7.6.40 *Insurance Company ID*:

IN1–4 (ST)

This field contains the insurance company identification number.

9.7.6.41 *Group Number*:

(ST) (IN1–9)

This text field identifies the group number of the insured individual.

9.7.6.42 *Group Name*:

IN1–10 (ST)

This text field identifies the group name of the insured individual.

9.7.6.43 *Policy Number*:

IN1–36 (ST)
Insurance identification number:
03010.06. INSURANCE ID NO.

This number is the identifier of the patient's insurance policy. (A new field for insurance referral number will be included in the next revision.)

9.7.6.44 *Medicare Health Insurance Card Number*:

IN2–6 (NM)
Medicare number:
03015. MEDICARE NO.

Unique number assigned by HCFA that identifies a person as eligible for benefits.

9.7.6.45 *Medicaid Case Number*:

IN2–8 (NM)
Medicaid number:
03025. MEDICAID NO.

This is the number assigned to patients eligible for MEDICAID benefits.

9.7.6.46 *Guarantor Name*:

GT1–3 (PN)
Principal payment sponsor:
03010.08. PRINCIPAL PAYMENT SPONSOR

Name of person responsible for bill or whose insurance plan provides coverage for the patient.

9.7.6.47 *Guarantor Address*:

GT1–5 (AD)
Address of sponsor (see Specification E 1238 and Guide E 1239).
03010.10. ADDRESS OF PRINC SPON

This is the mailing address of the principal payment sponsor.

9.7.6.48 *Financial Class*:

PV1–20 (ID)

The primary financial class assigned to the patient for the purpose of identifying sources of reimbursement. The first subfield is the class, the second subfield is the effective date (DT format). Repeats up to four times.

9.7.6.49 *Charge Price Indicator*:

PV1–21 (ID)

The code used to determine which price schedule is to be used for room and bed charges.

9.7.6.50 *Courtesy Code*:

PV1–22 (ID)

A code that indicates whether the patient will be extended certain special courtesies.

9.7.6.51 *Credit Rating*:

PV1–23 (ID)

A user defined code to determine past credit experience.

9.7.6.52 *Contract Code*:

PV1–24 (ID)

This code is used to identify the type of contract entered into by the facility and the guarantor for the purpose of settling outstanding account balances.

9.7.6.53 *Contract Effective Date*:

PV1–25 (DT)

The date the contract is to start.

9.7.6.54 *Contract Amount*:

PV1–26 (NM)

The amount to be paid by the guarantor each period in accordance with the contract.

9.7.6.55 *Contract Period*:

PV1–27 (NM)

Specifies the duration of the contract for user defined periods.

9.7.6.56 *Interest Code*:

PV1–28 (ID)

The code that indicates the amount of interest that will be charged the guarantor on any outstanding amounts.

9.7.6.57 *Clinical Resume or Final Progress Note (Text)*— This subsequent contains all of the data that characterizes the origin of the episode and the manner of arrival at the provider's facility, including the condition of the patient. It also summarizes that administrative and diagnostic conditions concerning the termination of treatment.

9.8 *Appointments*— This section will address planned future encounters.

9.9 *Procedures (to be completed)*:

9.9.1 *Procedures (E)*:

9.9.1.1 Significant data elements on all procedures performed in an operating room for diagnostic, exploratory, or definitive treatment purposes.

9.9.1.2 *Name and Code of the Principal Procedure*:

14001.F001. DISCHG
PRINCIP SURG.
PROCED.

Principal procedure is performed for definitive therapy, rather than for diagnostic or exploratory purposes, or the procedure most related to principal diagnosis. No symbols or abbreviations.

9.9.1.3 *Narrative Description of the Principal Procedure*:

9.9.1.4 *Date of the Principal Procedure*:

14001.E001.30. OPERATION DATE-TIME

9.9.1.5 Name and code of additional significant procedures.

9.9.1.6 Narrative description of additional significant procedures.

9.9.1.7 Date(s) of additional significant procedures.

9.9.1.8 Findings (gross, microscopic, pathological) of each procedure.

9.9.1.9 Organs explored.

9.9.1.10 Primary surgeon name.

9.9.1.11 Assistant surgeon name(s).

9.9.1.12 Preanesthesia assessment.

9.9.1.13 Type of anesthetic agent.

9.9.1.14 Dosage of all anesthetic agents.

9.9.1.15 Anesthesiologist name.

9.9.1.16 Nurse/anesthetist.

9.9.1.17 Current, regularly monitored vital signs.

9.9.1.18 IV fluids given.

9.9.1.19 Specimens removed.

9.9.1.20 Post anesthesia assessment.

9.9.1.21 *Complications*:

14001.E001.91. OPERATION COMPLICATIONS

Surgical misadventures, that is, infections.

9.9.1.22 *Post-Op Diagnosis*:

14001.E001.57. POST-OP DIAGNOSIS

Determination of the case after operating.

9.9.1.23 This subsegment contains data that characterizes those procedural events that accompany treatment of the patient, exclusive of laboratory phases of diagnostic procedures. These are recorded in Section 11 of Specification E 1238.

9.9.2 *Disposition (F)*— Identifies the circumstances under which the patient terminated the encounter or episode and includes data about the length of stay, condition of patient on discharge, recommended treatment, and other information

necessary for follow-up care.

9.9.2.1 *Date/Time of Discharge*:

14001.F040. DISCHARGE DATE-TIME

Date-time of formal release from, or termination of, an episode of care when discharged alive.

9.9.2.2 Discharge summary text.

9.9.2.3 *Type of Discharge*:

14001.F046. DISPOSITION TYPE, Specification E 1238

9.9.2.4 *Total Length of Stay*:

14001.F093. TOTAL ACUTE CARE LOS

This period is the number of days calculated according agreed upon formulae denoting the period of inpatient residence in the facility. The period of rehabilitative care is calculated separately, if conducted in the same facility and residence period. Specification E 1633, INTEGER NUMBER.

9.9.2.5 *Disposition To: (Home, SNF, Home Health, etc.)*:

14001.F080. DISPOSITION DESTINATION

This is a description of the actual destination of the patient upon leaving the facility.

9.9.2.6 *Referral*:

14001.F083. DISCHARGE PATIENT INSTRUCTIONS

For example, instructions to patient that will enhance progress toward a return to health or a stable state. To include: patient activity allowed, medical side effects, med. signs, diet, follow-up instructions, indications for home therapy, safety precautions, maintenance of equipment, frequency/use of machine settings, postural drainage, therapeutic percussion.

9.9.2.7 *Autopsy/Necropsy Report*:

14001.F030.01. ENCOUNTER DIAGNOSIS TYPE

This is addressed as encounter diagnosis type. Values would include provisional anatomic diagnosis and full autopsy/necropsy report.

9.9.2.8 This subsegment contains that data that characterizes the conditions under which the encounter or episode was completed and the arrangements for appropriate follow-up either by the current or by other providers. It contains information needed to maintain continuity of care over several episodes or multiple encounters.

9.10 *Legal Agreements*:

9.10.1 Data elements indicating legally binding directions or restraints on patient health care, release of information, and disposal of body or body parts, or both, after death.

9.10.1.1 *Consent to Care Acknowledgment and Date*:

02001. CONSENT SIGNED/ADMIT AGREEMENT

Patient indicates in writing that he/she has been informed of the nature of the treatment, risks, complications, alternative forms of treatment and treatment consequences.

9.10.1.2 *Patient Rights Acknowledgment*:

02005. PATIENT RIGHTS ACKNOWLEDGMENT

This text states the patient's understanding of his/her rights and the rights associated with the information in the record of care.

9.10.1.3 *Advance Directive to Physician*:

02030. DIRECTIVE TO PHYSICIAN

An advance directive written by the patient to the physician in case of incapacitation to give further instructions. This may include durable power of attorney, living will, organ donation and no cardiopulmonary resuscitation.

9.10.1.4 *Organ Donor Agreement*:

02040. ORGAN DONOR AGREEMENT

To include: donor patient name (transplant recipient) donor patient number: (transplant recipient) recipient patient number (transplant donor) recipient patient name (transplant donor).

9.10.1.5 *Release of Information Authorization*:

02100.12. PERSON AUTHORIZING RELEASE

The name or identifier of the individual authorizing the release of the type of information.

9.10.1.6 *Release of Information Purpose*:

02100.10. REL OF INFO PURPOSE

This text describes the purpose for which the released information will be used.

9.10.1.7 *Date of Release of Information Authorization*:

02100.02. TYPE OF RECORD ACTION

This code identifies the type of action involved in the release of information from the patient's record.

9.10.1.8 *Authorization for Autopsy*:

02010. AUTHORITY FOR AUTOPSY

The name of the individual authorizing an autopsy.

9.10.2 This segment is intended to record those legal data that characterize the patient's agreements to care and caveats regarding that care or disposal of his effects.

9.11 *Service/Order/Concept Master*:

9.11.1 Tests, supplies and equipment also have attributes when considered in the abstract (separately from the results or use in a particular patient). These are attributes that would be listed in a catalogue of the available tests, supplies or equipment. The attributes of a test might be when it could be obtained, the preparation requirements for specimens, the price, the normal range, the units, and so on. Much of the same applies to supplies and equipment. The idea of maintaining a "catalogue" or definition table for items such as supplies, orders, observations, equipment is a powerful construct. It permits easy additions and extension to the universe of items in a given class. (New tests and observations can be made up without having to redefine our universe or rewrite programs.) Also, more attributes can be added to the item to give the universe of entities new behaviors without little or no effect on the previous version of the world. Catalogue tables are widely used to implement pharmacy systems (where each drug in the formulary is represented in the catalogue) and laboratory systems (where each orderable battery and each discrete reportable test has its own catalogue). It is an essential (though abstract) component of an EHR where it will be used to represent (at least) the various species of observations and their attributes.

9.11.1.1 *Segment Type ID*:

(ST) (OM1-1)

The string OM1 identifies a segment as a general observation master segment.

9.11.1.2 *Sequence Number*:

(NM) (OM1–2)

The first OM1 segment in a message is described as "1," the second as "2," and so on.

9.11.1.3 *Producer's Test/Observation ID*:

(CE) (OM1–3)

This field contains the producer's usual or preferred identification of the test or observation. The format is that specified in 6.6.2, CE Coded Entry, of Specification E 1238. Only three components should be included: <ID code>^<service text name/description>^<source list of code>. All components should be non-null. The source list may be any of those included in Table 3 and Table 6 of Specification E 1238, or a local code.

9.11.1.4 *Permitted Data Types*:

(ID) (OM1–4)

This field contains the allowed data type(s) for this observation. The codes are the same as those listed in the table on Legal Data Types for Observation Values in Specification E 1238. A given observation may, under different circumstances, take on different data types. Indeed, under limited circumstances, an observation can consist of one or more fragments of different data types. When an observation may have more than one data type, for example, coded (CE) and numeric (NM) the allowable data types should be separated by repeat delimiters.

9.11.1.5 *Specimen Required*:

(ID) (OM1–5)

This field contains a *Y* to indicate that one or more specimens are required to obtain this observation, and an *N* to indicate that a specimen is not required.

9.11.1.6 *Producer ID*:

(CE) (OM1–6)

This field uniquely identifies the service producing the observation described in this segment. The format is that specified in 6.7.1.2. Three components should be included: an identifying code, the name of the producer, and the identity of the coding system (for example, 323–5678^Acme Special Lab^MCR). The identity of the coding system will usually be MCR (Medicare provider number) or HBS (HIBCC site codes) in the United States (see the table on Example Quantity/Timing Field Content in Specification E 1238). Each country may want to specify its preferred coding system and define a coding system ID to identify it. Remember that the magnitude of a treatment or the setting on a machine, such as a ventilator, can be regarded as an observation. Thus, pharmacy, respiratory care, and nursing may be producers of such observations.

9.11.2 *Observation Description*:

(TX) (OM1–7)

This field contains a text description of this observation.

9.11.2.1 *Other Test/Observation IDs for the Observation*:

(CE) (OM1–8)

This field lists all alias codes/identifiers for this observation. The format is that specified in 6.7.1.2 in Specification E 1238 except that only the first three components are used. If more than one alias code needs to be specified, multiple three-component, CE-format entries (<code 1>^<name 1>^<code system 1>) may be given, separated by repeat delimiters. An observation may have as many names/codes as are applicable (for example, ICD9, ACR-NEMA, SNOMED, and READ). We encourage the inclusion of as many different codes as may apply to assist cross-system mapping of terminology. All components of each triplet should be non-null (that is, names and coding system IDs within the CE data type are required in addition to codes). The source list may be any of those included in Table 3 and Table 5. Because the size (dose) of a treatment can also be an observation, codes that identify treatments (for example, NDC, ICCS) may also be included in this field.

9.11.2.2 *Other Names (Recognized by the Producer for the Observation)*:

(ST) (OM1–9)

Include any text aliases, or synonyms for the name in the context of the ordering service. These are alternative names, not associated with a particular coding system, by which the battery, test, or observation (for example, measurement, test, diagnostic study, treatment) is known to users of the system. Multiple names in this list are separated by repeat delimiters.

9.11.2.3 *Preferred Report Name for the Observation*:

(ST) (OM1–10)

This is the preferred name for reporting the observation or battery. The name can contain up to 30 characters (including blanks). It is the preferred name for columnar reports that require a maximum name size.

9.11.2.4 *Preferred Short Name or Mnemonic for the Observation*:

(ST) (OM1–11)

This is a name that can be used in space-limited reports (for example, specimen labels) to identify the observation for the convenience of human readers. The name can contain up to eight characters.

9.11.2.5 *Preferred Long Name for the Observation*:

(ST) (OM1–12)

This is the fully specified name for the observation or battery. It may include the full (unabbreviated) multiple-word names and contain up to 200 characters. It should be as scientifically precise as possible.

9.11.2.6 *Orderability*:

(ID) (OM1–13)

Enter *Y* in this field if the test/observation is an orderable code. Enter *N* if it is not orderable. For example, blood differential count is usually an orderable "test." MCV, contained within the differential count, is usually not independently orderable.

9.11.2.7 *Identity of Instrument Used to Perform This Study*:

(CE) (OM1–14)

When applicable, this field specifies the instrument or device

that is used to generate this observation or battery. Examples are the automated instrument in the laboratory, the imaging device and model number in radiology, and the automatic blood pressure machine on the ward. The format should be that specified in 6.7.1.2. The instrument is specified as a coded entry in anticipation that these identifiers could be specified as codes. Initially, we expect that most of the information about devices will be transmitted as text in the second component of the CE identifier. If more than one kind of instrument is used, all of them can be listed, separated by repeat delimiters. Other devices are pain scales and the Braden scale for decubitus ulcer.

9.11.2.8 *Coded Representation of Method*:

(CE) (OM1–15)

The method(s) used to produce the observation should be recorded in a computer-understandable (coded) form here. This field should report the same method(s) reported in narrative in the following field. More than one method may be listed, but only if they produce results that are clinically indistinguishable. Multiple methods must be separated by repeat delimiters.

9.11.2.9 *Portable*:

(OM1–16)

This field contains a value of *Y* if the observation can be obtained with a portable device brought to the patient, and *N* if the patient or specimen must be transported to the device.

9.11.2.10 *Observation Producing Department/Section*:

(ID) (OM1–17)

This field permits the sorting of observation orders and values by the providing service's department/section. It provides "source oriented" reporting when required. The codes for this field should be taken from the table on Codes for Service Intervals in Specification E 1238. Free text may be used instead of these codes, but in that case, they should be recorded as the second "component" of the field to distinguish them from the standard codes. Multiple codes in this field are separated by repeat delimiters.

9.11.2.11 *Telephone Number of Department/Section*:

(TN) (OM1–18)

This field contains the telephone number for calling responsible parties in this section to ask results or advice about the use of this test.

9.11.2.12 *Nature of Test/Observation*:

(ID) (OM1–19)

This field indicates whether the definition entry identifies a test battery, an entire functional procedure or study, a single test value (observation), multiple test batteries or functional procedures as an orderable unit (profile), or a single test value (observation) calculated from other independent observations. The possible options are the following:

Code	Description
A	Atomic test/observation (single test or treatment)
C	Single observation calculated via a rule or formula from other independent observations (for example, Alveolar—arterial ratio, cardiac output)
P	Profile or battery consisting of many independent atomic observations (for example, SMA12, electrolytes), usually done at one instrument on one specimen
F	Functional procedure that may consist of one or more interrelated measures (for example, glucose tolerance test, creatine clearance), usually done at different times or on different specimens, or both
S	Superset—a set of batteries or procedures ordered under a single code but processed as separate batteries (for example, routines = CBC, UA, electrolytes). This code indicates that the definition entry being described is a set of multiple test/observation batteries. For example, a client who routinely orders a CBC, a differential, and a thyroxine as an outpatient profile might use a single, special code to order all three test batteries, instead of having to submit three separate order codes.

(1) Codes P, F, and S identify sets (batteries) and should be associated with an OM5 segment that defines the list of elements. The definitions for the contained elements would have to be sent in other independent OMx segments, one for each contained element. In the ASTM context, most text reports; such as discharge summaries, admission H and Ps, and chest X-ray reports—are considered as sets, in which each section of the report (for example, description, impression, and recommendation of an X-ray report) is considered a separate observation.

(2) Code A identifies a single direct observation and would usually be associated with an OM2 or OM3 segments, or both.

(3) Code C identifies a derived quantity and would usually be associated with an OM6 segment. All of these codes can be associated with one or more OM4 (specimen) segments.

9.11.2.13 *Report Subheader*:

(CE) (OM1–20)

This field contains an optional string that defines the preferred header under which this observation should be listed on a standard display. For example, if the test is hemoglobin, this string might be "complete blood count." It is represented as a coded data type so that a battery can be a header. Only the description part of the string may be included in case the subheader does not have an associated code. When a series of observations is displayed according to the sort order given below, the subheader that groups those observations is presented whenever the subheader changes.

9.11.2.14 *Report Display Order*:

(ST) (OM1–21)

This field contains an optional string that defines the sort order in which this observation is presented in a standard report or display that contains many observations.

9.11.2.15 *Date-Time Stamp for Any Change in Definition Attribute for the Observation*:

(TS) (OM1–22)

This field indicates the date and time that the last of any field change was made in the host's record corresponding to the OM1 segment.

9.11.2.16 *Effective Date-Time of Change in Test Procedure That Makes Results Non-Comparable*:

(ST) (IN1–9)

(1) This field indicates the date and time of the last change in the test procedure that would make previous results incompatible with new results, for example, the last time that normal reference range or units changed for a numeric test/observation.

(2) We strongly suggest that observation producers never use the same observation ID when the measurement procedures changes in such a way that results produced under the new procedure are clinically different from those produced with the old procedure. Rather the producer should try to adjust the new procedure so that its values are clinically indistinguishable from the old. Failing that, one should create a new observation ID for the observation produced under the new procedure.

(3) In the rare circumstances when a procedure change occurs and neither of the above two options are viable, this field shall be used to transmit the effective date-time of the new procedure. The receiving system shall assume that any values that come across under this observation ID are under the new procedure after this date and take appropriate steps to distinguish the old from the new observations.

9.11.2.17 *Typical Turn-Around Time from Receipt of Specimen/Subject to Result Produced*:

(NM) (OM1–24)

Typical processing time for single test/observation. This field indicates the time from the delivery of a specimen or transport of a patient to a diagnostic service and the completion of the study. It includes the usual waiting time. The time is measured in minutes.

9.11.2.18 *Processing Time*:

(NM) (OM1–25)

Usual length of time (in minutes) between the start of a test process and its completion.

9.11.2.19 *Processing Priority*:

(ID) (OM1–26)

This field specifies one or more available priorities for performing the observation or test. This component indicates the corresponding priority with which the producer service will process the specimen, produce the observation, and return results, when this differs from collection priority. Permitted priority values are:

S	Stat (do immediately)
A	As soon as possible (a priority lower than stat)
R	Routine
P	Preoperative (to be done prior to surgery)
T	Timing critical (do as near as possible to requested time)
C	Measure continuously (for example, arterial line blood pressure)
B	Do at bedside or portable (may be combined with other codes)

Multiple priorities may be given, separated by repeat delimiters. For example, S~A~R~P~T indicates that the test may be ordered using codes S, A, R, P, or T.

9.11.2.20 *Reporting Priority*:

(ID) (OM1–27)

This field specifies the available priorities for reporting the test results when the user is asked to specify the reporting priority independent of the processing priority. The available codes are:

C—Call back results
R—Rush reporting

9.11.2.21 *Outside Site(s) Where Observation May Be Performed*:

(CE) (OM1–28)

If an outside service or services produce the observation, this field contains the identification(s) of the outside service(s). The format of this CE field is that specified in 6.7.1.2, with the producer ID (as defined in OM1–6) and the name of the service separated by component delimiters. An example is 39221 ACME lab MCR. If multiple services are used, they should be separated by repeat delimiter(s).

9.11.2.22 *Address of Outside Site(s)*:

(AD) (OM1–29)

Record in this field the address of the outside services listed in OM1–28. If multiple services are recorded in that field, their addresses should be separated by repeat delimiters, and the addresses should appear in the same order in which the services appear in the preceding field.

9.11.2.23 *Phone Number of Outside Site(s)*:

(TN) (OM1–30)

This field contains the telephone number of the outside services listed in OM1–28. If multiple services are recorded in that field, their telephone numbers should be separated by repeat delimiters, and the numbers should appear in the same order in which the services appear in field OM1–28.

9.11.2.24 *Confidentiality Code*:

(ID) (OM1–31)

This field indicates the degree to which special confidentiality protection should be applied to the observation. For example, a tighter control may be applied to an HIV titer than to a CBC. Examples of possible codes are the following:

V	—	Very restricted
R	—	Restricted
U	—	Usual control

9.11.2.25 *Observations Required to Interpret This Observation*:

(CE) (OM1–32)

This is the list of variables that the diagnostic service needs to interpret the results of an ordered study. The observations specified here should be sent to the diagnostic service as OBX segments along with the order (OBR) segment. The format of this CE field is that specified in 6.7.1.2.

(1) Example for Cervical Pap Smear:

2000.32^ date last menstrual period^ AS4~2000.33^ menstrual state^ AS4

(2) Example for Arterial Blood Gas:

94700^ inspired 02^ AS4

(3) These examples use AS4 codes in code/text format to identify the variables. Separate multiple items by repeat delimiters.

9.11.2.26 *Interpretation of Observations*:

(TX) (OM1–33)

This field contains clinical information about interpreting test results. Examples are the conditions (drugs) that may cause false abnormals, and the information about the sensitivity and specificity of the test for diagnoses.

9.11.2.27 *Contraindications to Observations*:

(TX) (OM1–34)

(1) List diagnosis or problem for which the test is contraindicated or poses a possible danger (for example, pacemaker, pregnancy, diabetes). For example, if the test identified in OM1 was an intravenous pyelogram, this field would include warnings about the use of contrast media in diabetes. The contraindication diagnoses should be separated by repeat delimiters.

(2) Most contraindication rules will be transmitted as free text. In such cases, the contents serves only as information for human reading. However, an alternative for machine readable contraindication rules also exists. The rule may be defined formally in the Arden syntax (see Specification E 1460) that has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Contraindication rules that are written in Arden syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

9.11.2.28 *Reflex Tests/Observations*:

(CE) (OM1–35)

This field includes the test names as type CE (that is, <code>^<text name>^<coding system>) that may be ordered automatically by the diagnostic service, depending on the results obtained from the ordered battery. A screening CBC might trigger a reticulocyte count if the Hgb is less than twelve. Multiple reflex tests are separated by repeat delimiters.

9.11.2.29 *Rules That Trigger Reflex Testing*:

(TX) (OM1–36)

This field contains the rules that trigger the reflex tests listed above. If multiple reflex tests are listed in 19.2.35 (field OM1–35) separated by repeat delimiters, a set of corresponding rules will be included in this section. The first rule will apply to the first test, the second to the second test, and so on.

(1) Most reflex rules will usually be transmitted as free text. In such cases, the contents serves only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden syntax (see Specification E 1460), which has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Reflex rules that are written in Arden syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

9.11.2.30 *Fixed Canned Message*:

(TX) (OM1–37)

This field contains codes and a fixed text message that is always associated with an abbreviation. The field may include multiple messages separated by repeat delimiters.

9.11.2.31 *Patient Preparation*:

(TX) (OM1–38)

(1) For tests or observations that require special patient preparation, diet, or medications, record them here. For GI contrast studies, this field would contain the pretest diet, for example, low residue for two days, NPO before study, and the preferred purgatives. Each separate medication, diet, or preparation should be delimited by a repeat delimiter. Separate each requirement by a repeat delimiter. Example for a sigmoidectomy: clear liquid diet full day before procedure~take 8 oz mag citrate 6 pm day before procedure~take two ducat tabs (5 m) at 4 pm day before procedure~NPO past midnight.

(2) Most rules about patient testing will be transmitted as free text. In such cases, the contents serves only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden syntax (see Specification E 1460) that has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Rules about patient preparation that are written in Arden syntax should begin and end with a double semi-colon (;;), the Arden slot delimiter.

9.11.2.32 *Procedure Medication*:

(CE) (OM1–39)

This contains treatments that may be needed as part of the procedure. Examples are radioactive iodine for a thyroid screen, and methacholine for a methacholine spirometry challenge. This field should be identified as a CE data type as described in 6.7.1.2.

9.11.2.33 *Factors That May Affect the Observation*:

(TX) (OM1–40)

(1) This field contains text description of the foods, diagnoses, drugs, or other conditions that may influence the interpretation of the observation, information about the direction of the effect, and any recommendation about altering the diet, conditions, or drug before initiating the test observation.

(2) Most rules about factors that effect the test interpretation will be transmitted as free text. In such cases, the contents serves only as information for human reading. However, an alternative for machine readable rules also exists. The rule may be defined formally in the Arden syntax (see Specification E 1460) that has syntax for defining algebraic and transcendental equations, as well as temporal and logical selection criteria based on patient information stored in the computer record. Rules about factors that affect test interpretation, that are written in Arden syntax, should begin and end with a double semi-colon (;;), the Arden slot delimiter.

9.11.2.34 *Test/Observation Performance Schedule*:

(ST) (OM1–41)

For diagnostic studies/tests that are performed only at certain times during the course of a work day or work week, this field indicates the maximum interval between successive test performances (the test may actually be performed more frequently). The format given in the table on Codes for Duration in Specification E 1238 should be used. If necessary, multiple codes may be given, separated by repeat delimiters. The use of multiple codes indicates that the test is performed at multiple concurrent intervals. For example, Q6H indicates that the test is performed at least once every 6 h around the clock. Q1J indicates that the test is performed at least every week on Mondays. QAM~QPM indicates that the test is performed at least once every morning and every evening. Q1J~Q3J~Q5J indicates that the test is performed at least every week on Mondays, Wednesdays, and Fridays. C indicates that the test is performed continuously, seven days per week.

9.11.2.35 *Description of Test Methods*:

(TX) (OM1–42)

This field contains a text description of the methods used to

perform the test and generate the observation. Bibliographic citations may be included.

9.11.2.36 *Charge by Producing Service*:

(CM) (OM1–43)

This and the subsequent field are included to provide a convenient way for an ordering system to display price information for the purpose of display to ordering physicians. This is not meant to accommodate all billing issues. They are not meant to provide full pricing information required by a financial system. This field contains the charge for an orderable test. The value can contain up to four components:

<patient price>^ <charge for ordering practice>^ <maximum charge allowed by third-party payor>^ <type of money>

Note the following example:

16^ 13.50^ 14.50^ USD

The price may be in American dollars, British pounds, French francs, Swiss francs, German marks, and so on. Use the ISO money code to indicate denomination of money. Multiple values can be included if cost is separated by a repeat delimiter.

9.11.2.37 *Price Modifiers*:

(CM) (OM1–44)

This is a two-component field that lists factors which might modify the price. The first component is the factor affecting the price, and the second component is the difference in price. Suggested factors might be the following:

S	—	Stat
N	—	Night shift
W	—	Weekends
A	—	ASAP

The syntax is as follows:

<kind of charge> { + ,–}<amount>{%}

A plus sign in front of the special charge indicates that the amount is added to the base price. A minus sign indicates that the amount is subtracted. If no plus or minus sign appears in front of the amount, the amount should replace the base price. If the amount is followed by a percent, compute the increment as a percent rather than an absolute amount. The percent cannot be used if a price is taken to be a replacement. Note the following example:

STAT^ + 20.50~
Weekends^ + 15.%

The price adjustment is assumed to be in the same money denomination as the preceding field.

9.12 *Provider Master*:

9.12.1 This segment contains, in one place, the descriptive data about each provider/practitioner and may then be referenced when recording data about the events of health care.

NOTE 8—Clinical segments are considered as accumulated data identified in 6.8 through 6.16 in Specification E 1238.

9.12.2 *Provider*—Identifying data on the primary organization or establishment responsible for the availability of health care services for this specific episode or encounter.

9.12.3 *Practitioner*— Identifying data elements on individuals licensed or certified to deliver care to patients, who had face-to-face contact with the patient, and provided care based on independent judgment.

9.12.3.1 *Provider Name*:

Type = NM
04001. PROVIDER/PRACTITIONER NAME

The name of facility or practice submitting a bill. May be the same as practitioner name. (A business entity that furnishes health care.)

9.12.3.2 *Provider Address*:

Type = AD
04001.03. PROVIDER ADDRESS

Complete address to which the provider wishes the payment sent.

9.12.3.3 *Provider Type*:

Type = ID
04001.05. PROVIDER TYPE

Type of health care setting or practice type. Includes routine home care, respite, inpatient care, acute inpatient care, bereavement follow-up outpatient laboratory, short stay, etc.

9.12.3.4 *Provider Identification Number*:

04001.07. PROVIDER ID NO.

Numbers assigned by various payers: Medicare, Medicaid, Blue Cross/Blue Shield, Federal Tax Number (assigned by Federal Government for tax report purposes).

9.12.3.5 *Attending/Referring/Consulting/Operating Practitioner Name*:

04001.10. PRACTITIONER NAME

The name of the practitioner, structured in common person name format.

9.12.3.6 *Practitioner Role (Primary, Referring, Consulting, Operating, etc.)*:

04001.45. PRACTITIONER CURRENT ROLE

This code identifies the role (primary physician, consultant etc.) that the practitioner plays with this patient.

9.12.3.7 *Practitioner's Profession*:

04001.20. PRACTITIONER'S PROFESSION

Profession in which the practitioner is currently engaged.

9.12.3.8 *Practitioner's Address*:

04001.25. PRACTITIONER'S ADDRESS

Usual or principal place of practice.

9.12.3.9 *Practitioner's Phone Number*:

04001.30. PRACTITIONER'S PHONE

The number where the practitioner may most frequently be reached.

9.12.3.10 *Practitioner's Unique Identification Number*:

04001.15. PRACTITIONER'S UNIVERSAL ID NO

The universal numeric identifier will be used to link services for a provider across care systems. All providers/practitioners will each have a unique number that identifies the practitioner from all others and is the same for the practitioner in all settings where he/she may practice.

9.12.3.11 *Practitioner's License Number*:

04001.35. PRACTITIONER LICENSE NO

The license identifying no. and state for the license authorizing the practitioner to practice.

9.12.3.12 *Practitioner's License State*:

04001.40. PRACTITIONER LICENSE STATE

The abbreviation for the state holding the practitioner's license.

10. Electronic Health Record Data Dictionary Resource

10.1 Additional recommended data elements within each segment category specified by individual source data sets are listed in Appendix X1 that contains all elements proposed for the record, including primary and longitudinal records from multiple sources. They are listed as a visual summary only to aid perception of the complete pattern of the record. Each data element is also listed and further detailed with attributes in Annex A1, that is a part of this guide. The reader is again reminded that, though each data element characterization is a part of this guide, it is not required if it is not to be used but, if used, it must have the same meaning and representation as given in Annex A1. Only conformance to that caveat will ensure reliable communication of the same concept across boundaries of time, setting and language. Work is underway to develop the master tables content and vocabulary to support this guide.

11. Keywords

11.1 data type; data views; EHR principles; electronic health record; master table; objects; segments

ANNEX

(Mandatory Information)

A1. ELECTRONIC HEALTH RECORD DATA DICTIONARY RESOURCE

TABLE A1.1 Electronic Health Record Data Dictionary Resource

01001.	**PATIENT NAME**	PersName	Person receiving health care services and about whom records containing data about those services are collected. ASTM E 1633 PARA 4.2.1
01002.	PREVIOUSLY REGISTERED NAME (1996)	PersPrevRegName	A last name changed due to marriage or initiated by patient; a former name; a maiden name. ASTM E 1633 PARA 4.2.1
01005.	PARENTAL MARITAL STATUS	PtParentMaritalStatusCode	A term expressing the current legal status of a pediatric patient's parents. ASTM E 1633 PARA 4.2.6 (5.2.2)
01007.	ADOPTED?	PtAdoptionStatusCode	A term identifying that the patient's recorded parents are not the biological ones who may be needed in establishing family pedigrees. ASTM E 1633 PARA 5.1 (4.2.6)
01010.	ALTERNATE INDIVIDUAL NAME	PersAliasName	A name added to, or substituted for, the proper name of a person. An assumed name. ASTM E 1633 PARA 4.2.6
01010.1.	ALTERNATE INDIVIDUAL NAME USAGE		Category of usage of this alternate individual name. ASTM E 1633 PARA 4.2.1
01010.2.	ALTERNATE INDIVIDUAL NAME START DATE		Date usage of this alternate individual name became effective. ASTM E 1633 PARA 4.2.4
01010.3.	ALTERNATE INDIVIDUAL NAME END DATE		Date usage of this alternate individual name ceased to be effective. ASTM E 1633 PARA 4.2.4
01015.	INDIVIDUAL IDENTIFIER	PtIDNum	Unique number assigned by the provider to: 1) distinguish the patient and his/her medical record from all others in the institution, 2) facilitate retrieval of the record and 3) facilitate posting of payment. ASTM E 1633 PARA 4.2.5
01015.1.	INDIVIDUAL IDENTIFIER ORGANIZATION		Identifier or name of the organization issuing the individual identifier. ASTM E 1633 PARA 4.2.6
01015.2.	INDIVIDUAL IDENTIFIER TYPE		Category of the individual identifier. ASTM E 1633 PARA 4.2.6
01015.3.	INDIVIDUAL IDENTIFIER START DATE		Date the identifier became effective within the issuing organization. ASTM E 1633 PARA 4.2.4
01015.4 .	INDIVIDUAL IDENTIFIER END DATE		Date the identifier ceased to be effective within the issuing organization. ASTM E 1633 PARA 4.2.4
01015.5.	INDIVIDUAL IDENTIFIER STATUS		Status of the identifier within the issuing organization. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

01016.	**UNIVERSAL PATIENT HEALTH NO.**	PtUniversalHealthNum	Permanent, unique number used by all providers and third party payors in conjunction with establishing and using the longitudinal record. It will link services for the individual across care systems. ASTM E 1633 PARA 4.2.5
01020.	SOCIAL SECURITY ACCOUNT NO. SSAN	PersSSANCode	A pseudo social security no. may be assigned if patient does not have an SSAN. ASTM E 1633 PARA 4.2.6
01025.	ARCHIVE LOCATION	PtRecordArchiveLocText	The locations of linked fragmented records; it also identifies permanent storage locations of inactive archived records. ASTM E 1633 PARA 4.2.6
01027.	**RECORD-HOLDING LOCATION ID**	PtRecHoldLocationId	Code identifier of a healthcare site which maintains a primary record of care about this patient. ASTM E 1633 PARA 4.2.6 (5.1)
01027.1.	**DATE OF EARLIEST HELD ENTRY**	PtEarliestEntryDtm	The least recent date within the record of a datum about the patient. ASTM E 1633 PARA 4.2.4 (01027.1)
01027.2.	**DATE OF LATEST HELD ENTRY**	PtLatestEntryDtm	The most recent date within the record of a datum about the patient. ASTM E 1633 PARA 4.2.4
01030.	LOCATION OF CHART	PtPaperChartLocText	Location of the paper chart or the location of automated MR (original location prior to unitization via linkage). ASTM E 1633 PARA 4.2.6
01032.	**DATE-TIME OF BIRTH**	PersBirthDtm	The exact time of birth event; age is generated from DOB if needed; time can be included for newborns. ASTM E 1633 PARA 4.2.4
01033.	**BIRTHPLACE**	PersBirthplaceName	The City, State, Nation where the patient's birth records may be found.
01034.	DEATH DATE/TIME		The exact time of death when known
01035.	NUMBER OF CHILDREN IN BIRTH	PtMultBirthCode	A term to distinguish identical individuals produced in the same gestation period. ASTM E 1633 PARA 4.2.5 (5.2.23)
01037.	BIRTH ORDER	PtBirthOrderQty	The order of birth of the patient in a given family; #__of__ children(pediatric use) ASTM E 1633 PARA 4.2.5 (1996)
01040.	**GENDER**	PersGenderCode	Distinction of gender. ASTM E 1633 PARA 5.2.20
01042.	**RACE**	PersRaceCode (As recorded at the start of care)	The region of the world from which the patient's ancestors came generally indicating possible inherited biologic diversity. ASTM E 1633 PARA 5.2.3
01045.	**ETHNIC GROUP**	PtEthnicGroupCode	That cultural group with which the patient identifies him/herself either by means of recorded family data or personal preference. A patient may belong to several such groups depending upon heritage, language, nationality or social association. ASTM E 1633 PARA 5.2.4
01047.	**RELIGION**	PtReligionCode	A term denoting the current religious affiliation of the patient at the start of care. A particular system of faith or worship. ASTM E 1633 PARA 5.2.7

TABLE A1.1 *Continued*

01050.	MILITARY SVC/VETERAN STATUS	PtMilSvcCode	A term indicating whether the patient is eligible for veteran or military supported care. Y/N ASTM E 1633 PARA 5.1 (4.2.6)
01052.	**MARITAL STATUS**	PersMaritalStatusCode	Marital status of the patient at the start of care. NEVER MARRIED: includes annulment of only marriage. MARRIED: includes common law. SEPARATED: married persons living apart except institutionalized. WIDOWED: spouse died and not remarried. DIVORCED: legally divorced and not remarried. ASTM E 1633 PARA 5.2.2
01055.	CITIZENSHIP STATUS	PersCitizenshipCode	Position or status of an inhabitant (enfranchised) of a country, as opposed to an alien. ASTM E 1633 PARA 5.2.6
01057.	PATIENT'S LANGUAGE	PtLanguageCode	A term indicating the language most frequently spoken by the patient in communicating with health care practitioners; if more than one language is spoken, record the frequency with which each one is used in the health care setting. ASTM E 1633 PARA 5.2.5
01058.	INTERPRETER REQ	PtLangInterpreterReqCode	This code merely indicates whether a language problem exists or not. Y/N ASTM E 1633 PARA 5.1 (4.2.6)
01060.	**EDUCATIONAL LEVEL**	PersEducationalLevelCode	The highest level, in years, within each major (primary, secondary, college, post-baccalaureate) education system, irrespective of any certifications achieved. ASTM E 1633 PARA 5.2.9
01062.	CURRENT WORK STATUS	PtWorkStatusCode	A term indicating level of employment: employed-full-time, employed-part-time, not employed, retired.
01065.	**OCCUPATION**	OccOccupationText	The employment, business, or a course of action in which the patient is engaged (i.e. ″student″) ASTM E 1633
01065.1.	OCCUPATION STATUS CODE	OccOccupationStatusCode	A list in reverse chronological order of all of the occupations which the patient held prior to the current one. A person can be considered to have only one primary occupation at one time - namely that activity in which the greatest amount of the working day is spent. Professional activities may span many diverse areas. Therefore the most significant should be considered. The status code should therefore identify the current active occupation and those that have been completed as well as those that are dormant but could be reactivated. ASTM E 1633 PARA 5.2.11
01065.2.	DATE COMPLETED OCCUPATION	OccCompletedOccupationDtm	The date that an occupation was terminated. ASTM E 1633 PARA 4.2.4
01067.	CURRENT VOCATIONAL STATUS	PtVocationsStatusCode	ASTM E 1633 PARA 5.1 (4.2.6)
01075.	PRESENT EMPLOYER NAME (1996)	EmplrPresentEmployerText	Name of workplace (organization) or employer's full name. That part providing a position (and compensation) for an employee. ASTM E 1633 PARA 4.2.6
01077.	WORK ADDRESS	EmplrWorkAddressText	The address of the employer at which the patient spends most of his/her day or that which is the location through which he/she can be contacted during working hours. ASTM E 1633 PARA 4.2.2

TABLE A1.1 *Continued*

01080.	WORK (BUSINESS) PHONE	EmplrBusinessPhonePhN	Current work phone no. of patient or guarantor, if applicable. ASTM E 1633 PARA 4.2.3
01085.	USUAL LIVING ARRANGEMENT	PtUsualLivingArrangCode	A code which denotes whether the patient lives alone or with whom. LEXICON ASTM E 1633 PARA 5.2.27 (4.2.6)
01087.	NUMBER OF PERSONS IN HOUSEHOLD	PtNumberinHouseholdQty	A value, which does not include patient, that denotes the number of individuals living in the patient's household. ASTM E 1633 PARA 4.2.5
01090.	**FAMILY MEMBER NAME**	FAMMbrName	The name of each family member. ASTM E 1633 PARA 4.2.1
01090.02.	FAMILY MEMBER DATE-OF-BIRTH	FAMMbrBirthDtm	The date of birth of the family member. ASTM E 1633 PARA 4.2.4
01090.03.	FAMILY MEMBER GENDER	FAMMbrGenderCode	The biologic sex of the family member. ASTM E 1633 PARA 5.2.20
01090.05	FAMILY MEMBER SSAN	FAMMbrSSANId	The Social Security Account Number for each family member. ASTM E 1633 PARA 4.2.5
01090.07.	**FAMILY MEMBER RELATIONSHIP**	FAMMbrRelationshipCode	A term denoting the relationship of the family member to the patient. ASTM E 1633 PARA 5.2.10
01090.09.	FAMILY MEMBER MALE PARENT	FAMMbrMaleParentName	The name of the biologic male parent of the patient to be used for family pedigrees. ASTM E 1633 PARA 4.2.1
01090.11.	FAMILY MEMBER FEMALE PARENT MAIDEN NAME	FAMMbrFemaleParentName	The name of the biologic female parent of the patient to be used for family pedigrees. It is the full current name of a newborn infant's mother. ASTM E 1633 PARA 4.2.1
01090.13.	FAMILY MEMBER SPOUSE NAME	FAMMbrSpouseName	The full maiden name of a female spouse and the current name of a male spouse of the patient. ASTM E 1633 PARA 4.2.1
01090.15.	FAMILY MEMBER DATE-OF-DEATH	FAMMbrDeathDtm	The date of death of the family member. ASTM E 1633 PARA 4.2.4
01090.17.	FAMILY MEMBER HEAD OF HOUSEHOLD	FAMMbrHeadofHouseholdCode	A code used for arranging health services and indicates which family member is the head of the patient's household. Only one individual should be so designated at any one time. Y/N
01090.19.	FAMILY MEMBER PRIMARY CAREGIVER STATUS	FAMMbrPrimCaregiverCode	A code denoting whether this person either acts as, or could act as, the primary giver of care in the home setting. Y/N
01090.21.	FAMILY MEMBER LOCATION	FAMMrLocationText	The location where the member resides during non-working hours. ASTM E 1633 PARA 4.2.6
01090.23.	FAMILY MEMBER OCCUPATION	FAMMbrOccupationCode	The current occupation of the family member. ASTM E 1633 PARA 5.2.11
01090.25.	FAMILY MEMBER MAJOR DIAGNOSIS/CAUSE OF DEATH	FAMMbrMajDiagDeathCode	A list of diagnosed major illnesses or injuries suffered by the family member during his lifetime. It is used for family linkage in inherited conditions. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

01090.27.	FAMILY MEMBER INHERITED GENE ID	FAMMbrInheritedGeneCode	The McKusick number of the phenotype (Mendelian Inheritance in Man 9th Ed Johns Hopkins Press 1990) ASTM E 1633 PARA 4.2.6
01090.27.01.	FAMILY MEMBER INHERITED GENE EXPRESSION	FAMMbrGeneExpressionCode	A term indicating Mendelian expression (dominant, Recessive, sex-linked); it is somewhat redundant as the McKusik number range also provides this data. ASTM E 1633 PARA 4.2.6
01090.27.02	FAMILY MEMBER INHERITED GENE EXTENT-OF-EXPRESSION	FAMMbrGeneExprExtentQty	This is an expression of the percentage of the expression. ASTM E 1633 PARA 4.2.5: A FRACTION IN TWO DIGITS
01095.	**PATIENT PERMANENT ADDRESS**	PersPermanentAddressText	The usual residence and/or address of the patient as defined by the payor organization. May be referred to as the ″Mailing Address″. ASTM E 1633 PARA 4.2.2
01096.	PATIENT PRIOR ADDRESS	PtPriorAddressText	Address prior to the current one at which the patient resided. ASTM E 1633 PARA 4.2.2
01096.1.	PRIOR ADDRESS BEGIN DATE	PtPriorAddrBeginDtm	The date on which a previous residence commenced. ASTM E 1633 PARA 4.2.4
01096.2.	PRIOR ADDRESS END DATE	PtPriorAddressEndDtm	The date that a prior residence terminated. ASTM E 1633 PARA 4.2.4
01097.	PATIENT COUNTY/CEN TRACT	PersAddressCntyCensusCode	A code used by the US Bureau of Census to specify a geographic area. ASTM E 1633 PARA 4.2.6
01099.	FOREIGN RESIDENCY STATUS	PersForeignResidencyCode	A code designating whether the patient regularly maintains a foreign residency. ASTM E 1633 PARA 4.2.6
01100.	PATIENT HOME PHONE	PersHomePhonePhN	The phone numbers of both permanent and temporary addresses. ASTM E 1633 PARA 4.2.3
01105.	PATIENT'S TEMPORARY ADDRESS	PersTempAddressText	The address of hotel, school or vacation residence May be referred to as ″local address″. ASTM E 1633 PARA 4.2.2
01108.	PATIENT TEMPORARY ADDRESS PHONE	PersTmpAddrPhN	The telephone at the temporary address. ASTM E 1633 PARA 4.2.3
01110.	EMERG. CONT. (REL/FR.)	PtEmergContName	Person to be notified, if needed. ASTM E 1633 PARA 4.2.1
01112.	EMERG. CONT. RELAT.	PtEmergContRelationCode	A code denoting the relationship of the emergency contact to the patient. ASTM E 1633 PARA 5.2.10
01115.	EMERG. CONT. ADDRESS	PtEmergContAddressText	The address of the person to contact in any emergency situation. ASTM E 1633 PARA 4.2.2
01117.	EMERG. CONT. H. PHONE	PtEmergContHPhonePhN	The most appropriate phone number of the emergency contact person. ASTM E 1633 PARA 4.2.3
01119.	EMERG. CONT. B. PHONE	PtEmergContBPhonePhN	The telephone at which the named emergency contact can be reached during working hours if the contact is at work during these hours. ASTM E 1633 PARA 4.2.3
01120.	PATIENT GUARDIAN NAME	PtGuardianName	Name of legal guardian. ASTM E 1633 PARA 4.2.1

TABLE A1.1 *Continued*

01125.	PATIENT GUARDIAN ADDRESS	PtGuardianAddressText	The current mailing address of the patient guardian. ASTM E 1633 PARA 4.2.2
01130.	PATIENT GUARDIAN STATUS	PtGuardianStatusCode	Court appointed guardian: individuals or corporations appointed by the court to manage some or all of the affairs of adults whom the court has found unable to manage for themselves and their affairs with ordinary prudence, or of minors whose parents are not available or who have been found unfit. Includes limited and plenary guardians.
01135.	LNOK NAME	PtLegNxtofKinName	A name in the nuclear family first, then followed by closest relative or friend. ASTM E 1633 PARA 4.2.1
01137.	LNOK RELATIONSHIP	PtLegNxtofKinRelationCode	This code denotes the relationship of the legal next-of-kin to the patient. ASTM E 1633 PARA 5.2.10
01140.	LNOK ADDRESS	PtLegNxtofKinAddressText	The address for the person named as the Next-of-Kin. ASTM E 1633 PARA 4.2.2
01142.	LNOK HOME PHONE	PtLegNxtofKinHPhonePhN	The home phone of the legal next of kin. ASTM E 1633 PARA 4.2.3
01145.	LNOK B. PH.	PtLegNxtofKinBPhonePhN	The main business phone number of the legal next of kin. ASTM E 1633 PARA 4.2.3
01150.	R/L HANDED?	HandednessCode	A code representing the patient's handedness ASTM E 1633 PARA 4.2.6
01155.	COLOR EYES	PtEyeColorCode	The normal eye color in absence of contact lenses or other eyewear. ASTM E 1633 PARA 4.2.6
01160.	COLOR HAIR	PtHairColorCode	The normal undyed hair color of the patient. ASTM E 1633 PARA 4.2.6
01165.	BLOOD TYPE	PtBloodTypeCode	The code of the patient's blood type as determined by a laboratory testing procedure. ASTM E 1633 PARA 4.2.6
01170.	HEIGHT FOR IDENTIFICATION	PtHeightQty(To include birth lengths)	Vertical measurement of the body. This is the most recent measured height standing in bare feet. ASTM E 1633 PARA 4.2.5
01175.	BUILD FOR IDENTIFICATION	PtPhysiqueBuildCode	A code denoting the major class of patient body build. ASTM E 1633 PARA 4.2.6
01180.	WEIGHT FOR IDENTIFICATION	PtWeightQty	A measurement of body mass; the most recent value. ASTM E 1633 PARA 4.2.5
01185.	PATIENT RECORD ACTIVITY STATUS	PtRecrdActivStatusCode	This is the activity status of the current record. ACTIVE/INACTIVE/ARCHIVED/ DEAD. ASTM E 1633 PARA 4.2.6
01190.	CONFIDENTIALITY PROTECTION	PtConfidentialityCode	A code to protect privacy of the patient, to include unwed mothers, celebrities, provider employees, psych/drug/alcohol patients. TEXT ASTM E 1633 PARA 5.2.1
01195.	DATE REGISTR RECORD INITIATED/UPDATED	HCRegRecordUpdateDtm	The date on which a change is made to the demographic segment of the primary record of care. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

01195.02.	PERSON INITIATING/UPDATING	HCRegInitUpdatePersName	The name of a member of a list of persons who change or update the primary record of care. ASTM E 1633 PARA 4.2.1
01197.	REGISTRATION REVIEW DATE	HCRegRegistrReviewDtm	The date when the registration record was reviewed by a responsible official for its accuracy. ASTM E 1633 PARA 4.2.4
01200.	REGISTRATION INFORMANT	HCRegRegistrInformantName	The name of the individual who provided the registration data on the latest update. ASTM E 1633 PARA 4.2.1
01205.	REGISTRATION COMMENT	HCRegRegistrCommentText	A text containing any additional information that relates to the registration process. ASTM E 1633 PARA 4.2.6
01210.	DATE RECORD TRANSF TO STORAGE		The date on which the record is removed from working storage and sent to archival storage because of death, inactivity or other knowledge that the patient will not return to active status. ASTM E 1633 PARA 4.2.4
01220.	DATE-TIME OF DEATH	DCertDeathDtm	The recorded date and time of the patient's death; in cases where death was unobserved it is the best estimate of such date and time. ASTM E 1633 PARA 4.2.4
01225.	PLACE OF DEATH	DCertDeathPlaceText	That location where the patient actually expired. If a health care facility, give its name. If at home give the address. If in the field give a location including an approximate address, optional city, county, state, and nation. TEXT ASTM E 1633 PARA 4.2.6
01227.	AUTOPSY STATUS	DCertAutopsyStatusCode	A code denoting whether an autopsy was conducted after the patient's death. Y/N . ASTM E 1633 PARA 4.2.6
01230.	RECORDER OF DEATH	DCertDeathRecorderName	The name of the person recording the patient's death. A physician must certify the patient's death. ASTM E 1633 PARA 4.2.1
01235.	DATE DEATH RECORDED	DCertDeathRecordedDtm	The date that the patient's death was actually recorded, as differentiated from the time of its occurrence. ASTM E 1633 PARA 4.2.4
01240.	DEATH CERTIFICATE NO.	DCertText	The state-of-death's actual identifier of the death certificate. ASTM E 1633 PARA 4.2.5
01245.	STATE DEATH CERTIF RECORDED	DCertRecordeStateCode	The name of the state in which the death is actually recorded.
01250.	CAUSE OF DEATH	DCertDeathCauseCode	A list of codes or terms which together best describe either the immediate or the ultimate cause of death. LEXICON
01251.	UNDERLYING CAUSE OF DEATH (M)		Hospital Association: used only cause of death and did their own analysis without using traditional vital statistics methods and concluded that hospital discharge abstracts were sufficient information. APHSIS does not agree)
01255.	PATIENT'S MORTUARY PREF	DCertPtMortuaryPrefName	The stated preference, when known, of a terminally ill patient. It is noted in order to allow arrangements to be made on behalf of the survivors, should they not be available. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

01260.	BEREAVEMENT ASSESSMENT		
01262.	CLERGYMAN'S NAME	PtClergymanName	The name of the patient's identified clergyman at the time of admission to a hospital or inpatient facility. ASTM E 1633 PARA 4.2.1
01265.	CLERGYMAN'S ADDRESS	PtClergymanAddressText	The mailing address of the patient's clergyman. ASTM E 1633 PARA 4.2.2
01267.	CLERGYMAN'S PHONE	PtClergymanPhonePhN	The telephone number at which the clergyman is most likely to be reached. ASTM E 1633 PARA 4.2.3
02001.	**CONSENT SIGNED/ADMIT AGREEMENT**	CAgrmntPtSig	Patient indicates in writing that (s)he has been informed of the nature of the treatment, risks, complications, alternative forms of treatment and treatment consequences. TEXT ASTM E 1633 PARA 4.2.7 (new) 4.2.6
02005.	**PATIENT RIGHTS ACKNOWLEDGEMENT**	CAgrmntPtRightsAcknSig	A text stating the patient's understanding of his/her rights and the rights associated with the information in the record of care. TEXT ASTM E 1633 PARA 4.2.7 (new) 4.2.6
02010.	AUTHORITY FOR AUTOPSY	CAgrmntAutopsyAuthName	The name of the individual authorizing an autopsy. ASTM E 1633 PARA 4.2.1
02015.	RELEASE OF BODY TO MORGUE	CAgrmntRelBodyMorgueText	Written notice that the body has been taken to the morgue. ASTM E 1633 PARA 4.2.2 (4.2.6)
02020.	CONSENT FOR VIDEOTP/OBSERV	CAgrmntObsAgrmntText	The text of the agreement signed by the patient consenting to observation or videotaping. Text ASTM E 1633 PARA 4.2.2 (4.2.6)
02025.	CONSENT TO RSCH PARTIC	RSCHAgrmntConsentText	A text agreeing to experimental therapies. Text ASTM E 1633 PARA 4.2.2 (4.2.6)
02030.	**DIRECTIVE TO PHYSICIAN**	CAgrmntPhysDirectiveText	A living Will written by the patient to the physician in case of incapacitation to giver further instructions. Text ASTM E 1633 PARA 4.2.2 (4.2.6)
02040.	ORGAN DONOR AGREEMENT	ORGDonorAgrText	An agreement text. Text should include: Donor Pt name (Transplant Recipient) Donor Pt no. (Transplant recipient) Recipient Pt no. (Transplant donor) Recipient Pt name (Transplant donor) Text ASTM E 1633 PARA 4.2.2 (4.2.6)
02045.	COURT-ORDERED CARE	CAgrmntCourtOrderCareText	A description of care received by a child or adult as a result of a court order. ASTM E 1633 PARA 4.2.2 (4.2.6)
02050.	LIVING WILL DESIGNEE	CAgrmntLivingWillText	
02052.	DURABLE POWER-OF-ATTORNEY STATUS	PtDurPAttStatusCode	
02053.	DURABLE POWER OF ATTORNEY FOR HEALTH CARE STATUS		
02055.	POWER OF ATTORNEY NAME	PtPAttName	
02056.	DURABLE POWER OF ATTORNEY FOR HEALTH CARE NAME		
02057.	POWER OF ATTONEY ADDRESS	PtPAtAddrText	
02058.	DURABLE POWER OF ATTORNEY FOR HEALTH CARE ADDRESS		

TABLE A1.1 *Continued*

02060.	POWER OF ATTORNEY PHONE	PtPAttPhonePhN	
02061.	DURABLE POWER OF ATTORNEY FOR HEALTH CARE PHONE		
02100.	**REL OF INFO RECRD ACT DATE**	RELINFRcrdRecordActionDtm	The date of each instance when any data from the patient record is released to other than authorized persons caring for the patient. ASTM E 1633 PARA 4.2.4
02100.02.	**TYPE OF RECORD ACTION**	RELINFRcrdRelActTypeCode	A code that identifies the type of action involved in the release of information from the patient's record. ASTM E 1633 PARA 4.2.6
02100.04.	REL OF INFO TYP OF INFO	RELINFRcrdInforTypeCode	A code that identifies the type of information released. ASTM E 1633 PARA 4.2.6
02100.06.	REL OF INFO PERS RELEASING	RELINFRcrdReleasPersName	The name of the person who released information from the patient's record. ASTM E 1633 PARA 4.2.1
02100.08.	REL OF INFO RELEASED TO	RELINFRcrdPersRelToName	The name of the person to whom the information from the patient's record was released. ASTM E 1633 PARA 4.2.1
02100.10.	REL OF INFO PURPOSE	RELINFRcrdRelPurposeText	A text describing the purpose for which the released information will used. ASTM E 1633 PARA 4.2.6
02100.12.	**PERSON AUTHORIZING RELEASE**	RELINFRcrdPersAuthRelName	The name or identifier of the individual authorizing the release of the type of information. ASTM E 1633 PARA 4.2.1
03001.	WORKMANS COMP CLAIM DATE	WCClmClaimDtm	A narrative of the recorded claims for worker compensation, including data time, location, employer. ASTM E 1633 PARA 4.2.4
03001.1.	WORKMANS COMP CLAIM NO.	BILLSvcsWrkCmpClaimNum	The identifier string for a claim submitted under workman's compensation. ASTM E 1633 PARA 4.2.6
03005.	INSURANCE CLAIM DATE	HCClmClaimDtm	The date of a recorded insurance claims for the patient. ASTM E 1633 PARA 4.2.4
03005.02.	INSURANCE CLAIM ID	HCClmClaimIDNum	The unique identifier for each insurance claim. ASTM E 1633 PARA 4.2.5
03010.	**PAYMENT SOURCE**	HCClmPrimaryPaySourceCode	Responsible for largest % of patient's current bill. May include address. ASTM E 1633 PARA 4.2.6, 5.2.21
03010.02.	PRIMARY PAYMENT CLASS	HCClmPrimaryPayClassCode	A code representing the class of payment. ASTM E 1633 PARA 4.2.6
03010.04.	**PAYOR GROUP NO.**	HCClmPayorGroupId	An identification number, control no., or code assigned by the carrier or administrator, to identify the group under which the individual is covered. ASTM E 1633 PARA 4.2.5
03010.06.	**PAYOR ID NO.**	HCClmPayorPolicyId	The identifier of the patient's insurance policy. ASTM E 1633 PARA 4.2.5
03010.08.	**PAYMENT SPONSOR**	HCClmPaySponsorName	The name of the person responsible for bill or whose insurance plan provides coverage for the patient. ASTM E 1633 PARA 4.2.1
03010.10.	**ADDRESS OF SPONSOR**	HCClmPaySponAddrText	The mailing address of the principal payment sponsor. ASTM E 1633 PARA 4.2.2

TABLE A1.1 *Continued*

03010.12.	PAYOR PRIORITY	HCClmPayorPriorityCode	The value indicating the sequence of priority of payors; it is an ordinal number. ASTM E 1633 PARA 4.2.6
03017.	MEDICARE TO YR	ACCPtMedicareToYrDtm	The current terminal date for patient coverage under Medicare. ASTM E 1633 PARA 4.2.4
03020.	MEDICARE A EFFECT. DATE	ACCPtMedicareAEffectDtm	The date that Part A of Medicare became effective for the patient. ASTM E 1633 PARA 4.2.4
03022.	MEDICARE B EFFECT. DATE	ACCPtMedicareBEffectDtm	The date that Part B of Medicare became effective for the patient. ASTM E 1633 PARA 4.2.4
03030.	BILLING ACCOUNT NO.	ACCPtBillingId	The identifier of the patient business account. ASTM E 1633 PARA 4.2.6
04001.	**PROVIDER/PRACTITIONER NAME**	HCPrvProviderName	The name of the facility or practice submitting a bill. May be the same as practitioner name. (A business entity which furnishes health care). ASTM E 1633 PARA 4.2.1
04001.01	PROVIDER GROUP/ORGANIZATION TITLE		
04001.03.	**PROVIDER ADDRESS**	HCPrvProviderAddressText	The complete address to which the provider wishes the payment sent. ASTM E 1633 PARA 4.2.2
04001.05.	**PROVIDER TAXONOMY CATEGORY**	HCPrvProviderTypeCode	The code indicating the category of health care setting or practice type. Includes routine home care, respite, inpatient care, acute inpatient care, bereavement follow-up outpatient laboratory, short stay, etc. ASTM E 1633 PARA 4.2.6
04001.07.	**PROVIDER ID NO.**	HCPrvProviderId	The numbers assigned by various payor agencies(e.g. Medicare, Medicaid, BlueCross/Blue Shield federal Tax no. (assigned by Federal Govt for tax report purposes). ASTM E 1633 PARA 4.2.6
04001.07.01.	**PROVIDER AGENCY ID NUM**	HCPrvAgencyIDCode	The agency associated with this unique identifier of this provider ASTM E 1633 PARA 4.2.6
04001.10.	**PRACTITIONER NAME**	HCPractPractitionerName	The name of the practitioner, structured in common person name format. ASTM E 1633 PARA 4.2.1
04001.12.	PRACTITIONER SSAN	HCPractSSANId	The Social Security Account Number Identifier of the practitioner as a generic identifier code. ASTM E 1633 PARA 4.2.5
04001.15.	PRACTITIONER'S NATIONAL PROVIDER IDENTIFIER	HCPractUniversalPractId	The universal numeric identifier which will be used to link services for a provider across care systems. A providers/practitioners will each have a unique number that identifies the practitioner from all others and is the same for the practitioner in all settings where he/she may practice. ASTM E 1633 PARA 4.2.6
04001.20.	**PRACTITIONER'S PROFESSION/OCCUPATION/ SPECIALTY**	HCPractProfessionCode	The profession in which the practitioner is currently engaged. ASTM E 1633 PARA 4.2.6, 5.1.16
04001.25.	**PRACTITIONER'S ADDRESS**	HCPractAddressText	The usual or principal place of practice. ASTM E 1633 PARA 4.2.2

TABLE A1.1 *Continued*

04001.30.	PRACTITIONER'S PHONE	HCPractPhonePhN	The number where the practitioner may most frequently be reached. ASTM E 1633 PARA 4.2.3
04001.31.	PRACTITIONER'S FAX PHONE	PractFaxPhonePhN	Telephone attached to a FAX machine. ASTM E 1633 PARA 4.2.3
04001.32.	PRACTITIONER'S E-MAIL ADDRESS	PractEMailAddrText	The electronic mail address string for the practitioner's office. ASTM E 1633 PARA 4.2.2
04001.35.	PRACTITIONER'S LICENSE CATEGORY	HCPractLicenseId	The license identifying no. and state for the license authorizing the practitioner to practice. ASTM E 1633 PARA 4.2.6
04001.35.01	PRACTITIONER LICENSING STATE		
04001.35.02	PRACTITIONER LICENSE CODE		
04001.35.04	PRACTITIONER LICENSE EFFECTIVE DATE		
04001.35.05	PRACTITIONER LICENSE EXPIRATION DATE		
04001.35.03	PRACTITIONER LICENSE NUMBER		
04001.35.06	PRACTITIONER LICENSE TERMINATION DATE		
04001.40.	PRACTITIONER CERTIFICATION CATEGORY (M)	HCPractLicenseStateCode	The abbreviation for the state holding the practitioner's license. ASTM E 1633 PARA 4.2.6
04001.40.1	CERTIFICATION NUMBER		
04001.40.2	CERTIFICATION EFFECTIVE DATE		
04001.40.3	CERTIFICATION EXPIRATION DATE		
04001.40.4	CERTIFICATION TERMINATION DATE		
04001.40.5	CERTIFICATION CODE		
04001.40.6	CERTIFICATION BOARD		
04001.45.	PRACTITIONER CURRENT ROLE	HCPractCurrentRoleCode	The role (primary care practitioner, physician, consultant etc.) that the practitioner plays with this patient. ASTM E 1633 PARA 4.2.6
04001.45.01.	PRACTITIONER DATE ROLE BEGAN	HCPractRoleBeganDtm	The date that this particular role was assumed by the practitioner for this patient. ASTM E 1633 PARA 4.2.4
04001.45.02	PRACTITIONER DATE ROLE ENDED	HCPractRoleEndedDtm	The date that this particular role by the practitioner has ended. ASTM E 1633 PARA 4.2.4
04001.50.	PRACTITIONER SPECIALTY	HCPractSpecialtyCode	The particular branch of medicine, dentistry or surgery; by virtue of advanced training certifies individual to be qualified to so limit his/her practice. ASTM E 1633 PARA 5.2.16
04001.50.1	DATE LOCATION EFFECTIVE		
04001.50.2	DATE LOCATION TERMINATED		
04001.50.3	LOCATION CODE		
04001.60.	**PRACTITIONER ELECRONIC SIGNATURE**	HCPractPractitionerSig	The electronic signature of the practitioner. ASTM E 1633 PARA 4.2.7

TABLE A1.1 *Continued*

05001.	**PROBLEM NUMBER**	PHProbNum	The problem identifier for this unique problem. Note: a systematic procedure for assigning these numbers across all practitioners has not been agreed upon. For the present, it should be considered a sequential integer number.
05001.01.	**PROBLEM NAME**	PHProbNam	A term uniquely identifying the nature of the problem.
05001.02.	PROBLEM CLINICAL INDICATION	PHProbIndicText	The reason for establishing a separate problem; the reason may be either a diagnosis or a pattern of symptoms. TEXT
05001.03.	**PROBLEM ESTD DATE OF ONSET**	PHProbProbOnsetDtm	The estimated date that the problem first occurred. ASTM E 1633 PARA 4.2.4
05001.05.	PROBLEM CAUSE/ETIOL.	PHProbCauseCode	The underlying disease, external cause, etc. ASTM E 1633 PARA 4.2.6
05001.07.	PROBLEM DATE RECORDED	PHProbRecordedDtm	The date at which the problem was actually entered into the record. ASTM E 1633 PARA 4.2.4
05001.09.	PROBLEM DIAGNOSIS	PHProbDiagnosisText	The term naming the established diagnosis for this problem. ASTM E 1633 PARA 4.2.6
05001.10.	PROBLEM DATE DIAGNOSED	PHProbDiagnosisDtm	The date that the problem was clinically recognized. ASTM E 1633 PARA 4.2.4
05001.12.	PROBLEM PROVIDER ASSIGNING DIAGNOSIS	PHProbDiagAssProvName	The name or identifier of the practitioner who assigns the diagnosis or recognizes the problem. ASTM E 1633 PARA 4.2.1
05001.13.	PROBLEM, FACILITY WHERE DIAGNOSIS ASSIGNED	PHProbDiagFacId	The identifier of the facility at which the practitioner assigning the diagnosis for this problem conducts a practice. ASTM E 1633 PARA 4.2.6
05001.15.	PROBLEM DATE RESOLVED	PHProbProbResolvedDtm	The date that this particular problem is considered resolved and no longer needs active consideration. ASTM E 1633 PARA 4.2.4
05001.17.	PROBLEM RESPONSIBLE PRACTITIONER	PHProbResponPractName	The practitioner currently responsible for this problem.
05001.20.	**PROBLEM CURRENT STATUS**	PHProbStatusCode	The activity category of the problem e.g. Active,Inactive. ASTM E 1633 PARA 4.2.6
05001.20.01.	PROBLEM DATE OF STATUS	PHProbStatusDtm	The date that the status code was assigned. ASTM E 1633 PARA 4.2.4
05001.22.	PROBLEM SUBJECTIVE DATA	PHProbSubjectiveText	The textual synopsis of the subjective (e.g. symptoms) data for this problem. ASTM E 1633 PARA 4.2.6
05001.25.	PROBLEM OBJECTIVE DATA	PHProbObjectiveText	The plain text description of the findings of examination by the practitioner. ASTM E 1633 PARA 4.2.6
05001.30.	PROBLEM BODY SYSTEM	PHProbROSBdySysCode	The category name of the principal body system for this problem. ASTM E 1633 PARA 5.2.22
05001.30.01.	PROBLEM BODY SYSTEM REVIEW TEXT	PHProbROSBdySysText	The textual summary text stating the status of the named body system.
05001.32.	PROBLEM ENCOUNTER DATES	PHProbEncDtm	The date of an encounter at which this problem was considered. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

05001.32.01.	PROBLEM MONITORING VARIABLE	PHProbMonitorVarCode	The measured parameter or variable to be monitored for tracking this problem.
05001.32.01.01.	PROBLEM PARAMETER VALUE	PHProbParamValueQty	This value is the numeric continuous value of the indicated parameter. ASTM E 1633 PARA 4.2.5
05001.35.	PROBLEM ASSESSMENT	PHProbAssessText	A statement of the problem current situation. TEXT
05001.40.	PROBLEM PLAN	PHProbPlanText	Text describing the plan for dealing with this patient problem. TEXT
05001.45.	PROBLEM ORDERS	PHProbOrdersIDNum	The codes that identify the orders in segment 10 of the record.
06001.	**IMMUNIZATION NAME**	ImmText	The name or identifier of the immunization procedure conducted. ASTM E 1633 PARA 4.2.2 (4.2.6)
06001.01.	**IMMUNIZATION DATE**	ImmDtm	The date the immunization procedure was conducted. ASTM E 1633 PARA 4.2.4
06001.01.01	IMMUNIZATION DOSE NUMBER IN SERIES	ImmDoseQty	The amount of immunizing agent administered. ASTM E 1633 PARA 4.2.5
06001.01.02.	IMMUNIZATION BATCH (1996)	ImmBatchId	The identifier of the batch of an agent used to induce immunity. ASTM E 1633 PARA 4.2.6
06001.01.03	IMMUNIZATION MANUFACTURER		
06001.01.04	IMMUNIZATION EXPIRATION DATE		
06001.01.05	IMMUNIZATION LOT NO.	ImmLotIdCode	The individual lot number of the batch of an agent used to induce immunity. ASTM E 1633 PARA 4.2.6 (1996)
06001.01.10	IMMUNIZATION NUMBER OF UNITS	ImmUnitsQty	ASTM E 1633 PARA 4.2.5
06001.01.11	IMMUNIZATION INJECTION SITE		
06001.01.12.	IMMUNIZATION ADMINISTERING TREATMENT FACILITY	ImmFacilId	The name or identifier of the treatment facility administering the agent. ASTM E 1633 PARA 4.2.6
06001.01.15.	IMMUNIZATION REACTION/RESULT	ImmReactOrResultCode	Text describing the result of the immunization and any adverse reaction. ASTM E 1633 PARA 4.2.6
06001.01.17.	IMMUNIZATION SEVERITY (1996)	ImmReactSevCode	A term classifying the severity of the reaction. ASTM E 1633 PARA 4.2.6
06001.01.20.	IMMUNIZATION REMARKS	ImmRemarksText	Text amplifying the observations associated with the immunization procedure. ASTM E 1633 PARA 4.2.2 (4.2.6)
06001.01.25.	PRACTITIONER IMMUNIZATION ADMINISTERING	HCPractPractitionerName	The name of the practitioner, structured in common person name format. ASTM E 1633 PARA 4.2.1
07001.	HAZARDOUS AGENT NAME	EStrAgentName	The name or identifier of the environmental stressor. ASTM E 1633 PARA 4.2.6
07001.01.	HAZARD TOTAL LIFETIME EXPOSURE	EStrTotLifeExpQty	The collective total lifetime exposure of the patient to this agent. ASTM E 1633 PARA 4.2.5
07001.03.	HAZARD UNIT OF EXPOSURE (1996)	EStrUnitExpCode	The units of lifetime exposure in SI units. ASTM E 1633 PARA 4.2.6
07001.05.	HAZARD EXPOSURE BEGIN DATE	EStrExposureBeginDtm	The date that the period of exposure began. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

07001.05.01.	HAZARD EXPOSURE TERMINATION DATE (1996)	EStrExposureTerminDtm	The date that this exposure period ceased. ASTM E 1633 PARA 4.2.4
07001.05.02	HAZARD EMPLOYER (1996)	EStrExposureEmployerText	The name of the employer associated with the exposure period. ASTM E 1633 PARA 4.2.6
07001.05.03.	HAZARD SETTING OF EXPOSURE	EStrExposureWorkCntrText	The name of the employer's work area where this period of exposure occurred. ASTM E 1633 PARA 4.2.6
07001.05.05	HAZARD ROUTE OF EXPOSURE	EStrExposeWorkActyCode	The nature of the patient's activity at the name work area. ASTM E 1633 PARA 4.2.6
07001.05.07.	HAZARD EXPOSURE INTERVAL DOSE	EStrExposureIntervDoseQty	The dose resulting from the exposure period. ASTM E 1633 PARA 4.2.5
07001.05.09	HAZARD PLANT PROCESS	EStrPlantProcessCode	The plant process related to the work area. ASTM E 1633 PARA 4.2.6
07001.05.11.	HAZARD PLANT LOCATION	EStrPlantLocationCode	The location of the plant site. ASTM E 1633 PARA 4.2.2
07001.05.13.	HAZARD WORK PERFORMED	EStrWorkPerformedName	The name of the hazardous work performed on the job. ASTM E 1633 PARA 4.2.6
07001.05.15.	HAZARD PERSONAL PROTECTION USED	EStrPersProtectCode	The names of the personal protection clothing/devices used during this exposure period. ASTM E 1633 PARA 4.2.6
07001.07	HAZARD TEST DATE	EStrTestDtm	The testing date for measuring environmental levels of this agent. ASTM E 1633 PARA 4.2.4
07001.07.01	HAZARD NATURE AND FORM OF MEASURED AGENT	EStrNatFormAgentCode	A term identifying the nature and form of the stressor being measured. ASTM E 1633 PARA 4.2.6 (1996)
07001.07.02	HAZARD SAMPLE UNIT COLLECT	EStrSampleCollUnitCode	The unit of measure for the specimen collected. ASTM E 1633 PARA 4.2.5 (1996)
07001.07.03.	HAZARD SAMPLE COLLECTION TIME	EStrCollTimeIntervQty	The time period over which the environmental specimen was collected. ASTM E 1633 PARA 4.2.6
07001.07.05.	HAZARD SAMPLE COLLECT DEVICE	EStrCollectDeviceCode	The device by which the environmental specimen is obtained.
07001.07.07.	HAZARD TEST SAMPLE METHOD (1996)	EStrTestSampleMethodCode	The method by which the sample is obtained. ASTM E 1633 PARA 4.2.6
07001.07.09.	HAZARD TYPE OF DETERMINATION (1996)	EStrDeterTypeCode	The method by which the amount of stressor was measured.
07001.07.11.	HAZARD PEAK MEASUREMENT VALUE	EStrPeakMeasurmntQty	The value of the peak level measurement. ASTM E 1633 PARA 4.2.5
07001.07.13.	HAZARD PEAK MEASUREMENT UNIT	EStrPeakMeasurmntUnitCode	The unit of the peak level measurement. ASTM E 1633 PARA 4.2.6
08001.	NO. OF PREV PREGNANCIES	HHistPrevPregQty	The count of all pregnancies experienced regardless of outcome. ASTM E 1633 PARA 4.2.5
08003.	NO. OF COMPLETED DELIVERIES	HHistCompletedDeliveryQty	The count of pregnancies which went to term with live births. ASTM E 1633 PAR 4.2.5
08005.	ESTD DATE OF PREGNANCY BEGIN	PRHistPregnancyBeginDtm	The date on which it is estimated the current pregnancy began. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

08005.01.	PRENATAL & PERINATAL HISTORY	PRHistPrePerinatHistText	A textual description of the current pregnancy. TEXT ASTM E 1633 PARA 4.2.6
08005.03.	ESTIMATED DATE OF DELIVERY		The date on which it is estimated that delivery will occur. ASTM E 1633 PARA 4.2.4
08005.05.	DATE FIRST SAW PRENATAL PRACT	PRHistInitPrenatPractDtm	The date the patient first consulted a healthcare practitioner about the current pregnancy. ASTM E 1633 PARA 4.2.4
08005.07.	TYPE OF PRENATAL PRACTITIONER	PRHistPrenatPractTypeCode	The specialty of this practitioner. ASTM E 1633 PARA 5.1 (5.2.9)
08005.09.	BIRTHING PLAN	PRHistBirthPlanText	The route of delivery selected for the current pregnancy. ASTM E 1633 PARA 4.2.6
08005.11.	LENGTH OF GESTATION	PRHistGestLengthQty	The total length in days of completed pregnancies. ASTM E 1633 PARA 4.2.5
08005.13.	GYNECOLOGIC ABNORMALITIES	PRHistGynecolAbnText	A textual description of abnormalities of the mother relating to the birth process. ASTM E 1633 PARA 4.2.6
08005.15.	BIRTH METHOD	PRHistBirthMethodCode	A class term for the category of delivery method. ASTM E 1633 PARA 4.2.6
08005.17.	DELIVERY COMPLICATIONS	PRHistDelivCompText	A textual description of the complications of each pregnancy, including the current one. ASTM E 1633 PARA 4.2.6
08005.19.	NO. OF FETUSES IN PREGNANCY	PRHistFetusCountQty	A count of the total number of fetuses in the gestation period. ASTM E 1633 PARA 4.2.5
08010.	PATIENT NEWBORN BIRTHWT		The weight at birth if the newborn infant, recorded at the time the record is initiated. ASTM E 1633 PARA 4.2.5
08013.	PATIENT NEWBORN BIRTHLNGTH		The length of the newborn infant recorded at the time the record is initiated.
08017.	ESTIMATE OF FETAL MATURITY AT BIRTH		A class term for the category of maturity of newborns.
08020.	PATIENT NEWBORN ABNORMALITIES		A textual description of the abnormalities observed at birth recorded when the record is first opened.
08023.	ONSET OF RESPIRATION		The date time post birth that respiration commenced.
08027.	1 MIN APGAR		The APGAR score computed at 1 minute post birth.
08030.	5 MIN APGAR		The APGAR score computed at 5 minutes post birth.
08033.	NEWBORN HEAD CIRCUMFERENCE		The measured circumference of the head recorded at birth when the record is opened. ASTM E 1633 PARA 4.2.5
08037.	NEWBORN CHEST CIRCUMFERENCE		The measured circumference of the chest at birth when the record is opened. ASTM E 1633 PARA 4.2.5
08050.	FAMILY HEALTH HISTORY	HHistFamilyHealthHistText	A textual summary of the health history of the parents and siblings of the patient. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

08052.	CHILD HEALTH HISTORY	HHistChildHealthHistText	A textual summary of the development of the infant through adolescence period. ASTM E 1633 PARA 4.2.6
08054.	ADULT HEALTH HISTORY	HHistAdultHealthHistText	A textual summary of the significant health events from adolescence to current. ASTM E 1633 PARA 4.2.6
08055.	PATIENT REPORTED HEALTH HISTORY		A patient's self reported history including risk factors (may be a standard questionnaire) ASTM E 1633 PARA 4.2.6
08056.	SEXUAL/REPRODUCTIVE HISTORY	HHistSexReprodHistText	A textual summary of the sexual history of both male and female patients. ASTM E 1633 PARA 4.2.6
08058.	DATE OF LAST MENSTRUAL PERIOD	HHistLastMenstPerDtm	For a female only, the date of last menstrual period prior to a suspected pregnancy. ASTM E 1633 PARA 4.2.4
08060	AGE AT MENARCHE	HHistMenarcheAgeQty	The age at which menstruation began. ASTM E 1633 PARA 4.2.5
08062.	MENSTRUAL STATUS	HHistMenstrualStatusCode	The category of current menstrual functioning. ASTM E 1633 PARA 4.2.6
08064.	BIRTH CONTROL METHOD		A textual description of the method of birth control for both male and female patients. ASTM E 1633 PARA 4.2.6
08070.	JOB START DATE	JobStartDtm	The HIRE DATE for each chronological paid (or significant non-paid regular) position held by the patient. These are identified for the purpose of recognizing the timpacts of the work environment on the health status of the patient. ASTM E 1633 PARA 4.2.4
08070.01.	JOB EMPLOYER	JobEmployerName	The name of the employing organization. ASTM E 1633 PARA 4.2.6
08070.03.	JOB FULL/PARTIME STATUS	JobTime PresentStatusCode	A term categorizing the amount of time spent on the job. ASTM E 1633 PARA 5.1 (4.2.6)
08070.05.	JOB STATUS	JobStatusCode	PRIMARY/SECONDARY
08070.07.	JOB TITLE	JobTitleText	The name of the position. ASTM E 1633 PARA 4.2.6
08070.09.	JOB CODE	JobCode	
08070.11.	JOB CLASSIFICATION	JobClassificationCode	
08070.13.	JOB EMPLOYEE NUMBER	JobEmployeeId	A number assigned by the company to identify the employee. ASTM E 1633 PARA 4.2.6
08070.14	OCCUPATIONAL CATEGORY		
08070.15.	JOB PROCESS/ACTIVITY	JobProcessActivityCode	The category name of the work activity conducted. ASTM E 1633 PARA 4.2.6
08070.17.	JOB TERMINATION DATE	JobTerminationDtm	The date this position terminated. ASTM E 1633 PARA 4.2.4
08070.19.	JOB COMMENTS	JobCommentsText	Textual remarks about any aspect of this position. ASTM E 1633 PARA 4.2.6
08070.20.	WORK LOCATION		
08070.21.	JOB WORK ACTIVITY	JobWorkActivityCode	

TABLE A1.1 *Continued*

08070.23.	JOB PROTECTIVE EQUIP	JobProtectiveEquipText	The textual name of any equipment, clothing or devices used to protect against the work environment. ASTM E 1633 PARA 4.2.6
08070.25.	JOB STRESSORS EXPOSED TO	JobExposureStressorIDCode	The names or identifiers of chemical, physical, biological or radiological stressors exposed to in the workplace as a result of this position. ASTM E 1633 PARA 4.2.6
08075.	**DATE OF HISTORY**		
08075.01.	PURPOSE		
08075.03.	HISTORY SITE OF EXAM		The location where the health history is updated. ASTM E 1633 PARA 4.2.6
08075.05	**SOURCE OF HISTORY: CONTACT NAME**	HExmHistSourceName	The name of an individual who relates the patient's history to the practitioner. ASTM E 1633 PARA 4.2.1
08075.07.	**HISTORY RELAT SOURCE TO PT**	HExmHistSourceRelPtCode	The relationship of the source of data used in updating the health history to the patient, if it is not the patient. ASTM E 1633 PARA 5.2.10
08075.09.	**HISTORY PRESENT HEALTH**		A statement of the current state of the patient's health at the time of the health history updating.
08075.10.	STATE OF ORAL HYGIENE		
08075.11.	**PAST HIST.-SOCIAL**		A statement of the current social aspects of the patient's functioning.
08075.13.	**CURRENT.-HABITS**		A current statement of personal habits at the time of the health history updating.
08075.15.	HISTORY CURRENT OCCUPATION		A statement of the patient's occupation at the time of the history updating.
08075.17.	PAST HIST.-PREV. ILLNESS		A statement of the illnesses experienced since the last history updating.
08080.	PAST HIST.-SURGERY DATE		The date of a past surgical procedure. ASTM E 1633 PARA 4.2.4
08080.01.	PAST HIST. OPERATION TYPE		The name of a surgical procedure. ASTM E 1633 PARA 5.1 (4.2.6)
08083.	MEDICATION HISTORY		A textual summary of past medications used by the patient. ASTM E 1633 PARA 4.2.6
08085.	TRAUMA HISTORY		A textual summary of trauma experienced by the patient during his lifetime. ASTM E 1633 PARA 4.2.6
08088.	ALLERGY HISTORY		A textual description of prior allergies. ASTM E 1633 PARA 4.2.6
08090.	DATE OF HISTORY GEN CMMENT		The date of a textual remark. ASTM E 1633 PARA 4.2.4
08090.1.	HISTORY GENERAL COMMENTS		The statement of the remark. ASTM E 1633 PARA 4.2.6
08095.	HEALTH HISTORY RESPONSE		A response term concerning a health history observation. ASTM E 1633 PARA 4.2.5 (4.2.6)
08095.01.	HEALTH HISTORY RESPONSE DATE	HHistRespDtm	A list of dates when this response was given. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

08095.01.01.	HISTORY RESPONSE COMMENT	HHistRespCommentText	A remark amplifying a response about a patient's health history. ASTM E 1633 PARA 4.2.6
09001.	**EXAM/HISTORY DATE**	HExmDtm	The date on which a physical examination and attendant history update was conducted. ASTM E 1633 PARA 4.2.4
09001.01.	EXAM/HISTORY PURPOSE	HExmPurposeCode	The purpose for which the patient was being examined. ASTM E 1633 PARA 4.2.6
09001.02	RISK FACTORS		
09001.03	EXAM/HISTORY FACILITY	HExmFaciltyId	The location of the examination site.
09001.04.	EXAM EXAMINERS NAME	HExmExaminerName	The name or identifier of the examiner. ASTM E 1633 PARA 4.2.1
09001.09.	**SOURCE HISTORY OF PRESENT ILLNESS/STATUS OF PRESENT HEALTH**	HExmPresentIllnessText	A detailed chronological description of the development of the pt's illness from the appearance of the first symptom to the present time. Include data of onset. ASTM E 1633 PARA 4.2.6
09001.11.	EXAM INITIAL IMPRESSIONS	HExmInitImpressionText	A textual statement of the examiner's initial observations. ASTM E 1633 PARA 4.2.6
09001.12.	**EXAM REVIEW OF SYSTEMS**	HExmReviewSystemsText	This data element contains the textual summary of the systematic review of the status and functioning of the body's systems and regions. ASTM E 1633 PARA 4.2.6
09001.13.	**EXAM FINDING**	HExmFindingCode	A term for an observation name made by the examiner. ASTM E 1633 PARA 4.2.6
09001.13.01.	EXAM FINDING VALUE	HExmFindingValueQty	The number value for the measurement made by the examiner. ASTM E 1633 PARA 4.2.5
09001.13.02	EXAM FINDING UNIT	HExmFindingUnitCode	The appropriate unit of measure for the observation. ASTM E 1633 PARA 4.2.6
0001.13.03.	EXAM FINDING INTERP CODE	HExmFindingInterpCode	A remark about the observation made by the examiner. ASTM E 1633 PARA 4.2.6
09001.13.04.	**EXAM FINDING COMMENT**	HExmFindingCommentText	A textual remark about the particular finding. ASTM E 1633 PARA 4.2.2 (4.2.6)
09001.15.	**EXAM/HISTORY TEXT**	HExmText	A textual narrative of the observations made by the examiner. ASTM E 1633 PARA 4.2.2 (4.2.6)
09001.17.	**EXAM FUNCTIONAL INDEP MEASURE**	HExmFIMQty	The sum of all components of the FIM. ASTM E 1633 PARA 4.2.6
09001.19.	EXAM FUNCT INDEP MEASURE ELEMENT NAME	HExmFIMCode	The name of a component of the total FIM. ASTM E 1633 PARA 4.2.6
09001.19.01.	EXAM FUNCTION INDEP MEASURE VALUE	HExmFIMeValueQty	The value for that FIM component. ASTM E 1633 PARA 4.2.5
09001.21.	**EXAM SUMMARY**	HExmSummaryText	A textual synopsis of the narrative of the examination, if appropriate. ASTM E 1633 PARA 4.2.6
09001.23.	EXAMINER/CONSULT RECOMMENDTN	HExmRecommdText	The examiner/consultant's opinion, diagnosis or impression. TEXT ASTM E 1633 PARA 4.2.6
09001.25.	EXAM ASSESSSMENT OF NUTRITIONAL STATUS	HExmNutritionAssessText	A textual summary of the nutritional status of the patient at this examination. ASTM E 1633 PARA 4.2.2 (4.2.6)

TABLE A1.1 *Continued*

09001.30.	TOOTH (M)		Tooth identifier code with ISO or ADA.
09001.30.01	TOOTH STATUS		Status category code of the tooth
09001.30.03	COMMENT		A textual comment observation or discussion about the identified tooth ASTM E 1633 PARA 4.2.6
09001.30.05	SURFACE (M)		The surface identifier code for the specified tooth.
09001.30.05.1	LEVEL OF DECAY		An ordinal code for increasing level of decay for the specified tooth and surface.
09001.30.05.2	RESTORATIVE MATERIAL		Identifier of restorative material used for the specified tooth and surface restoration.
09001.30.07.	PERIODONTAL TISSUE STATUS (M)		Ordinal code for normal/abnormal condition of the specified tooth and region.
09001.30.09	IMPLANT STATUS (M)		Coded value for the category of implant condition in the specified tooth position
09001.30.13	PLANNED PROCEDURE (M)		The identifier of the restorative procedure planned of the specified tooth
09001.30.13.1.	SCHEDULED DATE		The date of the specified planned procedure and tooth. ASTM E 1633 PARA 4.2.4
09001.40.	PROSTHESIS (M)		The identifier of prosthesis installed with the patient mouth.
09001.40.01	PROSTHESIS TYPE		The coded category of the installed prosthesis.
09001.40.03	PROSTHESIS ABUTMENT (M)		The identifier of the tooth site where the abutment for the specified prosthesis is located.
09001.40.05	DATE OF TEMPORARY PROSTHESIS		Date of installation of a temporary prosthesis preceding the permanent prosthetic device. ASTM E 1633 PARA 4.2.4
09001.40.07	DATE OF PERMANENT PROSTHESIS		Date when the permanent restorative prosthetic device replaced to temporary device as the specified prosthesis. ASTM E 1633 PARA 4.2.4
09001.40.09	INSTALLING PRACTITIONER		The identifier of the practitioner installing the prosthesis.
09001.40.11.	OPPOSING ARCH STATUS		Coded category for the condition of dental arch opposing the specified prosthesis.
09001.40.13	OCCUSAL SURFACE MATERIAL		Identifier of the material used on the occusal surface of the specified prosthesis.
09001.40.15	PATIENT SATISFACTION CODE		Ordinal code indicating the patient's satisfaction with the specified prosthesis.
10001.	**CLIN ORDER ID NUMBER**	COrdIDId	The unique identifier for a clinical order. ASTM E 1633 PARA 4.2.6
10001.001.	**CLIN ORDER ENCOUNTER DATETIME**	COrdEncDtm	The date and time of the Encounter that generated this clinical order. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

10001.002.	CLIN ORDER PATIENT STATUS	COrdPtStatusCode	The categorical term classifying the patient in terms of the health care setting under which treatment is being given such as: ambulatory, inpatient, home health, long term care, etc.).
10001.009.	CLIN ORDER DATE-TIME	COrdDtm	The date time point that the order was created by the originating practitioner. ASTM E 1633 PARA 4.2.4
10001.010	CLIN ORDER TYPE	COrdTypeCode	The categorical term classifying the action addressee and identifying the special data requirements of that addressee. ASTM E 1633 PARA 4.2.6
10001.013.	CLIN ORDER ACTION	COrdActionCode	A code for the category of action to be taken on this order. ASTM E 1633 PARA 4.2.6
10001.015.	CLIN ORDER PRIORITY	COrdPriorityCode	A categorical term classifying the urgency for carrying out his clinical order. ASTM E 1633 PARA 4.2.6
10001.017.	CLIN ORDER PRE-ADMIT STATUS	COrdPreAdmStatusCode	A categorical term classifying whether the patient situation is a pre-admission one. ASTM E 1633 PARA 4.2.6
10001.019.	CLIN ORDER ORIGIN	COrdOriginCode	The location from which the order was originated. ASTM E 1633 PARA 4.2.6
10001.021.	CLIN ORDER PARENT ORDER	COrdParentOrdIDId	The identifier of the triggering order of a secondary order. ASTM E 1633 PARA 4.2.6
10001.022.	CLIN ORDER MULTIPLE SEQ STATUS	COrdMultSeqStatusCode	The categorical terms classifying the actions of this clinical order as multiple and sequential in time.
10001.023.	CLIN ORDERS RELATED ORDERS	COrdRelatedOrdersIDCode	A list of order identifiers for clinical orders that are dependent upon or which are coordinated with the actions requested by this clinical order. ASTM E 1633 PARA 4.2.6
10001.025.	CLIN ORDER USER	COrdUserName	The identity of the staff individual who entered the order on behalf of a practitioner. ASTM E 1633 PARA 4.2.1
10001.027.	CLIN ORDER USER SIG	COrdUserSig	The electronic signature of the entering staff individual. ASTM E 1633 PARA 4.2.7 (4.2.6)
10001.029.	CLIN ORDER NURSE ID	COrdNurseIDCode	The name or identifier of the nurse signing this clinical order. ASTM E 1633 PARA 4.2.6
10001.031.	CLIN ORDER NURSE SIG	COrdNurseSig	The electronic signature of the nurse signing this clinical order. ASTM E 1633 PARA 4.2.7 (4.2.6)
10001.033.	CLIN ORDER ORDERING PRACTITIONER NAME	COrdOrderingPractName	The name or identifier of the practitioner creating this clinical order. ASTM E 1633 PARA 4.2.1
10001.034.	ORDERING PRACTITIONER		
10001.035.	CLIN ORDER ORDERING PRACTITIONER SIG	COrdOrderingPractSig	The electronic signature of the practitioner creating this clinical order.
10001.037.	CLIN ORDER COUNTERSIGNING PRACTITIONER NAME	COrdCSignPractName	The name or identifier of the duly authorized practitioner countersigning this clinical order. ASTM E 1633 PARA 4.2.1

TABLE A1.1 *Continued*

10001.039.	CLIN ORDER COUNTERSIGNING PRACTITIONER SIG	COrdCSignPractSig	The electronic signature of the duly authorized practitioner countersigning this clinical order. ASTM E 1633 PARA 4.2.7 (4.2.6)
10001.041.	CLIN ORDER NURSE SIG NEEDED STATUS	COrdNursSigNeedStatusCode	The categorical term classifying the conditions under which a nurse signature is required on this clinical order. ASTM E 1633 PARA 4.2.6
10001.043.	CLIN ORDER NURSE SIG NEEDED DATETIME	COrdNursSigNeedDtm	The date time point by which a nurse signature is required on this clinical order. ASTM E 1633 PARA 4.2.4
10001.045.	CLIN ORDER PRACTITIONER SIG NEEDED STATUS	COrdPrctSigNeedStatusCode	A categorical term classifying the conditions under which a practitioner signature is required to activate this clinical order. ASTM E 1633 PARA 4.2.6
10001.047.	CLIN ORDER PRACTITIONER SIG NEEDED DATETIME	COrdPrctSigNeedDtm	The date time by which the signature of an ordering practitioner is required for this clinical order. ASTM E 1633 PARA 4.2.4
10001.049.	CLIN ORDER COUNTERSIG NEEDED STATUS	COrdCSigNeedDtm	The categorical term classifying the conditions under which a countersignature is required to activate this clinical order. ASTM E 1633 PARA 4.2.4
10001.051.	CLIN ORDER COUNTERSIG NEEDED BY DATETIME	COrdCSigNeedStatusCode	The date time point by which a practitioner countersignature is required for this clinical order to be activated. ASTM E 1633 PARA 4.2.6
10001.052.	CLIN ORDER DISCONTINUED BY PRACTITIONER NAME	COrdDisconbyPractName	The name or identifier of the practitioner who discontinues this clinical order. ASTM E 1633 PARA 4.2.1
10001.053.	CLIN ORDER DISCONTINUED PRACTITIONER SIG	COrdDisconbyPractSig	The electronic signature of the practitioner who discontinues this clinical order. ASTM E 1633 PARA 4.2.7 (4.2.6)
10001.055.	CLIN ORDER CONFIRMATION RECD CODE	COrdConfirmationRecdCode	Internal mechanism to ensure receipt of order. ASTM E 1633 PARA 4.2.6
10001.057.	CLIN ORDER ACTIVE/PENDING FLAG	COrdActPendStatusCode	
10001.059.	CLIN ORDER ACTIVE STATUS	COrdActiveStatusCode	
10001.061.	CLIN ORDER PENDING STATUS	COrdPendingStatusCode	
10001.063.	CLIN ORDER INACTIVE STATUS FLAG	COrdInactiveStatusCode	
10001.065.	CLIN ORDER START STATUS	COrdStartStatusCode	
10001.067.	CLIN ORDER EXECUTION FREQUENCY	COrdExecFreqQty	A textual statement of the frequency with which the requested action should be executed over the duration of this clinical order. ASTM E 1633 PARA 4.2.5 (4.2.6)
10001.069.	CLIN ORDER DURATION OF SERVICE	COrdDurationText	The time period over which the service is to be performed, including start and stop times. ASTM E 1633 PARA 4.2.6
10001.071.	CLIN ORDER LATEST STATUS CHG DATETIME	COrdLastStatusChgDtm	The date time associated with a change in the category of any of the control data elements. ASTM E 1633 PARA 4.2.4
10001.073.	CLIN ORDER REACTIVATION DATETIME	COrdReactivationDtm	The date time of the point at which this clinical order was changed from inactive to active. ASTM E 1633 PARA 4.2.4
10001.075.	CLIN ORDER REQ FM ANCILLARY	COrdReqFmAncillaryText	
10001.077.	CLIN ORDER ANCILLARY ACTIV DATETIME	COrdAncillary ActivDtm	ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

10001.079.	CLIN ORDER RESULT EXPECTATION DATETIME	COrdRsltExpectDtm	The date time of the expected instant that a result from the actions requested in this clinical order might be available. ASTM E 1633 PARA 4.2.4
10001.081.	CLIN ORDER TELEPHONE RESULT FLAG	COrdTeleRsltStatusCode	The categorical term classifying the situations in which the result requested as a result of the actions in this clinical order should be communicated by telephone to the designated location.
10001.083.	CLIN ORDER TELEPHONE RESULT DESTINATION	COrdTelRsltDestinText	The name of the location to which a telephoned result which may be required should be returned. ASTM E 1633 PARA 4.2.6
10001.085.	CLIN ORDER REQUEST SCHEDULED FLAG	COrdReqSchedStatusCode	The categorical term classifying the appointment request associated with this clinical order. ASTM E 1633 PARA 4.2.6
10001.087.	CLIN ORDER REQUESTED APPT TIME	COrdReqApptDtm	The date time requested for the appointment associated with the services requested in this clinical order. ASTM E 1633 PARA 4.2.4
10001.089.	CLIN ORDER REQ APPT TYPE	COrdReqApptTypeCode	The categorical term classifying the appointment associated with the services requested in this clinical order. ASTM E 1633 PARA 4.2.6
10001.091.	CLIN ORDER APPT TRANSPORT STATUS	COrdApptTranspStatusCode	The categorical term classifying the transportation for the patient in conjunction with the appointment associated with delivering the services requested by this clinical order.
10001.093.	CLIN ORDER APPT STATUS	COrdApptStatusCode	The categorical term classifying the current action in carrying out this clinical order. ASTM E 1633 PARA 4.2.6
10001.095.	CLIN ORDER ASSIGNED APPT TIME	COrdAssignApptDtm	The date time of the appointment assigned by the delivering activity that is associated with the services requested in this clinical order. ASTM E 1633 PARA 4.2.4
10001.097.	CLIN ORDER HEALTH SERVICE ORDERED	COrdServiceOrderedCode	The name or identifier of the health service requested by this clinical order. ASTM E 1633 PARA 4.2.6
10001.098	TREATMENT PLAN INVOLVED		
10001.099.	PROBLEM NUMBER	PHProbId	The problem identifier for this unique problem. Note: a systematic procedure for assigning these numbers across all practitioners has not been agreed upon. For the present, it should be considered a sequential integer number. ASTM E 1633 PARA 4.2.6
10001.100.	**CLIN ORDER FULL TEXT**	COrdOrderText	The textual content of the order detailing what action is to be taken and the means to go about it. ASTM E 1633 PARA 4.2.2 (4.2.6)
10001.102.	CLIN ORDER LOCATION OF SERVICE	COrdServiceLocationId	The location at which the ordered service is to be delivered. ASTM E 1633 PARA 4.2.6
10001.104	CLIN ORDER FREQ ORDERED SVC	COrdOrderedSvcFeqQty	A term denoting how often the service is performed and the number of times it is performed. ASTM E 1633 PARA 4.2.5

TABLE A1.1 *Continued*

10001.106.	CLIN ORDER MODIFY STATUS	COrdModifyStatusCode	The categorical term classifying the conditions under which the order can be, or has been, modified. ASTM E 1633 PARA 4.2.6
10001.108.	CLIN ORDER MODIFICATION REASON	COrdModifReasonText	The textual statement as to why the order has been modified. ASTM E 1633 PARA 4.2.6
10001.110.	CLIN ORDER NON-MODIFY FLAG	COrdNonModifyStatusCode	The categorical term classifying the situation restricting modifications to this clinical order. ASTM E 1633 PARA 4.2.6
10001.112.	CLIN ORDER INSTRUCTIONS	COrdInstructionsText	The text describing the conduct of the requested action, including criteria for D/C or other decisions to be made about conduct of the service. ASTM E 1633 PARA 4.2.6
10001.114.	CLIN ORDER SECONDARY ORDERS	COrdSecondaryOrderListText	The list of identifiers of named clinical order types which are sequentially initiated when this clinical order is activated. ASTM E 1633 PARA 4.2.6
10001.116.	CLIN ORDER MESSAGE	COrdMessageText	A textual comment sent to the performer of the requested action. ASTM E 1633 PARA 4.2.6
10001.120.	CLIN ORDER RESULT ACKNOWL DATETIME	COrdRsltAcknDtm	The date time that the receipt of the result was acknowledged by the orderer. ASTM E 1633 PARA 4.2.4
10001.120.01	CLIN ORDER SHIFT CARE PLAN	COrdShiftCarePlanText	
10001.120.02	CLIN ORDER RESULT RETURN FLAG	COrdRsltRetCode	A categorical term classifying the situation associated with this clinical order regarding whether a result is to be returned as part of the actions requested. ASTM E 1633 PARA 4.2.6
10001.120.03	CLIN ORDER RESULT RETURN STATUS	COrdResltRetStatusCode	The category of the situation where results from a clinical order are being awaited.
10001.120.04.	CLIN ORDER RESULT RETURN DATETIME	COrdRsltRetDtm	The date time of the instant that a result that may be associated with this clinical order is returned to the care record. ASTM E 1633 PARA 4.2.4
10001.120.05.	CLIN ORDER RESULT RETURN ACKNL BY	COrdRsltRetAcknbyName	The identity of the individual who acknowledged the receipt of the results. ASTM E 1633 PARA 4.2.1
10001.120.06	CLIN ORDER RESULT RETURN COMMENT	COrdRsltRetCommentText	A textual remark associated with the result returned as requested by this clinical order. ASTM E 1633 PARA 4.2.6
10001.123.	CLIN ORDER DATE-TIME COMPLETED	COrdOrderCompletionDtm	The date time of the point at which all requested actions have been completed on this clinical order. ASTM E 1633 PARA 4.2.4
10001.140.	CLIN ORDER Q-A WARNING DATETIME	COrdQAWarnDtm	The date time of the point at which a warning about the actions associated with this clinical order was generated. ASTM E 1633 PARA 4.2.4
10001.140.1.	CLIN ORDER Q-A WARNING TEXT	COrdQAWarnText	The textual content of the generated warning associated with this clinical order and date time. ASTM E 1633 PARA 4.2.6
10001.140.2.	CLIN ORDER Q-A WARNING DISPOSITION	COrdQAWarnDispositionCode	The categorical term classifying the response to the warning. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

10001.140.3.	CLIN ORDER WARN OVERRIDE PRACTITIONER	COrdQAWarnOverrdPractName	The name or identifier of the practitioner overriding the warning associated with this clinical order. ASTM E 1633 PARA 4.2.1
10001.140.4.	CLIN ORDER Q-A WARN OVERRIDE AUTH BY PRACTITIONER	COrdQAWarnOverrdAuthName	A textual statement of the actions overriding the warning issued in association with this clinical order. ASTM E 1633 PARA 4.2.1
10001.140.5.	CLIN ORDER Q-A WARNING OVERRIDE JUSTIFICATION	COrdQAWarnOverrdJustText	A textual description of the reasons for overriding the warning associated with this clinical order. ASTM E 1633 PARA 4.2.6
10001.160.	CLIN ORDER Q-A REVIEW DATE	COrdReviewDtm	The date upon which the situation leading to a warning on this clinical order was reviewed. ASTM E 1633 PARA 4.2.4
10001.160.01	CLIN ORDER Q-A REVIEW EVENT TYPE	COrdQAEventTypeCode	The categorical term classifying the review events for this clinical order. ASTM E 1633 PARA 4.2.6
10010.	**TREATMENT PLAN ID (M)**		Identifier of a specified treatment plan.
10010.01	TREATMENT PLAN NAME		A human readable name of the treatment plan. ASTM E 1633 PARA 4.2.6
10010.02	**DESCRIPTION**		Textual description of the plan. ASTM E 1633 PARA 4.2.6
10010.03	PRIMARY PRACTITIONER		Identifier of the practitioner who takes responsibility for the ideas stated in the plan over the interval specified in the plan.
10010.04.	TEAM MEMBERS (M)		Identifiers of the practitioners participating in the planning and execution of the specified plan.
10010.04.01.	TEAM MEMBER ROLE		The identifier code for the role the team member is specified to play in the specified plan.
10010.05.	TOTAL OUTCOME MEASURE		Identifier of the quantitative/ordinal measure of the global outcome of the treatment for which this plan was created.
10010.06.	PLAN COMMENTS		Textual discussion of the plan, its progress and effectiveness. ASTM E 1633 PARA 4.2.6
10010.07.	PLAN COST		The estimated/measured overall cost of the planned treatment.
10010.10.	**PHASE IDENTIFIER (M)**		Identifier of specified phases declared in the planned treatment episode.
10010.10.01.	**PROBLEM**		The identifier of the health condition(s) from the health condition list toward treatment in this phase is directed.
10010.10.02.	CLINICAL ORDER ID		The identifier of the clinical order(s) which potentially (when authenticated) implement(s) the specified treatment in a phase.
10010.10.03.	CLINICAL ORDER STATUS		Identifier code for the current status for the activating clinical order for the specified plan and phase.
10010.10.04.	PHASE TARGET DATE		Date of the expected completion of this phase of the specified treatment plan and clinical order. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

10010.10.05.	OUTCOME GOAL		Textual statement of expected health condition status resulting from the specified treatment in this phase.
10010.10.06.	OUTCOME MEASURE		Identifier of the property which reflects the status of the outcome goal attainment of the specified treatment plan and phase.
10010.10.07.	ACTUAL PHASE COST		The numerical value of the actual cost of the specified phase and treatment plan.
10010.10.10.	TREATMENT EVENT DATE-TIME (M)		The time point of a specific scheduled encounter for execution of the proposed procedures for this phase and treatment plan. ASTM E 1633 PARA 4.2.4
10010.10.10.01	LOCATION		The location of the scheduled encounter for the execution of the specified phase and treatment plan.
10010.10.10.02	PRACTITIONER		The identifier of the practitioner responsible for the scheduled encounter executing the specified phase and treatment plan.
10010.10.10.03.	PROCEDURE (M)		The identifier of the procedures to be executed during the scheduled encounter(s) for execution of the specified treatment event.
10010.10.10.04.	APPOINTMENT COST		The numeric value of the identified encounter scheduled to execute the specified treatment event.
10010.11.	DATE-TIME STARTED		The date the treatment plan was started using the initial phase. ASTM E 1633 PARA 4.2.4
10010.12.	DATE-TIME EXPECTED COMPLETION		The date that the entire treatment plan is expected to be complete. ASTM E 1633 PARA 4.2.4
10010.13.	DATE-TIME ACTUAL COMPLETION		The date that the entire treatment plan was actually completed. ASTM E 1633 PARA 4.2.4
10010.14	AUTHENTICATION		The practitioner authenticator for the scheduled encounter completion for the specified phase and treatment plan.
11001.	**TEXT/EXAM/SPEC-COLLECTION DATETIME**	DXProcSpecExamDtm	The date and time when the specimen was collected from the patient or the measurement was made. ASTM E 1633 PARA 4.2.4
11001.01.	**TEST REQUESTED**	DXProcTestId	The name of the diagnostic test. ASTM E 1633 PARA 4.2.6
11001.01.03.	TEST REQ ENCOUNTER ID	DXProcTestEncIDCode	The name or identifier of the encounter from subsegment 14a during which the test/exam was conducted. The date and time when the specimen was collected from the patient or the measurement was made. ASTM E 1633 PARA 4.2.4
11001.01.06.	**TEST REQ ORDERING TREAT FAC**	DXProcOrderingFacilCode	The name or identifier of the facility from which the test as requested in a clinical order. ASTM E 1633 PARA 4.2.6
11001.01.09.	**TEST REQ PERFORMING FAC**	DXProcPerformFacilCode	The name or identifier of the facility performing the test or examination. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

11001.01.12.	ATTENDING PRACTITIONER NAME		The name or identifier of the practitioner ordering the test or exam. ASTM E 1633 PARA 4.2.1
11001.01.15.	TEST REQ CLIN ORDER ID	DXProcClinOrderId	The identifier of the clinical order from segment 10 requesting the test or exam. ASTM E 1633 PARA 4.2.6
11001.01.18.	RESIDENT PHYS. NAME		The name or identifier of the subordinate practitioner under supervision of the responsible practitioner. ASTM E 1633 PARA 4.2.1
11001.01.21.	PROBLEM NUMBER	PHProbId	The problem identifier for this unique problem. Note: a systematic procedure for assigning these numbers across all practitioners has not been agreed upon. For the present, it should be considered a sequential integer number. ASTM E 1633 PARA 4.2.6
11001.01.24.	TEST SPECIMEN SOURCE	DXProcSpecimenSourceCode	A term stating the specimen origin taken from the list of specimen categories.
11001.01.27.	SPECIMEN/CYTOLOGY NO.	DXProcSpecimenId	A unique identifier assigned by the performer. ASTM E 1633 PARA 4.2.6
11001.01.30.	TEST REQ SPECIMEN COLLECTOR	DXProcSpecCollectorName	The name or identifier of the collector of the specimen to be used for the test or the examiner for other whole body tests. ASTM E 1633 PARA 4.2.1
11001.01.33.	TEST SPECIMEN RECEIPT DATETIME	DXProcSpecReceiptDtm	The time that the specimen was actually received in the diagnostic facility. ASTM E 1633 PARA 4.2.6
11001.01.36.	TEST SPECIMEN CONDITION	DXProcSpecConditionCode	A text statement of the state of the specimen following either harvesting from the patient or receipt in the testing facility. It may also include a statement of patient condition for a whole body test.
11001.01.39.	TEST SPECIMEN TOTAL VOLUME	DXProcSpecTotVolQty	The total volume of specimen collected. ASTM E 1633 PARA 4.2.5
11001.01.42.	TEST SPECIMEN PREPARATIONS	DXProcSpecPrepText	A statement of the preparations required prior to the test or examination of the specimen. ASTM E 1633 PARA 4.2.6
11001.01.45.	**TEST DATE-TIME RESULT REPTD**	DXProcResultReportedDtm	Date-time that the results were reported from the performing facility. ASTM E 1633 PARA 4.2.4
11001.01.48.	TEST DATE OF REPORT DICTATION	DXProcReportDictationDtm	The date that the text of report was dictated for transcription. ASTM E 1633 PARA 4.2.4
11001.01.51.	**TEST REPORT TEXT**	DXProcReportText	The body of the report on tests producing a narrative. ASTM E 1633 PARA 4.2.6
11001.01.54.	DIAGNOSTIC REPORT DESTINATION	DXProcReportDestinCode	The location to which to send the reported results of testing or examination. ASTM E 1633 PARA 4.2.6
11001.01.57	**NUMERIC MEASUR/ANALYTE NAME**	DXProcNmeasAnalCode	The name of the exact measured species or measurement made during the test or examination. ASTM E 1633 PARA 4.2.6
11001.01.57.01.	**NUMERIC MEASUR/ANALYTE VALUE**	DXProcNmeasAnalValQty	The numeric value of the measurement. ASTM E 1633 PARA 4.2.5
11001.01.57.02	NUMERIC MEASUR/ANALYTE UNITS	DXProcNmeasAnalUnitCode	The unit of measure for the measurement. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

11001.01.57.03.	**NUMERIC MEASUR/ANALYTE INTERP**	DXProcNmeasAnalInterpCode	A term of interpretation for the measurement. ASTM E 1633 PARA 4.2.6
11001.01.57.04	NUMERIC MEASUR/ANAL ABN BASIS	DXProcNmeasAnalAbnBasCode	The population basis term for the interpretation. ASTM E 1633 PARA 4.2.6
11001.01.60.	**TEST REQ MICROBIOL ORGANISM**	DXProxMicroOrgCode	The name of the microobiological organism evaluated in the test. ASTM E 1633 PARA 4.2.6
11001.01.60.01.	**MICRO ORG ATTRIBUTE**	DXProcMicroOrgAttrCode	A list of attributes for a microbiological organism. ASTM E 1633 PARA 4.2.6
11001.01.60.02.	**MICRO BIOL ORG RESIST PATT**	DXProcMicroResistPattCode	A list of therapeutic agents for which the microbiologic organism is resistant. ASTM E 1633 PARA 4.2.6
11001.01.60.03.	**MICROBIOL ORG SPEC COMMENT**	DXProcMicroCommentText	A remark about the microbiologic organism tested. ASTM E 1633 PARA 4.2.6
11001.01.63.	**TEST COMMENTS**	DXProcCommentText	Textual remarks on the test or examination. ASTM E 1633 PARA 4.2.6
11001.01.66.	TEST PERFORMER/CYTOTEC HNOLOGIST	DXProcPerformerName	The name or identifier of the individual performing the test or examination. ASTM E 1633 PARA 4.2.1
11001.01.69.	TEST DIAGNOSTIS/CYTO DIAG & CODES	DXProcDiagCode	A list of diagnostic codes associated with this test or examination, either prior to or subsequent to the test. ASTM E 1633 PARA 4.2.6
12001.	**MEDICATION PRESC/ORD DATETIME**	MedcnOrdDtm	The date time the prescription or medication order was initiated. ASTM E 1633 PARA 4.2.4
12001.03.	MEDICATION/PRESCRIPTION ENCOUNTER ID	MedcnEncIdentCode	A unique identifier for the encounter originating a prescription or medication order. ASTM E 1633 PARA 4.2.6
12001.06.	**MEDICATION NAME**		Description of the current product
12001.09.	MEDICATION CLINICAL ORDER NO.	MedcnClinOrderNum	The unique identifier of the prescription or medication order from segment 10. ASTM E 1633 PARA 4.2.6 (4.2.5)
12001.12.	MEDICATION PRESCRIPTION NO.	MedcnPrescripId	Unique number assigned to identify each prescription.
12001.15.	**MEDICATION PRESCRIBER**	MedcnPrescriberName	The identity of the person with prescribing authority who wrote the prescription/order. ASTM E 1633 PARA 4.2.1
12001.18.	MEDICATION PRESCRIBER LOCATION	MedcnPrescriberLocCode	The location of the prescriber when the prescription/medication order was written.
12001.21.	PROBLEM NUMBER	PHProbId	The problem identifier for this unique problem. Note: a systematic procedure for assigning these numbers across all practitioners has not been agreed upon. For the present, it should be considered a sequential integer number. ASTM E 1633 PARA 4.2.6
12001.24.	MEDICATION REASON FOR ADMIN	MedcnAdminReasonText	The statement of the reason for this prescription/medication order. ASTM E 1633 PARA 4.2.6
12001.27.	MEDICATION STATUS OF PRESC/ORD	MedcnPrescStatusCode	A status code of: Current, discontinued or PRN is used to focus on specific classes of orders.

TABLE A1.1 *Continued*

12001.30.	**MEDICATION DOSE**	MedcnDoseQty	The strength, dosage or concentration ASTM E 1633 PARA 4.2.5
12001.33.	MEDICATION DOSE UNIT	MedcnDoseUnitCode	The unit of measure of the dose. ASTM E 1633 PARA 4.2.6
12001.36.	**MEDICATION VEHICLE/FORM**	MedcnVehicleFormCode	The form of the medication, including the vehicle. ASTM E 1633 PARA 4.2.6
12001.39.	**MEDICATION ROUTE**	MedcnAdminRouteCode	A term identifying the route of administration. ASTM E 1633 PARA 4.2.6
12001.42	**MEDICATION FREQ.**	MedcnAdminFreqCode	The number of doses to be administered per day or the interval between doses. ASTM E 1633 PARA 4.2.6
12001.45.	**MEDICATION INSTRUCTIONS**	MedcnInstructionText	Signature: prescription part that gives directions as to the taking of the medication. ASTM E 1633 PARA 4.2.6
12001.48.	MEDICATION TOT NO. DOSES/REFILL	MedcnDosePerRefillQty	The number of doses to be issued at each filling. ASTM E 1633 PARA 4.2.5 (1996)
12001.51.	MEDICATION NO. OF REFILLS	MedcnTotRefillQty	The number of times the prescription is authorized to be refilled. ASTM E 1633 PARA 4.2.5
12001.54.	**MEDICATION DATE OF REFILL**	MedcnRefillDtm	The date of each refill of the prescription. ASTM E 1633 PARA 4.2.4
12001.54.01.	MEDICATION REFILL DISP FACIL	MedcnRefilDispFacilCode	The name of the facility dispensing a refill of a specific prescription. ASTM E 1633 PARA 4.2.6
12001.57.	MEDICATION START DATE-TIME	MedcnStartDtm	The date-time that an inpatient medication order is to be started. ASTM E 1633 PARA 4.2.4
12001.60.	MEDICATION STOP DATE-TIME	MedcnStopDtm	The date-time that an inpatient medication order is to be stopped. ASTM E 1633 PARA 4.2.4
12001.63.	**MEDICATION NOTES**	MedcnNoteText	The effects/results of medication administration, which include drug interactions, adverse effects, etc. or a change in the patient's clinical status and/or lab findings caused by drugs. ASTM E 1633 4.2.6
13001.	SCHEDULED VISIT DATE-TIME	SCHPTApptDtm	The date and time of the appointed visit/ encounter. ASTM E 1633 PARA 4.2.4
13001.01.	SCHEDULED VISIT TREAT FACILITY	SCHPTApptTreatFacilText	The name of the facility where the appointed visit/encounter is to take place. ASTM E 1633 PARA 4.2.6
13001.03.	SCHEDULED VISIT CLINIC NAME	SCHPTApptClinicText	The name of the organizational unit within the facility where the visit/ encounter will take place. ASTM E 1633 PARA 4.2.6
13001.04.	SCHEDULED VISIT PREVIOUS ENC DATE	SCHPTApptPrevEncDtm	The date that the patient last had an encounter with this practitioner. ASTM E 1633 PARA 4.2.4
130001.05.	SCHEDULED VISIT PRACTITIONER ID	SCHPTApptPractIDCode	The name or identifier of the practitioner who is to receive the patient. ASTM E 1633 PARA 4.2.6
13001.07.	SCHEDULED VISIT PURPOSE	SCHPTApptPurposeText	The nature of the activities or focus of interest during the visit/encounter. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

13001.09.	SCHEDULED VISIT REMARKS	CHPTApptRemarksText	The text describing additional factors surrounding the visit/encounter ASTM E 1633 PARA 4.2.6
14001.	**DATE-TIME ENCOUNTER/ADMISSION**	HCFEncEncAdmDtm	The month, day, year and hour which patient began episode/encounter of care ASTM E 1633 PARA 4.2.4
14001.A001.	**TREATMENT FACILITY NAME**	HCFEncTreatFacilText	The name of the facility at which treatment is rendered. It is applicable in any setting. This element identifies the PROVIDER ORGANIZATION, such as a private practice name. ASTM E 1633 PARA 4.2.6
14001.A002.	**ENCOUNTER TYPE**	HCFEncEncounterTypeCode	ASTM E 1633 PARA 5.2.17
14001.A003.	ENCOUNTER ID	HCFEncEncounterIDCode	A unique identifier for each encounter. ASTM E 1633 PARA 4.2.6
14001.A0031.	**EPISODE ID**	HCEpiIDCode	An identifier code of the sequence of encounters relating to a single health problem. ASTM E 1633 PARA 4.2.6
14001.A004.	ENCOUNTER SECURITY PROTECTION	HCFEncConfidentialityCode	The level of protection of confidentiality assigned to a patient because of special conditions e.g. (celebrity, unwed mothers, staff, mental health patient, etc.) ASTM E 1633 PARA 5.2.1
14001.A010.	ENCOUNTER STATUS	HCFEncEncounterStatusCode	A term for the category denoting whether the encounter is complete, suspended, in progress or prematurely terminated. ASTM E 1633 PARA 4.2.6
14001.A013.	TREATMENT FACILITY TYPE	HCFEncFacilTypeCode	The category of facility where the encounter/episode occurred. ASTM E 1633 PARA 5.2.18
14001.A016.	**ENCOUNTER REASON FOR VISIT**	HCFEncReasonVisitCode	The purpose for which the encounter was sought by the patient. ASTM E 1633 PARA 5.2.19
14001.A020	ENCOUNTER PT ARRIVAL COND	HCFERecPtArrivCondCode	The severity condition of the patient on arrival for the encounter.
14001.A021.	MODE OF ARRIVAL	HCFEPiIDCode	The mode of arrival. It may include a variety of land, water and aircraft in addition to walk-in or other mode. AMBULANCE/WALKIN/OTHER ASTM E 1633 PARA 4.2.6
14001.A022.	ORIGIN FACILITY ID	IAdmOrigFacId	The identifier of the facility that transferred the patient to this facility. ASTM E 1633 PARA 4.2.6
14001.A023.	**CHIEF COMPLAINT**	HCVRecChiefComplaintText	The reason for the episode/encounter and patient's complaints and symptoms reflecting his/her own perceptions of his needs. The nature and duration of symptoms that caused the patient to seek medical attention, as stated in the patient's own words. ASTM E 1633 PARA 4.2.6 (1996)
14001.A027.	DATE-TIME OF INJURY	ERAdmInjDtm	The date-time injury to the patient actually occurred and which relates to this encounter. ASTM E 1633 PARA 4.2.4
14001.A030.	ENCOUNTER NATURE OF INJURY	HCFERecNatInjCode	A list of terms describing the actual nature of injury. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

14001.A033	ENCOUNTER MODE OF INJURY	HCFERecModeInjCode	A list of terms describing the causes (etiology) of the injury sustained. ASTM E 1633 PARA 4.2.6
14001.A036.	ENCOUNTER LOC WHERE INJURED	HCFERecInjGeogrLocCode	The geographic local where the injury took place. ASTM E 1633 PARA 4.2.6
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14001.A040.	INJURY ON THE JOB STATUS	HCFEncJobInjStatusCode	A code categorizing the injury on the job. ASTM E 1633 PARA 4.2.6
14001.A043.	INJURY CIRCUMSTANCES	HCFERecInjCircumText	A textual description of the events surrounding the injury. ASTM E 1633 PARA 4.2.6
14001.A044.	PROTECTIVE EQUIPMENT USED	HCFERecProtEqUsedCode	The name of the devices used for personal protection prior to injury, such as seat belts. ASTM E 1633 PARA 4.2.6
14001.A046.	INJURY SEV SCORE	ERAdmInjSevScoreQty	The score calculated as the sum of squares of the three highest Abbreviated Injury Scale (1-6) from the list of injuries; it cannot exceed 75. ASTM E 1633 PARA 4.2.5
14001.A050.	ENCOUNTER DATETIME OF PHYSICAL EXAM	HCFEncPhysExamDtm	The date time index of the physical examination from segment 9 associated with this encounter. ASTM E 1633 PARA 4.2.4
14001.A053.	PROBLEM NUMBER	PHProbId	The problem identifier for this unique problem. Note: a systematic procedure for assigning these numbers across all practitioners has not been agreed upon. For the present, it should be considered a sequential integer number. ASTM E 1633 PARA 4.2.5
14001.A056.	CURRENT LIVING ARRANGEMENT	IAdmLivingArrText	The environment in which the patient lives at home. ASTM E 1633 PARA 4.2.6
14001.A060	ENCOUNTER COMMENTS	HCFEncCommentText	Textual general remarks about this encounter. ASTM E 1633 PARA 4.2.6 (1996)
14001.A063.	ADMISSION TYPE	HCFERecAdmissionTypeCode	The coded lexicon for the category of the admission. ASTM E 1633 PARA 5.2.12
14001.A066.	ADMISSION AUTHORITY	IAdmAuthorityCode	The coded authority for the admission. ASTM E 1633 PARA 4.2.6
14001.A070.	REFERRAL TYPE	IAdmReferralTypeCode	Referral source. ASTM E 1633 PARA 4.2.6
14001.A073.	REFER. PROVIDER	IAdmReferProvName	SEE PRACTITIONER NAME. ASTM E 1633 PARA 4.2.1
14001.A083.	PRIVATE PHYSICIAN NAME	IAdmPrivPractName	Practitioner(s) having the major responsibility of providing/coordinating the medical services to a patient. SEE PRACTITIONER NAME. ASTM E 1633 PARA 4.2.1
14001.A093.	PRIV. PHYSICIAN NOTIFIED	IAdmPrivPractNotifCode	A code used at emergency facilities to record whether the patient's private practitioner has been notified. ASTM E 1633 PARA 4.2.6
14001.A096.	ADMISSION HOSPITALIZATION TYPE	IAdmHospTypeCode	
14001.A100.	PATIENT BD. FROM		
14001.A103.	ADMISSION HOSP REGISTER NO.	IAdmHospitalRegisterText	The number that MAY be assigned for each new admission of a patient. It is not required and is not used in many facilities. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

14001.A106.	AGE	HCFEncPtAgeQty	The patient's age in years at the start of the encounter or episode. ASTM E 1633 PARA 4.2.5
14001.A110.	ADMITTING SERVICE	IAdmAdmittingServiceCode	The clinical service within the resident treatment facility which accepts responsibility for the care of the patient during the stay. ASTM E 1633 PARA 5.2.15
14001.A113.	ORIGIN SVC	IAdmOriginServiceCode	The clinical service that either originated the request for admission or which referred the patient to the service which admitted him. This element is not applicable when referred by a practitioner not a member of an institutional clinical service. ASTM E 1633 PARA 5.2.15
14001.A116.	ADMISSION CONSULT SERVICE	IActAdmConsultSvcCode	The clinical service is one which is requested by the admitting service to provide advice regarding an aspect of the patient's health condition and who is being considered for admission to the facility. ASTM E 1633 PARA 5.2.15
14001.A116.01.	CONSULT DATE	IActConsultDtm	The date on which the requested consultation was made. ASTM E 1633 PARA 4.2.4
14001.A116.02.	CONSULT TEXT	IActConsultText	The text of the recommendations made by the consulting practitioner. ASTM E 1633 PARA 4.2.6 (1996)
14001.A116.03.	CONSULTING PRACTITIONER NAME	IActConsultPractName	The name of the practitioner called in for advice and counsel. ASTM E 1633 PARA 4.2.1
14001.A120.	ENC/ATTEND. PRACTITIONER NAME	IAdmAttendingPractName	An individual at any level of professional specialization who requires a public license/certification to practice the delivery of care to patients. A practitioner can also be a provider. The attending practitioner is that individual who is an established member of the admitting clinical service who accepts the responsibility for the care of the patient while assigned to that services's responsibility. ASTM E 1633 PARA 4.2.1
14001.A123.	E-R/ADMITTING PHYSICIAN	ERAdmAdmPhysName	The practitioner authorizing the episode of care for the patient. ASTM E 1633 PARA 4.2.1
14001.A126.	PATIENT CURRENT LOCATION	IActPtCurrentLocText	The location in terms of a care unit and physical location within that unit that the patient's residence is located. This may be the room and bed or a ward. ASTM E 1633 PARA 4.2.6
14001.A130.	ADMITTING ROOM & BED	IAdmAdmitRoomBedText	The room and bed which is originally assigned and which may be different from the current location. The chronology of locations where the patient resided during this stay can be found in the intrafacility transfer date multiple data element. ASTM E 1633 PARA 4.2.6 (1996)
14001.A133.	ADMISSION TYPE OF ACCOMMOD	IAdmAccommodationTypeCode	The type of the accommodation assigned to the patient when first admitted to the facility. This may change and the change can be found associated with the intrafacility transfer date list. ASTM E 1633 PARA 5.2.15

TABLE A1.1 *Continued*

14001.A136.	PRIMARY NURSING/THERAPY UNIT	IAdmPriNursinUnitText	The organizational title for the functional unit. ASTM E 1633 PARA 4.2.6
14001.A140.	ADMITTING FLOOR	IAdmFloorText	The floor of the nursing unit to which the patient is admitted. ASTM E 1633 PARA 4.2.6
14001.A143.	WARNINGS	IAdmWarningCode	A list of conditions that may be hazardous either to the patient or to the care staff that attend the patient upon admission to resident status. ASTM E 1633 PARA 4.2.6
14001.A146.	ADMISSION RECORDS RECD	IAdmRecordsRecdCode	A code reflecting the nature of the records received during admitting that are from another site.
14001.A150.	PERSONAL VALUABLES LEFT	IAdmValuableListText	A list containing names of the actual items left in custody of the facility. ASTM E 1633 PARA 4.2.2 (1996)
14001.A153.	IMPAIRMENT GROUP	IActImpairmentGroupCode	The impairment group from the FIM document
14001.A154.	ADMITTING RANCHO SCORE	IAdmRANCHOScoreQty	A severity score calculated_____ at admission to resident status. ASTM E 1633 PARA 4.2.6
14001.A156.	TOTAL ENCOUNTER/ADMIT FIM	IAdmTotFIMQty	The calculated Total FIM summed from its individual elements at admission. ASTM E 1633 PARA 4.2.5
14001.A160.	ADMIT FIM ELEMENT NAME	IAdmFIMElementId	The name of the individual element composing the FIM. ASTM E 1633 PARA 4.2.6
14001.A160.01.	FIM ELEMENT VALUE	IAdmFIMElementQty	The value for the individual FIM element. ASTM E 1633 PARA 4.2.5
14001.A163.	ADMISSION INTRA-FAC XFR DATE	ITrnsTransferDtm	The date upon which an intrafacility transfer took place. ASTM E 1633 PARA 4.2.4
14001.A163.01.	ADMISSION INTRA-FAC XFR TYPE	ITrnsTransferTypeCode	A code that classifies the transfer into a discrete number of classes. ASTM E 1633 PARA 5.2.13
14001.A163.02.	ADMISSION INTRA-FAC NURS UNIT	ITrnsNursingUnitId	The name of the nursing unit to which the patient is transferred. ASTM E 1633 PARA 4.2.6
14001.A163.06.	ADMISSION INTRA-FAC CLIN SVC	ITrnsTransfServiceCode	The name of the clinical service assigned to the receiving unit in an intrafacility transfer. ASTM E 1633 PARA 5.2.15.
14001.A163.10.	ADMISSION INTRA-FAC RM/BED	ITrnsTransfRoomBedName	The actual location of the functional nursing unit into which the patient is transferred. ASTM E 1633 PARA 4.2.6
14001.A163.13.	ADMISSION INTRA-FAC DIAGNOSIS	ITrnsTransfDiagnosisCode	The diagnosis that characterizes the patient at the time the transfer is made. ASTM E 1633 PARA 4.2.6
14001.A163.16.	ADMISSION INTRA-FAC PROVIDER	ITrnsTransfPractName	The name of the practitioner who actually orders the transfer. ASTM E 1633 PARA 4.2.1
14001.A170.	**PATIENT DIAGNOSIS**	IAdmDiagnosisCode	A name or surrogate code for a diagnosis term in the list of diagnoses for this stay. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

14001.A170.01.	DIAGNOSIS TYPE	IAdmDiagnosisTypeCode	This element is a modifier for each term/code used to list the diagnoses for a patient, either concurrent with care or in discharge summary. Each diagnosis will have a single type that is its most important in any single list. ASTM E 1633 PARA 4.2.6
14001.A170.02.	DIAGNOSIS STATUS	IAdmDiagnosisStatusCode	Major/minor-significant conditions vs. insignificant. R/O-diagnostic possibility to be considered. Inactive-not important at the present time, but could have implication for future care. Status post-condition no longer clinically relevant but historically important. ASTM E 1633 PARA 4.2.6
14001.A170.03.	DIAGNOSIS NARRATIVE	IAdmDiagnosisNarrText	The diagnosis narrative in plain text. ASTM E 1633 PARA 4.2.6 (1996)
14001.A173.	INDICATED SURGERY	IAdmIndSurgText	ASTM E 1633 PARA 4.2.6
14001.A186.	CURRENT PT STATUS DT	IActCurrPtStatusDtm	This date-time is that at which the status-code was assigned. ASTM E 1633 PARA 4.2.4
14001.A186.01.	CURRENT PT STATUS	IActCurrPtStatusCode	This code classifies the patient's clinical status with respect to severity of illness. ASTM E 1633 PARA 4.2.6
14001.A186.02.	CURRENT PROGNOSIS	IActCurrProgCode	The expected status or outcome of the resident stay at the time noted. ASTM E 1633 PARA 4.2.6
14001.A195.	ADMISSION CUSTOD PERS EFF	IAdmCustPersEffName	The name of the person holding the patient's personal effects or valuables during the current stay. ASTM E 1633 PARA 4.2.6
14001.A200.	NOTIFIED BY WHOM	IActNOKNotifiedbyName	The name of the facility staff members who notify the family or next-of-kin regarding the patient's death or major worsening of the patient's condition. ASTM E 1633 PARA 4.2.1
14001.A203.	DATETIME NOTIFIED FAMILY/NOK	IActNOKNotifiedDtm	The time that the notifying person contacted the patient's family regarding the patient's death or major worsening of condition. ASTM E 1633 PARA 4.2.4
14001.A206.	POLICE HOLD	IAdmPoliceHoldStatusCode	The code classifying the patient with respect to police holding status. ASTM E 1633 PARA 4.2.6
14001.A210.	DATE-TIME NOTIFIED POLICE	IAdmPoliceHoldNotifDtm	The date-time that the police were notified regarding the need to hold the patient. ASTM E 1633 PARA 4.2.4
14001.A213.	NOTIFIED MED. EXAMINER	IActMedexaminerNotifDtm	The class of the patient regarding notification of the medical examiner about the patient's death. Y/N
14001.A216.	DATETIME CHAPLAIN NOTIFIED	IActChaplainNotifCode	The time that the pastoral staff was notified of the severity or terminal status of a patient. ASTM E 1633 PARA 4.2.4
14001.A220.	MINISTRATIONS ADMINISTERED	IActMinistrationsText	The text describing the nature of the pastoral care rendered. ASTM E 1633 PARA 4.2.6
14001.A223.	ADMISS/ENC SOURCE OF PAYMENT	IAdmExpectPaySourceCode	The code identifying the class of payment mechanism by which the services rendered will be paid. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

14001.A223.01.	PAYMENT TYPE	IAdmExpectPayTypeCode	A category of payment list. ASTM E 1633 PARA 4.2.6
14001.A223.02.	PAYMENT CARRIER	IAdmExpectPayCarrierId	The name of the insurance carrier providing the named category of payment. ASTM E 1633 PARA 4.2.6
14001.A223.03.	PAYMENT MECHANISM	IAdmExpectPayMechCode	The means (funds transfer, check, cash, etc.) by which the payment will be made. ASTM E 1633 PARA 4.2.6
14001.B0001.	PRE-HOSP DATETIME CALL RECEIVED	PREHospCallReceivedDtm	The date time the call was received at the dispatch center. ASTM E 1633 PARA 4.2.4
14001.B0002.	PRE-HOSP DATETIME RUN DISPATCHED	PREHospRunDispatchDtm	The date time the provider was notified of the need to respond. ASTM E 1633 PARA 4.2.4
14001.B0003.	PRE-HOSP DATETIME RUN ARRIVED AT SCENE	PREHospSceneArrivalDtm	The date time the provider's vehicle arrived at the scene. ASTM E 1633 PARA 4.2.4
14001.B00031.	PRE-HOSP ORDER AGENCY ARRIVED	PREHospOrderAgencyArrQty	The sequence order that the responding agency arrived at the scene to administer pre-hospital care. ASTM E 1633 PARA 4.2.5
14001.B0004.	PRE-HOSP DATETIME PATIENT LEFT THE SCENE	PREHospPtLeftSceneDtm	The date time that the provider's vehicle departed from the scene. ASTM E 1633 PARA 4.2.4
14001.B0005.	PRE-HOSP DATETIME PATIENTARRIVED AT TREATMENT FACILITY	PREHospArrivTreatFacilDtm	The date time that the provider's vehicle arrived at the first health care facility destination. ASTM E 1633 PARA 4.2.4
14001.B0006.	PRE-HOSP DATTIME UNIT RETURNED TO SERVICE	PREHospReturntoServiceDtm	The date time that the providers vehicle was ready to respond to a subsequent call. ASTM E 1633 PARA 4.2.4
14001.B00061.	DATE-TIME TRAUMA SURGEON ARRIVED	ERAdmTraumaSurgArrDtm	The clock time that the trauma surgeon arrived in the Emergency Dept. in response to this case. ASTM E 1633 PARA 4.2.4
14001.B00062.	DATE-TIME NEUROSURGEON ARRIVED	ERAdmNeuroSurgArrDtm	The time that the Neurosurgeon arrived in the Emergency Dept. in response to this case. ASTM E 1633 PARA 4.2.4
14001.B001.	PRE-HOSPITAL EQUIPMENT/PROCEDURES	PREHospEquipProcedCode	The name of a treatment or procedure given to the patient during the pre-hospital care. ASTM E 1633 PARA 4.2.6
14001.B001.01.	PRE-HOSPITAL PROCEDURE DATE-TIME	PREHospProcedureDtm	The date time that the treatment or procedure was conducted. ASTM E 1633 PARA 4.2.4
14001.B003.	PRE-HOSP. CARE NARRATIVE	PREHospCareNarrativeText	The description of First Aid and other pre-arrival care delivered. ASTM E 1633 PARA 4.2.2 (1996)
14001.B004.	SEVERITY AT DISPATCH	PREHospDispSeverityQty	The ordinal category of severity at the time of dispatch. ASTM E 1633 PARA 4.2.5
14001.B005.	SEVERITY AT ARRIVAL ON SCENE	PREHospSceneSeverityQty	The ordinal category of severity at the time of arrival on scene. ASTM E 1633 PARA 4.2.5
14001.B0051.	INCIDENT RUN NUMBER	PREHospIncidentRunId	A uniqe (preferable pre-numbered) alphanumeric sequence for each provider organization in a state to be assigned to each vehicle dispatch for each patient regardless of whether a patient was transported. ASTM E 1633 PARA 4.2.6

TABLE A1.1 *Continued*

14001.B006.	PRE-HOSPITAL AGENCY ID	PREHospAgencyIDNum	A unique alphanumeric sequence assigned for identification by each state to first responder organizations. ASTM E 1633 PARA 4.2.6
14001.B0065.	PRE-HOSP VEHICLE ID	PREHospVehicleIDNum	The identification of the vehicle responding to the pre-hosp run. ASTM E 1633 PARA 4.2.6
14001.B007.	PRE-HOSP DISPATCH NO.	PREHospDispatchNum	A unique pre-numbered alphanumeric sequence for each request for service made to the dispatch center. ASTM E 1633 PARA 4.2.6
14001.B0071.	TRAUMA NUMBER	PREHospTraumaNum	An identifier for each Trauma incident in a region used for record linking. ASTM E 1633 PARA 4.2.6
14001.B010.	PRE-HOSP SCENE DESCRIPTION	PREHospSceneDescriptText	A categorical term and code describing the scene in which the patient was first encountered. ASTM E 1633 PARA 4.2.6
14001.B011.	PRE-HOSP CREW ID	PREHospCrewIDId	The state license number of the crew member which should be a unique alphanumeric sequence. ASTM E 1633 PARA 4.2.6
14001.B011.01.	PRE-HOSP CREW MEMBER SKILL LEVEL	PREHospCrewSkillCode	A categorical term describing the highest level of certification. ASTM E 1633 PARA 4.2.6
14001.B011.02.	PRE-HOSP CREW PROCEDURE PERFORMED	PREHospCrewProcedureName	The identifier of a procedure conducted or missed during pre-hospital care.
14001.B012.	PRE-HOSPITAL OBSERVATION	PREHospObservationCode	The name of an observation made during pre-hospital care. ASTM E 1633 PARA 4.2.6
14001.B012.01.	PRE-HOSP OBSERVATION VALUE	PREHospObservationQty	The numeric value of the observation made during pre-hospital care. ASTM E 1633 PARA 4.2.5
14001.B012.02.	PRE-HOSP OBSERVATION DATETIME	PREHospObsDtm	The time point at which an observation was made during pre-hospital care. ASTM E 1633 PARA 4.2.4
14001.B015.	TIME OF TRIAGE	ERAdmTriageDtm	The time that the emergency department assigned priority to the patient for determining the nature and sequence of care. ASTM E 1633 PARA 4.2.4
14001.B016.	CONDITION AT TRIAGE	ERAdmTRiageCondCode	A statement of the patient's physiologic state at the time triage was conducted. ASTM E 1633 PARA 4.2.6
14001.B030.	BURNS-LOCATION		The anatomic names of the ares of the body which are burned.
14001.B030.01.	BURNS-PCT BODY		The percent of the total body area that the burned area covers.
14001.B030.02.	BURNS-DEGREE		The severity of the area burned.
14001.B033.	FRACTURES-LOCATION		The names of the bones which are fractured.
14001.B033.01.	FRACTURES-TREATMENT		The pre-hospital treatment of a fracture.
14001.B036.	TOURNIQUET-DATETIME		The date and time that each tourniquet is established.
14001.B036.01.	TOURNIQUET LOC		The name of the location for each tourniquet established.

TABLE A1.1 *Continued*

14001.B039.	E-R PROCEDURES	The names of the diagnostic or therapeutic procedures conducted in the emergency department.
14001.B042.	TUBE TYPE	The name of the device used to ensure a patient airway.
14001.B045.	OXYGEN TIME STARTED	The time that oxygen therapy was commenced.
14001.B048.	OXYGEN PERCENT	The percent of oxygen in the administered breathing gasses. ASTM E 1633 PARA 4.2.5
14001.B051.	XRAY LOCATION	The body location for which a radiograph is taken.
14001.B051.01.	XRAY VIEW	The view of the radiographed location.
14001.B054.	PRE-HOSPITAL BLOOD RUN NO.	The number of the specimen taken at the scene destined for the blood bank and tested to speed the availability of blood units at the receiving facility.
14001.B057.	BLOOD PRODUCT ID	The identifying number on each unit.
14001.B057.01.	BLOOD DONOR ID	The identifier of the donor of the blood product unit.
14001.B057.02.	BLOOD PRODUCT TYPE	This is the product type (e.g. whole blood, packed red cells, fresh frozen plasma, etc.).
14001.B057.03.	BLOOD PRODUCT TIME STARTED	The time when administration was started. ASTM E 1633 PARA 4.2.4
14001.B057.04.	BLOOD PRODUCT TIME FINISHED	The time when administration was finished. ASTM E 1633 PARA 4.2.4
14001.B057.05.	BLOOD PRODUCT BLOOD TYPE	
14001.B057.06.	BLOOD PRODUCT CROSSMATCH	This is the crossmatch data string.
14001.B057.07.	BLOOD VOLUME TRANSFUSED	Amount of each unit transfused in milliliters ASTM E 1633 PARA 4.2.5
14001.B057.08.	BLOOD PRODUCT CUMULATIVE VOLUME	The total volume of blood or blood products administered. ASTM E 1633 PARA 4.2.5
14001.B057.09.	BLOOD PRODUCT COMMENTS	The textual remarks about blood product administration. ASTM E 1633 PARA 4.2.6
14001.B060.	ADMITTING DIET ORDER	
14001.B063.	IV FLUID TYPE & ADDITIVES	
14001 B063.1.	DATE-TIME IV HUNG	ASTM E 1633 PARA 4.2.4
14001.B063.2.	IV LINE NEW START DATE-TIME	ASTM E 1633 PARA 4.2.4
14001.B063.3.	IV SITE	
14001.B063.4.	IV LINE NEW START:GUAGE&LNGTH	
14001.B063.5.	IV FLUID INFUSION DATETIME	ASTM E 1633 PARA 4.2.4
14001.B063.5.01.	IV FLUID VOLUME INFUSED	
14001.B063.5.02.	IV FLUID BOTTLE ID	
14001.B063.6.	IV FLUID RATE	
14001.B063.7.	IV FLUID CUMULATIVE VOLUME INFUSED	
14001.B063.9.	IV CARE	

TABLE A1.1 *Continued*

14001.B069.	FLUID INTAKE IV SOURCE	
14001.B069.01.	FLUID INTAKE VOL-TOTAL	ASTM E 1633 PARA 4.2.5
14001.B069.02.	FLUID INTAKE DATE-TIME	ASTM E 1633 PARA 4.2.4
14001.B069.21.	FLUID IN/OUT	
14001.B069.22.	FLUID VOLUME	ASTM E 1633 PARA 4.2.5
14001.B070.	VITAL SIGNS TIMES	
14001.B070.01.	VITAL SIGNS TRACKING VARIABLE	
14001.B070.01.01.	VITAL SIGNS TRACK VAR VALUE	ASTM E 1633 PARA 4.2.5
14001.B070.01.02.	VITAL SIGNS TRACK VAR UNIT	
14001.B072.	MEDICATION ID	
14001.B072.01.	ADMISSION MEDICATION DATETIME ADMINISTERED	
14001.B072.01.01.	ADMISSION MEDICATION PERSON ADMINISTERING	
14001.B072.01.02.	ADMISSION MEDICATION CLINICAL ORDER ID	
14001.B072.01.03.	ADMISSION MEDICATION DATETIME OF NEXT DOSE	ASTM E 1633 PARA 4.2.4
14001.B072.01.04.	ADMISSION MEDICATION ADMINISTRATION COMMENT	ASTM E 1633 PARA 4.2.6
14001.B072.02.	ADMISSION MEDICATION NO. DOSES ADMINISTERED	
14001.B075.	ADMISSION DIAGNOSTIC TEST ID	
14001.B075.01.	ADMISSION DIAGNOSTIC TEST DATETIME	ASTM E 1633 PARA 4.2.4
14001.B075.01.01	ADMISSION DIAGNOSTIC TEST SPECIMEN ID	
14001.B078.	INTENSIVE CARE SUMMARY DATETIME	ASTM E 1633 PARA 4.2.4
14001.B078.01.	INTENSIVE CARE SUMMARY TEXT	
14001.B078.02.	INTENSIVE CARE SUMMARY PRACTITIONER ID	ASTM E 1633 PARA 4.2.1
14001.B081.	ADMISSION CLINICAL ORDER ID	
14001.B084.	ADMISSION PROBLEM ID	
14001.C001.	PRIMARY NURSE THERAPIST	
14001.C003.	NURSING DIAGNOSIS/PAT. PROB.	
14001.C006.	LONG TERM CARE GOALS	
14001.C009.	NURSING SHORT TERM GOAL	
14001.C012.	NURS. SHORT TERM GOAL DEADLINE	
14001.C015.	NURSING REQUIREMENT CATEGORY	
14001.C018.	PATIENT PROFILE ATTRIBUTE	
14001.C018.01.	PATIENT PROFILE ATTRIBUTE VALUE	
14001.C021.	COMMUNITY SVCS USED	
14001.C024.	NURSING APPROACH/ACT. PLAN	
14001.C027.	CLINICAL COURSE MEASUREMENT	
14001.C027.01.	CLINICAL COURSE MEASUREMENT VALUE	ASTM E 1633 PARA 4.2.5
14001.C027.02.	CLINICAL COURSE MEASUREMENT VALUE UNIT	
14001.C055.	DIET CHANGE DATE-TIME	ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

14001.C055.01	DIET CHANGE DIET TYPE	
14001.C058.	ADMISSION HYGIENE STATUS	
14001.C060.	ADMISSION VITAL SIGN FREQUENCY	
14001.C062.	ADMISSION ALLERGIES	
14001.C065.	ADMISSION DISCHARGE OBJECTIVE ID	
14001.C065.01.	ADMISSION DISCHARGE OBJECTIVE TEXT	
14001.C065.03.	ADMISSION FUNCTIONAL GOAL	
14001.C065.06.	ADMISSION OBJECTIVE TARGET DATETIME	ASTM E 1633 PARA 4.2.4
14001.C065.09.	ADMISSION DISCHG OBJECTIVE ACTION	
14001.C068.	ANTIC. DIPSOSITION	
14001.C070.	ADMISSION ESTIMATED DISCHARGE DATETIME	ASTM E 1633 PARA 4.2.4
14001.C073.	DISCHARGE/AFTERCARE PLAN/PROBS	To provide reasonable assurance of continued care, developed with patient and family participation.
14001.C075.	ADMISSION NURSING PROBLEM NUMBER	
14001.C078.	ADMISSION ROS BODY SYSTEM ID	ASTM E 1633 PARA 5.2.22
14001.C078.01.	ADMISSION ROS BODY SYSTEM REVIEW TEXT	
14001.C080.	ADMISSION SCHEDULED TEST/CONSULT/SURGERY DATETIME	ASTM E 1633 PARA 4.2.4
14001.C080.01.	ADMISSION TEST/CONSULT/SURGERY TYPE	
14001.C080.02.	ADMISSION TEST/CONSULT/SURGERY LOC CONDUCTED	
14001.C080.03.	ADMISSION TEST/CONSULT/SURGERY DATETIME ORDERED	ASTM E 1633 PARA 4.2.4
14001.C080.04	ADMISSION TEST/CONSULT/SURGERY DATETIME COMPLETED	ASTM E 1633 PARA 4.2.4
14001.C085.	ADMISSION TREATMENT	
14001.C085.01.	ADMISSION TREATMENT DATE ORDERED	The time that a treatment was ordered. ASTM E 1633 PARA 4.2.4
14001.C085.02.	ADMISSION TREATMENT DATE SCHED	The time that an ordered treatment was scheduled. ASTM E 1633 PARA 4.2.4
14001.C085.03.	ADMISSION TREATMENT DATE COMPLETE	The time that an ordered treatment was completed. ASTM E 1633 PARA 4.2.4
14001.C090.	ADMISSION PATIENT INSTRUCTION DATETIME	ASTM E 1633 PARA 4.2.4
14001.C090.01.	ADMISSION PATIENT INSTRUCTION TYPE	
14001.C090.02	ADMISSION PATIENT INSTRUCTION TEXT	
14001.C090.03.	ADMISSION PATIENT INSTRUCTION VERIFICATION	
14001.C130.	**CLINICAL PROGRESS NOTE DATE-TIME**	The time point that the physicians textual assessment was composed or written. ASTM E 1633 PARA 4.2.4
14001.C130.01.	**CLINICAL PROGRESS NOTE**	A textual description of the physician's observations, their interpretations and conclusions about the clinical course of the patient or the steps taken, or to be taken, in the care of the patient.

TABLE A1.1 *Continued*

14001.C130.03.	**SIGNATURE/AUTHENTICATOR**	HCPractSig	An electronic unique signature of the physician identifying that individual.
14001.C110.	REHABILITATIVE SERVICE ORDERED		
14001.C110.01.	REHABILITATIVE SVC UNIT		
14001.C110.02.	REHABILITATIVE SVC DESCRIPTION		
14001.C120.	FOOD INTAKE DATE-TIME		ASTM E 1633 PARA 4.2.4
14001.C120.01.	FOOD ID		
1400.C120.01.01.	FOOD AMOUNT		ASTM E 1633 PARA 4.2.5
14001.C120.01.02.	FOOD AMOUNT UNIT		
14001.C120.02.	NUTRIENT ID		
14001.C120.02.01.	NUTRIENT AMOUNT		ASTM E 1633 PARA 4.2.5
14001.C120.02.02.	NUTRIENT UNIT		
14001.C122.	NUTRITIONAL ASSESSMENT		An overview of the nutritional status of the patient and the perceived nutritional needs that must be provided. TEXT
14001.C123.	RESPONSE TO DIET		A textual synopsis of the effects of a particular diet.
14001.C125	DIET TYPE		A categorical term identifying a particular class of diet.
14001.C128.	DIET COMMENTS		A textual remark ampliyfing aspects of the patient's diet. ASTM E 1633 PARA 4.2.6
14001.D001.	**NAME OF THERAPY/SVC**		The identifier or name of the therapeutic service conducted.
14001.D001.01.	**THERAPY START DATE-TIME**		The time point that the service was commenced. ASTM E 1633 PARA 4.2.4
14001.D001.01.01.	**THERAPY FINISH DATE-TIME**		The time point that the therapy ceased.ASTM E 1633 PARA 4.2.4
14001.D001.01.03.	THERAPY PROBLEM ID		The identifier or name of the main problem associated with the therapy.
14001.D001.01.05.	THERAPY CLINICAL ORDER ID		The identifier of the clinical order which requested the therapy.
14001.D001.01.06.	THERAPY NAME OF ORDERING PRACTITIONER		
14001.D001.01.07.	THERAPY LOCATION DELIVERED		The care facility location at which the therapeutic procedure was conducted.
14001.D001.01.11.	THERAPY PATIENT BEGIN CONDIT		The beginning status of the patient, includes behavioral aspects.
14001.D001.01.13.	THERAPY PATIENT END CONDIT		The concluding status of the patient, including behavioral aspects.
14001.D001.01.15.	THERAPY STATUS		The category term describing the state of the therapeutic procedure. C:CURRENT; I:INACTIVE;D/C: NO LONGER USED
14001.D001.01.17.	THERAPY SPECIFIC PREPARATION		The names of the preparative procedures required before the primary procedure can be conducted, such as positioning, procedures etc.
14001.D001.01.18.	THERAPY PRODUCTS GIVEN		The name and attributes of the products utilized in the therapeutic procedure, including nature of product, dosages, ingredients.

TABLE A1.1 *Continued*

14001.D001.01.18.01.	AMT OF THERAP PRODUCT GIVEN		The total dose or amount of the product, as opposed to dose rates.
14001.D001.01.19.	THERAPY EQUIPMENT USED		The names or identifiers of the devices used to deliver or conduct the therapeutic procedure.
14001.D001.01.21.	**THERAPISTS RESPONSE ASSESSMENT**		Therapists documentation of pt's attitude toward the plan, including estimates of further therapeutic potential.
14001.D001.01.22	THERAPY RESULTS OF TREATMENT		Text description of treatment outcome.
14001.D001.01.23.	THERAPY RESULT EVALUATION		A textual judgment of the overall effect produced by the therapeutic procedure.
14001.D001.01.25.	**THERAPY PERF PRACTITIONER**		The name or identifier of the individual practitioner who administered the therapy. ASTM E 1633 PARA 4.2.1
14001.D001.01.27.	**THERAPISTS RECOMMENDATIONS**		Further plans for continued treatment and/or services, including an assessment of patient's ability to improve and to what level. ASTM E 1633 PARA 4.2.6
14001.E001.	**DATE-TIME PATIENT IN**		The time point of the patient's arrival in the operating room complex. ASTM E 1633 PARA 4.2.4
14001.E001.02.	OPER PT ISOLATION STATUS		The category term reflecting the nature of the procedures for isolating the patient from the environment or for protecting the environment from the patient with respect to infectious, or potentially infectious conditions.
14001.E001.04.	OPER PT CATEGORY		The category term for the class of operative procedure for this patient.
14001.E001.06.	OPER PT CASE TYPE		
14001.E001.08.	OPER PT CASE NO.		The unique identifier for this operative case.
14001.E001.10.	OR NO.		The name or identifier of the operating room in which this patient's procedures will be conducted.
14001.E001.11	PATIENT ISOLATION STATUS		Identified for contagious disease condition state.
14001.E001.12.	ORDERING STA NO.		The identifier of the location for which supplies or services are ordered for this operative event.
14001.E001.14.	ORGAN DONOR TYPE	ORGDonorAgrTypeCode	The name of the individual donating tissue or organs to this recipient patient. ASTM E 1633 PARA 4.2.6
14001.E001.14.01.	BLOOD/SKIN DONOR NAME		The name of a blood or skin donor to this patient. ASTM E 1633 PARA 4.2.1
14001.E001.17.	OPERATIVE POSITIONS		The name of the position to be used to be used for the procedure to be conducted.
14001.E001.20.	POSITIONAL AIDS		The nature of the devices used to aid the patient assume the body position required for the procedure to be conducted.
14001.E001.22.	EVIDENCE REMOVED		A textual description of the specimens or other material removed for legal purposes as evidence in judicial or administrative procedures.

TABLE A1.1 *Continued*

14001.E001.24.	DATE-TIME SEEN BY ANESTHESIOL	The time point of pre-anesthesia assessment.
14001.E001.26.	ANESTHESIA START TIME	The date time when the procedure for administering all anesthetic agents is commenced. ASTM E 1633 PARA 4.2.4
14001.E001.28.	ANESTHESIA RDY TIME	The date time when the anesthetic agents have produced their desired biological effect which will be maintained during the surgery. ASTM E 1633 PARA 4.2.4
14001.E001.30.	OPERATION DATE-TIME	The date time at which the operative procedures commenced during this surgery. ASTM E 1633 PARA 4.2.4
14001.E001.32.	OPERATION END TIME	The date time at which the operative procedures were completed during this surgery. ASTM E 1633 PARA 4.2.4
14001.E001.34.	ANeSTHESIA END TIME	The date time when the biologic effect of all anesthetic agents has disappeared. ASTM E 1633 PARA 4.2.4
14001.E001.36.	PATIENT OUT TIME	The time point at which the patient leaves the operating room complex. ASTM E 1633 PARA 4.2.4
14001.E001.38.	PATIENT PHYSICAL STATUS	A textual description of the patient's overall physiological status.
14001.E001.40.	OPERATION DESCRIPTION	A textual description of the operation to be performed written before conduct of the procedures.
14001.E001.42.	OPER PT PRE-OP COMMENT	The textual remarks made before the surgical procedures begin.
14001.E001.44.	OPERATION MEASUREMENT	The name or identifier of the measurement or observation made during this surgery.
14001.E001.44.1.	OPERATION MEASUREMENT VALUE	The numeric amount of the property to be measured during the surgery.
14001.E001.46.	CHECK RECORD	A category term for classifying the complete review of the care record and surgery request before commencing the surgery.
14001.E001.48.	CHECK PATIENT	A category term for classifying the complete review of the patient before commencing the surgery.
14001.E001.50.	O-R NURSE ID	The name or identifier of the lead nurse in the operating room. ASTM E 1633 PARA 4.2.1
14001.E001.51.	OPER PT RESP STATUS	The category term classifying the general respiratory condition of the patient.
14001.E001.52.	OPER PT CIRC STATUS	The category term classifying the general circulatory condition of the patient.
14001.E001.53.	OPER PT CNS STATUS	The category term classifying the general central nervous system condition of the patient.
14001.E001.54.	PREVIOUS ANESTHETIC COMPLIC.	Textual description of prior difficulties the patient may have had with anesthesia.
14001.E001.55.	PRE-OP MED NAME	

TABLE A1.1 *Continued*

14001.E001.55.01.	PRE-OP MED DOSE	The numerical measure of the amount of medicinal product given to the patient before surgery.
14001.E001.55.02	PRE-OP MED ROUTE	The categorical term for the avenue by which the medicinal product given to the patient prior to surgery was introduced into the patient.
14001.E001.55.03.	PRE-OP MED TIME	The date time point at which the medicinal product was administered to the patient. ASTM E 1633 PARA 4.2.4
14001.E001.55.04.	PRE-OP MED EFFECT	Textual description of the outcome of administering the medicinal product to the patient prior to surgery.
14001.E001.56.	PRE-OP DIAGNOSIS	Determination of the case prior to operating.
14001.E001.57.	POST-OP DIAGNOSIS	Determination of the case after operating.
14001.E001.58.	OPERATIVE EVENT SURGEON	Clinicians who performed the principle procedure. These data are also needed for the operating practitioner in the episode summary (7170.) ASTM E 1633 PARA 4.2.1
14001.E001.58.01.	SURGEON ROLE	The category term for the role played by the named surgeon during this surgery.
14001.E001.60.	**ANESTHESIOL/ANESTHETIST**	The name of the practitioner responsible for the induction and maintenance of anesthesia during this surgery. ASTM E 1633 PARA 4.2.1
14001.E001.61.	ANESTHESIOL. RESIDENT	The practitioner in training who assists the anesthesiologist responsible for this patient and this surgery. ASTM E 1633 PARA 4.2.1
14001.E001.62.	ANESTHETIST	The name or identifier of the nurse-anesthetist participating in the operation. ASTM E 1633 PARA 4.2.1
14001.E001.63.	O-R STAFF POSITION	The unique name of the position staffed during this surgery. ASTM E 1633 PARA 4.2.6
14001.E001.63.01.	O-R STAFF NAME	The name of the individual filling the O-R staff position. ASTM E 1633 PARA 4.2.1
14001.E001.64.	ANESTHESIA INDUCTION	
14001.E001.65.	ANESTHETIC INDUCTION COMMENTS	The textual remarks relating to the induction of anesthesia in this patient.
14001.E001.66.	ENDOTRACHEAL TUBE TYPE	The category of endotracheal tube used in this surgery and this patient.
14001 E001.67.	ENDOTRACHEAL TUBE COMMENT	The textual remarks concerning the endotracheal tube used in this surgery.
14001.E001.68.	TIME OR BLOOD ORDERED	The date time the request for blood units is to be used in the operating room was placed. ASTM E 1633 PARA 4.2.4
14001.E001.68.01.	NO. UNITS BLOOD ORD IN O-R	The count of the units of blood ordered for the operating room to be used during this surgery. ASTM E 1633 PARA 4.2.5
14001.E001.69.	**OPERATIVE PROCEDURE**	The unique name of the procedure conducted during surgery.

TABLE A1.1 *Continued*

14001.E001.69.001.	OPERATIVE PROCEDURE DATE-TIME	The moment the surgical procedure commenced.
14001.E001.69.002.	OPERATIVE PROCEDURE PRIORITY	The order of importance of the operative procedure in the operating room stay.
14001.E001.69.003.	OPERATIVE PROCEDURE DESCRIPTION	A narrative of what was done during the procedure.
14001.E001.69.01.	OPERATIVE PROCEDURE EVAL.	A textual report of the specific procedure conducted during surgery.
14001.E001.69.02	OPERATIVE PROCEDURE FINDINGS	A narrative of what was observed as a result of the procedure.
14001.E001.70.	SURGICAL SPECIMEN ID	The unique identifier for a specimen obtained during surgery.
14001.E001.70.01.	SURGICAL SPECIMEN SITE	The anatomic location from which the specimen was obtained during surgery.
14001.E001.70.02	SURGICAL SPECIMEN PROCESSING	The procedural steps taken to prepare a specimen obtained during surgery for examination.
14001.E001.70.03	SURGICAL SPECIMEN FINDINGS	A narrative of the observations on the specimen.
14001.E001.71.	**ANESTHETIC AGENT**	Type of agent used to induce diminished, or loss of, feeling or sensation.
14001.E001.71.01.	ANESTHETIC AGENT DOSE VALUE	The numeric measure of the amount of anesthetic administered.
14001.E001.71.02.	ANESTHETIC AGENT DOSE UNIT	The unit of measure associated with the anesthetic dose value.
14001.E001.71.03.	ANESTHETIC TECHNIQUE	The name of the technique(s) used to administer the anesthetics used in the operation.
14001.E001.72.	**POST-ANESTHESIA ASSESSMENT**	A textual synopsis of the effectiveness and adverse effects of the anesthesia.
14001.E001.73.	**OPERATIVE EVENT DATE-TIME**	The time point for each operative event including temp, pulse, resp, BP from start of procedure through recovery. ASTM E 1633 PARA 4.2.4
14001.E001.73.01.	OPERATIVE EVENT CODE	An identifier or name of the event occurring during the operation for which an attribute was observed.
14001.E001.73.02.	OPERATIVE EVENT VALUE	The value, either quantitative (numeric) or qualitative, associated with this operative event.
14001.E001.73.03.	OPERATIVE EVENT FLUID TYPE	The name or identifier of the fluid associated with this operative event.
14001.E001.73.04.	OPERATIVE EVENT FLUID VOLUME	The measure of the fluid associated with this operative event. ASTM E 1633 PARA 4.2.5
14001.E001.73.05.	OPERATIVE EVENT POSITION	The name or identifier of the patient position associated with this event.
14001.E001.73.06.	OPERATIVE EVENT POSITIONAL AID	The name of a positional aid utilized during this operative event.
14001.E001.74.	BLOOD LOSS, TOTAL	Total blood loss, in units of blood, during the operation.
14001.E001.75.	EXTRA OR SUPPLIES	The name or identifier of supplies used in this operation that are additional to those regularly used.

TABLE A1.1 *Continued*

14001.E001.75.01	EXTRA OR SUPPLIES-AMT		The numeric quantity of those additional supplies.
14001.E001.76.	K-THERMIA		
14001.E001.78.	CAUTERY SITE		The anatomic location of the site cauterized during surgery.
14001.E001.80.	CASTS		A description of the locations and types of casts applied during the operation.
14001.E001.82.	IMPLANTS & DRAINS		A list of the locations and descriptions of any surgical implants or drains left in the patients at the conclusion of the operation.
14001.E001.84.	TOURNIQUET TIMES		The list of times that tourniquets are established to control blood flow.
14001.E001.84.01.	TOURNIQUET LOC		The name of the location for each tourniquet established.
14001.E001.85.	URINARY CATHET. PLACE DATETIME		The time point at which a catheter was placed in the urinary tract.
14001.E001.86.	NEEDLE CTS-1ST:3RD		A sequence of numbers representing the visual counts of suturing needles at three time points.
14001.E001.87.	INSTRUMENT CT-1ST:3RD		A sequence of numbers representing the visual counts of surgical instruments at three time points.
14001.E001.88.	SPONGE CTS-1ST:3RD		A sequence of numbers representing the visual counts of surgical sponges at three time points.
14001.E001.90.	RECOVERY NOTE TEXT		A textual account of the course of the patient's recovery following the operation.
14001.E001.91.	**OPERATION COMPLICATIONS**		A textual account of surgical misadventures, i.e., infections.
14001.E001.92.	OPERATIVE COMMENTS		A textual remark during the operative event.
14001.E001.93.	DISCH. OPER RPT DICT. DATE		The date the operating surgeon actually dictated the operative report. ASTM E 1633 PARA 4.2.4
14001.E001.94	OP-REPORT DICTATED BY		The name or identifier of the surgeon dictating the operative report.
14001.F006.	**ADMISSION ENCOUNTER SURGEON**	IDispSurgeonName	The surgeon participating in the principal operative procedure of this admission. ASTM E 1633 PARA 4.2.1
14001.F006.1.	**ADMISSION ENCOUNTER SURGEON ROLE**	IDispSurgeonRoleCode	The role of the surgeon in the principal operative procedure of this admission. ASTM E 1633 PARA 4.2.6
14001.F013.	ADMISS OPER PROCEDURE	IDispOperProcCode	The name of operative procedures other than the principal on conducted during this admission. ASTM E 1633 PARA 4.2.6
14001.F013.01.	ADMISS OPER PROC DATE	IDispOperProcDtm	The date on which other operative procedures than the principal on was conducted. ASTM E 1633 PARA 4.2.4
14001.F013.02.	ADMISS OPER PROC SURGEON	IDispOperProcSurgName	The name of the surgeon performing operative procedures other than the principal one. ASTM E 1633 PARA 4.2.1

TABLE A1.1 *Continued*

14001.F013.03.	ADMISS OPER PROCEDURE TYPE	IDispOperProcTypeCode	The code identifying the procedure type (e.g., principal, primary, secondary). ASTM E 1633 PARA 4.2.6
14001.F014.	ENCOUNTER PROCEDURE	HCAVDispEncounterProcCode	A list of procedures conducted on the patient during this encounter/stay. ASTM E 1633 PARA 4.2.6
14001.F030.	**ENCOUNTER DIAGNOSIS**	HCFEDispDiagICDCode	A list of all conditions co-existing at the time of the episode that effect the treatment received or LOS. A condition of sufficient signficance to warrant inclusion for investigative medical studies. No symbols or abbreviations. Complications are additional diagnoses describing conditions arising after the beginning of the episode and modifying the course of the patient's illness or the medical care required. Also describes undesired result and/or misadventure in the medical care of a patient. LEXICON
14001.F030.01.	ENCOUNTER DIAGNOSIS TYPE	HCFEDispDiagTypeCode	A term identifying priority (e.g. secondary, tertiary etc.) of the diagnosis code. ASTM E 1633 PARA 4.2.6
14001.F030.02.	ENCOUNTER DIAGNOSIS NARRATIVE	HCFEDispDiagNarrText	The narrative text of the diagnosis. ASTM E 1633 PARA 4.2.6
14001.F036.	ENCOUNTER ETIOLOGY	HCFEDispEtiolCode	A name of causes of the conditions which led to this stay. ASTM E 1633 PARA 4.2.6
14001.F036.1.	ENCOUNTER ETIOLOGY TYPE	HCFEDispEtiolTypeCode	The type of the cause of the patient's primary diagnosis for this stay. The name may refer to either illness or traumatic injury conditions. ASTM E 1633 PARA 4.2.6
14001.F040.	**DISPOSITION DATE-TIME**	HCFEDispDispDtm	Date-time of formal release from, or termination of, an episode of care when discharged alive. ASTM E 1633 PARA 4.2.4
14001.F043.	PHYSICIAN AUTHORIZ DISPOSITION	HCFEDispPrctAuthDischName	The responsible physician actually authorizing the patient's discharge. ASTM E 1633 PARA 4.2.1
14001.F046.	**DISPOSITION TYPE**	HCFEDisposTypeCode	ASTM E 1633 PARA 5.2.14
14001.F050.	DISCHG./ENCOUNTER DISPOSITION	HCFEDispDisposCode	The provider's statement of the next steps in the care of the patient. It applies to all encounters including inpatient stays and gives the basic cateory and subcategory of the disposition action (e.g. D/C to home, died, left AMA, follow-up, etc.). This lexicon is used in both the UACDS and the UHDDS of the NCHS. ASTM E 1633 PARA 4.2.6
14001.F053.	ENCOUNTER DEPART DATETIME	HCAVDispDepartDtm	The date time the patient actually departed the facility. ASTM E 1633 PARA 4.2.4
14001.F056.	ENCOUNTER FOLLOWUP ACTION	HCAVDispEncFolowupActCode	A description of any follow-up actions resulting from this encounter. ASTM E 1633 PARA 4.2.6
14001.F060.	ENCOUNTER FOLLOWUP STATUS	HCAVDispEncFolowupStaCode	A list of terms depicting the current status of the follow-up action. ASTM E 1633 PARA 4.2.6
14001.F063.	ENCOUNTER FOLLOWUP TARGET DATE	HCAVDispEncFollowTargDtm	The date by which the intended follow-up action is to be completed. ASTM E 1633 PARA 4.2.4

TABLE A1.1 *Continued*

14001.F066.	COND. ON DISCHG.	IDispCondonDischgCode	The health status upon discharge. Text. ASTM E 1633 PARA 4.2.6
14001.F067.	DISCHARGE RANCHO SCORE	IDispRANCHoScoreQty	A severity score calculated at discharge from resident status. ASTM E 1633 PARA 4.2.5
14001.F068.	TOTAL DISCHARGE FIM	IDispFImQty	The calculated total FIM value summed from its individual elements at discharge from resident status. ASTM E 1633 PARA 4.2.5
14001.F069.	DISCHARGE FIM ELEMENT NAME	IDispDischgFImElCode	The name of the individual element comprising a FIM at time of discharge from resident status. ASTM E 1633 PARA 4.2.6
14001.F069.01.	DISCHARGE FIM ELEMENT VALUE	IDispDischFImQty	The value for the individual FIM element.
14001.F070.	REASON FOR DISCHARGE	IDispDischgReasonCode	The term categorizing the reason for terminating the patient's resident status such as: moved, died, no medical supervision needed, requested by family, referral elsewhere, lack of reimbursement, refusal of treatment, treatment goals met (maximum benefit achieved), left AMA. ASTM E 1633 PARA 4.2.6
14001.F073.	PERSON ACCOMPANYING PATIENT FROM FACILITY	IDispPersonAccompPtName	The person who actually accompanies the patient from the facility after a discharge or encounter. ASTM E 1633 PARA 4.2.1
14001.F076.	DISPOSITION TRANSPORT TYPE	IDispDisposTransTypeCode	A list of the categories of transport by which the patient left the facility. ASTM E 1633 PARA 4.2.6
14001.F080.	**DISPOSITION DESTINATION**	IDispDisposDestText	A description of the actual destination of the patient upon leaving the facility. ASTM E 1633 PARA 4.2.6
14001.F083.	**DISPOSITION PATIENT INSTRUCTIONS**	HCFEDispPtInstructText	The instructions for care or follow-up issued to a patient who left the facility. ASTM E 1633 PARA 4.2.6
14001.F086.	PATIENT SIGNATURE	IDispPatientSig	
14001.F090.	DISCHG SUMM DICT DATE-TIME	IDispDischgSummDictDtm	The date and time that the responsible physician actually dictated the text of the summary. ASTM E 1633 PARA 4.2.4
14001.F093.	TOTAL ACUTE CARE LOS	IDispTotAcuteCarLOSDayQty	This period is the number of days calculated according to agreed upon formulae denoting the period of inpatient residence in the facility. The period of rehabilitative care is calculated separately, if conducted in the same faciity and residence period. ASTM E 1633 PARA 4.2.5
14001.F096.	LENGTH OF REHAB SERVICES	IDispRehabSvcDayCnt	The number of days denoting the period of residence in a rehabilitative status. ASTM E 1633 PARA 4.2.5
14001.F100.	TOTAL ICU DAYS	IDispTotalICUDayCnt	ASTM E 1633 PARA 4.2.5
14001.F101.	DATE-TIME OF DISPOSITION NOTE	HCFEDispDispNoteDtm	The date and time of the note describing the care rendered in the emergency department. ASTM E 1633 PARA 4.2.4
14001.F105.	**TEXT OF NOTE/REPORT**	HCFEDispNoteText	The textual content of the report. ASTM E 1633 PARA 4.2.6
14001.F110.	**SIGNATURE/AUTHENTICATOR**	HCPractSig	An electronic unique signature of the physician identifying that individual.

TABLE A1.1 *Continued*

14001.G001.	CHARGE ITEM NAME	BILLItmText	The name for a reimbursement, for D/C DRG charge-all charges for procedures and services rendered by the provider or his/her associates, during or in conjunction with the episode. It includes procedures occurring subsequent to the episode but ordered during the episode, and a facility fee, if billed separately from the professional fee. NUMERIC. ASTM E 1633 PARA 4.2.6
14001.G001.01.	MEDICAL SERVICE CODE	BILLItmServiceCode	The identifying character string for a service rendered during this encounter. ASTM E 1633 PARA 4.2.6
14001.G001.02.	MEDICAL SERVICE DATE	BILLItmServiceDtm	The date of the service rendered, which may be different from the encounter data-time, conducted off-site. ASTM E 1633 PARA 4.2.4
14001.G001.03.	MEDICAL SERVICE COMMENT	BILLItmCommentText	The notation associated with this Service Code. ASTM E 1633 PARA 4.2.6
14001.G001.04.	MEDICAL SERVICE CHARGE VALUE	BILLItmChargeValue	The monetary value associated with the Service Code. ASTM E 1633 PARA 4.2.5
14001.G003.	WORKMANS COMP CLAIM FILING STATUS	BILLSvcsWrkCmpFilStatCode	The code for the status of any claim filed for Workman's Compensation at either the state or federal level associated with this visit/encounter. ASTM E 1633 PARA 4.2.6
14001.G006.	WORKMANS COMP CLAIM NO.	BILLSvcsWrkCmpClaimId	The identifier string for a claim submitted under workman's compensation. ASTM E 1633 PARA 4.2.6

APPENDIX

(Nonmandatory Information)

X1. MEDICAL DENTAL RECORD OF CARE STRUCTURE

TABLE X1.1 EHR Vocabulary Content Master List

Electronic Health Record Summary List of Content
= DOD/CHCS Registration data element
+ = Uniform Discharge Dataset
& = Uniform Ambulatory Minimum Dataset
M = Master Patient Index
% = VA Data Dictionary
$ = VA March AFB Data Dictionary Additions
* (post) = FMF reqd elements

I. Demographic/Administrative

01001.	%+&M#Patient Name *
01002.	Previous Name - Previously Registered Name
01005.	Parental Marital Status
01007.	Adoption status
01010.	% Alias - Individual Alternate Name (M)
01010.1.	Usage
01010.2.	Start date
01010.3.	End date
01015.	&M+Unique Personal Identifier/Facility Unit Number - Individual Identifier (M)
01015.1.	Organization
01015.2.	Type
01015.3.	Start date
01015.4.	End date
01015.5.	Status
01025.	MArchive data (M)
01027.	Record Holding Location ID (M)→Facility Data File
01027.1.	Date of earliest held entry
01027.2.	Date of latest held entry
01030.	%MLocation of paper chart (chartbase)
01032.	%&M+#Date-time of Birth *
01033.	%Birthplace
01035.	Multiple Birth Market - Number of Children in the birth
01037.	Birth order
01040.	%&M+#Sex *
01042.	%+#Race *
01045.	Ethnic Group(M)
01047.	%#Religion *
01050.	Military Service/Veteran Status
01052.	%Marital Status
01055.	Citizenship Status
01057.	Patient's Language
01058.	Enabling Interpreter Reqd
01060.	Education level
01062.	%Current work Status
01065.	%Occupation (M)
01065.1.	Occupation Status Code
01065.2.	Date completed occupation
01065.3.	Std Industrial Code
01067.	Current Vocational Status
01070.	Previous occupations
01070.1.	Date completed occupation
01075.	Patient current workplace - Present employer name
01077.	Work Address
01080.	%#Work Phone
01085.	Usual living arrangement
01087.	No. persons in household
01090.	Family member's name (M)
01090.02.	SSAN
01090.03.	Relationship
01090.05.	Male parent name
01090.07.	Female parent maiden (birth) name - Female parent name
01090.11.	Sex
01090.13.	Date of birth
01090.15.	Date of Death
01090.17.	Head of Household Status
01090.19.	Principal Caregiver Status
01090.21.	Location
01090.23.	Occupation
01090.25.	Major Diagnosis/Cause of Death (M)
01090.27.	Inherited Gene ID (M)
01090.27.01.	Expression
01090.27.02.	Extent
01095.	%&+Patient. Home Address
01096.	Patient Previous Address (M)
01096.1.	Previous address begin date
01096.2.	Previous address end date
01097.	Patient County/Census tract
01099.	Code for foreign residence
01100.	%&+Patient Home Phone
01105.	Patient Temporary Address
01108.	Patient Temporary Address Phone
01110.	%Emergency Contact name
01112.	%Emergency Contact relationship
01115.	%Emergency Contact Addr.
01117.	%Emergency Contact phone
01119.	Emergency Contact Business phone
01120.	Patient Legal Guardian Name
01125.	Patient Legal Guardian Address
01130.	Patient Guardian Status
01135.	%#Next of Kin (NOK) Name
01137.	%#NOK Relationship
01140.	%#NOK Address
01142.	%#NOK H. Phone
01145.	NOK B. Phone
01150.	Handedness Code
01155.	Color Eyes
01160.	Color Hair
01165.	Blood Type
01170.	%Height for identification
01175.	Build for identification
01180.	%Weight for identification *
01185.	%Patient Record-Activity Status
01190.	Confidentiality Protection
01195.	Date Record Initiated or Updated(M)
01195.02.	Person initiating/updating
01197.	Record review date
01200.	Registration Informant
01205.	Registration Comment
01210.	Date Record transferred to Storage
01220.	Date-time of Death
01225.	Place of Death
01227.	Autopsy (Y/N)
01230.	Recorder of death
01235.	Date recorded
01240.	Death Certif. no.
01245.	State recorded
01250.	Cause of Death (M)
01255.	Mortuary preference/internment
01260.	Bereavement assessment
01262.	Clergyman Name
01265.	Clergyman Address
01267.	Clergyman phone

II. Legal Agreements

02001.	Admit agreements/Consent to care
02005.	Patients rights Acknowledgement
02010.	Authority for Autopsy
02015.	Body release to Morgue

TABLE X1.1 *Continued*

02020.	Consent for video tape/observation
02025.	Consent to Research participation
02030.	Directive to Physician
02040.	Organ Donor Consent
02045.	Court-ordered care
02050.	Living Will Designee
02052.	Durable Power of Attorney status
2053.	Durable Power of Attorney for health care status
2054.	Durable Power of Attorney for health care name
2055..	Durable Power of Attorney for health care address
2056.	Durable Power of Attorney for health care address
2057.	Durable Power of Attorney for health care phone
02055.	Power of Attorney Name
02057.	Power of Attorney Address
02060.	Power of Attorney Phone
IIA. Release of Information Record	
02100.	Record action date (M)
02100.02.	Type of action
02100.04.	Type of information
02100.06.	Person releasing
02100.08.	Released to
02100.10.	Purpose of release
02100.12.	Person Authorizing
III. Financial	
03001.	Workman Comp Claim Date (M)
03001.1.	Workman Comp Claim ID
03005.	Insurance Claim Date (M)
03005.02.	Claim ID
03010.	Payer (M)
03010.02.	Payer type/class
03010.04.	Patient Insurance Group no.
03010.06.	Insurance Subscriber ID
03010.08.	Payment Sponsor
03010.10.	Address of Sponsor
03010.12.	Payer Priority
03010.15.	(MEDICARE NO.)
03017.	Medicare to yr
03020.	Medicare A eff date
03022.	Medicare B eff date
03030.	Billing Account no.
IV. Providers	
04001.	Provider/Practitioner name (M)
04001.01.	Provider Group/Organization title
04001.03.	Provider Address
04001.05.	Provider Taxonomic Category
04001.07.	Provider ID# (M)
04001.07.01.	ID Agency
04001.10.	Practitioner Name (M)→PROVIDER/PRACTITIONER NAME
04001.12.	Practitioner SSAN
04001.15.	Practitioner number ID - Practitioner National Provider ID (NPI)
04001.20.	Practitioner Profession - Practitioner profession/ occupation/specialty (M)
04001.25.	Practitioner Office Address
04001.30.	Practitioner Office Phone
04001.31.	Practitioner FAX Phone
04001.32.	Practitioner E-mail Address
04001.35.	Practitioner License Number - Practitioner License Category (M)
04001.35.01.	Practitioner Licensing State
04001.35.02.	Practitioner License Code
04001.35.03.	Practitioner License Number
04001.35.04.	Practitioner License Effective Date
04001.35.05.	Practitioner License Expiration Date
04001.35.06.	Practitioner License Termination Date
04001.40.	Practitioner Licensing State - Practitioner Certification Category (M)
04001.40.01.	Certification Number
04001.40.02.	Certification Effective date
04001.40.03.	Certification Expiration date
04001.40.04.	Certification Termination Date
04001.40.05.	Certification Code

TABLE X1.1 *Continued*

04001.40.06.	Certification Board
04001.45.	Practitioner Current role for this patient (M)
04001.45.01.	Date role began
04001.45.02.	Date role ended
04001.50.	Practitioner Location (M)
04001.50.01.	Date Location Effective
04001.50.02.	Date Location Terminated
04001.50.03.	Location Code
04001.60.	Practitioner Signature - Practitioner Electronic Signature
V. Problem List - Health Condition List	
05001.	Problem ID (M)
05001.01.	Problem Statement
05001.02.	Problem Indication
05001.03.	Problem Date of Onset
05001.05.	Problem Cause
05001.07.	Problem Date Recorded
05001.09.	Problem Diagnosis
05001.10.	Problem Date Diagnosed
05001.12.	Problem Provider Assigning Diagnosis→PRACTITIONER SEGMENT
05001.13.	Problem Facility Where Diagnosed
05001.15.	Problem Date Resolved
05001.17.	Problem Responsible Practitioner→PRACTITIONER SEGMENT
05001.20.	Problem - Status (active, suspended, nactive, resolved,alert) (M)
05001.20.01.	Problem Date of Status
05001.22.	Problem - Subjective (text)
05001.25.	Problem - Objective (text)
05001.30.	Problem - Body System (M)→BODY SYSTEM TERM
05001.30.01.	Problem - Review text
05001.32.	Problem - Encounter date-times (M)→ENCOUNTER SEGMENT
05001.32.01.	Problem - Monitoring variable/service (M)
05001.32.01.01.	Problem - Value
05001.35.	Problem - Assessment (text)
05001.40.	Problem - Plan (text)
05001.45.	Problem - Health Condition Order ID (M)→ORDERS SEGMENT
VI. Immunizations	
06001.	Type of procedure(vaccine,test or Toxoid name, including blood type) (M) *
06001.01.	Immunization Date (M)
06001.01.01.	Dose - Immunization Dose number in series
06001.01.02.	Batch - Immunization Batch
06001.01.03.	Immunization Manufacturer
06001.01.04.	Immunization Expiration date
06001.01.05.	Lot No. - Immunization Lot no
06001.01.10.	No of Units - Immunization No of Units
06001.01.11.	Immunization Injection site
06001.01.12.	Administering Treatment Facility - Immunization Administering Treatment Facility
06001.01.15.	Reaction/Result - Immunization Reaction/Result
06001.01.17.	Severity - Immunization Severity
06001.01.20.	Immunization Remarks
06001.01.25.	Provider - Immunization Administering Practitioner-ID→PRACTITIONER SEGMENT
VII. Record of Exposure to Environmental Stressors	
07001.	Hazard type (M)→STRESSOR FILE
07001.01.	Total Lifetime Exposure - Hazard Total Lifetime Exposure
07001.03.	Unit of Exposure - Hazard Unit of Exposure
07001.05.	Hazard Exposure begin date-time (M)
07001.05.1.	Termination date - Hazard Exposure Termination Date
07001.05.02.	Employer - Hazard Employer→EMPLOYER SUBSEGMENT OF MED HIST
07001.05.03.	Work Center - Hazard Setting of Exposure
07001.05.05.	Work Activity - Hazard Route of Exposure
07001.05.07.	Interval Dose - Hazard Interval Dose
07001.05.09.	Plant Process - Hazard Plant Process Code
07001.05.11.	Plant Location - Hazard Plant Location Code
07001.05.13.	Work Performed - Name of Hazard Work Performed

TABLE X1.1 *Continued*

07001.05.15.	Protection Practice Used - Hazard Personal Protection Used (M)
07001.07.	Hazard Test Date (M)
07001.07.01.	Nature and Form of Measured Agent - Hazard Nature and Form of Measured Agent
07001.07.02.	Hazard Unit of Hazard Sample collected
07001.07.03.	Collection Time - Hazard Sample Collection Time
07001.07.05.	Collection Device - Hazard Sample Collection Device
07001.07.07.	Sample Method - Hazard Test Sample method
07001.07.09.	Measurement Method - Hazard Type of Determination
07001.07.11.	Peak Value - Hazard Peak Measurement Value
07001.07.13.	Measurement Unit - Hazard Peak Measurement Unit
VIII. Health History	
	Prenatal
08001.	No. prev pregnancies
08003.	No. completed deliveries
08005.	Est date of beginning of pregnancy (M)
08005.01.	Prenatal/perinatal history
08005.03.	Estimated/Actual Date of Delivery
08005.05.	Date first saw pre-natal practitioner
08005.07.	Type of prenatal practitioner seen
08005.09.	Birthing plan
08005.11.	Length of Gestation (Wks)
08005.13.	Gynecologic Abnormalities
08005.15.	Birth method
08005.17.	Delivery complications
08005.19.	No. of fetuses in pregnancy
	Perinatal
08010.	Patient newborn birth weight
08013.	Patient newborn birth length
08017.	Estimate of patient fetal maturity at birth
08020.	Patient newborn abnormalities
08023.	Onset of respiration
08027.	1 min Apgar
08030.	5 min Apgar
08033.	Newborn Head circumference (cm)
08037.	Newborn Chest circumference (cm)
	Individual
08050.	Family History (text)
08052.	Child History (text)
08054.	Adult History (text)
08055.	Patient Reported Health History - Health Education History
08056.	Sexual/Reproductive History (text)
08058.	Date of last missed menstrual period
08060.	Age at menarche
08062.	Current Menstrual Status
08064.	Birth Control Method
08070.	Job Hire date (M)
08070.01.	Employer
08070.03.	Full/Part-time
08070.05.	Job Status(primary,secondary)
08070.07.	Job title
08070.09.	Job code
08070.11.	Job classification
08070.13.	Employee no.
08070.14.	Occupational Category
08070.15.	Job Process/activity
08070.16.	Job Std Industrial Category
08070.17.	Termination date
08070.19.	Comments
08070.20.	Work Location
08070.21.	Work activity (M)
08070.23.	Protective equipment (M)
08070.25.	Stressors exposed to (M)
8075.	Date of history
8076.	Purpose
08075.3.	History site/location
08075.5.	Source of history

TABLE X1.1 *Continued*

08075.7.	Source of history data name
08075.9.	State of present health
08075.10.	State of oral hygiene
08075.11.	Social history
08075.13.	Current Habits - smoking, alcohol, etc.
08075.15.	Current occupation
08075.17.	History of present illness since last visit
08080.	Operation date (M)
08080.01.	Name
08083.	Past medications(M)
08085.	Trauma History (text)
08088.	Drug Sensitivities/Allergies (text)
08090.	General Comments Date (M)
08090.1.	Text
08095.	Health History Question Response (M)
08095.01.	Date (M)
08095.01.01.	Comment
IX Examination	
09001.	Exam Date (M)
09001.01.	Purpose
09001.02.	Risk Factors (M)
09001.03.	Treatment Facility
09001.04.	Examiner's name→PRACTITIONER SEGMENT
09001.05.	History of Present Illness/Status of Present Health - Source of History data:name
09001.11.	Initial impression
09001.12.	Review of Systems(text)
09001.13.	Exam Finding (M)
09001.13.01.	Finding value
09001.13.02.	Finding Units
09001.13.03.	Finding Interpretation Code
09001.13.04.	Comment on Finding
09001.14.	Exam Procedure
09001.15.	Comments on Exam
09001.17.	Functional Independence Measure Total
09001.19.	FIM Element name (M)
09001.19.1.	FIM Element value
09001.21.	Summary of Defects/Diagnosis
09001.23.	Recommendations
09001.25.	Assessment of nutritional status
09001.26.	Patient Generated Functional Health Status
09001.30.	Tooth (M)
09001.30.01.	Tooth Status
09001.30.03.	Comment
09001.30.05.	Surface (M)
09001.30.05.1.	Level of Decay
09001.30.05.2.	Restorative Material
09001.30.05.3.	Periodontal Tissue Status
09001.30.06.	Sensitivity
09001.30.07.	Mobility
09001.30.08.	Periodontal Lingual Pocket Depth
09001.30.09.	Periodontal Buccal Pocket Depth
09001.30.10.	Implant Type
09001.30.11.	Implant material
09001.30.13.	Planned Procedure
09001.30.13.1.	Scheduled Date
09001.40.	Prosthesis (M)
09001.40.01.	Prosthesis Type
09001.40.03.	Prosthesis Abutment(M)
09001.40.05.	Date of Temporary Prosthesis
09001.40.07.	Date of Permanent Prosthesis
09001.40.09.	Installing Practitioner
09001.40.11.	Opposing Arch Status
09001.40.13.	Occusal Surface Material
09001.40.15.	Patient Satisfaction Code
X. Orders/Treatment Plans	
10001.	Order ID # (M)
	Patient /Subject
10001.001.	Encounter date-time/ID (M)→ENCOUNTER SEGMENT
10001.002.	Patient Residential Status
	Type/Addressee
10001.009.	Order Date-time

TABLE X1.1 *Continued*

10001.010.	Order type (ancillary service ID)→ANCILLARY SERVICE LEXICON
10001.013.	Order Action
10001.015.	Priority of order
10001.017.	Pre-admit order
10001.019.	Origin of order(verbal/phone etc)
10001.021.	Parent order- if secondary
10001.022.	Is order multiple sequential
10001.023.	Related Orders (M)→ORDER SEGMENT
	Orderer/Originator
10001.025.	User→Personnel list
10001.027.	User SIG
10001.029.	Nurse
10001.031.	Nurse SIG
10001.033.	Ordering Practitioner→PRACTITIONER SEGMENT
10001.034.	Ordering Practitioner Role
10001.035.	Ordering Practitioner SIG
10001.037.	Countersigning Practitioner→PRACTITIONER SEGMENT
10001.039.	Countersigning Practitioner SIG
10001.041.	Nurse SIG needed
10001.043.	Time Nurse SIG needed
10001.045.	Practitioner SIG needed
10001.047.	Time Practitioner SIG needed
10001.049.	Countersignature needed
10001.051.	Time countersignature needed
10001.052.	Order D/Ced by→PRACTITIONER SEGMENT
10001.053.	D/C SIG
10001.055.	Date-time Order confirmed by addressee
	Control
10001.057.	Active/pending flag
10001.059.	Active status
10001.061.	Pending status
10001.063.	Inactive status flag
10001.065.	Start today/tomorrow
10001.067.	Order timing-every or every nth day
10001.069.	Duration order in effect
10001.071.	Last status change
10001.073.	Reactivation date
10001.075.	Ask from ancillary
10001.077.	Time of ancillary activ.
10001.079.	Time to expect stat result
10001.081.	Telephone result flag
10001.083.	Telephone result to other than location ordered from
10001.085.	Request scheduled
10001.087.	Requested appt time
10001.089.	Appointment type
10001.091.	Transport needed
10001.093.	Appointment status
10001.095.	Assigned appt time
	Text
10001.097.	Health Service Ordered→HEALTH SERVICE TERM
10001.098.	Treatment Plan Involved→TREATMENT PLAN
10001.099.	Principal Problem - Health Condition Affected→PROBLEM LIST SEGMENT
10001.100.	Full text of order
10001.102.	Location of Service
10001.104.	Daily frequency
10001.106.	Order modified?
10001.108.	Reason for Modification
10001.110.	Non-modifiable flag
10001.112.	Instructions for the order (Including D/C Criteria)
10001.114.	Secondary orders→Order ID #(ORDER/TREATMENT PLAN SEGMENT)
10001.116.	Message (M)
	Results
10001.120.	Result acknowledgement date-time (M)
10001.120.01.	Shift care plan date
10001.120.02.	Result return flag
10001.120.03.	Result status
10001.120.04.	Result date-time
10001.120.05.	Acknowledged by→PRACTITIONER SEGMENT
10001.120.06.	Comment
10001.123.	Date-time order completed
	Quality Assurance
10001.140.	Q-A Warning date-time (M)

TABLE X1.1 *Continued*

10001.140.1.	Text of warning
10001.140.2.	Disposition of warning
10001.140.3.	Over-ridden by practitioner→PRACTITIONER SEGMENT
10001.140.4.	Authorized by practitioner→PRACTITIONER SEGMENT
10001.140.5.	Justification
10001.160.	Q-A Review date (M)
10001.160.01.	Event Type
10001.170.	Care/treatment plans
10001.170.1.	Care plan goals
10001.170.2.	Date-time care plan started
10001.170.3.	(AUTHORIZED BY PRACTITIONER)
	Treatment plan
10010.	Treatment Plan ID (M)
10010.01.	Treatment Plan Name
10010.02.	Description
10010.03.	Primary Practitioner ID
10010.04.	Team Members(M)
10010.04.01.	Team Member Role
10010.05.	Total Outcome measure
10010.06.	Plan Comments
10010.07.	Plan Cost
10010.08.	Treatment Plan Status
10010.09.	Patient Management Needs (M)
10010.10.	Phase Identifier (M)
10010.10.01.	Problem - Health Condition (M)
10010.10.02.	Clinical Order ID
10010.10.03.	Clinical Order Status
10010.10.04.	Target Date
10010.10.05.	Outcome Goal
10010.10.06.	Outcome Measure
10010.10.07.	Phase Cost
10010.10.09.	Treatment Regimen ID
10010.10.10.	Appointment Date-time (M)
10010.10.10.01.	Location
10010.10.10.02.	Practitioner→PRACTITIONER SEGMENT
10010.10.10.03.	Procedure (M)
10010.10.10.03.01.	Problem - Health Condition ID
10010.10.10.04.	Appointment Cost
10010.11.	Date-time Started
10010.12.	Date-time expected completion
10010.13.	Date-time actual completion
10010.14.	Authentication
XI. Diagnostic Tests	
11001.	Test type identification (M)
11001.01.	Specimen collection date-time
11001.01.03.	Encounter ID→ENCOUNTER SEGMENT
11001.01.06.	Treatment facility ordering
11001.01.09.	Performing facility
11001.01.12.	Attending Specialist ID
11001.01.15.	Clinical Order ID→ORDERS SEGMENT
11001.01.18.	Requesting Provider ID
11001.01.21.	Problem/Diagnosis→PROBLEM LIST SEGMENT
11001.01.24.	Source of specimen
11001.01.27.	Specimen ID
11001.01.30.	Collector of Specimen
11001.01.33.	Data-time specimen received
11001.01.36.	Condition of specimen
11001.01.39.	Specimen volume
11001.01.42.	Specimen Information/Preparations reqd
11001.01.45.	Date-time result returned to requester
11001.01.48.	Report dictation date-time
11001.01.51.	Report Text
11001.01.54.	Report Destination (M)
11001.01.57.	Numeric Measurement/Analyte name (M)
11001.01.57.01.	Value
11001.01.57.02.	Units
11001.01.57.03.	Interpretation
11001.01.57.04.	Abnormality Basis
11001.01.60.	Microbiologic organism (M)
11001.01.60.01.	Attribute pattern
11001.01.60.02.	Resistance pattern
11001.01.60.03.	Specific Comments
11001.01.63.	General Comments
11001.01.66.	Performer/Technologist

TABLE X1.1 *Continued*

11001.01.69.	Diagnosis Terms/Codes (M)
XII. Medications	
12001.	Date-time of Prescription/Medication Order (M)
12001.03.	Encounter ID→ENCOUNTER SEGMENT
12001.06.	Medication name→MEDICATION PROPERTIES
12001.09.	Clinical Order ID→ORDERS SEGMENT
12001.12.	Prescription no.
12001.15.	Prescriber ID→PRACTITIONER SEGMENT
12001.18.	Prescriber location
12001.21.	Problem ID→PROBLEM LIST SEGMENT
12001.24.	Reason for administration
12001.27.	Status of Prescription/Order
12001.30.	Dose
12001.33.	Unit
12001.36.	Form
12001.39.	Route
12001.40.	Site of Administration
12001.42.	Interval/Frequency
12001.45.	Instructions for use (SIG)
12001.48.	Total Dose prescribed/refill
12001.51.	No. refills authorized
12001.54.	Date of refill (M)
12001.54.01.	Refill dispensing facility
12001.57.	Medication Start date-time
12001.60.	Medication Stop date-time
12001.63.	Medication Notes
XIII. Scheduled Visits	
13001.	% Date-time (M)
13001.01.	Treatment Facility
13001.03.	% Clinic Name
13001.04.	Previous Encounter datetime→ENCOUNTER SEGMENT
13001.05.	Provider ID→PRACTITIONER SEGMENT
13001.07.	% Purpose/Chief Complaint
13001.09.	Remarks
XIV. Encounter/Episodes	
14001.	%+#Date-time of encounter/admission (M) *
14001.A001.	# Name of Treatment Facility *
14001.A002.	Type of Encounter (Patient Type)
14001.A003.	Encounter ID
14001.A004.	Confidentiality Status
A. Administrative/Diagnostic Summary	
14001.A010.	Encounter Status Amb Care
14001.A013.	& Treatment facility type
14001.A016.	&Reason for visit
14001.A020.	Encounter Patient Arrival Condition
14001.A021.	Mode of Arrival (M)
14001.A022.	Origin Facility ID
14001.A023.	& Chief Complaint
14001.A027.	Datetime of injury Trauma
14001.A030.	Encounter Nature of Injury/Illness (M)
14001.A033.	Encounter Mode of Injury/illness (M) [See also F003/F036]
14001.A034.	Product of Injury
14001.A036.	Location where injured/ill
14001.A040.	Inj. on Job Status
14001.A043.	Injury circumstances
14001.A044.	Protective equipment used (M)
14001.A046.	Injury Severity Score
14001.A050.	Date of Phys Exam→PHYS EXAM SEGMENT
14001.A053.	Problems (M)→PROBLEM LIST SEGMENT
14001.A056.	Current Living arrangements
14001.A060.	Comments
14001.A063.	% Admission type InP Care
14001.A066.	Admission authority
14001.A070.	%# Location Admitted/Referred/Sent from
14001.A073.	Referring Practitioner name→PROVIDER SEGMENT
14001.A083.	Private Practitioner name→PROVIDER SEGMENT
14001.A093.	Private Practitioner Notified?
14001.A096.	Hospitalization type

TABLE X1.1 *Continued*

14001.A100.	Patient Board from
14001.A103.	# Hospital Register no
14001.A106.	$ Age
14001.A110.	#Admitting Service
14001.A113.	Referring Service
14001.A116.	% Consulting Service (M)
14001.A116.01.	Date assigned
14001.A116.02.	Consult text
14001.A116.03.	Consult Practitioner →PRACTITIONER SEGMENT
14001.A120.	Provider/Attending physician (M)→PRACTITIONER SEGMENT
14001.A123.	% E-R/Admitting physician→PRACTITIONER SEGMENT
14001.A126.	%Ward
14001.A130.	%Location admitted to
14001.A133.	Type of Accommodation
14001.A136.	Current Nursing Unit Assigned
14001.A140.	%Floor Assigned
14001.A143.	Warnings
14001.A146.	Records received
14001.A150.	Personal Valuables left
14001.A151.	Location of Personal Valuables
14001.A153.	Impairment group
14001.A154.	Admit RANCHO
14001.A156.	Total Admit/Encounter FIM
14001.A160.	Admit FIM Element name (M)
14001.A160.01.	FIM Element value
14001.A163.	%Transfer date (M)
14001.A163.01.	% Transfer type
14001.A613.02.	% Transferred to Nursing unit
14001.A163.06.	Clinical service
14001.A163.10.	% Room/Bed
14001.A163.13.	% Transfer diagnosis
14001.A163.16.	Provider→PRACTITIONER SEGMENT
14001.A170.	Diagnosis/Problem (M)→DIAGNOSIS TERM
14001.A170.01.	Type(Admitting,pri,sec)
14001.A170.02.	Status(Major,Minor,R/O,Inact,S/P)
14001.A170.03.	Narrative
14001.A173.	Indicated surgery
14001.A174.	Discharge Rancho
14001.A180.0	Discharge FIM element name
14001.A180.1.	FIM element value
14001.A183	Current Status SI/VSI
14001.A186.	#Date-time of Clinical Status (M)
14001.A186.1.	# Status (SI/VSI)
14001.A186.2.	# Prognosis
14001.A195.	Custodian of Personal Effects
14001.A200.	NOK notified by whom
14001.A203.	#Date-time NOK notified
14001.A206.	Police hold
14001.A210.	Date-time Notif. police
14001.A213.	Date-time Notif med. examiner
14001.A216.	Date-time Chaplain notified
14001.A220.	Ministrations administered *
14001.A223.	+Source of payment (M)
14001.A223.01.	Type(primary, secondary,other)
14001.A223.02.	Carrier
14001.A223.03.	Mechanism
B. Trauma Care/History of Present Illness	
	Pre-hospital care
14001.B0001.	Date-time Call Received
14001.B0002.	Date-time Run Dispatched
14001.B0003.	Date-time Run Arrived at the Scene
14001.B00031.	Order Agency Arrived at Scene
14001.B0004.	Date-time Patient Left the Scene
14001.B0005.	Date-time Patient arrived at the Treatment Facility
14001.B0006.	Date-time Returned to Service
14001.B00061.	Date-time Trauma Surgeon arrived
14001.B00062.	Date-time Neurosurgeon arrived
14001.B001.	Pre-hospital Equipment/procedures (M)
14001.B001.01	Procedure date-time
14001.B003.	Narrative
14001.B004.	Severity in Dispatch
14001.B005.	Severity at Arrival on Scene
14001.B0051.	Run Number
14001.B006.	Agency ID
14001.B0065.	Vehicle ID

TABLE X1.1 *Continued*

14001.B007.	Dispatch Number
14001.B0071.	Trauma Number
14001.B010.	Scene Description
14001.B011.	Crew ID (M)
14001.B011.1.	Skill level
14001.B011.2.	Procedure Performed (M)
14001.B012.	Observation (M)→Consciousness
14001.B012.01.	Observation value Pre-hospital condition
	Pupils
	Neck veins
	Skin
14001.B012.02.	Observation date-time
	Emergency Room Care
14001.B015.	Time of Triage *
14001.B016.	Condition at Triage
14001.B020.	ER Disposition
14001.B021.	ER Disposition Date-time
14001.B024.	ER comment
14001.B027	ER Patient discharge instructions
14001.B030.	Burns/location (M)
14001.B030.01.	%Body
14001.B030.02.	Degree
14001.B033.	Fracture/location (M)
14001.B033.01.	Treatment
14001.B036.	Tourniquet date-time (M)
14001.B036.01.	Location
14001.B039.	ER Procedures (M)
14001.B039.01	Procedure Date-time
14001.B042.	Tube Type (M)
14001.B045.	Oxygen time started
14001.B048.	Oxygen %
14001.B051.	Xray-location (M)
14001.B051.01.	View (M)
14001.B054.	Blood Run No.
	Critical Care
14001.B057.	Blood product Unit ID (M)
14001.B057.01.	Donor ID
14001.B057.02.	Product Type
14001.B057.03.	Time started
14001.B057.04.	Time completed
14001.B057.05	Blood type
14001.B057.06	Crossmatch Data
14001.B057.07.	Volume
14001.B057.08.	Cumulative volume
14001.B057.09.	Comments
14001.B060.	Current Diet-type
14001.B063.	IV Solution/Fluid type (M)
14001.B063.1.	Time started
14001.B063.2.	Time last tubing change
14001.B063.3.	Location
14001.B063.4.	Gauge needle
14001.B063.5.	Time (M)
14001.B063.5.1.	Volume
14001.B063.5.2.	Bottle ID
14001.B063.6.	Infusion rate
14001.B063.7.	Total volume (mL)
14001.B063.9.	IV care
14001.B069.	Fluid intake source (M)
14001.B069.1	Total vol
14001.B069.2.	Time (M)
14001.B069.21.	IN/OUT
14001.B069.22.	Volume
14001.B070.	Vital Signs/Tracking Variable Date-time (M) *
14001.B070.01.	Tracking variable name (M)→Body Wt
14001.B070.01.1.	Value Temp
14001.B070.01.2.	Unit Pulse rate
	Airway clear/obs
	Resp rate
	Resp effort
	BP Posture
	Systolic BP
	Diastolic BP
	Mean BP
	Wedge P

TABLE X1.1 *Continued*

	Level of consciousness
	Verbal Resp
	Pupil size
	Pupil reaction
	Eye opening
	Motor resp
	Capillary refill
	GCS
	Trauma score
14001.B072.	Medication ID (M)→MEDICATION/PRESCRIPTION SEGMENT
14001.B072.01.	Date-time administered (M)
14001.B072.01.01.	Person administering
14001.B072.01.02.	Clinical Order ID→ORDERS SEGMENT
14001.B072.01.03	Time next dose
14001.B072.01.04.	Comments
14001.B072.02.	No. doses administered
14001.B075.	Lab test ID (M)→DIAGNOSTIC TEST SEGMENT
14001.B075.01.	Date-time (M)
14001.B075.01.01.	Specimen ID
14001.B078.	Intensive Care date-time (M)
14001.B078.01.	Summary text
14001.B078.02.	Practitioner ID→PRACTITIONER SEGMENT
14001.B081.	Order ID (M)→ORDERS SEGMENT
14001.B084.	Problem ID (M)→PROBLEM LIST SEGMENT
C. Clin Course/Nursing Care Plan	
14001.C001.	Primary Nurse/Therapist
14001.C003.	Nursing Diagnosis
14001.C006.	Long Term Care goals
14001.C009.	Nursing Short Term Goals
14001.C012.	Nursing Short Term Goal Deadline
14001.C015.	Nursing Requirement Category (Acuity)
14001.C018.	Patient Profile Attribute (M)
14001.C018.1.	Attribute Value
14001.C021.	Community Services Used
14001.C024.	Nursing Approach
14001.C027.	Clinical Course Measurement→Wt This Admission
14001.C027.1.	Clinical Course Measurement Value Ideal Body Weight
14001.C027.2.	Clinical Course Measurement Unit Ht This Admission
	Body Surface Area
	Skinfold Thickness
	Arm Circumference
	Wrist Circumference
	Skinfold as % of std
	Muscle as % of std
14001.C055.	Diet chg date-time (M)
14001.C055.1.	Type
14001.C058.	Hygiene (oral & general) (M)
14001.C060.	Vital sign frequency
14001.C062.	Allergies (M)
14001.C065.	Discharge objective ID (M)
14001.C065.01.	Objective text
14001.C065.03.	Functional Goal (M)
14001.C065.06.	Objective Date
14001.C065.09.	Actions
14001.C068.	Anticipated Disposition
14001.C070.	Est Discharge date
14001.C073.	Aftercare Plan
14001.C075.	Nursing Problem no (M)→PROBLEM SEGMENT
14001.C078.	General Review of Systems (M)
14001.C078.01.	Text
14001.C080.	Date-time sched. tests/consults/Surgery (M)
14001.C080.01.	Type
14001.C080.02.	Place to be conducted
14001.C080.03.	Date-time ordered
14001.C080.04.	Date-time completed
14001.C085.	Treatment types (M)
14001.C085.01.	Date-time ordered
14001.C085.02.	Date-time scheduled
14001.C085.03.	Date-time completed
14001.C090.	Patient Instruction date (M)
14001.C090.01.	Type
14001.C090.02.	Text
14001.C090.03.	Verification

TABLE X1.1 *Continued*

C. Clinical Course Nursing Notes	
14001.C100	Nursing Notes date-time
14001.C100.1	Text
14001.C100.2	Nurse ID
C. Clin Course/Rehabilitative Care Section	
14001.C110.	Rehabilitative Service ordered (M)
14001.C110.01.	Unit
14001.C110.02.	Description
C. Clin Course Dietetics/Nutritional Care Plan	
14001.C120.	Food intake date-time (M)
14001.C120.01.	Food ID (M)
14001.C120.01.01.	Amt
14001.C120.01.02.	Unit
14001.C120.02.	Nutrient (M)
14001.C120.02.01.	Level/day
14001.C120.02.02.	Unit
14001.C122.	Nutritional Status
14001.C123.	Response to Diet
14001.C125.	Diet type
14001.C128.	Diet/Nutrition Comments
C. Clin course/Progress Notes	
14001.C130.	Progress Notes date-time (M)
14001.C130.01.	Text
14001.C130.03.	Physician - Authenticator ID→PRACTITIONER SEGMENT
D. Therapies	
14001.D001.	Therapy type (M)
14001.D001.01.	Date-time commenced (M)
14001.D001.01.01.	Date-time completed
14001.D001.01.03.	Problem ID→PROBLEM LIST SEGMENT
14001.D001.01.05.	Clinical Order ID→ORDERS SEGMENT
14001.D001.01.07.	Location delivered
14001.D001.01.11.	Beginning patient condition
14001.D001.01.13.	Ending patient condition
14001.D001.01.15.	Status of Therapy
14001.D001.01.17.	Specific preparation for therapy
14001.D001.01.18.	Type of Product/Service (M)
14001.D001.01.18.01.	Amount of product
14001.D001.01.19.	Durable Equipment Used
14001.D001.01.21.	Progress Assessment
14001.D001.01.22.	Results of Treatment
14001.D001.01.23.	Clinical Evaluation of results
14001.D001.01.25.	Performing Practitioner name→PRACTITIONER SEGMENT
14001.D001.01.27.	Recommendations
E. Operative Procedures	
14001.E001.	Operation Patient arrival Date-time (M) *
14001.E001.02.	Isolation
14001.E001.04.	Category
14001.E001.06.	Case type
14001.E001.08.	Case no.
14001.E001.10.	O.R. no.
14001.E001.12.	Ordering station no.
14001.E001.14.	Donor type (M)
14001.E001.14.01.	Name
14001.E001.17.	Operative Positions
14001.E001.20.	Positional aids
14001.E001.22.	Was evidence removed from patient?
14001.E001.24.	Patient seen by anesthesiol. date-time
14001.E001.26.	Anesthesia start time
14001.E001.28.	Anesthesia ready time
14001.E001.30.	Operation start time
14001.E001.32.	Operation complete time
14001.E001.34.	Anesthesia end time
14001.E001.36.	Patient depart time
14001.E001.38.	Physical status
14001.E001.40.	Operation description *
14001.E001.42.	Pre-operative Comment

TABLE X1.1 *Continued*

14001.E001.44.	Operation Measurement (M)→Vitals(T,P,R,BP,Wt)
14001.E001.44.1.	Measurement value HGB
	RBC
	HCT
	Lab-Test-ID (M)
	Result
	UA Nor/Abn
14001.E001.46.	Check Record
14001.E001.48.	Check Patient
14001.E001.50.	OR Nurse ID
14001.E001.51.	Resp status (text)
14001.E001.52.	Circulatory status (text)
14001.E001.53.	CNS status (text)
14001.E001.54.	Prev. anesth. complications (text) *
14001.E001.55.	Premedication name (M) *
14001.E001.55.01	Dose
14001.E001.55.02	Route
14001.E001.55.03.	Time
14001.E001.55.04.	Effect
14001.E001.56.	Preoperat. diagnosis *
14001.E001.57.	Postoperative diagnosis *
14001.E001.58.	Surgeon (M) *→PRACTITIONER SEGMENT
14001.E001.58.01.	Role (Primary,Assistant,Resident)
14001.E001.60.	Anesthesiologist→PRACTITIONER SEGMENT
14001.E001.61.	Anesthesiology Resident→PRACTITIONER SEGMENT
14001.E001.62.	Anesthetist→PRACTITIONER SEGMENT
14001.E001.63.	O.R. Staff position (M)
14001.E001.63.01.	Name
14001.E001.64.	Induction (Sat/Unsat) *
14001.E001.65.	Induction comments
14001.E001.66.	Endotracheal tube type *
14001.E001.67.	E.T. tube comments
14001.E001.68.	Time blood ordered for O.R. (M)
14001.E001.68.01.	No units
14001.E001.69.	Operative procedure (M) *
14001.E001.69.001.	Procedure Datetime
14001.E001.70	Specimen ID (M)
14001.E001.70.01.	Site
14001.E001.70.02.	Processing
14001.E001.70.03	Findings
14001.E001.71.	Anesthetic agent (M) *
14001.E001.71.01.	Dose
14001.E001.71.02.	Unit
14001.E001.71.03.	Anesthetic technique
14001.E001.72.	Post anesthesia assessment
14001.E001.73.	Event-time (M)
14001.E001.73.01	Event code
14001.E001.73.02	Value
14001.E001.73.03	Fluid type *
14001.E001.73.04	Fluid volume *
14001.E001.73.05.	Position
14001.E001.73.06.	Positional aid
14001.E001.74.	Blood loss tital (No units used)
14001.E001.75.	Extra supplies name (M)
14001.E001.75.01.	Amount
14001.E001.76.	K-Thermia
14001.E001.78.	Cautery site
14001.E001.80.	Casts applied
14001.E001.82.	Implants/Drains/Ligatures (M)
14001.E001.84.	Tourniquet time (M)
14001.E001.84.01.	Tourniquet location
14001.E001.85.	Urinary catheter place time
14001.E001.86.	Needle counts(M)
14001.E001.87.	Instrument counts(M)
14001.E001.88.	Sponge counts(M)
14001.E001.90.	Recovery (text)
14001.E001.91.	Complications
14001.E001.92.	Post operative Remarks *
14001.E001.93.	Operative Report dictation date
14001.E001.94.	Operative Report dictated by→PRACTITIONER SEGMENT
14001.E001.95.	Operative report text
F. Disposition	
14001.F001	(PRINCIPAL OPERATIVE PROCEDURE)

TABLE X1.1 *Continued*

14001.F003	(PRIMARY SURGEON)
14001.F006.	Assistant Surgeon - Surgeon (M)→PRACTITIONER SEGMENT
14001.F013.	+ Operative procedure (M) *→PROCEDURE TERM/CODE
14001.F013.01.	Date
14001.F013.02.	Surgeon→PRACTITIONER SEGMENT
14001.F013.03.	Type (pri,sec,etc)
14001.F014.	Encounter Procedure (M)→PROCEDURE TERM/CODE
14001.F016	Primary diagnosis code
14001.F020	Primary diagnosis narrative
14001.F023	Principal diagnosis code
14001.F026	Principal diagnosis narrative
14001.F030.	+ Patient Diagnosis (M)→DIAGNOSIS TERM/CODE
14001.F030.01.	Type (pri,sec,etc)
14001.F030.03.	Narrative
14001.F036.	Encounter Etiology (M)→ETIOLOGY TERM/CODE)
14001.F040.	+#Disposition Datetime *
14001.F043.	Physician Authorizing Discharge→PRACTITIONER SEGMENT
14001.F046.	#%Disposition type
14001.F050.	& Disposition
14001.F053.	Departure Date/time
14001.F056.	Followup action
14001.F060.	Follow-up status

TABLE X1.1 *Continued*

14001.F063.	Follow-up target date
14001.F066.	Condition on discharge/departure
14001.F070.	Reason for discharge
14001.F073.	Person Accompanying patient from facility
14001.F076.	Disposition transport type
14001.F080.	#$ Disposition Destination
14001.F083.	Patient Disposition Instructions
14001.F086.	Patient signature
14001.F090.	Discharge Summary Dictation date
14001.F093.	Length of acute care stay
14001.F096.	Length of Rehabilitation services
14001.F100.	Total ICU days
14001.F101.	% Dischg Summary date
14001.F105.	Narrative Discharge Summary
14001.F110.	# Physician ID→PRACTITIONER SEGMENT
G. Charges	
14001.G001.	Charge Item Name (M)
14001.G001.01.	Medical Service Code
14001.G001.02.	Medical Service date
14001.G001.03.	Medical Service Comment
14001.G001.04.	Charge Value
14001.G003.	Workman's Comp Claim filing status
14001.G006.	Workman's Comp Claim ID

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