



De nieuwe TC EHR

Nationaal HL7
Standaardisatiecongres
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Inhoud

- Aanleiding, visie en missie, speerpunten
- Activiteiten in 2011
- Het EHR-S FM en PHR-S FM
- Ontwikkelingen en praktijkvoorbeelden



Aanleiding TC

- Het EPD veld is in beweging
- Standaarden voor goede ICT ondersteuning zijn vereist
- Het EHR-S FM een bruikbare standaard voor de GGZ markt in Nederland
- Doorontwikkelen van, stimuleren van het gebruik van en waar nodig ontwikkeling van een profiel voor de locale situaties is gewenst
- Hier kan proactief op worden ingesprongen



Visie en missie TC

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- Visie:

‘De TC wil het gebruik van de EHR-S FM en PHR-S FM standaard voor systemen in Nederland faciliteren. De TC wil een continue wisselwerking tussen Nederland en HL7 internationaal bewerkstelligen’

- Missie en doelstellingen:

- Volgen van ontwikkelingen rondom EHR, PHR en gerelateerde standaarden, zowel binnen als buiten HL7.
- EHR-S FM en PHR-S FM waar nodig aanpassen ten behoeve van de Nederlandse situatie -> Nederlands profiel
- Actief samenwerken met de internationale HL7 EHR Workgroup.
- Veld betrekken bij de doorontwikkeling van de standaarden.
- Stimuleren van het gebruik van de standaarden.



Activiteiten TC in 2011

- Iedere twee maanden komt de TC bij elkaar.
- Overleg met de EHR WG bij HL7 Internationaal
- Analyse van de **stakeholders** voor de TC. Prioritering tav investering in de stakeholders.
- **Communicatieplan.**
- **Scholing**, themamiddag, HL7 Magazine, website HL7, wiki en evt googlegroups.
- **Vertalen** van ondersteunende documenten betreffende het EHR-S FM.
- Inventarisatie profielen nationaal & internationaal.



EHR vs EHR systeem

- EHR
 - Het onderliggende eenduidige logische dossier
 - De gegevens-elementen die het dossier vormen
 - Vormt het medisch juridische dossier
- EHR systeem
 - Software die de mogelijkheid biedt om:
 - Het dossier te beheren en te onderhouden
 - Diverse dossiergebonden taken uit te voeren rondom patientenzorg, onderzoek en bedrijfsvoering
 - Alle gegevens in een systeem of in verschillende systemen een deel van de gegevens



Het EHR-S Functional Model

Is Niet...

- Een berichtenspecificatie
- Een EPD specificatie
- Een implementatie specificatie (niet het “hoe”)
 - Schrijft geen specifieke technologie voor
 - Geeft niet aan hoe functies gerealiseerd moeten worden (bijvoorbeeld d.m.v. interface of database ontwerp)

Is...

- Een EPD-systeem specificatie
- Een referentielijst van functies die een EPD-systeem kan ondersteunen (het “wat”)
 - Een consistente beschrijving van functionaliteit
 - Voorziet in flexibiliteit die innovatie en product differentiatie bevordert
 - Gouden standaard, rekening houdend met praktische beperkingen, voor de ontwikkeling v.e. EPD-systeem



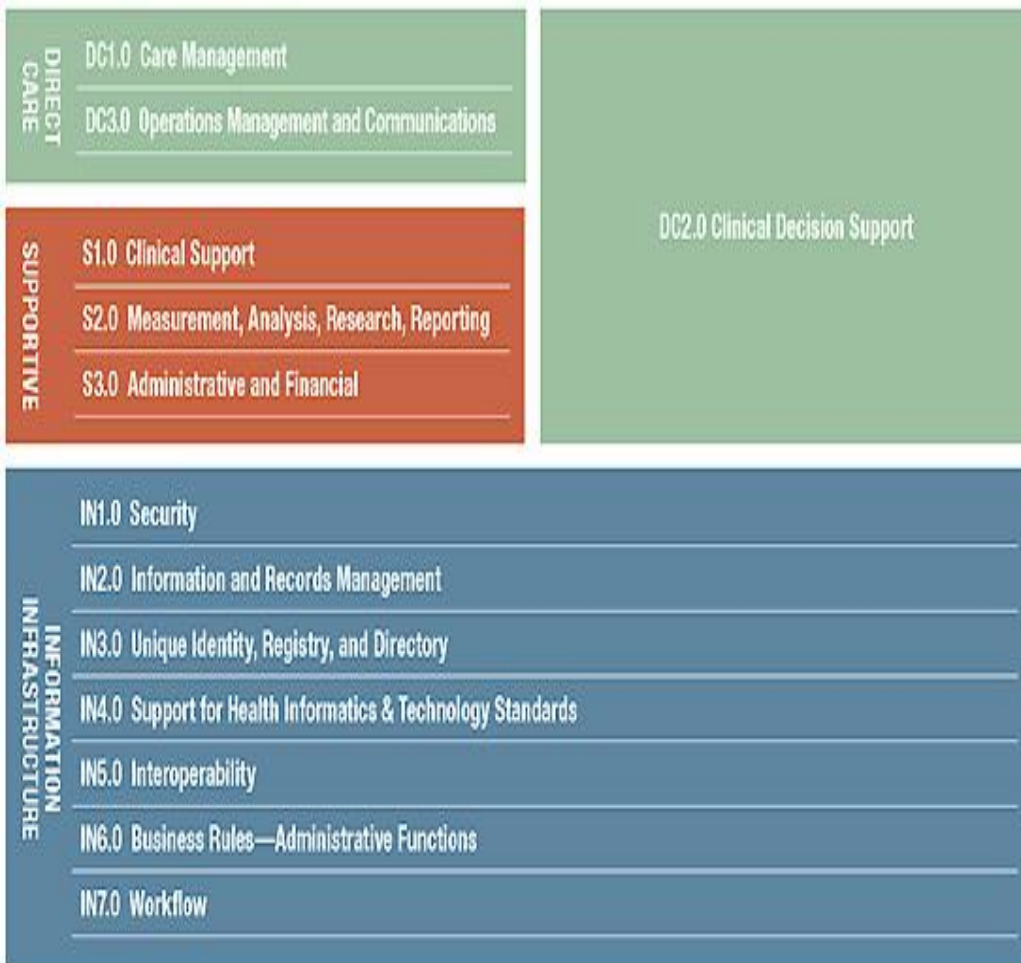
EPD systeem versus het ZIS/ XIS

- Startpunt voor ZIS/ XIS waren de administratieve en logistieke functies.
- Startpunt EPD systeem is de directe zorg met de daarbij noodzakelijke ondersteunende functies en functies voor informatie infrastructuur
- ZIS functies omvatten meer dan die in het EHR-S FM



EHR-S FM en PHR-S FM in Vogelvlucht

Vershil



| | | |
|----------------------------|--------|--|
| Personal Health | PH.1.0 | Account Holder Profile |
| | PH.2.0 | Manage Historical Clinical Data And Current State Data |
| | PH.3.0 | Wellness, Preventive Medicine, and Self Care |
| | PH.4.0 | Manage Health Education |
| | PH.5.0 | Account Holder Decision Support |
| | PH.6.0 | Manage Encounters with Providers |
| Supportive | S.1.0 | Provider Management |
| | S.2.0 | Financial Management |
| | S.3.0 | Administrative Management |
| | S.4.0 | Other Resource Management |
| Information Infrastructure | IN.1.0 | Health Record Information Management |
| | IN.2.0 | Standards Based Interoperability |
| | IN.3.0 | Security |
| | IN.4.0 | Auditable Records |



Direct Care Functions EHR-S FM

| ID# | Type | Name | Statement/Description | See Also | Conformance Criteria | Row # |
|----------|------|--|--|--|---|-------|
| | | | clinical category, or by consultant, depending on need. Jurisdictional laws and organizational policies that prohibit certain users from accessing certain patient information must be supported. | IN.5.1 IN.5.2 IN.5.4 IN.6 | 5. The system SHALL conform to function IN.2.2 (Auditable Records). | 80 |
| DC.1.2 | F | Manage Patient History | <p>Statement: Capture and maintain medical, procedural/surgical, social and family history including the capture of pertinent positive and negative histories, patient-reported or externally available patient clinical history.</p> <p>Description: The history of the current illness and patient historical data related to previous medical diagnoses, surgeries and other procedures performed on the patient, and relevant health conditions of family members is captured through such methods as patient reporting (for example interview, medical alert band) or electronic or non-electronic historical data. This data may take the form of a pertinent positive such as: "The patient/family member has had..." or a pertinent negative such as "The patient/family member has not had..." When first seen by a health care provider, patients typically bring with them clinical information from past encounters. This and similar information is captured and presented alongside locally captured documentation and notes wherever appropriate.</p> | S.2.2.1 S.3.5 IN.1.7 IN.2.5.1 IN.2.5.2 IN.4.1 IN.4.2 IN.4.3 IN.5.1 IN.5.2 IN.5.4 | 1. The system SHALL provide the ability to capture, update and present current patient history including pertinent positive and negative elements. | 81 |
| | | | | | 2. The system SHOULD provide the ability to capture and present previous external patient histories. | 82 |
| | | | | | 3. The system MAY provide the ability to capture the relationship between patient and others. | 83 |
| | | | | | 4. The system SHALL capture the complaint, presenting problem or other reason(s) for the visit or encounter. | 84 |
| | | | | | 5. The system SHOULD capture the reason for visit/encounter from the patient's perspective. | 85 |
| | | | | | 6. The system SHOULD conform to function IN.1.4 (Patient Access Management). | 86 |
| | | | | | 7. The system SHALL conform to function IN.2.2 (Auditable Records). | 87 |
| DC.1.3 | H | Preferences, Directives, Consents and Authorizations | | | 1. The system SHOULD conform to function IN.1.4 (Patient Access Management). | 88 |
| | | | | | 2. The system SHALL conform to function IN.2.2 (Auditable Records). | 89 |
| DC.1.3.1 | F | Manage Patient and Family Preferences | <p>Statement: Capture and maintain patient and family preferences.</p> <p>Description: Patient and family preferences regarding issues such as</p> | DC.2.1.4 S.3.7.1 | 1. The system SHALL provide the ability to capture, present, maintain and make available for clinical decisions patient preferences such as language, religion, spiritual practices and culture. | 90 |



Personal Health Functions PHR

| ID# | Type | Name | Statement/Description | See Also in EHR-S FM | See Also in PHR-S FM | Conformance Criteria | Row |
|--------|------|--|---|--|----------------------|--|---------------------|
| | | | flag). Examples: Produce a summary record of care and present ad hoc views of the health record such as the same unambiguous list of medications that is referenced by all providers, pharmacists, and the PHR Account Holder him/her self. | | | 1. If the jurisdiction provides individuals with an option to indicate or not indicate that information has been withheld, the system SHALL provide the ability for the PHR Account Holder to exercise that option. | 7 |
| PH.1 | H | PHR Account Holder Profile | Statement: Manage PHR Account Holder demographics, preferences, Advance Directives, consent directives and authorizations. Description: The person that is the subject of the personal health record is referred to as the PHR Account Holder. The PHR Account Holder may also be represented by the parent/guardian, or a designated representative (proxy) assigned by the PHR Account Holder or otherwise authorized entity. The PHR includes relevant demographic information and other administrative statements necessary to provide care such as Advance Directives or consents for care. Examples: Display and maintain demographics or preferences such as the PHR Account Holder's preferred first or religious preferences. | S.1.4.1 S.2.2.1 S.3.1.2 S.3.1.5 IN.2.1 IN.2.3 | | | 8 |
| PH.1.1 | F | Identify and Maintain a Patient Record | Statement: Unambiguously identify the PHR Account Holder; correctly link the information with the PHR Account Holder and vice-versa. Description: The PHR Account Holder must be confident that the system can reliably and uniquely identify them and provide access to their health record. Nothing precludes the PHR Account Holder from having more than one PHR such as a tethered PHR-S with | S.1.4.1 S.2.2.1 S.3.1.2 S.3.1.5 IN.2.1 IN.2.3 | | 1. The system MAY provide a user guide to assist the PHR Account Holder in installing, initializing, registering, or operating their PHR. 2. The system SHALL provide the ability to store more than one unique identifier for each PHR Account Holder's record. 3. The system SHOULD provide the ability to capture, store and utilize the PHR Account Holder's unique identifiers from multiple external sources 4. The system SHALL associate key identifier information (e.g., medical record number, insurance account number, and voluntary unique identifiers) with each PHR Account Holder. | 9 10 11 12 |

The EHR-S FM contains approximately 160 functions and 1,000 conformance criteria across three sections.



EHR-S FM Release 1.1

Functional Profiles
(care settings)

Ancillary Profiles
(specific purposes)

Emergency

Long-Term and Post-Acute Care

Behavioral Health

Child Health

Records Management and Evidentiary Support

Vital Records

Clinical Research

Functional and ancillary profiles are subsets derived from the model. EHR systems conform to profiles.



Profielen afgeleid van het EHR-S FM

- *Een paar voorbeelden:*
 - Behavioral Health Functional Profile
 - Child Health Functional Profile for EHR Systems
 - Emergency Department Information Systems
 - Ambulatory Oncology EHR Functional Profile
 - Profielen voor Diabetes en public health in de maak bij HL7 Internationaal.



Voorbeelden

EHR-S FM

Oncology profile Direct Care functions

DC 1.3.3. The system **SHOULD** provide the ability to document an assent for patients legally unable to consent.

DC.1.3.3 The system **SHALL** provide the ability to document an assent for patients legally unable to consent.

Niet opgenomen

DC 1.4.1 The system **SHALL** capture a set of Serious Adverse Event (SAE) data as modeled by the current release of HL7 ICSR (Individual Case Safety Reporting)

DC 1.5 Manage assessments; geen kinderen, alleen 11 conformance criteria

Toegevoegd 1.5.1 en 1.5.2 met meerdere conformance criteria. Bijvoorbeeld:

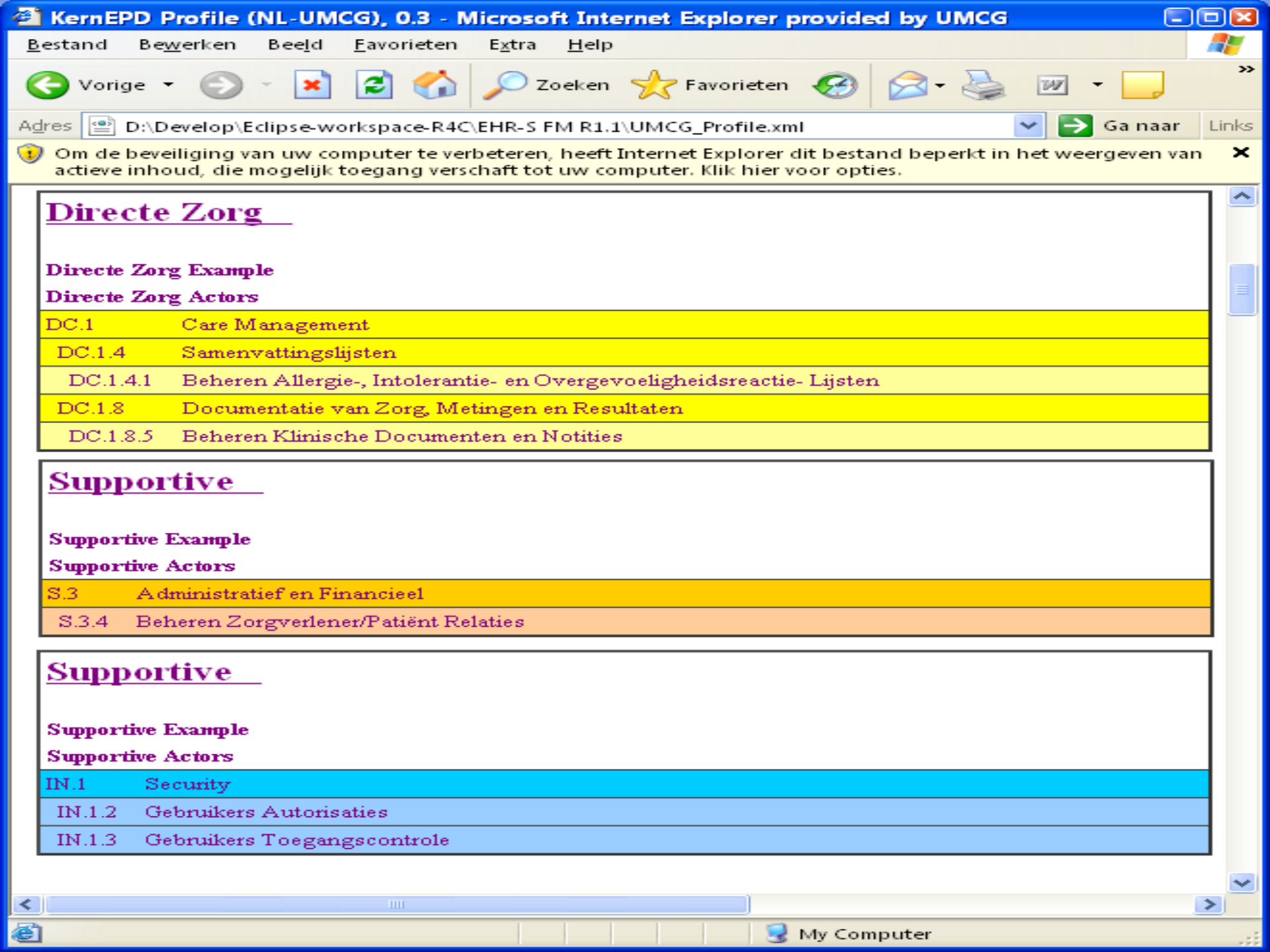
The system **SHALL** capture the physical examination

The system **SHALL** provide a means to vary the physical examination documented based upon patient problem.



Voorbeelden in Nederland

- EPD GGZ:
 - Profiel ontwikkeld op basis van het Behavioral Health Functional Profile
 - Profiel is basis in de gemeenschappelijke aanbesteding
- UMCG (Kern)EPD Profiel



Om de beveiliging van uw computer te verbeteren, heeft Internet Explorer dit bestand beperkt in het weergeven van actieve inhoud, die mogelijk toegang verschaft tot uw computer. Klik hier voor opties.

Directe Zorg

Directe Zorg Example
Directe Zorg Actors

| | |
|----------|--|
| DC.1 | Care Management |
| DC.1.4 | Samenvattingslijsten |
| DC.1.4.1 | Beheren Allergie-, Intolerantie- en Overgevoelighedsreactie- Lijsten |
| DC.1.8 | Documentatie van Zorg, Metingen en Resultaten |
| DC.1.8.5 | Beheren Klinische Documenten en Notities |

Supportive

Supportive Example
Supportive Actors

| | |
|-------|---------------------------------------|
| S.3 | Administratief en Financieel |
| S.3.4 | Beheren Zorgverlener/Patiënt Relaties |

Supportive

Supportive Example
Supportive Actors

| | |
|--------|-----------------------------|
| IN.1 | Security |
| IN.1.2 | Gebruikers Autorisaties |
| IN.1.3 | Gebruikers Toegangscontrole |



DC.1.4.1 Manage Allergy, Intolerance and Adverse Reaction List

Widget & Service

See Also (direct)

DC.2.3.1.1 Support for Drug Interaction Checking

S.2.2.1 Health Record Output

S.2.2.3 Ad Hoc Query and Report Generation

Query Tool

S.2.2.4 Clinical Decision Support System Guidelines

IN.2.5.2 Manage Structured Health Record Information

Care Record Store Service

IN.2.5.1 Manage Unstructured Health Record Information

Document Service

IN.4.2 Maintenance of Terminologies

IN.4.1 Standard Terminologies and Terminology Models

SNOMED CT Terminology Service

IN.6 Business Rules Management

Rule Engine

IN.4.3 Terminology Mapping

See Also (indirect)

S.2.2 Report Generation

Report Generator

IN.1.2 Entity Authorization

Authorisation Service

IN.1.1 Entity Authentication

IN.1.4 Patient Access Management

IN.1.3 Entity Access Control

IN.2.4 Extraction of Health Record Information

IN.2.1 Data Retention, Availability and Destruction

IN.5.1 Interchange Standards

HL7 v3

IN.2.2 Auditable Records



Documentatie en presentaties mbt het EHR-S FM/ PHR- s FM

- Beide FM's of werkdocumenten zijn te vinden op:
http://wiki.hl7.org/index.php?title=EHR#Project_Information
- Presentatie Robert Stegwee (2008).
http://www.hl7.nl/ventura/engine.php?Cmd=getpicture&P_site=407&P_self=5427
- Release 2 bij HL7 en ISO in ballot
- Wiki TC:
http://wiki.hl7.org/index.php?title=EHR_TC_NL



Vragen?