

HL7 EHR Work Group

Personal Health Record System Functional Model Release 1 Draft Standard for Trial Use July 2008

Glossary

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Scope:

- The EHR Work Group's PHR-System Functional Model Glossary only defines terms that are unique to the PHR System Functional Model.
- Terms in the EHR Work Group's PHR-System Functional Model Glossary will be submitted for inclusion in the HL7 Version 3.0 Edition Glossary.
- We assume that the creation of a PHR User Account is within the scope of the PHR-S FM.

The Manage Hierarchy

Within the PHR Work Group, there was an intentional effort to create language consistency in the conformance criteria. The "Manage Hierarchy" diagram below was used to create semantic harmony within the conformance criteria so that, for example, if the Personal Health Chapter has a conformance criteria using the term "nullify", that term had the same meaning as used in the Supportive Chapter's conformance criteria.

The levels in the hierarchy are granular and have a parent-child relationship. For example, the diagram below depicts that managing the "Capture" of information comes from an External Source or from an Internal Source. Similarly, under the "Maintain" section of the diagram, the term "Store" could invoke all five verbs listed below it (i.e., Save, Backup, Compact, Encrypt, or Archive). If the parent term is not used, then the respective verbs in the child will be cited individually in the criterion. If the term "Manage" is used, all of the applicable verbs included in the table are encompassed in that criterion. Authors are responsible for determining whether one or more of the subverbs are not appropriate for a given function and must write conformance criteria that constrain the use of the verb hierarchy according to the intent of the profile being created.

MANAGE							
Capture		Maintain				Render	
Input (External)	Create (Internal)	Store	Update	Restrict Access	Remove Access	Read (Internal)	Output (External)
Receive Accept Download Import	Enter Compute Record	Save Backup Compact Encrypt Archive	Edit Correct Amend Augment Annotate Comment Associate Tag	Hide Mask Filter	Obsolete Inactivate Destroy Nullify Purge	View Report Display Access Present	Send Upload Export Synchronize

The hierarchical principle above was applied during the development of the PHR-S FM. Additional terms used in the model are found in the model's Glossary. It is important to be consistent in the terminology used in the PHR-S FM conformance criteria so there is consistent interpretation of the conformance criteria's intent in defining the functionality.

Editor's note (*John Ritter 2007-10-31*): The concept of "local" system vs. "non-local" system needs to be reworked in the PHR-S FM Glossary because it is difficult to distinguish one system from another merely on the basis of locale. The concept that we are trying to express in the Glossary is the differentiation of the PHR Account Holder's system from "not-the-PHR-Account-Holder's-System". This differentiation is difficult because the PHR Account Holder's system may very well be the same as the "other" system. For example, the PHR Account Holder may want to store a picture of his broken bone in his PHR, but his PHR (system) and the picture (system) may both reside in the same hospital (system). The PHR Working Group will tackle this issue as part of its next set of tasks.

Term	Definition	Citation	Location of Term in Functional Model
A			
Accept	To capture data from a system into the PHR Account Holder's system by inputting the data via manual / real-time user intervention, allowing the reception of the data. For example, upon receiving a notice that information regarding a new clinical trial is available, the PHR Account Holder may <i>accept</i> the corresponding clinical trial brochure.		(not yet vetted)
Access	To output data from a system by reading it in such a way as to view the pointers to the data, but not the data itself. For example, a PHR Account Holder may review a list of radiological images, but not view the images themselves. The possibility to retrieve medical information stored in a database or remote application. Access should be limited by security authentication mechanisms.		(not yet vetted) and EHR-S FM Glossary
"...according to user role, organizational policy, or jurisdictional law"	A key phrase within the PHR-S FM that enables certain functionality to be tailored differently depending on varying needs/requirements of differing stakeholders. (See "User Role", "Organizational Policy", and "Jurisdictional Law".) The three elements of the key phrase may be in variance with each other and may require arbitration. For example, a stakeholder in the <u>user role</u> of PHR Account Holder may desire that a certain PHR data element be stored for one hundred years; the relevant organization may have an <u>organizational policy</u> that dictates that the element be stored for at most three years; and applicable <u>jurisdictional law</u> may dictate that the element be stored for at most seven years.		(not yet vetted)
Amend	To maintain data by updating it in such a way as to repair an insufficient element. For example, the PHR Account Holder may alter her address from 638 Oak Street, to 638 Oak Street Suite B.		(not yet vetted)
Annotate	To maintain data by updating it in such a way as to enhance an element. For example, the PHR Account Holder may insert a note regarding the family history by including a note such as, "Great grandmother died of cancer (as indicated), but I am not sure whether it was lung cancer or liver cancer."		(not yet vetted)
Archive	To maintain data by storing it in such a way as to move one or more extracts to offline storage, ensuring the possibility of restoring the extracts to online storage when needed	ISO TS 18308	(not yet vetted) and

Term	Definition	Citation	Location of Term in Functional Model
	(without loss of meaning). Wherever possible, archived data should be technology-independent so that future users are not dependent on obsolete technologies.		EHR-S FM Glossary
Associate	To maintain data by updating it in such a way as to draw connections between disparate data. For example, The PHR Account Holder may associate recent weight-gain data with socially-relevant data such as the recent death of a parent.		(not yet vetted)
Attest	The PHR Account Holder may "Attest" to the information in the PHR. Such attestation may be useful to the provider and other stakeholders for determining the trustworthiness of the PHR information.		(not yet vetted)
Augment	To maintain data by updating it in such a way as to clarify or extend an element. For example, the PHR Account Holder may extend the notes about his bone fracture by including a corresponding picture of the fracture.		(not yet vetted)
Authorization	(See "PHR Authorization")		
Authorized PHR User	<p>An Authorized PHR User is a person who has been granted access to one or more PHR functions by the PHR Account Holder or by the PHR Account Holder Proxy.</p> <p>Examples of potentially Authorized PHR users include:</p> <ul style="list-style-type: none"> • Proxy User (including representative payee) • School nurse • Summer camp administrators • Judicial system officers • Insurance carriers • Care providers • Employers (nationally or internationally) • Health management program administrators / coaches • VISA • Secondary PHR Users, including: <ul style="list-style-type: none"> • Public health organizations • Research organizations • Clinical Trials organizations 		
B			
Backup	To maintain data by storing it in such a way as to create a copy in case the original is lost, corrupted, or destroyed.		(not yet vetted)
C			
Capture	To manage data by placing it into a system either through human intervention or mechanical means. For example, a PHR Account Holder may place PHR data into the PHR system via a keyboard or may	http://www.merriamwebster.com/dictionary/capture	(not yet vetted) and EHR-S FM

Term	Definition	Citation	Location of Term in Functional Model
	<p>include research data gathered from the Internet.</p> <p>A means of inputting or recording data into the system either through human intervention or mechanical means. (e.g., importing a file, device to EHR-S input, insertion of data via a message).</p>		Glossary
Clinical Document	<p>A Clinical Document is a documentation of clinical observations and services, with the following characteristics:</p> <ol style="list-style-type: none"> 1. Persistence – A clinical document continues to exist in an unaltered state, for a time period defined by local and regulatory requirements; 2. Stewardship – A clinical document is maintained by a person or organization entrusted with its care; 3. Potential for authentication – A clinical document is an assemblage of information that is intended to be legally authenticated; 4. Wholeness – Authentication of a clinical document applies to the whole and does not apply to portions of the document without the full context of the document; 5. Human readability – A clinical document is human readable. <p>Note: notice that the above definition does not mention a CDA document's potential to also contain structured/coded data. Thus, if a PHR element explicitly needed structured/coded data support, the need would best be explicitly stated as a functional requirement. (The key issue is that any requirement to support structured/coded data is always in addition to the requirement to support human readability of the data.)</p>		(not yet vetted)
Comment	To maintain data by updating it in such a way as to express an additional thought about an element. For example, the PHR Account Holder may insert a note regarding his general practitioner such as, "This physician has a strong grasp of rare skin diseases."		(not yet vetted)
Compact	To maintain data by storing it in such a way as to reduce the storage requirements of the data. For example, by compressing the data via a software algorithm, eliminating redundant phrases, or reducing the blank spaces between relevant data.		(not yet vetted)
Compute	To capture data from a system into the PHR Account Holder's system by creating it in		(not yet vetted)

Term	Definition	Citation	Location of Term in Functional Model
	such a way as to combine disparate information. For example, to discover the location of the nearest pharmacy that is covered by the PHR Account Holder's insurance plan given the PHR Account Holder's current home address.		
Context-based access	<p>Examples of "Context-based access" include:</p> <ul style="list-style-type: none"> • Emergency ("break the glass") access (for example, by an Emergency Physician during a heart attack, or by an Emergency Responder during a life-threatening car crash). • Legal-access requirements (for example, a judge may grant law enforcement personnel access to certain portions of a set of PHR records during a criminal investigation). • Time-related access (for example, granting a trusted neighbor access while the primary proxy is on holiday). 		(not yet vetted)
Correct	To maintain data by updating it in such a way as to repair an incorrect element. For example, the PHR Account Holder may alter her address from 368 to 638 Oak Street.		(not yet vetted)
Create (Internal)	To manage data by capturing it from the PHR Account Holder's manual efforts to fashion data.		(not yet vetted)
D			
Destroy	To maintain control of data by removing access to the data in such a way as the data no longer exists by virtue of having been explicitly overwritten or altered in an unrecoverable way. For example, the PHR Account Holder may destroy certain data by overwriting it with binary ones and zeros, and with random numbers such that the original data is unrecoverable.		(not yet vetted)
Display (verb)	<p>To output data from a system by reading it in such a way as to produce a certain, (requested) generally raw perspective of the data. For example, a PHR Account Holder may review her current (raw, unformatted) home address.</p> <p>Implies read-only data-access capability.</p> <p>Presenting information on a computer monitor. Example: The system SHALL display medication ordering dates when known." Compare with "View."</p>		(not yet vetted) and EHR-S FM Glossary
Download	To capture data from a system into the PHR Account Holder's system by inputting it via manual / real-time user intervention and demanding certain external data. For example, to download a list of nearby pharmacies for later study.		(not yet vetted)

Term	Definition	Citation	Location of Term in Functional Model
E			
Edit	To maintain data by updating it in such a way as to enhance an element. For example, the PHR Account Holder may alter his name from "John James Smith" to "John James (nickname: 'JJ') Smith"		(not yet vetted)
Encrypt	To maintain data by storing it in such a way as to convert the data into a form (a ciphertext) that cannot easily be understood by unauthorized people or systems.	http://searchsecurity.techtarget.com/sDefinition/0,,sid14_gci212062.00.html	(not yet vetted) and EHR-S FM Glossary
Enter	To capture data from a local system by creating it in such a way as to manually note certain data. For example, the PHR Account Holder may manually note the PHR Account Holder's street address via the keyboard.		(not yet vetted)
Export	To output data by extracting it from the PHR Account Holder's system for use by another system. For example, a PHR Account Holder may offer his current list of medications to his oncologist's system.		(not yet vetted)
F			
Filter	To maintain data by restricting access to the data in such a way as to only reveal subsets of the data. For example, the PHR Account Holder may only want to see data sent from the Elm Street Clinic within the past six months.		(not yet vetted)
H			
Health Care Provider	A Health Care Provider is a person licensed, certified or otherwise authorized or permitted to administer health care in the ordinary course of business or practice of a profession, including a health care facility.	HL7 Glossary, January 2002.	
Health Insurance Carrier (Payer)	The PHR Account Holder's Health Insurance Carrier is a third party entity that pays for, administers or underwrites coverage for health care expenses. Examples of Health Insurance Carriers include: an insurance company, a self-insured employer plan, a health maintenance organization (HMO), a preferred provider organization (PPO), a government agency or a third party administrator (TPA).	HL7 Glossary, January 2002.	
Hide	To maintain data by restricting access to the data in such a way as to not reveal the existence of the data. For example, the PHR Account Holder may a search for "car crash injury" to return "the system cannot respond to the query as formulated".		(not yet vetted)
I			

Term	Definition	Citation	Location of Term in Functional Model
Import	To capture data from a non-local system by inputting it in such a way as requires manual / real-time user intervention. For example, the PHR Account Holder may manually import the address of the nearest pharmacy.		(not yet vetted)
Inactivate	To maintain control of data by removing access to the data in such a way as the data is no longer active for a certain reason. For example, the PHR Account Holder may no longer employ a list of local oncologists, while the PHR Account Holder is stationed in another country for a while.		(not yet vetted)
Input (External)	To receive data from a source that is outside the local system.		(not yet vetted)
J			
Jurisdictional Law	Access to, or use of, PHR data or functionality may be categorized according to Jurisdictional Law.		(not yet vetted)
M			
Maintain	<p>To manage data by manipulating it within a system. For example, a PHR Account Holder may keep certain data and discard other data, or add value to certain data by correcting or annotating it, or prioritize certain data by inactivating or archiving it.</p> <p>To ensure that a website, a piece of software, or database is kept up-to-date and in good order for the benefit of users. Could involve any of the following actions; capture, create, read, and update (edit, correct, amend, and augment).</p>	http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861627890	(not yet vetted) and EHR-S FM Glossary
Manage	To handle, direct, govern, maintain, or control in action or use. Includes the elements of retrieval, deletion, correction, amendment, and augmentation.	Random House College Dictionary	EHR-S FM Glossary
Mask	<p>To maintain data by restricting access to the data in such a way as to reveal the existence of certain data, but not reveal its contents. For example, the PHR Account Holder may want to mask his social security number as ***-**-****.</p> <p>It may be useful for the PHR system to not only include the ability to send information in a masked format, but also include the ability to unmask the underlying content either under extraordinary conditions or by specific role incumbents (such as Emergency Department physicians).</p> <p>Masking is a term used to describe process of restricting access to or transfer of personal health information (PHI). Typically masking is applied at the data source and may be overridden, as permitted by law, by</p>	http://www.infoway-inforoute.ca/en/InfowayPassport/InfowayPassport.aspx?ReturnUrl=http%3a%2f%2fknowledge.infoway-inforoute.ca%2fDefault.aspx	(not yet vetted) and EHR-S FM Glossary

Term	Definition	Citation	Location of Term in Functional Model
	the accessing custodian (e.g. in emergency health situations).		
N			
Nullify	To maintain control of data by removing access to the data in such a way as the data can no longer be located or is irrelevant. For example, the PHR Account Holder Proxy may have elected to be on a list to be notified when a new cancer treatment is available for a parent. If the parent dies, the PHR Account Holder Proxy may desire to be removed (nullified) from the list of those to be notified.		(not yet vetted)
O			
Obsolete	To maintain control of data by removing access to the data in such a way as the data is no longer used (in favor of other (newer, or different) data). For example, the PHR Account Holder may no longer employ an outdated list of local oncologists in queries for local specialists.		(not yet vetted)
Organizational Policy	Access to, or use of, PHR data or functionality may be categorized according to Organizational Policy. "Organization" (in the case of a PHR-System) is equivalent to the concept of sponsorship for payers (insurers). The reason that the concept of "organizational policy" ought to be available to PHR system designers, for example, is that some vendors (say, an insurance company) might have an organizational policy against storing drug-use data to reduce the risk of liability if certain PHR information were leaked or stolen.		(not yet vetted)
Output	To manage data by extracting it from a system either through human intervention or mechanical means. For example, a PHR Account Holder may render PHR data onto a computer screen for personal review, or may deposit PHR data in a provider's system for use by the PHR Account Holder's provider.		(not yet vetted)
P			
PHR Account	<p>A PHR Account is a set of access controls associated with a single PHR Account Holder and his or her data.</p> <p>A PHR Account provides the PHR Account Holder with (1) access to his or her personal health data and (2) access to the functions of a PHR system.</p> <p>A PHR Account is conceptually similar to a bank account, which provides controlled access to data and to the functions of the system in which the data are stored."</p>		

Term	Definition	Citation	Location of Term in Functional Model
	PHR Accounts may be hosted on a PHR Account Holder's stand-alone personal computer, a web-based system, or other portable electronic devices.		
PHR Account Holder	<p>The PHR Account Holder is the subject of the PHR Account, controls access to and permissions of the PHR Account, and controls the movement of data in and out of the PHR Account.</p> <p>The term PHR Account Holder is synonymous with the terms "patient" or "consumer."</p>		
PHR Account Holder Proxy	A PHR Account Holder Proxy is a person who is appropriately authorized to act on behalf of the PHR Account Holder within the PHR Account .		
PHR Application	<p>A PHR Application is a software system that offers PHR functionality and related services to PHR Account Holders through individual PHR Accounts.</p> <p>A PHR Application may reside on a PHR Account Holder's personal computer, on a remote web server, on a portable electronic device, or on some combination of these and other technologies.</p>		
PHR Authorization	<p>A PHR Authorization is a permission granted by a PHR Account Holder to an Authorized PHR User to use a function or functions of the PHR Account.</p> <p>PHR Authorizations may be to specific individuals or to specific remote computer systems.</p> <p>PHR Authorizations also may be role-based, i.e., granted to a class of individuals or a class of remote computer systems.</p> <p>PHR Authorizations may include varying levels of access, e.g., "read-only," "write-only," "read/write," etc.</p> <p>The exact permissions and levels of PHR Authorizations may vary based on different PHR Sponsors and PHR Service Providers; the descriptions here are not intended to prescribe a particular approach.</p> <p>Authorization is the process of giving someone permission to do or have something. In multi-user computer systems, a system administrator defines for the system which users are allowed access to the system and what privileges of use (such as access to which file directories, hours of</p>	<p>PHR Working Group definition,</p> <p>and</p> <p>http://searchappsecurity.techtarget.com/sDefinition/0,,sid92_gci211622,00.html</p>	

Term	Definition	Citation	Location of Term in Functional Model
	access, amount of allocated storage space, and so forth). Assuming that someone has logged in to a computer operating system or application, the system or application may want to identify what resources the user can be given during this session. Thus, authorization is sometimes seen as both the preliminary setting up of permissions by a system administrator and the actual checking of the permission values that have been set up when a user is getting access		
PHR Service Provider	<p>A PHR Service Provider is an organization that delivers a PHR Application to PHR Account Holders.</p> <p>A PHR Service Provider may offer PHR Applications directly to PHR Account Holders or indirectly via contracted PHR Sponsors.</p> <p>The term PHR Service Provider is synonymous with the term “PHR vendor” and enables the distinction between direct PHR-application providers and third-party sponsors (such as physician offices or hospitals). See also: PHR Sponsor</p>		
PHR Sponsor	<p>A PHR Sponsor offers PHR Account Holders access to a given PHR Application.</p> <p>A PHR Sponsor may not necessarily be the same entity as the PHR Service Provider.</p> <p>Examples of PHR Sponsors include: a physician office, a health system, an employer, a pharmacy, a health plan or a direct PHR Service Provider.</p>		
Present	<p>To output data from a system by reading it in such a way as to offer pointers to data, but not the data itself. For example, a PHR Account Holder may offer a list of radiological images to a provider, but not offer the images themselves.</p> <p>To offer to view; to bring to one's attention; to bring or introduce into the presence of someone; to show or display</p>	http://www.m-w.com/cgi-bin/dictionary/present	(not yet vetted) and EHR-S FM Glossary
Purge	To maintain control of data by removing access to the data in such a way as the data no longer exists by way of deletion or removal. For example, the PHR Account Holder may elect to delete all records related to the Elm Street Clinic because the PHR Account Holder never visited the clinic and is moving to a new country.		(not yet vetted)
R			

Term	Definition	Citation	Location of Term in Functional Model
Read	To output data by extracting it from a system for review. For example, a PHR Account Holder may review his current list of medications.		(not yet vetted)
Receive	To capture data from a non-local system by inputting it without manual / real-time user intervention, enabling unattended, asynchronous data-reception. For example, various emails may be <i>received</i> from a provider for later manual review by the PHR Account Holder.		(not yet vetted)
Record (noun)	A writing by which some act or event, or a number of acts or events, is recorded; a register; as, a record of the variations of temperature during a certain time; a family record. An authentic official copy of a document which has been entered in a book, or deposited in the keeping of some officer designated by law.		EHR-S FM Glossary
Record (verb)	To capture data from a local system by creating it in such a way as to retain certain data. For example, to cut-and-paste part of an email communication into a PHR. Need to distinguish when the user records (user acts) and the system records (in the background, as in a time/date stamp). (1) A background activity of the system that inserts data into the patient record after an authorized user has completed some documentation. Example: After an authorized user cosigns the record, the date and time of the signature is recorded in the background to complete the required documentation for that action.		(not yet vetted) and EHR-S FM Glossary
Remove Access	To maintain data by disallowing access to the data in such a way as the data can no longer be retrieved.		(not yet vetted)
Report	To output data from a system by reading it in such a way as to produce a certain, (requested) generally long-term, well-formatted perspective of the data. For example, a PHR Account Holder may review his current list of medications, dosages, and the related costs. A collection of facts and figures that may be printed, describing in detail an event, situation, or the like, usually as the result of observation, inquiry, etc; i.e. a medical report on the patient that maybe printed.		(not yet vetted) and EHR-S FM Glossary
Restrict Access	To maintain data by disallowing access to the data in such a way as the data exists, but is not seen by the requestor.		(not yet vetted)
S			
Save	To maintain data by storing it in such a way as to manually mark it for data retention, to		(not yet vetted)

Term	Definition	Citation	Location of Term in Functional Model
	mark it in such a way that it is not subject to automatic deletion, or to make a copy of the data.		
Send	To output data from the PHR Account Holder's system by exporting it in such a way as to (passively, automatically) route it to another system. For example, a PHR Account Holder's system may (passively, automatically) send weekly reports to a diabetes specialist's system regarding the PHR Account Holder's current weight.		(not yet vetted)
Store	To place or leave in a location (as a warehouse, library, or computer memory) for preservation or later use or disposal.	http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=store	EHR-S FM Glossary
Synchronize	To output data from the PHR Account Holder's system by exporting it in such a way as to coordinate certain data with another system (or systems). For example, the PHR Account Holder may coordinate the medications prescribed by two physicians with a list of home remedies so that all each has a current list of the Account Holder's medications/remedies.		(not yet vetted)
T			
Tag	To maintain data by updating it in such a way as to mark it for special use. For example, the PHR Account Holder may mark certain data for review by an oncologist.		(not yet vetted)
U			
Update	To enter into the electronic health record the most recent information or more recent information than was previously available.	http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861708594	EHR-S FM Glossary
Upload	To output data from the PHR Account Holder's system by exporting it via manual / real-time user intervention to another system. For example, to upload the PHR Account Holder's current list of medications to her General Practitioner's system.		(not yet vetted)
User Role	Access to, or use of, PHR data or functionality may be categorized according to User Role. Examples of User Roles include: PHR Account Holder, administrator, Emergency Responder, and clinician.		(not yet vetted)
V			
View (noun)	To output data from a system by reading it in such a way as to enable a certain, (requested) generally short-term, ad hoc perspective of the data. For example, a PHR Account Holder may review his current list of medications. Specific information displayed on a computer monitor after it has been filtered		(not yet vetted) and EHR-S FM Glossary

Term	Definition	Citation	Location of Term in Functional Model
	by the system. Compare with "Display."		

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