

# **Cardiology: Inpatient Heparin Anticoagulation Protocol Order Set KNART Validation Report**

## **Order Set: Validation Report**

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



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

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

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## Table of Contents

|   |   |
|---|---|
| 1. Basic File and Well-formedness Tests ..... | 1 |
| 2. XSD Schema Checks .....                    | 2 |
| 3. Schematron Checks .....                    | 3 |
| 4. Terminology Checks via Ontoserver .....    | 4 |

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## List of Tables

|  |   |
|--|---|
| 1.1. Summary .....                       | 1 |
| 2.1. KAS Schema Validation Summary ..... | 2 |
| 3.1. Editorial Convention Check .....    | 3 |
| 4.1. Ontoserver Information .....        | 4 |
| 4.2. Terminology and ANF Usage .....     | 4 |
| 4.3. TSR Requested Codes .....           | 5 |
| 4.4. Other Unresolved .....              | 7 |

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# Chapter 1. Basic File and Well-formedness Tests

**Table 1.1. Summary**

| Information            | Value                            |
|------------------------|----------------------------------|
| File name              | CDSK_KRprt_OS_O27IPHeparin.xml   |
| File size              | 377.0 KB                         |
| Type                   | Order Set                        |
| Publication Date       | 06/18/2018                       |
| File Modification Date | 06/18/2018 13:38:19              |
| Well-formed XML        | YES                              |
| MD5                    | f88c41979df5063843e9ffb634312451 |

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# Chapter 2. XSD Schema Checks

**Table 2.1. KAS Schema Validation Summary**

| Information        | Value                            |
|--------------------|----------------------------------|
| KAS Schema Version | urn:hl7-org:knowledgeartifact:r1 |
| Schema File        | knowledgedocument.xsd            |
| Validation Errors  | 0                                |

---

# Chapter 3. Schematron Checks

**Table 3.1. Editorial Convention Check**

| Information                  | Value  |
|------------------------------|--|
| Editorial Schematron Version | ISO Schematron 2016  |
| Schema File                  | knart-L3-validation.sch, L3Validation.sch,<br>KnartStyle.sch |
| Validation Errors            | 0  |
| Validation Warnings          | 0  |

# Chapter 4. Terminology Checks via Ontoserver

**Table 4.1. Ontoserver Information**

| Information                   |         | Value   |
|-------------------------------|---------|---|
| Ontoserver URL                |         | <a href="https://ontoserver.hspconsortium.org/fhir">https://ontoserver.hspconsortium.org/fhir</a>   |
| Ontoserver Version            |         | 5.0   |
| Date of Code Checks           |         | 06/18/2018 13:38:48   |
| SNOMED                        | Version | <a href="http://snomed.info/sct/731000124108/version/20170901">http://snomed.info/sct/731000124108/version/20170901</a> , <a href="http://snomed.info/sct/900000000000207008/version/20170731">http://snomed.info/sct/900000000000207008/version/20170731</a> |
|                               | Codes   | 443237  |
| LOINC                         | Version | 2.61,2.63   |
|                               | Codes   | 126207  |
| RXNorm                        | Version | Does not exist  |
|                               | Codes   | 0   |
| v3 Code System EducationLevel | Version | 2016-03-23  |
|                               | Codes   | 9   |

**Table 4.2. Terminology and ANF Usage**

| Terminology References          |    |                                      |    |
|---------------------------------|----|--------------------------------------|----|
| Total Codes Used <sup>a</sup>   |    | 31                                   |    |
| Resolved <sup>b</sup>           |    | 19                                   |    |
| Unresolved <sup>c</sup>         | 12 | TSR Requested Codes <sup>d</sup>     | 1  |
|                                 |    | SOLOR Placeholder Codes <sup>e</sup> | 0  |
|                                 |    | Other Unresolved <sup>f</sup>        | 11 |
| ANF Model Reference Information |    |                                      |    |
| anf:ClinicalStatement           |    | 34                                   |    |
| anf:TSR-NoModel <sup>g</sup>    |    | 0                                    |    |

<sup>a</sup>Total number of unique codes referenced in the KNART XML.

<sup>b</sup>Number of unique codes used in the KNART XML and present in ontoserver.

<sup>c</sup>Number of unique codes used in the KNART XML and not found in ontoserver.

<sup>d</sup>Number of unique code system and code pairs referenced in the KNART XML with a placeholder ('TSR-NoCode').

<sup>e</sup>Number of unique codes in uuid form referenced in the KNART XML.

<sup>f</sup>Number of other unique codes not found in ontoserver, e.g. RXNorm codes.

<sup>g</sup>KAS elements modeled as 'anf:TSR-NoModel' indicates they cannot be modeled in the current version of ANF.



**Table 4.3. TSR Requested Codes**

|   | Information | Value   |
|---|-------------|---|
| 1 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 1465  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|   | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1465column=134]        |
| 2 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 1711  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|   | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1711column=134]        |
| 3 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 1944  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|   | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1944column=134]        |
| 4 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 2177  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|   | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=2177column=134]        |
| 5 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 2413  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|   | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=2413column=134]        |
| 6 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 2649  |
|   | Column      | 134   |
|   | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |

|    | Information | Value   |
|----|-------------|---|
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=2649column=134]        |
| 7  | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 2885  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=2885column=134]        |
| 8  | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 3120  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=3120column=134]        |
| 9  | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 3355  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=3355column=134]        |
| 10 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 3589  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=3589column=134]        |
| 11 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 3825  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=3825column=134]        |
| 12 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 4061  |
|    | Column      | 134   |

|    | Information | Value   |
|----|-------------|---|
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=4061column=134]        |
| 13 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 4300  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=4300column=134]        |
| 14 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 4537  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=4537column=134]        |
| 15 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 4774  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=4774column=134]        |
| 16 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 5011  |
|    | Column      | 134   |
|    | Message     | TSR requested for codeSystem: http://snomed.info/sct and code: TSR-NoCode |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=5011column=134]        |

**Table 4.4. Other Unresolved**

|   | Information | Value  |
|---|-------------|--|
| 1 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml   |
|   | Line        | 566  |
|   | Column      | 56   |
|   | Message     | Code 978755, codeSystem http://www.nlm.nih.gov/research/umls/rxnorm not found in Ontoserver. |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=566column=56]                                |

|   | Information | Value   |
|---|-------------|---|
| 2 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 622   |
|   | Column      | 56  |
|   | Message     | Code 978725, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.  |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=622column=56]   |
| 3 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 678   |
|   | Column      | 56  |
|   | Message     | Code 978744, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.  |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=678column=56]   |
| 4 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 734   |
|   | Column      | 56  |
|   | Message     | Code 978746, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.  |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=734column=56]   |
| 5 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 790   |
|   | Column      | 56  |
|   | Message     | Code 1162664, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver. |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=790column=56]   |
| 6 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 863   |
|   | Column      | 56  |
|   | Message     | Code 1162664, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver. |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=863column=56]   |
| 7 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 936   |
|   | Column      | 56  |
|   | Message     | Code 861363, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.  |
|   | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=936column=56]   |
| 8 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|   | Line        | 992   |
|   | Column      | 56  |

|    | Information | Value   |
|----|-------------|---|
|    | Message     | Code 1361574, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver. |
|    | Reference   | KNART [file:CDSK_KRprt_OS_O27IPHeparin.xml#line=992column=56]   |
| 9  | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 1065  |
|    | Column      | 56  |
|    | Message     | Code 1856274, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver. |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1065column=56]   |
| 10 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 1124  |
|    | Column      | 56  |
|    | Message     | Code 0, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.       |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1124column=56]   |
| 11 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 1180  |
|    | Column      | 56  |
|    | Message     | Code 861356, codeSystem <a href="http://www.nlm.nih.gov/research/umls/rxnorm">http://www.nlm.nih.gov/research/umls/rxnorm</a> not found in Ontoserver.  |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=1180column=56]   |
| 12 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 5204  |
|    | Column      | 154   |
|    | Message     | Code 1421000205106, codeSystem <a href="http://snomed.info/sct">http://snomed.info/sct</a> not found in Ontoserver.                                     |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=5204column=154]  |
| 13 | FileName    | CDSK_KRprt_OS_O27IPHeparin.xml  |
|    | Line        | 5219  |
|    | Column      | 154   |
|    | Message     | Code 1421000205106, codeSystem <a href="http://snomed.info/sct">http://snomed.info/sct</a> not found in Ontoserver.                                     |
|    | Reference   | KNART<br>[file:CDSK_KRprt_OS_O27IPHeparin.xml#line=5219column=154]  |