

# **Primary Care: Family Health History Documentation Template**

## **Documentation Template: Conceptual Structure**

**Contract: VA118-16-D-1008, Task Order  
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**Department of Veterans Affairs (VA)**



**Knowledge Based Systems (KBS)  
Office of Informatics and Information Governance (OIIG)  
Clinical Decision Support (CDS)**

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# Primary Care: Family Health History Documentation Template: Documentation Template: Conceptual Structure

by Knowledge Based Systems (KBS), Office of Informatics and Information Governance (OIIG), and Clinical Decision Support (CDS)

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# Preface

**Table 1. Revision History**

| Date           | Life Cycle Event |
|----------------|------------------|
| June 14, 2018  | Published        |
| April 27, 2018 | Published        |
| April 27, 2018 | Reviewed         |
| March 7, 2018  | Created          |

**Table 2. Clinical White Paper Contributors**

| Name                    | Role   | Affiliation  |
|-------------------------|--------|--|
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**Table 3. Artifact Identifier**

| Domain                           | Artifact ID                          | Name |
|----------------------------------|--------------------------------------|------|
| urn:va.gov:kbs:knart:artifact:r1 | a5da18a9-4ee9-5531-8fe7-99ae417cdab2 | O31  |

---

# Artifact Applicability

**Table 4. Applicability Foci, Description and Codes**

| Focus           | Description                      | Code System | Code   | Value Set | Value Set Version |
|-----------------|----------------------------------|-------------|--|-----------|-------------------|
| TargetUser      | Provider to include Primary Care | SNOMED CT   | 453231000124104  Primary care provider (occupation)          | N/A       | N/A               |
| WorkflowSetting | Primary Care                     |             |  | N/A       | N/A               |
| ClinicalVenue   | Outpatient                       | SNOMED CT   | 33022008  Hospital-based outpatient department (environment) | N/A       | N/A               |
| PatientAgeGroup | Adult Patients                   | SNOMED CT   | 133936004  Adult (person)                                    | N/A       | N/A               |

---

# Models

**Table 5. Model References**

| Referenced Model           | Description                   |
|----------------------------|-------------------------------|
| urn:solor.io:anf-model:1.0 | VA Analysis Normal Form Model |

---

# Chapter 1. External Data Definitions

No externalData expression definitions and no trigger definitions are present.



---

## Chapter 2. Expression Definitions

**Table 2.1. familyMembersList**

|  |
|--|
| Expression: type=elm:List  |
| Annotation:  |
| Codes: elm:element[elm:Code]: [27733009  Sister (person)]elm:element[elm:Code]:<br>[70924004  Brother (person)]elm:element[elm:Code]: [66089001  Daughter<br>(person)]elm:element[elm:Code]: [65616008  Son (person)]elm:element[elm:Code]:<br>[72705000  Mother (person)]elm:element[elm:Code]: [394859001  Maternal<br>grandmother (person)]elm:element[elm:Code]: [394857004  Maternal grandfather<br>(person)]elm:element[elm:Code]: [719765007  Maternal half sister (person)]elm:element[elm:Code]:<br>[719766008  Maternal half brother (person)]elm:element[elm:Code]: [736454006  <br>Maternal aunt (person)]elm:element[elm:Code]: [442031000124102  Maternal uncle<br>(person)]elm:element[elm:Code]: [6839005  Father (person)]elm:element[elm:Code]:<br>[394858009  Paternal grandmother (person)]elm:element[elm:Code]: [394856008  <br>Paternal grandfather (person)]elm:element[elm:Code]: [719764006  Paternal half sister<br>(person)]elm:element[elm:Code]: [719762005  Paternal half brother (person)]elm:element[elm:Code]:<br>[736455007  Paternal aunt (person)]elm:element[elm:Code]: [442041000124107  Paternal uncle<br>(person)]elm:element[elm:Code]: [TSR-NoCode] |

---

## Chapter 3. Family Structure

Consider using this section when a detailed genetic history is the intent. For routine clinical care, consider beginning with the next section. If you do complete this section, include both living and deceased family members.

# prompt: How many brothers do you have?  
response: Integer (Single)

# prompt: How many sisters do you have?  
response: Integer (Single)

# prompt: How many sons do you have?  
response: Integer (Single)

# prompt: How many daughters do you have?  
response: Integer (Single)

# prompt: How many brothers does your mother have? (your uncles)  
response: Integer (Single)

# prompt: How many sisters does your mother have? (your aunts)  
response: Integer (Single)

# prompt: How many brothers does your father have? (your uncles)  
response: Integer (Single)

# prompt: How many sisters does your father have? (your aunts)  
response: Integer (Single)

---

# Chapter 4. Family Health History

## ❖ History of Autoimmune Disorders

---

# prompt: Autoimmune Disorder  
itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a |Observation  
procedure (procedure)] ->(363702006 |Has focus (attribute))-  
>[85828009 |Autoimmune disease (disorder)]  
response: String (Single)  
# prompt: Family Member  
response: Code (Single)  
# prompt: Age at Autoimmune Disorder Diagnosis  
response: Integer (Single)  
# prompt: Autoimmune Disorder Detail  
response: String (Single)  
# prompt: Died as result of disease?  
response: Boolean (Single)

## ❖ History of Allergic Disorders

---

# prompt: Allergic Disorder  
itemCode: TSR-NoCode  
response: String (Single)  
# prompt: Family Member  
response: Code (Single)  
# prompt: Age at Allergic Disorder Diagnosis  
response: Integer (Single)  
# prompt: Autoimmune Disorder Detail  
response: String (Single)  
# prompt: Died as result of disease?  
response: Boolean (Single)

## ❖ History of Cancers

---

# prompt: Cancer  
itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a |Observation  
procedure (procedure)] ->(363702006 |Has focus (attribute))-  
>[363346000 |Malignant neoplastic disease (disorder)]  
response: String (Single)  
# prompt: Family Member  
response: Code (Single)  
# prompt: Family Member Age at Diagnosis  
response: Integer (Single)  
# prompt: Cancer Detail  
response: String (Single)  
# prompt: Died as result of disease?

|                                      |  |
|--------------------------------------|--|
|                                      | response: Boolean (Single)   |
| ❖ History of Congenital Disorders    | <p># prompt: Congenital Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[66091009  Congenital disease (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Congenital Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>          |
| ❖ History of Developmental Disorders | <p># prompt: Developmental Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[5294002  Developmental disorder (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Developmental Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p> |
| ❖ History of Dermatologic Disorders  | <p># prompt: Dermatologic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[95320005  Disorder of skin (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Dermatologic Detail</p> <p>response: String (Single)</p>   |

|  |  |
|--|--|
|  | <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>  |
| ❖ History of Endocrine Disorders         | <p># prompt: Endocrine Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[362969004  Disorder of endocrine system (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Endocrine Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p> |
| ❖ History of Metabolic Disorders         | <p># prompt: Metabolic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[75934005  Metabolic disease (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Metabolic Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>             |
| ❖ History of Gastroenterologic Disorders | <p># prompt: Gastroenterologic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[119292006  Disorder of gastrointestinal tract (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Gastroenterologic Disorder Detail</p>  |

|                                      |   |
|--------------------------------------|---|
|                                      | <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>  |
| ❖ History of Genitourinary Disorders | <p># prompt: Genitourinary Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[42030000  Disorder of the genitourinary system (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Genitourinary Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p> |
| ❖ History of Reproductive Disorders  | <p># prompt: Reproductive Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[362968007  Disorder of reproductive system (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Reproductive Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>       |
| ❖ History of Hematologic Disorders   | <p># prompt: Hematologic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[414022008  Disorder of cellular component of blood (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p>   |

|   |  |
|---|--|
|   | <p># prompt: Hematologic Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>  |
| ❖ | <p>History of Hereditary Disorders</p> <hr/> <p># prompt: Hereditary Condition</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[32895009  Hereditary disease (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Hereditary Condition Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p> |
| ❖ | <p>History of Infectious Diseases</p> <hr/> <p># prompt: Infectious Disease</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[40733004  Infectious disease (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Infectious Disease Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>      |
| ❖ | <p>History of Musculoskeletal Disorders</p> <hr/> <p># prompt: Musculoskeletal Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[928000  Disorder of musculoskeletal system (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p>  |

|   |   |
|---|---|
|   | <p>response: Integer (Single)</p> <p># prompt: Musculoskeletal Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>   |
| ❖ | <p>History of Neurologic Disorders</p> <hr/> <p># prompt: Neurologic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[118940003  Disorder of nervous system (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Neurologic Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p> |
| ❖ | <p>History of Ophthalmic Disorders</p> <hr/> <p># prompt: Ophthalmic Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[371409005  Disorder of eye region (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis</p> <p>response: Integer (Single)</p> <p># prompt: Ophthalmic Disorder Detail</p> <p>response: String (Single)</p> <p># prompt: Died as result of disease?</p> <p>response: Boolean (Single)</p>     |
| ❖ | <p>History of Psychiatric Disorders</p> <hr/> <p># prompt: Psychiatric Disorder</p> <p>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation procedure (procedure)] -&gt;(363702006  Has focus (attribute))-&gt;[74732009  Mental disorder (disorder)]</p> <p>response: String (Single)</p> <p># prompt: Family Member</p> <p>response: Code (Single)</p>  |



|   |  |
|---|--|
|   | <p># prompt: Family Member Age at Diagnosis<br/>response: Integer (Single)</p> <p># prompt: Psychiatric Disorder Detail<br/>response: String (Single)</p> <p># prompt: Died as result of disease?<br/>response: Boolean (Single)</p>   |
| ❖ | <p>History of Behavioral Health Disorders</p> <hr/> <p># prompt: Behavioral Health Disorder<br/>itemCode: TSR-NoCode<br/>response: String (Single)</p> <p># prompt: Family Member<br/>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis<br/>response: Integer (Single)</p> <p># prompt: Behavioral Health Disorder Detail<br/>response: String (Single)</p> <p># prompt: Died as result of disease?<br/>response: Boolean (Single)</p>   |
| ❖ | <p>History of Pulmonary Disorders</p> <hr/> <p># prompt: Pulmonary Disorder<br/>itemCode: [a997cc03-3e99-40eb-833a-6374c7750a3a  Observation<br/>procedure (procedure)] -(363702006  Has focus (attribute))-<br/>&gt;[19829001  Disorder of lung (disorder)]<br/>response: String (Single)</p> <p># prompt: Family Member<br/>response: Code (Single)</p> <p># prompt: Family Member Age at Diagnosis<br/>response: Integer (Single)</p> <p># prompt: Pulmonary Disorder Detail<br/>response: String (Single)</p> <p># prompt: Died as result of disease?<br/>response: Boolean (Single)</p> |

---

# Chapter 5. Family Members with Selected Condition

## Family Members with Selected Condition

prompt: Family Member with Selected Condition

response: Code (Single)

response EnumerationConstraint (List)

range:

item: Sister

item: Brother

item: Daughter

item: Son

item: Mother

item: Maternal Grandmother

item: Maternal Grandfather

item: Maternal Half-Sister

item: Maternal Half-Brother

item: Maternal Aunt

item: Maternal Uncle

☞ item: Other

Details

---

item: Father

item: Paternal Grandmother

item: Paternal Grandfather

item: Paternal Half-Sister

item: Paternal Half-Brother

item: Paternal Aunt

item: Paternal Uncle

prompt: Living

response: Code (Multiple)

response EnumerationConstraint (List)

range:

item: Yes([a997cc03-3e99-40eb-833a-6374c7750a3a |Observation procedure (procedure)]- ->[363702006 |Has focus (attribute)]->[365472006 |Finding of relatives surviving (finding)])

item: No([a997cc03-3e99-40eb-833a-6374c7750a3a |Observation procedure (procedure)]- ->[363702006 |Has focus (attribute)]->[365474007 |Finding of details of family (finding)]->[363714003 |Interprets (attribute)]->[fd38bb5d-4f5d-43b5-9b22-b648079ccf4c |Age at time of death (observable entity)])

item: Unknown

☞ item: Other

Details

---

prompt: Age Deceased?

response: Integer (Single)

prompt: Other comments about this family member

response: String (Single)

---

# Chapter 6. Patient Genetic Testing History

Patient Genetic Testing History

❖ Patient Genetic Testing Done?

❖ prompt: Yes

response: Boolean (Single)

prompt: Test

response: Code (Single)

response EnumerationConstraint (List)

range:

item:

prompt: Results

response: Tuple (Single)

prompt: Additional Genetic Testing/Results?

response: Boolean (Single)

❖ Patient Genetic Testing Done?

prompt: Additional genetic testing history

response: String (Single)

---

# Chapter 7. Historian

Historian

prompt: Relationship to Patient

response: String (Single)

---

# Chapter 8. Tabular List

## *Terminology Service Request (TSR) Mappings*

**Table 8.1. Terminology Versions**

| Name      | Identifier             | Version                        |
|-----------|------------------------|--------------------------------|
| SNOMED CT | 2.16.840.1.113883.6.96 | United States Edition 20180301 |

**Table 8.2. Terminology References**

| System    | Code   | Display Text <sup>a</sup>        | References <sup>b</sup> |
|-----------|--|----------------------------------|-------------------------|
| SNOMED CT | 133936004  Adult (person)                                    | Adult Patients                   | 1                       |
| SNOMED CT | 27733009  Sister (person)                                    | Precoordinated Expression        | 1                       |
| SNOMED CT | 33022008  Hospital-based outpatient department (environment) | Outpatient                       | 1                       |
| SNOMED CT | 394856008  Paternal grandfather (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 394857004  Maternal grandfather (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 394858009  Paternal grandmother (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 394859001  Maternal grandmother (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 405824009  Genetic test (procedure)                          |                                  | 1                       |
| SNOMED CT | 442031000124102  Maternal uncle (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 442041000124107  Paternal uncle (person)                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 453231000124104  Primary care provider (occupation)          | Provider to include Primary Care | 1                       |
| SNOMED CT | 65616008  Son (person)                                       | Precoordinated Expression        | 1                       |
| SNOMED CT | 66089001  Daughter (person)                                  | Precoordinated Expression        | 1                       |
| SNOMED CT | 6839005  Father (person)                                     | Precoordinated Expression        | 1                       |
| SNOMED CT | 70924004  Brother (person)                                   | Precoordinated Expression        | 1                       |
| SNOMED CT | 719762005  Paternal half brother (person)                    | Precoordinated Expression        | 1                       |
| SNOMED CT | 719764006  Paternal half sister (person)                     | Precoordinated Expression        | 1                       |

| System    | Code   | Display Text <sup>a</sup> | References <sup>b</sup> |
|-----------|--|---------------------------|-------------------------|
| SNOMED CT | 719765007  Maternal half sister (person)   | Precoordinated Expression | 1                       |
| SNOMED CT | 719766008  Maternal half brother (person)  | Precoordinated Expression | 1                       |
| SNOMED CT | 72705000  Mother (person)  | Precoordinated Expression | 1                       |
| SNOMED CT | 736454006  Maternal aunt (person)  | Precoordinated Expression | 1                       |
| SNOMED CT | 736455007  Paternal aunt (person)  | Precoordinated Expression | 1                       |
| SNOMED CT | TSR-NoCode <sup>c</sup>  | Precoordinated Expression | 3                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[118940003  Disorder of nervous system (disorder)]         | Precoordinated Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[119292006  Disorder of gastrointestinal tract (disorder)] | Precoordinated Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[19829001  Disorder of lung (disorder)]                    | Precoordinated Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[32895009  Hereditary disease (disorder)]                  | Precoordinated Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[362968007  Disorder of reproductive system (disorder)]    | Precoordinated Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-6b34c775d03e  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[362969004  Disorder                                       | Precoordinated Expression | 1                       |

| System    | Code  | Display Text <sup>a</sup>              | References <sup>b</sup> |
|-----------|---|--|-------------------------|
|           | of endocrine system (disorder)]   |  |                         |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[363346000  Malignant neoplastic disease (disorder)]            | 0374c07503a2  Malignant Expression     | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[371409005  Disorder of eye region (disorder)]                  | 0374c07503a2  Disorder Expression      | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[40733004  Infectious disease (disorder)]                       | 0374c07503a2  Infectious Expression    | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[414022008  Disorder of cellular component of blood (disorder)] | 0374c07503a2  Disorder Expression      | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[42030000  Disorder of the genitourinary system (disorder)]     | 0374c07503a2  Disorder Expression      | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[5294002  Developmental disorder (disorder)]                    | 0374c07503a2  Developmental Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure (procedure)] ->(363702006  Has focus (attribute))->[66091009  Congenital disease (disorder)]                       | 0374c07503a2  Congenital Expression    | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-0374c07503a2  Observation procedure  | 0374c07503a2  Observation Expression   | 1                       |



| System    | Code   | Display Text <sup>a</sup>              | References <sup>b</sup> |
|-----------|--|--|-------------------------|
|           | (procedure)] ->(363702006<br> Has focus (attribute))-<br>>[74732009  Mental<br>disorder (disorder)]  |  |                         |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)] ->(363702006<br> Has focus (attribute))-<br>>[75934005  Metabolic<br>disease (disorder)]   | 6374c7750a3a<br>Observation Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)] ->(363702006<br> Has focus (attribute))-<br>>[85828009  Autoimmune<br>disease (disorder)]  | 6374c7750a3a<br>Observation Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)] ->(363702006<br> Has focus (attribute))-<br>>[928000  Disorder of<br>musculoskeletal system<br>(disorder)]   | 6374c7750a3a<br>Observation Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)] ->(363702006<br> Has focus (attribute))-<br>>[95320005  Disorder of<br>skin (disorder)]  | 6374c7750a3a<br>Observation Expression | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)]- -<br>>(363702006  Has focus<br>(attribute))->[365472006<br> Finding of relatives<br>surviving (finding)]  | 6374c7750a3a                           | 1                       |
| SNOMED CT | [a997cc03-3e99-40eb-833a-<br>6374c7750a3a<br> Observation procedure<br>(procedure)]- -<br>>(363702006  Has focus<br>(attribute))->[365474007  <br>Finding of details of family<br>(finding)]- ->(363714003<br> Interprets (attribute))-<br>>[fd38bb5d-4f5d-43b5-9b22-<br>b648079ccf4c  Age at<br>time of death (observable<br>entity)] | 6374c7750a3a                           | 1                       |

<sup>a</sup>If a code is used multiple times in the KNART, only the display text of the first instance is shown.

<sup>b</sup>Count of the number of times the given code system and code pair is used in the KNART.

<sup>c</sup>TSR-NoCode is a placeholder indicating a code was requested, but was not provided.

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# Chapter 9. Behavior Symbols

**Table 9.1. Group Organizational Behavior**

| Symbol | Name           | Definition  |
|--------|----------------|---|
| #      | Sentence Group | A group of related alternative actions is a sentence group if the item referenced by the action is the same in all the actions, and each action simply constitutes a different variation on how to specify the details for that item. For example, two actions that could be in a SentenceGroup are "aspirin, 500 mg, 2 times per day" and "aspirin, 300 mg, 3 times per day". In both cases, aspirin is the item referenced by the action, and the two actions represent two different options for how aspirin might be ordered for the patient. Note that a SentenceGroup would almost always have an associated selection behavior of "AtMostOne", unless it's a required action, in which case, it would be "ExactlyOne". |
| #      | Logical Group  | A group with this behavior logically groups its sub-elements, and may be shown as a visual group to the end user, but it is not required to do so.  |
| ➤      | Visual Group   | Any group marked with this behavior should be displayed as a visual group to the end user.  |

**Table 9.2. Group Selection Behavior**

| Symbol | Name       | Definition  |
|--------|------------|---|
| #      | Any        | Any number of the items in the group may be chosen, from zero to all.   |
| #      | All        | All the items in the group must be selected as a single unit.   |
| #      | AllOrNone  | All the items in the group are meant to be chosen as a single unit: either all must be selected by the end user, or none may be selected. |
| #      | ExactlyOne | The end user must choose one and only one of the selectable items in the group. The user may not choose none of the items in the group.   |
| ⬠      | AtMostOne  | The end user may choose zero or at most one of the items in the group.  |
| ✱      | OneOrMore  | The end user must choose a minimum of one, and as many additional as desired.   |

**Table 9.3. Required Behavior**

| Symbol | Name  | Definition  |
|--------|-------|---|
| ◆      | Must  | An action with this behavior must be included in the actions processed by the end user; the end user may not choose not to include this action. |
| ◇      | Could | An action with this behavior may be included in the set of actions processed by the end user.   |

| Symbol | Name                 | Definition   |
|--------|----------------------|--|
| ➤      | MustUnlessDocumented | An action with this behavior must be included in the set of actions processed by the end user, unless the end user provides documentation as to why the action was not included. |

**Table 9.4. Precheck Behavior**

| Symbol | Name | Definition  |
|--------|------|---|
| ▲      | Yes  | An action with this behavior is one of the most frequent actions that is, or should be, included by an end user, for the particular context in which the action occurs. The system displaying the action to the end user should consider "pre-checking" such an action as a convenience for the user. |
| #      | No   | An action with this behavior is one of the less frequent actions included by the end user, for the particular context in which the action occurs. The system displaying the actions to the end user would typically not "pre-check" such an action.   |

**Table 9.5. Cardinality Behavior**

| Symbol | Name     | Definition   |
|--------|----------|--|
| ◆      | Single   | An action with this behavior may only be completed once.     |
| ❖      | Multiple | An action with this behavior may be repeated multiple times. |

**Table 9.6. Item Flags**

| Symbol | Name   | Definition  |
|--------|--------|---|
| ☞      | fillIn | This item, in a list entry, allows the user to enter a fill in value that is not present in the set of presented choices. |

**Table 9.7. Read Only Behavior**

| Symbol | Name | Definition   |
|--------|------|--|
| #      | true | For a particular action or action group, specifies whether the elements are read only. |

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# Appendix A. References

This appendix contains the list of related resources and supporting documents used in creating this KNART.

## List of References

### Related Resources

[CCWP] *Primary Care: Family Health History Clinical Content White Paper*

[CSD] *Primary Care: Family Health History Documentation Template Conceptual Structure Document*

[KVRpt] *Primary Care: Family Health History Documentation Template KNART Validation Report*

### Supporting Evidence

[CMS 2012] *Eligible Professional Meaningful Use Menu Set Measures: Measure 4 of 6: Stage 2: Family Health History: Center for Medicare and Medicaid ; cited October 2012. Available from: [https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2\\_EPMenu\\_4\\_FamilyHealthHistory.pdf](https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2_EPMenu_4_FamilyHealthHistory.pdf) (link [[https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2\\_EPMenu\\_4\\_FamilyHealthHistory.pdf](https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2_EPMenu_4_FamilyHealthHistory.pdf)])*

[VHA 2017] *Family health history: SMARTForm use case, version 1.2. SMARTForms Family Health History Use Case: U.S. Department of Veteran Affairs study; cited September 8, 2017. Available from: [V1.2\\_20150602.docx](#) (link [[V1.2\\_20150602.docx](#)])*

[NIH 2017] *My Family Health Portrait: A tool from the Surgeon General: U.S. National Institutes of Health cited December 21, 2017. Available from: <https://familyhistory.hhs.gov/FHH/html/index.html> (link [<https://familyhistory.hhs.gov/FHH/html/index.html>])*