# HL7 FHIR Glossary

### A

**ABAC** (Attribute-Based Access Control), also known as policy-based access control, defines an access control paradigm whereby access rights are granted to users through the use of policies which combine attributes together. (See RBAC)

**Absolute URL** is an URL specifies the location of a target stored on a local or networked computer. An absolute URL contains all the information necessary to locate a resource and typically uses the following format: scheme://server/path/resource (See Relative URL)

**Account** is a financial tool for tracking value accrued for a particular purpose. In the healthcare field, used to track charges for a patient, cost centers. A Billing Account is an accumulator of financial and administrative information for the main purpose of supporting claims and reimbursement. In context of FHIR, Account is a resource that acts as a central record against which charges, payments, and adjustments are applied.  
  
**Accounts Receivable** is the way of processing patient and insurance company payments.

**Adjudicator** is someone who presides, judges, and arbitrates during a formal dispute or competition. Adjudicator has numerous purposes, including preliminary legal judgments, to determine applicant eligibility, or to assess contenders' performance in competitions.

**Adjudication** is aprocess by which an an insurer of a claim, preauthorization or predetermination to determine under the insurance plan what if any benefits are or would be payable.

**Advance Directives** is aliving Will written by the patient to the physician in case of incapacitation to give further instructions.

**Agency** is apermanent or semi-permanent organization responsible for the provision of emergency medical services within a given jurisdictional area  
  
**Alerts** are brief online notices that are issued to users as they complete a cycle through the menu system.  Alerts are designed to provide interactive notification of pending computing activities, such as the need to reorder supplies or review a patient's clinical test results.

**Animal** is a subtype of Living Subject representing any animal-of-interest. An instance of an animal is uniquely identifiable and, as a result, able to be certified, licensed, or otherwise credentialed by an appropriate Credentialing Authority for the purpose of involvement in one or more healthcare processes.   
  
**ANSI -** American National Standards Institute (www.ansi.org)

**API** is a collection of well-defined interfaces for interoperating between two applications.

**Application** isall submissions that are grouped together for regulatory purposes.  
  
**Application** is a software program or set of related programs that provide some useful healthcare capability or functionality.  
  
**Application Role** is an abstraction that expresses a portion of the messaging behavior of an information system.

**Appointment** is a booking of a healthcare event among patient(s), practitioner(s), related person(s) and/or device(s) for a specific date/time in the future or past.

**Argonaut Project** is a private sector initiative to advance industry adoption of modern, open interoperability standards. The purpose of the Argonaut Project is to rapidly develop a first-generation FHIR-based API and Core Data Services specification to enable expanded information sharing for electronic health records and other health information technology based on Internet standards and architectural patterns and styles.

**Artifact** is any deliverable resulting from the discovery, analysis, and design activities leading to the creation of message specifications.  
  
**ASCII (**American Standard Code for Information Interchange), a common 8-bit character encoding set.  
  
**ATNA** (Audit Trail and Node Authentication) is an IHE Integration Profile to establishe security measures which, together with the Security Policy and Procedures, provide patient information confidentiality, data integrity and user accountability. (See IHE)

**Attachment** is a collection of information objects sent to a party to support their understanding or processing of another resource such as a claim.

**Attachment, Solicited** – See Solicited Attachment

**Attachment, Unsolicited** – See Unsolicited Attachment

**Attachment** is an additional data content defined in other formats. FHIR specification defines an Attachment data type for including content inline encoded in Base64 or referencing to content found elsewhere.

**Authentication** is a process of recognizing a user’s identity. It is the mechanism of associating an incoming request with a set of identifying credentials. (See OAuth)

**Authorization** is a security mechanism to determine access levels or user/client privileges related to resources. This is the process of granting or denying access to resources which allows the user access to various resources based on the user's identity.

### B

**BackboneElement** is the base definition for complex elements defined as part of a resource definition - that is, elements that have children that are defined in the resource.

**Base64** is a group of binary-to-text encoding schemes that represent binary data in an ASCII string format designed to carry data stored in binary formats across channels that only reliably support text content. (See ASCII)

**Batch** is a FHIR RESTful API interaction sent to the FHIR Server to perform a set of actions on resources in a single HTTP request/response. In case of Batch interaction actions are performed independently. (See Transaction)

**Battery** is abattery is a set of closely related observations. The components of a battery should have a generally accepted clinical, functional or logical relationship to one another.

**Beneficiary** is a party whose health care expenses may be covered by a policy issued by an Insurer.

**Benefit Amount** is an amount payable under an insurance policy for a given expense incurred by a patient.

**Benefit Coverage** is adescription of the benefits provided by an individual's benefit plan.  
  
**Billing** is the way ofprocessing patient and insurance company bills.

**Binding** is the way to link a coded element to a definition of the set of possible codes that the element may contain. The set of possible codes is either a formal reference to a ValueSet resource or a general reference to some web content that defines a set of codes.

**Binding Strength** is a property of Binding that defines the degree of flexibility associated with the use of the codes in the value set. (See Binding)

**Bundle** a container for a collection of resources. (See Contained Resource)

### C

**Canonical URL** is a stable and preferred logical identifier for the resource that always identifies the resource across all contexts of use. This typically applies to terminology, conformance or knowledge resources.

**Canonical Reference** is the references to resources by their canonical URL (See Canonical URL)

**Capabilities** is a FHIR RESTful API interaction to retrieve the information about a server's capabilities - which portions of the FHIR specification it supports. (See CapabilityStatement)

**CapabilityStatement** is a resource that describes a statement of the kinds of resources and operations provided and/or consumed by an application.

**Cardinality** is the property of a data element, the lower and upper bounds on how many times this element is allowed to appear in the resource.

**Care plan** is an ordered assembly of expected or planned activities including observations, services, appointments, procedures and setting of goals, usually organized in phases or sessions, which have the objective of organizing and managing health care activity. Care plans are often focused upon on or more health care problems, with the expectation of one or more favourable outcomes. Care plans may include orders sets as actionable elements, usually supporting a single session or phase. In context of FHIR, CarePlan is a resource to describe the intention of how one or more practitioners intend to deliver care for a particular patient, group or community for a period of time, possibly limited to care for a specific condition or set of conditions.

**Carrier** is anorganization that establishes insurance policies, determines eligibility and benefits under those insurance policies, and underwrites payments for products and/or services provided to a beneficiary (person or organization).

**CDA** (Clinical Document Architecture) is a document markup standard that specifies the structure and semantics of "clinical documents" for the purpose of exchange between healthcare providers and patients.

**CDS** (Clinical Decision Support) is a term to describe a variety of tools to enhance decision-making in the clinical workflow to provide clinicians, staff, patients or other individuals with knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care.

**CDS** **Hook** is a specification that describes a "hook"-based pattern for invoking decision support from within a clinician's workflow. (See CDS)

**Chief Complaint** is theprimary reason a patient requires attention; typically the only complaint treated.  
  
**Circular Reference** is the type of resource reference when the reference points to another resource of the same type used when the resources describe a complex hierarchy or resources may add additional content to another resource by deriving from it e.g. extending type declarations.

**Claim** is used by providers and payors, insurers, to exchange the financial information and supporting clinical information, regarding the provision of health care services with payors and for reporting to regulatory bodies and firms which provide data analytics. In context of FHIR, Claim is a resource to request a provider issued list of professional services and products which have been provided, or are to be provided, to a patient which is sent to an insurer for reimbursement.

**Client** is aperson receiving the immunizations or having recommendations made. (See Patient)  
  
**Clinical Decision Support** is theability to use data to discover/justify the proper activities planned for a patient.

**Clinical Reasoning** is the ability to represent and encode clinical knowledge in a very broad sense so that it can be integrated into clinical systems. This encoding may be as simple as controlling whether or not a particular section of an order set appears based on the conditions that a patient has, or it may be as complex as representing the care pathway for a patient with multiple conditions.

**Clinical Statement** is anexpression of a discrete item of clinical, clinically-related or public health information that is recorded because of its relevance to the care of patients (persons, animals and other entities).

**code** is a type of FHIR data types where a resource instance element represents the code only. The system is implicit- it is defined as part of the definition of the element, and not carried in the instance.

**Coding** is a type of FHIR data types where a resource instance element has a code and a system element that identifies where the definition of the code comes from.

**Coding** is a process where medical records produced by the health care provider are translated into a code that identifies each diagnoses and procedure utilized in treating the patient.

**CodeableConcept** - A type of FHIR data types that represents a concept by plain text and/or one or more Coding elements.

**Complex data type** is usually a structure with components that represent other data types or structures required to build a sophisticated concept. (See Primitive data type)

**Condition** is a term to define patient's medical, problem, diagnosis, situation, issue, other event, or clinical concept that has risen to a level of concern.

**Conditional Reference** is a search URI that describes how to find the correct reference when the logical id of a resource is not known. Conditional Reference can be used only in Transaction. (See Transaction)

**Code System** define concepts and give them meaning through formal definitions, and assign codes that represent the concepts. Example: LOINC, ICD, UCUM, HL7 code lists

**Coding System** – see Code System.  
  
**Conformance Verb** is a setverb form for indicating a requirement. HL7 FHIR specification uses the conformance verbs SHALL, SHOULD, and MAY as defined in RFC 2119. The correct verb for indicating an absolute requirement is “SHALL”. Universally accepted standardization terminology does not recognize "MUST". Use "SHALL" to indicate a mandatory aspect or an aspect on which there is no option. The correct verb form for indicating a recommendation is "SHOULD." The correct verb form for an option is "MAY." The negatives are SHALL NOT, SHOULD NOT.

**Conditional Update** is the FHIR RESTful API interaction that allows a client to update an existing resource based on some identification criteria, rather than by logical id.

**Contained Resource** is a resource within another resource when the content referred to in the resource reference does not have an independent existence apart from the resource that contains it. (See Bundle)

**COB (Coordination of Benefit)** are the rules, usually regionally defined, which govern the order of application of multiple Insurance coverages or Self-Pay to a given suite of health care expenses.

**CORS** (Cross-Origin Resource Sharing) is a specification that enables open access across domain-boundaries and introduces a standard mechanism for implementing cross-domain requests.

**Coupling** is an interaction between systems or between properties of a system.

**Coupling, Loosely** – See Loosely Coupled

**Coupling, Tightly** – See Tightly Coupled

**Coverage** is a financial instrument which may be used to reimburse or pay for health care products and services. Includes both insurance and self-payment. In context of FHIR, Coverage is a resource intended to provide the high-level identifiers and descriptors of an insurance plan, typically the information which would appear on an insurance card, which may be used to pay, in part or in whole, for the provision of health care products and services.

**Coverage Extension** is aform of Authorization where the Provider requests payment approval for extension of a Person's benefit coverage. Coverage Extensions require manual or human intervention and decision by the Adjudicator.

**CQF** (Clinical Quality Framework) is an initiative focused on the specifications used to represent knowledge artifacts within the Clinical Quality Measurement and Clinical Decision Support communities.

**CQL** (Clinical Quality Language) is a high-level, domain-specific language focused on clinical quality and targeted at measure and decision support artifact authors.

**CRUD** (Create, Read, Update, Delete) is an acronym to define a set of basic operations to be done in a data repository. CRUD operations map to HTTP action verbs and can be a part of RESTful API. (See RESTful)

**CSS** (Cascading Style Sheets) is HTML styling rules to describe how HTML elements are to be displayed on screen, paper, or in other media.

### D

**Data Type** is the structural format of the data carried in a resource element. FHIR provides a special set of data types that includes primitive, general-purpose, metadata and special-purpose data types.

**Data Type, Primitive** – See Primitive data type

**Data Type, Complex** – See Complex data type

**Deductible** is thedollar amount for which the plan beneficiary must pay before any remaining eligible expenses are reimbursed under the plan. This is usually calculated on an annual basis.

**Default Slice** is a special slice that allows a profile to describe a set of specific slices, and then make a set of rules that apply to all of the remaining content that is not in one of the defined slices. (See Slicing)

**Default value** is thevalue for an element that is to be used by a FHIR resource instance receiver if no value is given.  
  
**De-identification** is the process used to prevent someone's personal identity from being revealed.

**Demographic Information** relates to the patient's name, address, date of birth, etc.

**Dependent** is a person who receives their coverage via a policy which is own or subscribed to by another. Typically, these include spouses, partners and minor children but may also include students, parents and disabled persons.

**Deprecated** is an indication that systems should continue to support the artifact/feature/concept, but are discouraged from making use of it.

**Diagnosis** is an identification of disease or condition by a practitioner by means of a Persons symptoms, diagnostic tests, etc.  
  
**Diagnosis Code** is acoding scheme (e.g., ICD-10CA/CCI) used to indicate diagnosis.  
  
**DICOM** (Digital Imaging and Communications in Medicine) is a standard focusing on storing, managing and sharing of medical images as well as integration of imaging devices in the medical context.  
  
**DICOM, SR -** DICOM Structured Reporting  
  
**Digital Signature:** A legally useful electronic equivalent to facsimile signature, including signatures generated for a variety of entities including human and machine sources. Based on digital certificates attributable to well-known healthcare oriented certificate authorities; incorporating cryptographically secure techniques for signature generation and validation

**Differential Statement** – is a StructureDefinitions that describe only the differences relative to the structure definition it constrains (which is most often the base FHIR resource or data type). (See StructureDefinition)

**DIN (**Drug Identification Number) assigned to a specific medication by Health Canada.  
  
**Discharge Summary** is a concise summary of hospitalization to the Primary Care Provider (PCP) who will follow the patient in clinic after his/her stay or the admitting doctor at next hospitalization.

**Discriminator Slice** is a field or set of fields that act as a "discriminator" used to provide a better way to distinguish slices. (See Slicing)

**Document** is a coherent set of information that is a statement of healthcare information, including clinical observations and services. A document is an immutable set of resources with a fixed presentation that is authored and/or attested by humans, organizations and devices. FHIR resources can be used to build documents that represent a composition.

**DomainResource** is an abstract resource that extends a base Resource. The DomainResource is never created directly, instead, one of its descendant resources is created. (See Resource)

**DSTU** (Draft Standard for Trial Use) is an ANSI standards development process stage.

### E

**e-Claim** is aninvoice for health related good(s) and/or service(s) transmitted for payment in an electronic format. (See Claim)  
  
**Electronic Health Record (EHR)** An electronic representation of an individual's health record, either in a single data repository or in separate linked repositories.  
  
**Eligibility (for benefits coverage)** is when a Person meets the criteria for benefits coverage. Benefits coverage is determined by the Insurance Carrier and may be delegated to an Adjudicator.

**EMS (**Emergency Medical Services) is a branch of emergency services dedicated to providing out-of-hospital acute medical care and/or transport to definitive care, to patients with illnesses and injuries which the patient, or the medical practitioner, believes constitutes a medical emergency.  
  
**eMPI** Enterprise Master Patient Index

**Encounter** is aninteraction between a patient and healthcare participant(s) for the purpose of providing patient service(s) or assessing the health status of a patient. For example, outpatient visit to multiple departments, home health support (including physical therapy), inpatient hospital stay, emergency room visit, field visit (e.g., traffic accident), office visit, occupational therapy, telephone call.  
  
**Enrolment** is aprocess of registering with an insurer to obtain benefits coverage.  
  
**Episode of Care** is a collection of one or more encounters that address the same target of care and that include a relationship to the same Episode of Illness or Condition. (See Encounter)

**ETag** is a HTTP response header served as an identifier for a specific version of a resource. (See HTTP)

**Extensible Markup Language** (XML) – is a markup language with the aim to represent data in a hierarchical structure in a text file. Based on SGML (Standard Generalized Markup Language), it consists of a set of rules for defining semantic tags used to mark up the content of documents.

**Extension** is child elements to represent additional information that is not part of the basic definition of the resource. A resource can be profiled to specify where particular extensions are required or expected. (See Profile)

### F

**Fair Use** - in the United States, trademark law includes a fair use defense, sometimes called "trademark fair use" to distinguish it from the better-known fair use doctrine in copyright. Fair use of trademarks is more limited than that which exists in the context of copyright.

**Findings** is a term to define the results of an investigation (e.g., an observation, a condition discovered)

**Five Ws** (Who What When Where Why) is a common pattern for all resources that deals with attribution.

**FHIR** (Fast Healthcare Interoperability Resources) is a next generation standards framework created by HL7. FHIR combines the best features of HL7's v2 , HL7v3 and CDA product lines while leveraging the latest web standards and applying a tight focus on implementability.

**FHIRPath** is a path based navigation and extraction language. Operations are expressed in terms of the logical content of hierarchical data models, and support traversal, selection and filtering of data. (See XPath)

**Forge** (Furore Forge) is the official Windows desktop application for authoring FHIR profiles and managing conformance resources (See Profiles).

### G

**GraphQL** is a query language for APIs and a runtime for fulfilling those queries with your existing data. The GraphQL interface may be implemented by any server, and may be provided as a facade service in front of a conformant RESTful API.(See http://graphql.org)

### H

**HAPI** (HL7 application programming interface) is an open-source, object-oriented HL7 2.x parser for Java.

**HAPI-FHIR** is an open-source, object-oriented implementation of the FHIR specification in Java.

**Health Service** is a health care service such as diagnosis, treatment or intervention performed for a person.  
  
**Healthcare Claim** is an invoice for health related good(s) and/or service(s) transmitted for payment. (See Invoice)  
  
**HIPAA** (Health Insurance Portability and Accountability Act of 1996) is United States legislation that provides data privacy and security provisions for safeguarding medical information.

**History** is the FHIR RESTful API interaction to retrieve the history of either a particular resource, all resources of a given type, or all resources supported by the system.

**HITSP** Health Information Technology Standards Panel (www.hitsp.org)  
  
**HL7 (**Health Level Seven) is an ANSI-recognized standards development organization in the healthcare interoperability space (www.hl7.org)

**HL7v2** is one of the most widely implemented standards for healthcare information in the world. The Version 2 Messaging Standard was first released in October 1987 as an Application Protocol for Electronic Data Exchange in Healthcare Environments.

**HL7v3** represents a new approach to clinical information exchange based on a model driven methodology that produces messages and electronic documents expressed in XML syntax. The V3 specification is built around subject domains that provide storyboard descriptions, trigger events, interaction designs, domain object models derived from the RIM, hierarchical message descriptors (HMDs) and a prose description of each element.

**HQMF** (Health Quality Measure Format) is a standard for representing a health quality measure as an electronic document. A quality measure is a quantitative tool that provides an indication of an individual or organization’s performance in relation to a specified process or outcome via the measurement of an action, process or outcome of clinical care.

**HTML** (Hypertext Markup Language) is a specification of the W3C that provides markup of documents for display in a web browser.

**HTTP** (Hypertext Transfer Protocol) is a state-less protocol for the exchange of data in the application layer of the OSI-model. It is used in the World Wide Web (WWW) for representation of web-sites, but also for machine-to-machine communication.

**HTTPS** (HTTP over SSL or HTTP Secure) is an extension of the HTTP used for secure communication over a computer network and is widely used on the Internet. HTTPS uses Secure Socket Layer (SSL) or Transport Layer Security (TLS) as a sublayer under regular HTTP application layering. (See HTTP, SSL, TLS)

### I

**ICD** (International Classification of Diseases): is a global standard for health information and published by the WHO. (https://icd.who.int)

**IHE** (Integrating the Healthcare Enterprise): is an organisation of volunteers, who cooperate to integrate IT systems in the healthcare enterprise.

**Implicit Rule** is a reference to a custom agreement that describes how the resource is being used that was followed when the resource was constructed, where the implementation guide must be known and understood in order to safely processing the content.

**Immunization** is a treatment given to a patient to confer immunity for a specific disease. In context of FHIR, Immunization is a resource to describe the event of a patient being administered a vaccine or a record of an immunization as reported by a patient, a clinician or another party, and intended to cover the recording of current and historical administration of vaccines to patients across all healthcare disciplines in all care settings and all regions.

**Immunization History** is acollection of immunizations received by the client/patient.  
  
**Immunization Status** describes a person's progress towards meeting the goals for a particular vaccine.  
  
**Insurer** is a public or private insurer which will adjudicate Claims for health care goods and services to determine if the there is any benefit payable, amount due, under the policy which covers the patient. (See Claim)

**Interaction** is an operation on resources provided by FHIR RESTful API where individual resource instances are managed in collections by their type. FHIR defined resource instance level, type level and whole system level interactions.

**Interoperability -** in HL7 context, is the ability of two or more computer systems to exchange information.

**Invariants** are constrain attached to an element in a resource. Many constraints are defined in the base specification. Additional constraints may be defined in profiles that apply to resources.

**Invoice** is arequest initiated by a Provider, on behalf of a plan member (insured), for payment for services rendered and/or goods provided. Stated another way, an Invoice is a request by a plan member to a plan administrator (Adjudicator) for payment of a benefit covered by the benefit plan.

**Is-Modifier** is a boolean property that is assigned when a resource element is defined, either as part of the base resource contents in this specification, or when profiles declare extensions.

**Is-Summary** is a boolean property that indicates how the element behaves when a client can request the server to return only a portion of the resources by using the parameter. (See Summary Searches)

### J

**JSON** (JavaScript Object Notation) is a compact, text-based data format for the platform independent exchange of data between IT systems.

**Jurisdiction** is the authority to license agencies and professionals to provide EMS services in a geographic area.

**JWT** (JSON Web Token) is a compact URL-safe means of representing claims to be transferred between two parties.

### L

**Label , Security** is a concept attached to a resource or bundle that provides specific security metadata about the information it is fixed to. Security Labels enable more data to flow as they enable policy fragments to accompany the resource data.

**Laboratory Order** is arequest for clinical laboratory services for a specified patient.

**Literal Reference** is a reference to a location at which the other resource is found. The reference may be a relative reference, in which case it is relative to the service base URL, or an absolute URL that resolves to the location where the resource is found. (See URL)

**Living Subject** is anabstract term to define Person or Animal.  
  
**Location** is a details and position information for a physical place where services are provided and resources and participants may be stored, found, contained, or accommodated.

**Logical Reference** is an identifier to the entity from the target element that cannot be converted to a literal reference to directly reference an actual resource. (See Literal Reference)

**Logical Identifier** is an id element of the resource assigned by the server responsible for storing it. The logical id is unique within the space of all resources of the same type on the same server.

**LOINC** (Logical Observation Identifiers Names and Codes): is an international Code System for the identification of laboratory and clinical studies and tests. (https://loinc.org)

**Loosely Coupled** in context of application roles do not assume that common information about the subject classes participating in a message is available to system components outside of the specific message. (See Tightly Coupled)

### M

**Markup** is a term forcomputer-processable annotations within a document. Markup encodes a description of a document’s storage layout and logical structure.   
  
**Master Patient Index** is a computer-based system that facilitates the tracking of patient information by assigning each patient an identifying series of characters.

**Maturity Level** - See Maturity Model

**Maturity Model** (FHIR Maturity Model) relates to the degree of formality and stability of a resource and can be used to judge how advanced and therefore stable an artifact is.

**MAY** is theconformance verb MAY is used to indicate a possibility. (See Conformance Verb)

**Media** is a photo, video, or audio recording acquired or used in healthcare. The actual content may be inline or provided by direct reference.

**Medication** is a drug used to diagnose, cure, treat, or prevent disease. In context of FHIR, Medication is a resource used for the identification and definition of a medication for the purposes of prescribing, dispensing, and administering a medication as well as for making statements about medication use.

**Medication Administration** is an description of the event of a patient consuming or otherwise being administered a medication. This may be as simple as swallowing a tablet or it may be a long running infusion. Related resources tie this event to the authorizing prescription, and the specific encounter between patient and health care practitioner.

**Medication Dispense** is an indication that a medication product is to be or has been dispensed for a named person/patient. This includes a description of the medication product (supply) provided and the instructions for administering the medication. The medication dispense is the result of a pharmacy system responding to a medication order.

**Medication Statement** is a record of a medication that is being consumed by a patient that may indicate that the patient may be taking the medication now or has taken the medication in the past or will be taking the medication in the future.

**Message** is a package of information communicated from one application to another. FHIR Resources can be used in a traditional messaging context, much like HL7v2.  
  
**Meta** is an element "meta" of type "Meta" which is a set of metadata that provides technical and workflow context to the resource.

**Methodology** is a set of methods or rules followed in a particular discipline.   
  
**MIME (**Multipurpose Internet Mail Extensions) is an Internet standard that helps extend the limited capabilities of email by allowing insertion of images, sounds and text in a message. Defined by RFC 2046.

**MLLP** (Minimum Lower Layer Protocol) is a minimalistic Open Systems Interconnection (OSI)-session layer framing protocol as well as a minimalistic reliable transport protocol typically used to transmit HL7v2 messages.

**Modifier Extension** is a child element to represent additional information that is not part of the basic definition of the resource that modifies the meaning of the element that contains it. (See Extension)

**Must-Support** is a resource element label meaning that implementations that produce or consume resources shall provide "support" for the element in some meaningful way.

### N

**Namespace -** A qualifier added to an XML tag to ensure uniqueness among XML elements. (See XML)

**Narrative** is the human-readable content or summary of the resource that an applications can display to users without having to fully and correctly process the data in the resource. The Narrative is defined in XHTML format. (See XHTML)

**NullFlavor** is the code system defined as a part of HL7 version 3. It contains values for a data element which indicates the absence and reason for absence of data.

### O

**OAuth** (Open Authorization) is an open standard for token-based authentication and authorization on the Internet.

**Object Identifier** isa scheme to provide globally unique identifiers. (See OID)

**OID** (ISO Object Identifier): A globally unique identifier created using the rules established in the ISO 9834 series of standards

**Observation** is a measurement or simple assertion made about a patient, device or other subject. Observations are a central element in healthcare, used to support diagnosis, monitor progress, determine baselines and patterns and even capture demographic characteristics. Most observations are simple name/value pair assertions with some metadata, but some observations group other observations together logically, or even are multi-component observations.

**OpenID** is an open standard and decentralized authentication protocol that allows users to be authenticated by co-operating sites using a third-party service, eliminating the need for webmasters to provide their own ad hoc login systems, and allowing users to log into multiple unrelated websites without having to have a separate identity and password for each. (See Authentication)

**OperationOutcome** is a FHIR resource to represent a collection of error, warning or information messages that result from a system action and provided as a direct system response or component of one.

**Organization** is aformally or informally recognized grouping of people or organizations formed for the purpose of achieving some form of collective action. Includes companies, institutions, corporations, departments, community groups, healthcare practice groups, payer/insurer. An Organization is recognized as an entity from the perspective of one or more authorities and/or other organizations external to the Organization-of-Interest including legal, social, etc.

**Outcome** is anobservation on the subject made following a specific intervention or collection of interventions on the subject or related subjects.

### P

**Paging** is the way to break up a large amount of results of a search or history interaction by sending continuation links to the client when returning a Bundle. This mechanism is adapted from RFC 5005.

**PATCH** is a FHIR RESTful API interaction used as an alternative to updating an entire resource, which can be useful when a client is seeking to minimize its bandwidth utilization, or in scenarios where a client has only partial access or support for a resource.

**Patient** is a Person, in the role of patient for a particular situation. For example, this person is a patient at the hospital, but this person is not a patient at this time. (See also Person)  
  
**Patient Education -** The teaching or training of patients concerning their own health needs.

**Patient Encounter** - See Encounter.

**Payee** is aperson or organization that receives payment for Goods provided and/or Services rendered or receives payment on behalf of one or more Providers. As well, a Payee may be a Person who has directly paid the Provider for the Goods provided and/or Services rendered and is being reimbursed by the Adjudicator.  
  
**Payer** is aperson or organization responsible for paying medical bills.  
  
**Payment Advice** is apayment details for adjudicated Invoices and non-Invoice adjustments which correspond to an actual payment either by cheque or electronic funds transfer.  
  
**Payment Reconciliation** is theprocess of comparing what has been paid versus what was expected to be paid.  
  
**Payor** is anorganization who is responsible for the payment.

**Person** is an individual person, who can assume multiple roles over time. For example, a person may be a patient for a period of time at a hospital or a provider on a different occasion.

**Person** is a subtype of Living Subject representing single human being who must also be uniquely identifiable through one or more legal documents (e.g. Driver's License, Birth Certificate, etc.)

**Practitioner** is a person who is engaged in the healthcare process and healthcare-related services as part of his/her formal responsibilities.

**Pre-Determination** is thesubmission of a 'mock' Healthcare Invoice to a Payor to determine the extent to which an Adjudicator will reimburse for the goods or services. A Provider may use this to compare alternate treatments to determine least cost alternative for the patient.  
  
**Prescription** is anorder from a recognized prescriber for a health care good or service.  
  
**Primitive data type** is a data type that defined as a single entity, and whose full semantic is contained in its definition.

**Problem List** is a series of brief statements that catalog a patient’s medical, nursing, dental, social, preventative and psychiatric events and issues that are relevant to that patient’s health care (e.g. signs, symptoms, and defined conditions).

**Procedure** in the context of a Health Care procedure is the details identifying the service or procedure that was actually provided to a Person such as the procedure code, duration of procedure, time procedure took place and Provider who performed the procedure.  
  
**Profile** isa set of constraints on a resource that define rules about which resource elements are or are not used, what additional elements are added that are not part of the base FHIR specification, what terminologies are used in particular elements. Profiles are represented as structure definitions.

**Profile, Resource** – see Resource Profile.

**Profile, Supported** – see Supported Profile

**Progress Note** is a textual description of the health care provider’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.

**Protocol** in the context of a Health Care is aset of medical instructions to be followed under a specified set of circumstances  
  
**Provider** is an individual who delivers a health service to a person or animal e.g., doctor, nurse, pharmacist, technician, etc.

**Provenance** is a name of FHIR resource that tracks information about the activity that created, revised, deleted, or signed a version of a resource, describing the entities and agents involved.

### Q

**QDM** (Quality Data Model) is an information model that defines relationships between patients and clinical concepts in a standardized format to enable electronic quality performance measurement. The model is the structure for electronically representing quality measure concepts for stakeholders involved in electronic quality measurement development and reporting.

**Query** isa primary mechanism for retrieving information from computer systems.

### R

**RBAC** (Role-based Access Control) is a policy-neutral access-control mechanism to restrict system access to authorized users defined around roles and privileges. (See ABAC)

**RDF** (Resource Description Framework) is a family of World Wide Web Consortium (W3C) specifications originally designed as a metadata data model. FHIR resources can be represented in the textual syntax for RDF called Turtle that allows an RDF graph to be completely written in a compact and natural text form, with abbreviations for common usage patterns and datatypes.

**Re-Adjudication (of an invoice)** is a process whereby a Provider can request a re-adjudication of an invoice that has been partially paid by a Payor.  
  
**Relative URL** specifies the location of a target stored on a local or networked computer and typically consists only of the path relative to the Service Base URL. (See Absolute URL)

**Resource** - a modular component FHIR solutions are built from. FHIR resources by themselves all specialize the base type Resource. Resources can be thought as a collection of information models that define the data elements, constraints and relationships for the “business objects” most relevant to healthcare. (See DomainResource)

**Resource Profile** - describe the general features that are supported by a system for each kind of resource. Typically, this is the superset of all the different use-cases implemented by the system. This is a resource-level perspective of a system's functionality. (See Profile)

**Resource Reference** is a general references between resources. (See Canonical Reference)

**Resource, Contained** – See Contained Resource

**REST** (Representational State Transfer) - is a paradigm for distributed systems especially for web services. REST defines principles on using communication protocols (mainly HTTP and HTTPS) in the application layer level of the OSI-model.

**RESTful** - Web Services or API (application program interface) that conform to the REST architectural style. (See REST)

**RFH** (Resources For Healthcare) is the initial draft of the FHIR standard.

**RIM** (Reference Information Model) is the HL7 version 3 information model from which all other information models (e.g., RMIMs) and messages are derived.

**RMIM** (Refined Message Information Model) is an information structure in HL7 version 3 that represents the requirements for a set of messages. A constrained subset of the Reference Information Model (RIM) which MAY contain additional classes that are cloned from RIM classes.

### S

**SAIF** (HL7 Service-Aware Interoperability Framework) is the framework to rationalize interoperability of standards, provide consistency between all artifacts, enable a standardized approach to Enterprise Architecture development and implementation, and a way to measure the consistency.

**Security Labels** is a concept attached to a resource or bundle that provides specific security metadata about the information it is fixed to. Security Labels enable more data to flow as they enable policy fragments to accompany the resource data.

**Scenario** is a statement of relevant events from the problem domain, defined as a sequence of interactions. The scenario provides one set of interactions that the modeling committee expects will typically occur in the domain. Usually, a sequence diagram is constructed to show a group of interactions for a single scenario.

**Schedule** is a container for slots of time that may be available for booking appointments. (See Appointment)

**Schema**

1. A diagrammatic presentation, a structured framework, or a plan.

2. A set of requirements that need to be met in order for a document or set of data to be a valid expression within the context of a particular grammar. For example, XML Schema is a specification of the structure of a document or set of data.

**Schematron** is a rule-based validation language for making assertions about the presence or absence of patterns in XML trees.

**SDO -** Standards Development Organization  
  
**Secondary Payor** is aPayor that is responsible for payment of a Healthcare Invoice if the Primary Payor does not pay.  
  
**Semantic** in the context of a technical specification, semantic refers to the meaning of something as distinct from its exchange representation. Syntax can change without affecting semantics.  
  
**Service** is a cohesive set of functions that maintain responsibility for both data and "state" for the scope of their responsibility. Services have a unity of function, such as Terminology Management, Identity Management working with other services in collaboration as part of an orchestrated workflow.

**SHALL** is theconformance verb SHALL is used to indicate a requirement. (See Conformance Verb)  
  
**SHOULD** is theconformance verb SHOULD is used to indicate a recommendation. (See Conformance Verb)

**Simplifier** is the FHIR platform for profiles and implementation guides, used by FHIR implementers around the world (simplifier.net)

**Slicing** is the way to constrain an element in StructureDefintion that may occur more than once (e.g. in a list), and then split the list into a series of sub-lists, each with different restrictions on the elements in the sub-list with associated additional meaning.

**Slicing, Discriminator** – See Discriminator Slice

**Slicing, Default** – see Default Slice

**SMART** (Substitutable Medical Applications, Reusable Technologies) is the way to standardize the processes on how EHR systems and their applications authenticate and integrate.

**SMART on FHIR** – See SMART.

**Snapshot Statement** – is a StructureDefinitions that carry a "snapshot" - a fully calculated form of the structure that is not dependent on any other structure. (See StructureDefinition)

**SNOMED CT** (Systematized Nomenclature of Medicine – Codes and Terms): is the most comprehensive, multilingual clinical healthcare terminology in the world and enables consistent representation of clinical content in EHRs. (http://www.snomed.org)

**SOA** (Service-Oriented Architecture) is a style of software design where services are provided to the other components by application components, through a communication protocol over a network.

**SOAP** (Simple Object Access Protocol) - is a network protocol for the exchange of data between IT systems and is defined by the World Wide Web Consortium (W3C). SOAP uses XML for the representation of the data transported and Internet-protocols of the transport- and application-layer level of the OSI-model, mainly by HTTP(s) and TCP.

**Solicited Attachment** is an attachment sent to provide supporting information in response to having received a request for additional information. (See Attachment)

**Specification** is a detailed description of the required characteristics of a product.   
  
**Specimen** is a sample obtained from a subject on which observations are performed. A specimen is a type of partitive role in which, the player is a material taken as a sample from a source scoping entity. For example, a specimen of venous blood taken from a patient for a laboratory investigation.  
  
**SSL** (Secure Sockets Layer) is a cryptographic protocol that provides end-to-end communications security over networks and was widely used for internet communications and online transactions. Replaced by an updated version called TLS. (See TLS)

**Statement, Differential** – See Differential Statement

**Statement, Snapshot** – See Snapshot Statement

**StructureDefinition** is a resource that makes rules about how other resource (or type) and its data elements are used in a particular context, including defining how extensions are used.

**STU** (Standard for Trial Use) is an ANSI standards development process stage.

**Stylesheet** is afile that describes how to display an XML document of a given type. (See CSS)  
  
**Summary Searches** is the way a client can request the FHIR server to return only a portion of the resources by using the parameter \_summary. The intent is to reduce the total processing load on server, client, and resources between them such as the network.

**Supported Profile** - describe the information handled/produced by the system on a per use case basis. (See Profile)

**Supply Order** is aquantity of manufactured material to be specified either by name, id, or optionally, the manufacturer.

### T

**Tag** is a used to associate additional operational information with the Resources, such as workflow management. (See Meta)

**Terminology** - A structured, human and machine-readable representation of clinical concepts required directly or indirectly to describe health conditions and healthcare activities and allow their subsequent retrieval or analysis.

**Tightly Coupled** in context of application roles assume that common information about the subject classes participating in a message is available to system components outside of the specific message. (See Loosely Coupled)

**TLS** (Transport Layer Security) is a cryptographic protocol that provides end-to-end communications security over networks and is widely used for internet communications and online transactions. (See SSL)

**TOGAF** is an Enterprise Architecture standard of The Open Group, is an Enterprise Architecture methodology and framework used to improve business efficiency.

**Transaction** is a FHIR RESTful API interaction sent to the FHIR Server to perform a set of actions on resources in a single HTTP request/response. In case of Transaction actions are performed as single atomic action where the entire set of resource changes succeed or fail as a single entity. (See Batch)

**Trigger Event** An [event](file:///D:\Enjoy\HL7\HL7v3%20Normative%20Edition%202015\CD1\Edition2015\help\glossary\glossary.html#gl-event) which, when recorded or recognized by an [application](file:///D:\Enjoy\HL7\HL7v3%20Normative%20Edition%202015\CD1\Edition2015\help\glossary\glossary.html#gl-application), causes another action to occur.

**Turtle** is the textual syntax for RDF that allows an RDF graph to be completely written in a compact and natural text form, with abbreviations for common usage patterns and datatypes. (See RDF)

### U

**UCUM** (Unified Code for Units of Measure) is a code system intended to include all units of measures being contemporarily used in international science, engineering, and business. The purpose is to facilitate unambiguous electronic communication of quantities together with their units.

**UML** (Unified Modelling Language) is a specification created to unify several well-known object-oriented modeling methodologies, including those of Booch, Rumbaugh, Jacobson, and others.

**Unsolicited Attachment** is an attachment sent to provide supporting information without first having received a request for additional information. (See Attachment)

**URI** (Uniform Resource Identifier Reference) is a compact case sensitive sequence of characters that identifies an abstract or physical resource defined by RFC 3986.

**URL** (Uniform Resource Locator) is the syntax and semantics of formalized information for location and access of resources via the Internet defined by RFC 1738.

**URL, Absolute** – See Absolute URL

**URL, Canonical** - See Canonical URL

**URL, Relative** - See Relative URL

**URN** (Uniform Resource Name) is a Uniform Resource Identifier (URI) that is assigned under the "urn" URI scheme and a particular URN namespace, with the intent that the URN will be a persistent, location-independent resource identifier defined by RFC 8141.

### V

**Vaccine** is a product that composes an immunization.  
  
**value[x]** represents the choice of Data Types. In the real instance of a resource the "value" part of the name is constant, and the "[x]" is replaced with the title-cased name of the type that is actually used. (See Data Types)

**Value Set** - specifies a set of codes defined by code systems that can be used in a specific context. Value Set can be a versioned excerpt of codes from one or multiple terminologies used to describe health conditions and healthcare activities. (See Code System)

**Version, FHIR** is the version of the FHIR specification. FHIR Servers may support multiple versions of FHIR.

**Version, Record** is a version of a resource supported by FHIR Server to allow to retrieve old instances of a resource. FHIR Servers do not have to support versioning, though they are strongly encouraged to do so.

**Version, Business** is a version of the content that goes through a formal publishing cycle. This is changed explicitly by a human, or by some automated process in accordance with applicable business rules. The version can be appended to the URL in a reference to allow a reference to a particular business version of the resource.

**Vital Signs** are physical signs or measurements that indicate an individual is alive, such as heart beat, breathing rate, temperature, and blood pressure.

**Vocabulary** is a set of valid values for a coded attribute or field.

**Vocabulary Domain** is a set of all concepts that can be taken as valid values in an instance of a coded attribute or field; a constraint applicable to code values.

### W

**WADO-RS** (Web Access to DICOM Objects by RESTful Services) is a specification that allows enables a user agent to retrieve DICOM Instances using HTTP (See DICOM)

**Well-formed document** is an XML documentwhich meets all of the well-formedness constraints in the XML Specification. (See XML)

**Withdrawn** is an indication that an artifact is documented for historical purposes, but no longer supported.

**Workflow** is asequence of activities by an individual that is required to complete a specific business process.

### X

**XDS** (Cross-Enterprise Document Sharing) - IHE Integration Profile that facilitates the registration, distribution and access across health enterprises of patient electronic health records. (See IHE)

**XHTML** is a reformulation of HTML 4 in XML 1.0 format defined by W3C organization in the “XHTML™ 1.0 The Extensible HyperText Markup Language” standard. (See HTML)

**XML** (Extensible Markup Language) - is a markup language with the aim to represent data in a hierarchical structure in a text file. Based on SGML (Standard Generalized Markup Language), it consists of a set of rules for defining semantic tags used to mark up the content of documents.  
  
**XPath** (XML Path Language) is a query language for selecting nodes from an XML document.

**XML Prolog** is an optional component added in the beginning of an XML document, typically <?xml version="1.0" encoding="UTF-8"?>. The XML Prolog is not a part of the XML document and does not have a closing tag.

**XSL** (Extensible Style Language) is a specification of the W3C specifies the presentation of a class of XML documents by describing how an instance of the class is transformed into an XML document that uses the formatting vocabulary.  
  
**XSLT** (XSL Transformation language) is a specification of the W3C for transforming XML documents into other XML documents.

### Z

**Zachman Framework** is an enterprise ontology and is a fundamental structure for Enterprise Architecture which provides a formal and structured way of viewing and defining an enterprise.