# Federal Health Architecture Program Federal Health Information Model (FHIM)

# **PersonDemographics Model**



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## PersonDemographics

PatientDemographicsDomain

## \_PersonDemographics

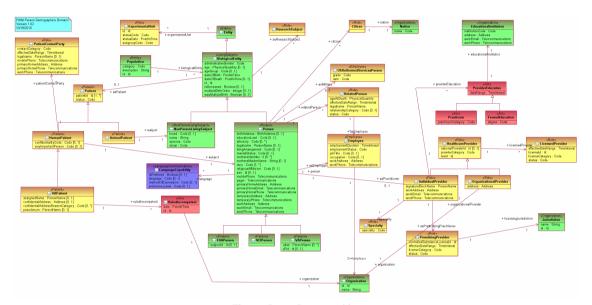


Figure \_PersonDemographics

### «Patient» Class: AnimalPatient

A specialization of the Patient role containing information specific to non-human patients.

Association 'AnimalPatient.subject' of type 'NonPersonLivingSubject' with cardinality of [1] Identifies the animal which is playing the role of patient (AnimalPatient).

## «LivingSubject» Class: BiologicalEntity

This class represents an organism, whether it is currently alive or not. This class is equivalent to the HL7 V3 Living Subject class.

#### Attribute 'BiologicalEntity.administrativeGender' of type 'Code' with cardinality of [1]

'The gender (i.e., the behavioral, cultural, or psychological traits typically associated with one sex) of a living subject as defined for administrative purposes. This attribute does not include terms related to clinical gender. Gender is a complex physiological, genetic, and sociological concept that requires multiple observations in order to be comprehensively described. The purpose of this attribute is to provide a high-level classification that can also be used for the appropriate allocation of inpatient bed assignment.' HL7 RIM.

#### Attribute 'BiologicalEntity.age' of type ' PhysicalQuantity' with cardinality of [0..1]

The length of time that an organism has lived. Note that this property will typically be derived or calculated as needed, and as such may not always be present as a separate concept. Added 7/8/10 for vMR.

#### Attribute 'BiologicalEntity.ageGroup' of type 'Code' with cardinality of [0..1]

A categorization of the length of time that an organism has lived, used in order to group subjects together, or in order to for clinical decision support purposes (e.g., adults take x pills, children under 12 take y pills, not recommended for children under 2). Note that this property will typically be derived or calculated as needed, and as such may not always be present as a separate concept. Added 7/8/10 for vMR.

#### Association 'BiologicalEntity.asPatient' of type ' Patient' with cardinality of [0..1]

A role of a person or animal as a recipient of health care services from a healthcare provider. Note that if the person or animal is a research subject, a different association (asResearchSubject) is used.

#### Association 'BiologicalEntity.asResearchSubject' of type 'ResearchSubject' with cardinality of [\*]

A physical entity which is the primary unit of operational and/or administrative interest in a study. For example, a person who is registered in a study as a recipient of an investigational product or as a control. May also include individuals who are being screened for studies, or individuals participating in observational or other studies. Other examples may include a pacemaker, a fuse that can be used in medical devices, a cow, a farm, a pen of pigs, a tissue sample from a tissue bank, etc. NOTE: StudySubjects within a study are all of the same type. An entity registered in a study is not part of another entity registered in the same study.

#### Attribute 'BiologicalEntity.dateOfBirth' of type ' PointInTime' with cardinality of [1]

The date and time of the birth or hatching of the living subject.

#### Attribute 'BiologicalEntity.dateOfDeath' of type ' PointInTime' with cardinality of [0..1]

The date and time that a living subject's death occurred.

#### Attribute 'BiologicalEntity.id' of type ' Id' with cardinality of [1]

An identifier that uniquely identifies the individual.

#### Attribute 'BiologicalEntity.isDeceased' of type 'Boolean' with cardinality of [0..1]

Indicates whether the living subject is no longer alive.

#### Attribute 'BiologicalEntity.multipleBirthOrder' of type ' Integer' with cardinality of [0..1]

If the biological entity was born along with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second.

#### Attribute 'BiologicalEntity.wasMultipleBirth' of type 'Boolean' with cardinality of [0..1]

If the biological entity was born along with other siblings, this property indicates the order the entity was born. For example, for a set of twins, this property indicates which twin was born first, and which was born second. An indication as to whether the person was born along with other siblings as part of a single pregnancy. This property is primarily used to distinguish records for newborn infants who have not yet have been given names. This property may also be used in research situations to distinguish individuals who were part of a multi-child pregnancy.

### «Role» Class: Citizen

'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com

#### Association 'Citizen.nation' of type 'Nation' with cardinality of [1]

'A relatively large group of people organized under a single, usually independent government; a country.' - American Heritage Dictionary. An organization created to govern a country, which has the power to grant citizenship to its people.

## «Organization» Class: EducationalInstitution

An organization created to provide educational instruction. Specifically, a school or institution of higher learning.

#### Attribute 'EducationalInstitution.address' of type ' Address' with cardinality of [1]

The person's office address. First choice for business related contacts during business hours.

#### Attribute 'EducationalInstitution.institutionCode' of type 'Code' with cardinality of [1]

Identifies the educational institution. This would ordinarily be an string or an Id, but because there are a finite number of medical schools, they are normally represented as codes.

#### Attribute 'EducationalInstitution.workEmail' of type ' Telecommunications' with cardinality of [1]

The email address that a person uses while at their place of business. First choice for business related contacts during business hours.

#### Attribute 'EducationalInstitution.workPhone' of type ' Telecommunications' with cardinality of [1]

The phone number for a person at their office location. First choice for business related contacts during business hours.

## «Employee» Class: Employee

This class represents information about a person while in the role of an employee of some organization.

#### Attribute 'Employee.employer' of type 'Organization' with cardinality of [0..1]

The employer end of an association link between an employee and an organization by which they are employed.

#### Attribute 'Employee.employmentDuration' of type 'TimeInterval' with cardinality of [1]

The date range during which a person is an employee in a given employment relationship.

#### Attribute 'Employee.employmentStatus' of type 'Code' with cardinality of [1]

The status of the employment relationship; e.g., Temporary, Permanent, Etc.

#### Attribute 'Employee.jobTitle' of type 'Code' with cardinality of [0..1]

'The title of the job held, for example, Vice President, Senior Technical Analyst. This is a local name for the employee's occupation that doesn't necessarily correspond to any scheme for categorizing occupation.' (HL7 v3)

#### Attribute 'Employee.occupation' of type 'Code' with cardinality of [0..1]

'A value that qualifies the classification of 'kind-of-work' based upon a recognized industry or jurisdictional standard.' HL7 RIM

#### Attribute 'Employee.workAddress' of type ' Address' with cardinality of [1]

The person's office address. First choice for business related contacts during business hours.

#### Attribute 'Employee.workPhone' of type 'Telecommunications' with cardinality of [1]

The person's office telephone number. First choice for business related contacts during business hours.

### **«Entity» Class: Entity**

'A physical thing, group of physical things or an organization capable of participating in Acts while in a role. An entity is a physical object that has, had or will have existence. The only exception to this is Organization, which while not having a physical presence, fulfills the other characteristics of an Entity. Entity stipulates the thing itself, not the Roles it may play: the Role of Patient, e.g., is played by the Person Entity.' HL7 RIM.

#### Association 'Entity.experimentalUnit' of type 'ExperimentalUnit' with cardinality of [\*]

A role played by a physical entity in which it is acting as the primary unit of interest in a specific

research objective.

## «Role» Class: ExperimentalUnit

A physical entity which is the primary unit of interest in a specific research objective. In an interventional study, the experimental unit is assigned to an intervention. The experimental unit is also the unit of primary statistical analysis. Commonly the individual StudySubject (animal, person or product) is the experimental unit. Different experimental units must be capable of receiving different experimental interventions. For example, if all pigs in a pen receive the same intervention in their feed, and the primary observations and analyses of interest are associated with the entire pen (e.g. total feed consumed, total weight of all pigs combined), then the pen of pigs rather than the individual animal is the experimental unit. [CDISC/HL7 Study Participation RMIM, PORT\_RM100001UV] For example, a human StudySubject may have 10 patches of skin each considered an ExperimentalUnit, or a Product StudySubject may have 10 bearings in it, each considered an ExperimentalUnit. Alternatively, each StudySubject may be an ExperimentalUnit. NOTE: Depending on the research objectives, a single study may have multiple levels of experimental units, such as whole people and patches of skin.

#### Attribute 'ExperimentalUnit.id' of type ' Id' with cardinality of [1]

A unique symbol that establishes identity of the experimental unit. For example, patient number 7 on a study.

#### Attribute 'ExperimentalUnit.statusCode' of type ' Code' with cardinality of [1]

A coded value specifying the state of the experimental unit. For example, active, cancelled, pending, suspended, terminated, nullified.

#### Attribute 'ExperimentalUnit.statusDate' of type ' PointInTime' with cardinality of [1]

The date (and time) on which the status is assigned to the experimental unit.

#### Attribute 'ExperimentalUnit.subgroupCode' of type 'Code' with cardinality of [1]

A coded value specifying the identification of uniform groups of subjects for separate analysis or treatment. For example, in National Cancer Institute (NCI) this is the Clinical Data Update System (CDUS) Reporting.

### «Person» Class: FDAPerson

A specialization of Person that adds properties specifically needed by FDA

#### Attribute 'FDAPerson.subjectId' of type ' Id' with cardinality of [0..1]

A local identifier for a person. The stereotype set indicates there may be more than one distinct local ID for a given person, identified in no particular order. There is only one distinct local ID for each facility

issuing the ID and local IDs are only assigned to a person where there was some reason for the person to be assigned a distinct ID specific to a facility.

### «Act» Class: FormalEducation

Represents information about the formal educational experience of an Individual Healthcare Provider.

Attribute 'FormalEducation.degree' of type 'Code' with cardinality of [1]

Indicates the degree or certificate earned by the provider. Examples include Bachelor of Science, Doctorate in Medicine.

### «Role» Class: HealthcareProvider

A person or organization which is authorized to perform healthcare-related services.

Association 'HealthcareProvider.licensedProvider' of type 'LicensedProvider' with cardinality of [\*]

A practitioner who has been authorized to perform certain activities that fall under the jurisdiction of the issuer of the license.

#### Attribute 'HealthcareProvider.nationalProviderId' of type ' Id' with cardinality of [0..1]

An identifier that uniquely identifies all persons and organizations who perform medical services within the United States. This identifier is mandated by HIPAA and is maintained by CMS.

Attribute 'HealthcareProvider.providerCategory' of type 'Code' with cardinality of [1]

Contains a categorization for the practitioner.

Attribute 'HealthcareProvider.taxId' of type ' Id' with cardinality of [1]

This contains the tax ID for the practitioner, used for billing purposes.

### «Patient» Class: HumanPatient

A specialization of the Patient role containing information specific to only human patients (such as confidentiality code).

#### Attribute 'HumanPatient.confidentialityCode' of type 'Code' with cardinality of [0..1]

'Codes that identify how sensitive a piece of information is and/or that indicate how the information may be made available or disclosed.' HL7 RIM.

Association 'HumanPatient.patientContactParty' of type ' PatientContactParty' with cardinality of [\*]

The person who should be contacted on the patients behalf under specified situations.

#### Association 'HumanPatient.subject' of type ' Person' with cardinality of [1]

Identifies the person who is playing the role of patient (HumanPatient).

#### Attribute 'HumanPatient.veryImportantPerson' of type 'Code' with cardinality of [0..1]

The person who should be contacted on the patients behalf under specified situations. Note that because all we need is the person's name and contact information (address, phone numbers), this class does not have an association to the Person class (although logically it should). This is because the other properties of 'A code specifying the patient's special status granted by the organization at which they are a patient, often resulting in preferred treatment and special considerations. For example, board member, diplomat, etc.'

### «Role» Class: IndividualProvider

A person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

## Association 'IndividualProvider.asPrescribingPractitioner' of type ' PrescibingProvider' with cardinality of [\*]

Represents information about the practitioner who has been licensed to prescribe medications under the jurisdiction of the issuer of the license.

#### Association 'IndividualProvider.person' of type 'Person' with cardinality of [1]

Links to information about the Person who is playing the role of Practitioner.

#### Association 'IndividualProvider.providerEducation' of type ' ProviderEducation' with cardinality of [\*]

Represents information about the educational experience of an Individual Healthcare Provider. This includes both formal training resulting in some sort of degree or certification, as well as practical experience such as an internship.

#### Attribute 'IndividualProvider.signatureBlockName' of type 'PersonName' with cardinality of [1]

Contains the name and title of the Practitioner as they wish it to be displayed with the notation that they signed the document electronically. For example, a practitioner who routinely uses a nickname for most correspondence would likely want their legal name on the signature block. In addition, this property would contain the title that they would use when electronically signing a document. For example, a practitioner may hold multiple titles, but would choose one to be used for signing. Examples of titles are Chief of Surgery, Dietician, Clinical Pharmacist, etc.

#### Association 'IndividualProvider.specialty' of type 'Specialty' with cardinality of [\*]

A specialty in medicine is a branch of medical science. After completing medical school, physicians or surgeons usually further their medical education in a specific specialty of medicine by completing a multiple year residency. Medical practitioners who engage in a medical specialty are known as medical

specialists. Specialists may be Board Eligible or Board Certified. Board certified in medicine means a physician has taken and passed a medical specialty examination. Board eligible, by contrast, means that a physician has completed the requirements for admission to a medical specialty board examination but has not taken and passed the examination. For example, a physician must perform 3 years of training in an approved pediatric residency to be board eligible and then successfully complete a comprehensive written examination to be certified by the American Board of Pediatrics.

Attribute 'IndividualProvider.workAddress' of type ' Address' with cardinality of [1]

The person's office address. First choice for business related contacts during business hours.

Attribute 'IndividualProvider.workEmail' of type ' Telecommunications' with cardinality of [1]

The email address that a person uses while at their place of business. First choice for business related contacts during business hours.

Attribute 'IndividualProvider.workPhone' of type 'Telecommunications' with cardinality of [1]

The phone number for a person at their office location. First choice for business related contacts during business hours.

## «Organization» Class: Jurisdiction

'The territory over which authority is exercised.' - dictionary.com. This class represents the organization that has authority over a given territory or area of endeavor. In other words, this class represents a government or governmental agency. The government may be a national (e.g., Canada) or territorial (e.g., Virginia).

Attribute 'Jurisdiction.id' of type ' Id' with cardinality of [1]

An unique string or token used to identify the jurisdiction

Attribute 'Jurisdiction.name' of type 'String' with cardinality of [1]

The name of the jurisdiction

## «LanguageCommunication» Class:

## LanguageCapability

The language communication capabilities for a Person.

Attribute 'LanguageCapability.isPreferred' of type 'Boolean' with cardinality of [0..1]

An indicator specifying whether or not the language is preferred by the person for the associated method of expression.

#### Attribute 'LanguageCapability.language' of type 'Code' with cardinality of [0..1]

A value representing a language for which the Person has some level of proficiency for written or spoken communication.

#### Attribute 'LanguageCapability.methodOfExpression' of type 'Code' with cardinality of [0..1]

The means by which the person is capable of communicating in the language. Examples of method of expression would be written and spoken.

Attribute 'LanguageCapability.proficiencyLevel' of type 'Code' with cardinality of [0..1]

'A value representing the level of proficiency in a language.' (HL7 v3).

### «Role» Class: LicensedProvider

A practitioner who has been authorized to perform certain activities that fall under the jurisdiction of the issuer of the license.

Attribute 'LicensedProvider.effectiveDateRange' of type 'TimeInterval' with cardinality of [1]

The date range during which the license is valid.

Attribute 'LicensedProvider.licenseCategory' of type 'Code' with cardinality of [1]

A classification of the provider's license.

Attribute 'LicensedProvider.licenseld' of type ' Id' with cardinality of [1]

Identifies a certification of a practitioner to perform certain activities that fall under the jurisdiction of the issuer of the license.

#### Attribute 'LicensedProvider.status' of type 'Code' with cardinality of [1]

Indicates the current state of the provider's license. Potential values include: Pending, Active, Terminated.

## «Organization» Class: Nation

'A relatively large group of people organized under a single, usually independent government; a country.' - American Heritage Dictionary. An organization created to govern a country, which has the power to grant citizenship to its people.

#### Attribute 'Nation.name' of type ' Code' with cardinality of [1]

Identifies the nation. This would ordinarily be an Id, but because there are a finite number of countries, countries are normally represented as codes.

### «Person» Class: NCIPerson

A specialization of Person that adds properties specifically needed by NCI

## «NonPersonLivingSubject» Class:

## NonPersonLivingSubject

A subtype of LivingSubject that includes all living things except the species homo sapiens.

Attribute 'NonPersonLivingSubject.breed' of type 'Code' with cardinality of [0..1]

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onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);"name="hotword">species - from Dictionary.com</span></span>

#### Attribute 'NonPersonLivingSubject.name' of type 'String' with cardinality of [1]

A name used to identify the non-human individual. Typically used only when the individual is a pet or a beast of burden. Examples include 'Spot', 'Fido', 'Seattle Slew'. Note that this property is typically not used when the subject is a lower order organism.

#### Attribute 'NonPersonLivingSubject.species' of type 'Code' with cardinality of [1]

A categorization of non-human biological entities. Possible values include 'canine', 'feline', 'staphylococcus aureus', etc.

#### Attribute 'NonPersonLivingSubject.strain' of type 'Code' with cardinality of [1]

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onclick="this.style.backgroundColor='#b5d5ff':return hotWord(this);" name="hotword">as</span> <span id="hotword" onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">a</span> <span onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">family</span> style="BACKGROUND-COLOR: CURSOR: default" id="hotword" transparent; <span onmouseout="this.style.backgroundColor='transparent'" onmouseover="this.style.cursor='default'" onclick="this.style.backgroundColor='#b5d5ff':return hotWord(this);" name="hotword">or</span> <span style="BACKGROUND-COLOR: transparent; CURSOR: default" id="hotword" onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">stock.</span> 5. <span id="hotword"><span style="BACKGROUND-COLOR: transparent; CURSOR: default" id="hotword"</pre> onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">a</span> <span style="BACKGROUND-COLOR: CURSOR: default" id="hotword" transparent: onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" name="hotword">variety,</span> onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" style="BACKGROUND-COLOR: CURSOR: default" id="hotword" <span transparent; onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">especially</span> CURSOR: <span style="BACKGROUND-COLOR: transparent; default" id="hotword" onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">of</span> <span style="BACKGROUND-COLOR: CURSOR: default" id="hotword" transparent; onmouseover="this.style.cursor='default'" onmouseout="this.style.backgroundColor='transparent'" onclick="this.style.backgroundColor='#b5d5ff';return hotWord(this);" name="hotword">microorganisms." -Dictionary.com</span></span></div>

## «Role» Class: OrganizationalProvider

An organization which is authorized to provide health care services.

Attribute 'OrganizationalProvider.address' of type ' Address' with cardinality of [1]

The person's office address. First choice for business related contacts during business hours.

### «Patient» Class: Patient

A role of a person or animal as a recipient of health care services from a healthcare provider.

#### Attribute 'Patient.patientId' of type ' Id' with cardinality of [1..\*]

An identification of the person or animal while in the role of Patient. This id is basically an 'account number'. A single person will have multiple patient ids at various healthcare providers. Indeed it is not uncommon for a person to have multiple patient ids or 'account numbers' at a single institution - often a new account number is created for each episode of care. This is also the case in long-term care situations, where a new account number may be created each month in order to facilitate monthly billing.

#### Attribute 'Patient.status' of type 'Code' with cardinality of [1]

Indicates the state of the Patient's record, as defined in the state-transition model in the HL7 RIM. Examples include Active, Pending, Terminated, etc. Additional states might be defined such as 'Temporary' or 'Permanent'.

## «Role» Class: PatientContactParty

Person, such as sex and date of birth, are irrelevant to the usage. The HL7 Role class allows for names and addresses on the Role, which technically should be only those names or addresses as the relate to the role (i.e., as they differ from those in Person class), but since these are available for use, we are utilizing them in this manner, even though it is somewhat irregular.

#### Attribute 'PatientContactParty.contactCategory' of type 'Code' with cardinality of [1]

Indicates the circumstances under which this person is the contact party for the person identified in the owning Person class.

#### Attribute 'PatientContactParty.effectiveDateRange' of type 'TimeInterval' with cardinality of [1]

The date range during which this person is a contact party for the patient.

#### Attribute 'PatientContactParty.legalname' of type 'PersonName' with cardinality of [0..1]

The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc.

#### Attribute 'PatientContactParty.mobilePhone' of type ' Telecommunications' with cardinality of [1]

A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business.

#### Attribute 'PatientContactParty.primaryHomeAddress' of type ' Address' with cardinality of [1]

A communications address for the person's primary place of residence.

Attribute 'PatientContactParty.primaryHomePhone' of type 'Telecommunications' with cardinality of

The phone number of a person at their primary home, to reach a person after business hours.

#### Attribute 'PatientContactParty.workPhone' of type 'Telecommunications' with cardinality of [1]

The phone number for a person at their office location. First choice for business related contacts during business hours.

### «Person» Class: Person

This class represents a human being of interest to the enterprise. The person may potentially play many different roles, including those of a patient, a provider, or an employee. It is noted that the same person may play different roles at different times. For example, an employee may also be a licensed healthcare provider and may also at times be a patient.

#### Association 'Person.asEmployee' of type 'Employee' with cardinality of [\*]

Represents information about a person while in the role of an employee of some organization.

#### Association 'Person.asMilitary' of type ' USUniformedServicesPerson' with cardinality of [0..1]

Represents information about a person while in the role of a member of the armed forces.

#### Association 'Person.asPractitioner' of type 'IndividualProvider' with cardinality of [0..1]

Represents information about a person who is authorized to provide health care services in the role of practitioner for a health care provider organization. The role of practitioner includes all functions performed for a health care provider organization in order to provide patient care and treatment.

#### Attribute 'Person.birthAddress' of type 'BirthAddress' with cardinality of [0..1]

The city, state (or other designation such as province or region) and country where a person was born. Used for both identification and statistical purposes.

#### Association 'Person.citizen' of type 'Citizen' with cardinality of [\*]

'A native or naturalized member of a state or nation who owes allegiance to its government and is entitled to its protection' - Dictionary.com

#### Attribute 'Person.educationLevel' of type 'Code' with cardinality of [0..1]

'The highest level of education a person achieved.' HL7 RIM. This property is a code, examples of which include: Elementary school; high school or secondary school degree complete; college or baccalaureate degree complete.

#### Attribute 'Person.ethnicity' of type 'Code' with cardinality of [\*]

The self-reported cultural group(s) with which the person identifies him/herself. This property may contain more than one distinct ethnicity for a given person, identified in no particular order.

#### Association 'Person.language' of type 'LanguageCapability' with cardinality of [\*]

Represents the language communication capabilities for a Person.

#### Attribute 'Person.legalname' of type 'PersonName' with cardinality of [0..1]

The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc.

#### Attribute 'Person.livingArrangement' of type 'Code' with cardinality of [0..1]

'The housing situation of a person. This attribute is used for discharge planning, social service assessment, and psychosocial evaluation.' HL7 RIM.

#### Attribute 'Person.maritalStatus' of type 'Code' with cardinality of [0..1]

'The domestic partnership status of a person.' HL7 V3 RIM. This property is a code, examples of which include 'Married', 'Divorced', and 'Single'.

#### Attribute 'Person.mobilePhone' of type 'Telecommunications' with cardinality of [1]

A telecommunication device that moves and stays with its owner. Suitable for urgent matters, the mobile phone is not the first choice for routine business.

#### Attribute 'Person.mothersIdentifier' of type ' II' with cardinality of [\*]

<spanstyle="FONT-FAMILY: 'Times New Roman','serif'; FONT-SIZE: 10pt; mso-fareast-font-family:
'Times New Roman'; mso-ansi-language: EN-US; mso-fareast-language: DE; mso-bidi-language:
AR-SA">Thisfield is used, for example, as a link field for newborns.<span style="mso-spacerun: yes"></span> Typically a patientID or account number may be used.<span style="mso-spacerun: yes"></span> This field can contain multiple identifiersfor the same mother.</span>

#### Attribute 'Person.mothersMaidenName' of type 'String' with cardinality of [0..1]

This is the birth family name of the person's mother, also known as her 'maiden name'. This property is typically used to distinguish two persons who may have similar or identical names, or to verify a person's identity.

#### Attribute 'Person.pager' of type 'Telecommunications' with cardinality of [1]

A paging device suitable to solicit a callback or to leave a very short message.

#### Attribute 'Person.primaryHomeAddress' of type ' Address' with cardinality of [1]

A communications address for the person's primary place of residence.

#### Attribute 'Person.primaryHomeEmail' of type 'Telecommunications' with cardinality of [1]

The email address that a person uses while at their primary home, to reach a person after business hours.

#### Attribute 'Person.primaryHomePhone' of type 'Telecommunications' with cardinality of [1]

The phone number of a person at their primary home, to reach a person after business hours.

#### Attribute 'Person.race' of type 'Code' with cardinality of [\*]

'A group of people united or classified together on the basis of common history, nationality, or geographic distribution.' American Heritage Dictionary. 'A value representing the race of a person.' HL7 V3 RIM. This property may contain more than one race for a given person, identified in no particular order.

#### Association 'Person.relatedPerson' of type 'RelatedPerson' with cardinality of [\*]

Represents a person playing role of related person as identified by the person who is of primary interest to the enterprise. This role is only created if a person is related to another person by blood or by legal contract. For example, could be spouse, son, aunt, mother, etc. However, a friend is not a related person.

#### Attribute 'Person.religiousAffiliation' of type 'Code' with cardinality of [0..1]

'The primary religious preference of a person (e.g. Hinduism, Islam, Roman Catholic).' HL7 V3 RIM. This property is used primarily to accommodate the person's religious preferences in clinical settings.

#### Attribute 'Person.ssn' of type ' Id' with cardinality of [0..1]

A nine digit identification number assigned to a person by the US Social Security Administration. Used primarily for identification purposes. Note that HIPAA forbids the use of SSN as a primary identifier.

#### Attribute 'Person.temporaryAddress' of type ' Address' with cardinality of [1]

An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation.

#### Attribute 'Person.temporaryPhone' of type 'Telecommunications' with cardinality of [1]

An address at which a person may be contacted while away from their primary home residence. For example, the person may be staying at a hotel to be nearer to a treatment facility, or while on vacation.

#### Attribute 'Person.workAddress' of type ' Address' with cardinality of [1]

The person's office address. First choice for business related contacts during business hours.

#### Attribute 'Person.workEmail' of type 'Telecommunications' with cardinality of [1]

The email address that a person uses while at their place of business. First choice for business related contacts during business hours.

#### Attribute 'Person.workPhone' of type 'Telecommunications' with cardinality of [1]

The phone number for a person at their office location. First choice for business related contacts during business hours.

## «Entity» Class: Population

'2.a) a body of persons or individuals having a quality or characteristic in common. 3) a group of individual persons, objects, or items from which samples are taken for statistical measurement' -

Merriam-Webster's Medical Dictionary

Attribute 'Population.category' of type 'Code' with cardinality of [1]

A categorization of the population

Attribute 'Population.description' of type 'String' with cardinality of [1]

A textual description of the population

Attribute 'Population.id' of type ' Id' with cardinality of [1]

Uniquely identifies the population.

### «Act» Class: Practicum

'A school or college course, especially one in a specialized field of study, that is designed to give students supervised practical application of previously studied theory' - American Heritage Dictionary. This class represents information about the practical educational experience of an Individual Healthcare Provider, such as an internship.

Attribute 'Practicum.practicumCategory' of type 'Code' with cardinality of [1]

Categorizes the type of practical experience the Individual Healthcare Provider has undergone. Example values include Internship, Residency, etc.

## «Role» Class: PrescibingProvider

Contains information specific to practitioners who are licensed to prescribe medications, especially controlled substances.

Attribute 'PrescibingProvider.controlledSubstanceLicenseld' of type ' Id' with cardinality of [1] Identifies the license under which the practitioner is authorized to prescribe controlled medications.

Attribute 'PrescibingProvider.effectiveDateRange' of type 'TimeInterval' with cardinality of [1]

The date range during which this practitioner is authorized to prescribe medications under the associated deald.

Attribute 'PrescibingProvider.licenseCategory' of type 'Code' with cardinality of [1]

A classification of the provider's license.

Association 'PrescibingProvider.licensingJurisdiction' of type 'Jurisdiction' with cardinality of [1]

Identifies the state or jurisdiction which authorized the Healthcare Provider to prescribe medications Note that a state or jurisdiction is an Organization.

Attribute 'PrescibingProvider.status' of type 'Code' with cardinality of [1]

Indicates the current state of the provider's license. Potential values include: Pending, Active, Terminated.

### «Act» Class: ProviderEducation

Represents information about the educational experience of an Individual Healthcare Provider. This includes both formal training resulting in some sort of degree or certification, as well as practical experience such as an internship.

Attribute 'ProviderEducation.dateRange' of type 'TimeInterval' with cardinality of [1]

Contains the dates (start and end) during which the provider's education took place.

Association 'ProviderEducation.educationalInstitution' of type ' EducationalInstitution' with cardinality of [1]

An organization created to provide educational instruction. Specifically, a school or institution of higher learning.

### «Role» Class: RelatedPerson

This class contains information on persons who are playing the role of a related person to the person identified in the associated (or 'owning') Person class. This role is only created if a person is related to another person by blood or by legal contract. For example, could be spouse, child, parent, aunt, etc. However, a friend is not a related person. Note that because all we need is the person's name and contact information (address, phone numbers), this class does not have an association to the Person class (although logically it should). This is because the other properties of Person, such as sex and date of birth, are irrelevant to the usage. The HL7 Role class allows for names and addresses on the Role, which technically should be only those names or addresses as they relate to the role (i.e., as they differ from those in Person class), but since these are available for use, we are utilizing them in this manner, even though it is somewhat irregular. Note that employment status and occupation are included for certain financial eligibility determinations.

Association 'RelatedPerson.asEmployee' of type 'Employee' with cardinality of [\*]

Represents information about a person while in the role of an employee of some organization.

Attribute 'RelatedPerson.effectiveDateRange' of type 'TimeInterval' with cardinality of [1]

The date range during which this person is a contact party for the patient.

Attribute 'RelatedPerson.legalname' of type 'PersonName' with cardinality of [1]

The name by which a person is known or legally identified such as the name on a driver's license or passport. Note that the datatype for this property is a PersonName, which includes the various parts that make up a person's name such as family name, prefixes, suffixes, etc.

#### Attribute 'RelatedPerson.relationshipCategory' of type 'Code' with cardinality of [0..1]

Indicates how the person is related to the person identified in the owning Person class. Examples include Spouse, Child, Parent, Legal Guardian, etc.

#### Attribute 'RelatedPerson.status' of type 'Code' with cardinality of [1]

The status of the record of the relationship with the person identified in the Person class. Example values include Active, Deprecated, etc. Paired with the effectiveDateRange which indicates the valid range of dates for which this person is a relation.

## «Role» Class: ResearchSubject

A physical entity which is the primary unit of operational and/or administrative interest in a study. For example, a person who is registered in a study as a recipient of an investigational product or as a control. May also include individuals who are being screened for studies, or individuals participating in observational or other studies. Other examples may include a pacemaker, a fuse that can be used in medical devices, a cow, a farm, a pen of pigs, a tissue sample from a tissue bank, etc. NOTE: StudySubjects within a study are all of the same type. An entity registered in a study is not part of another entity registered in the same study.

## «Act» Class: RuledIncompetent

In cases where the patient has been ruled to be incompetent to make decisions about their own care, this class identifies the organization which made such ruling, and the date upon which it occurred.

#### Attribute 'RuledIncompetent.date' of type 'PointInTime' with cardinality of [1]

Contains the actually date and time stamp that the patient was ruled incompetent.

#### Attribute 'RuledIncompetent.id' of type ' Id' with cardinality of [1]

An identification for the record of the event in which a patient has been ruled to be incompetent to make decisions regarding their own care.

#### Attribute 'RuledIncompetent.organization' of type 'Organization' with cardinality of [1]

Identifies the organization which ruled the patient to be incompetent to make decisions about their own care.

### «Role» Class: Specialty

A specialty in medicine is a branch of medical science. After completing medical school, physicians or surgeons usually further their medical education in a specific specialty of medicine by completing a

multiple year residency. Medical practitioners who engage in a medical specialty are known as medical specialists. Specialists may be Board Eligible or Board Certified. Board certified in medicine means a physician has taken and passed a medical specialty examination. Board eligible, by contrast, means that a physician has completed the requirements for admission to a medical specialty board examination but has not taken and passed the examination. For example, a physician must perform 3 years of training in an approved pediatric residency to be board eligible and then successfully complete a comprehensive written examination to be certified by the American Board of Pediatrics.

Attribute 'Specialty.specialty' of type 'Code' with cardinality of [1]

A code identifying the branch of medical science in which the provider has chosen to specialize.

### «Employee» Class:

### **USUniformedServicesPerson**

This class represents information about a person while in the role of a member of the United States Uniformed Services, which includes military and Public Health Service members.

Attribute 'USUniformedServicesPerson.grade' of type 'Code' with cardinality of [1]

A military, naval, or civil service rank

Attribute 'USUniformedServicesPerson.rank' of type 'Code' with cardinality of [1]

An official position or grade; e.g., the rank of sergeant.

### «Patient» Class: VAPatient

A subtype of HumanPatient that contains additional properties unique to the needs of the Department of Veterans Affairs.

#### Attribute 'VAPatient.assignedName' of type ' PersonName' with cardinality of [0..1]

The name assigned to a person where the person's actual legal or pseudonym is to remain anonymous or is unknown. If this property is not empty, its contents are used for publication and for searches - even if there are other names present. This property is cleared to null values when it is no longer to be used. When this property is empty, the pseudonym or legal name is to be used.

#### Attribute 'VAPatient.confidentialAddress' of type ' Address' with cardinality of [0..1]

A confidential address for the Patient that is used for correspondence. When producing correspondence, the Confidential Address is used first; if it is empty, then the Temporary address is used; if it is empty, then the Permanent address is used. This property contains the actual address - not the circumstances under which the temporary address is to be used. The one or more uses of this address are

indicated in the confidentialAddressReasonCategory property.

#### Attribute 'VAPatient.confidentialAddressReasonCategory' of type ' Code' with cardinality of [\*]

Indicates the circumstances under which correspondence should be addressed to the Patient's confidential address. Examples include: Eligibility/enrollment, Appointment scheduling, Copayments/billing, or Medical records.

#### Attribute 'VAPatient.pseudonym' of type 'PersonName' with cardinality of [0..1]

An alternate name by which the person is known.

#### Association 'VAPatient.ruledIncompetent' of type 'RuledIncompetent' with cardinality of [\*]

In cases where the patient has been ruled to be incompetent to make decisions about their own care, this identifies the organization which made such ruling, and the date upon which it occurred.

### «Person» Class: VAPerson

A subtype of Person that contains additional properties unique to the needs of the Department of Veterans Affairs.

#### Attribute 'VAPerson.alias' of type ' PersonName' with cardinality of [\*]

A name assigned to a person either because their real name is not known (e.g.,, an unconscious person brought into an emergency room), or because the person is a highly visible person (e.g., a celebrity or a prominent politician) whose real name should be obscured. It is noted that in the latter use case, a rigorous security capability should obviate the need for an alias field.

#### Attribute 'VAPerson.vPid' of type ' Id' with cardinality of [0..1]

A identifier assigned by the Department of Veterans Affairs to uniquely identify a Person. VPID stands for VA Person Identifier