Women's Health: Reproductive Health Order Set

Order Set: Conceptual Structure

Contract: VA118-16-D-1008, Task Order (TO): VA-118-16-F-1008-0007, CLIN0008BA

Department of Veterans Affairs (VA)



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

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Women's Health: Reproductive Health Order Set: Order Set: 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	
May 23, 2018	Published	
May 23, 2018	Reviewed	
March 21, 2018	Created	

Table 2. Clinical White Paper Contributors

Name	Role	Affiliation
C. Yvette Williams-Harris, MD MPH	Author	Physician, 1670 Clairmont Rd Atlanta, GA 30033
Megan Geber, MD MPH	Author	Physician, VA Boston HealthCare System, 150 South Huntington Ave Boston, MA 02130
Caitlin M. Cusack, MD MPH	Author	Contractor - Physician Informaticist, Office of Women's Health Services, 8455 Colesville Rd, 12th Floor Silver Spring, MD 20910

Table 3. Artifact Identifier

Domain	Artifact ID	
urn:va.gov:kbs:knart:artifact:r1	adf20fe0-7b1c-555b-958c-1fdc00de60bf	O17

Artifact Applicability

Table 4. Applicability Foci, Description and Codes

Focus	Description	Code System	Code	Value Set	Value Set Version
PatientAgeGroup	>=13 and <52 years of age.			N/A	N/A
PatientGender	Female	SNOMED CT	248152002 Female (finding)	N/A	N/A
ClinicalVenue	Outpatient	SNOMED CT	33022008 Hospital-based outpatient department (environment)	N/A	N/A
TargetUser	Primary Care	SNOMED CT	453231000124104 Primary care provider (occupation)	N/A	N/A
TargetUser	Designated women's health providers			N/A	N/A
TargetUser	Gynecologist			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

Definitions

Table 1.1. Disqualifications

Expression: type=elm:Retrieve , dataType=anf:ClinicalStatement, codeProperty=topic, dateProperty=dateTime

Annotation:

Codes: elm:element[elm:Code]: [236886002 | Hysterectomy (procedure)|]elm:element[elm:Code]: [76876009 | Bilateral oophorectomy (procedure)|]elm:element[elm:Code]: [77543007 | Ligation of fallopian tube (procedure)|]elm:element[elm:Code]: [|Observation procedure (procedure)] ->(363702006 | Has focus (attribute))->[76498008 | Postmenopausal state (finding)]]elm:element[elm:Code]: [|Observation procedure (procedure)] ->(363702006 | Has focus (attribute))-d5d1c4f4-5d27-4e48-94b9-866c5c08f163 | Failure to conceive (finding)]]

Triggers

No trigger definitions are present.

Chapter 2. Expression Definitions

Table 2.1. PatientAge

Expression: type=elm:SingletonFrom

Annotation:

Codes: elm:value[elm:Code]: [398166005 | Performed (qualifier value)|]elm:value[elm:Code]: [[a997cc03-3e99-40eb-833a-6374c7750a3a | Observation procedure (procedure)] ->(363702006 | Has focus (attribute))->[105726004 | Age AND/OR growth finding (finding)]]

Table 2.2. PatientGender

Expression: type=elm:SingletonFrom

Annotation:

Codes: elm:element[elm:Code]: [[a997cc03-3e99-40eb-833a-6374c7750a3a |Observation procedure

(procedure)] ->(363702006 | Has focus (attribute))->[248152002 | Female (finding)]]

Chapter 3. Laboratory Tests

If the patient is not known to be pregnant, then consider ordering a pregnancy test.

• quantitative human chorionic gonadotropin-serum now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 167037004 | Measurement of

serum total human chorionic gonadotropin (procedure)|

priority: Precoordinated Expression 50811001 | Routine

(qualifier value)|

• qualitative human chorionic gonadotropin-urine now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 104405006 | Urine pregnancy

test, by visual color comparison methods

priority: Precoordinated Expression 50811001 | Routine

(qualifier value)

Sexually Transmitted Infection Screening

chlamydia nucleic acid amplification testing vaginal swab now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [398452009 | Chlamydia trachomatis nucleic acid assay (procedure)]->(116686009 | Has specimen (attribute))->[258520000 | Vaginal swab (specimen)]

priority: Precoordinated Expression 50811001 | Routine

(qualifier value)

gonorrhea nucleic acid amplification testing vaginal swab now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [398381009 | Neisseria gonorrhoeae nucleic acid assay (procedure)] ->(116686009

|Has specimen (attribute))->[258520000 |Vaginal swab

(specimen)]

priority: Precoordinated Expression 50811001 |Routine

(qualifier value)

HIV screen-serum now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 171121004 |Human immunodeficiency virus screening (procedure)|

unstructured[0]: Serum

priority: Precoordinated Expression 50811001 | Routine (qualifier value) \mid

Chapter 4. Point of Care Tests

Point of Care Urine pregnancy test now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |Requested (qualifier value)|

topic: Precoordinated Expression 104405006 |Urine pregnancy test, by visual color comparison methods (procedure)|

priority: Precoordinated Expression 50811001 |Routine (qualifier value)|

Chapter 5. Medications and Devices

If the patient is not known to be pregnant, then consider ordering a pregnancy test prior to ordering any contraceptive options

Please consider the following contraception options

Contraceptive Implants

♠ Etonogestrel 68 mg implant subdermal for implantation now actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [71861002 | Implantation (procedure)] ->(260686004 | Method (attribute))->[257867005 |Insertion - action (qualifier value)] ->(363701004 |Direct substance (attribute))->[Rx;389221 Etonogestrel 68 MG Drug Implant]

priority: Precoordinated Expression 50811001 | Routine (qualifier value)

♠ Levonorgestrel 20 micrograms/day device intrauterine for insertion now actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

> statementType: Precoordinated Expression 385644000 | Requested (qualifier value)

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[257867005 |Insertion - action (qualifier value)] ->(363701004 |Direct substance (attribute))->[Rx;804156 Levonorgestrel 0.000833

MG/HR Intrauterine System]

priority: Precoordinated Expression 50811001 | Routine (qualifier value)

♠ Levonorgestrel 14 micrograms/day device intrauterine for insertion now actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[257867005 |Insertion - action (qualifier value)] ->(363701004 |Direct substance (attribute))->[Rx;1366334 Levonorgestrel 0.000583

MG/HR Intrauterine System]

priority: Precoordinated Expression 50811001 | Routine (qualifier value)

Copper T 380A device intrauterine for insertion now actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 65200003 |Insertion of

intrauterine contraceptive device (procedure)

unstructured[0]: Copper T 380A device priority: Precoordinated Expression 50811001 |Routine (qualifier value)|

Contraceptive Injection

Medroxyprogesterone acetate injectable suspension 150 mg/mL. Give 1 mL solution intramuscular every 3 months, first dose now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129326001 | Injection - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;1000153 1 ML medroxyPROGESTERone acetate 150 MG/ML Prefilled Syringe] ->(410675002 | Route of administration (attribute))->[78421000 | Intramuscular route (qualifier value)]

requestedResult.lowerBound: 1 requestedResult.upperBound: 1

requestedResult.includeLowerBound: true requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 258773002 |Milliliter (qualifier value)|

priority: Precoordinated Expression 50811001 |Routine (qualifier value)|

repetition[0].eventFrequency.lowerBound: 3 repetition[0].eventFrequency.upperBound: 3

repetition[0].eventFrequency.includeLowerBound: true repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic: Precoordinated Expression 258706009 |month (qualifier value)|

Combined Oral Contraceptives

♦ Desogestrel 0.15 mg/ethinyl estradiol 0.03 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;240707 Desogestrel 0.15 MG / Ethinyl Estradiol 0.03 MG Oral Tablet] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1

requestedResult.includeLowerBound: true

requestedResult.includeUpperBound: true

 $requested Result. measure Semantic:\ Precoordinated\ Expression$

421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

repetition[0].periodDuration.resolution: 1

 $repetition [0]. period Duration. include Lower Bound: \ true$

repetition[0].periodDuration.includeUpperBound: true

 $repetition [0]. period Duration. measure Semantic:\ Precoordinated$

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258773002 |Milliliter (qualifier value)|

♦ Ethinyl estradiol 0.02 mg/levonorgestrel 0.1 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;242297 Ethinyl Estradiol 0.02 MG / Levonorgestrel 0.1 MG Oral Tablet] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1

requestedResult.includeLowerBound: true

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

 $repetition [0]. period Duration. include Lower Bound: \ true$

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.measureSemantic: Precoordinated Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].periodDuration.resolution: 1

repetition[0].eventFrequency.upperBound: 1

 $repetition [0]. event Frequency. include Lower Bound: \ true$

 $repetition [0]. event Frequency. include Upper Bound: \ true$

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

♦ Ethinyl estradiol 0.03 mg/levonorgestrel 0.15 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;238019 Ethinyl Estradiol 0.03 MG / Levonorgestrel 0.15 MG Oral Tablet] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1

 $requested Result. include Lower Bound: \ true$

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

♠ Ethinyl estradiol 0.03 mg/levonorgestrel 0.05 mg, ethinyl estradiol 0.04 mg/levonorgestrel 0.075 mg, ethinyl estradiol 0.03 mg/levonorgestrel 0.125 mg (triphasic). Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;748832 { 6 (Ethinyl Estradiol 0.03 MG / Levonorgestrel 0.05 MG Oral Tablet) / 10 (Ethinyl Estradiol 0.03 MG / Levonorgestrel 0.125 MG Oral Tablet) / 5 (Ethinyl Estradiol 0.04 MG / Levonorgestrel 0.075 MG Oral Tablet) / 7 (Inert Ingredients 1 MG Oral Tablet) } Pack] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1 requestedResult.upperBound: 1

 $requested Result. include Lower Bound: \ true$

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1 repetition[0].periodDuration.upperBound: 168

 $repetition [0]. period Duration. include Lower Bound: \ true$

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition [0]. period Duration. measure Semantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition [0]. event Frequency. lower Bound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

- ♠ Ethinyl estradiol 0.035 mg/norethindrone 1 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills
- ♠ Ethinyl estradiol 0.035 mg/norethindrone 0.5 mg, ethinyl estradiol 0.035 mg/norethindrone 0.75 mg, ethinyl estradiol 0.035 mg/norethindrone 1 mg (triphasic). Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;749852 {7 (Ethinyl Estradiol 0.035 MG / Norethindrone 0.5 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / Norethindrone 0.75 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / Norethindrone 1 MG Oral Tablet) / 7 (Inert Ingredients 1 MG Oral Tablet) } Pack] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requested Result.lower Bound: 1

requestedResult.upperBound: 1

requested Result. include Lower Bound: true

requestedResult.includeUpperBound: true

 $requested Result. measure Semantic:\ Precoordinated\ Expression$

421026006 |Conventional release oral tablet (dose form)|

repetition [0]. period Duration. lower Bound: 1

repetition [0]. period Duration. upper Bound: 168

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

♠ Ethinyl estradiol 0.035 mg/norgestimate 0.25 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;240128 Ethinyl Estradiol 0.035 MG / norgestimate 0.25 MG Oral Tablet] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1

requestedResult.includeLowerBound: true

requested Result. include Upper Bound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

♠ Ethinyl estradiol 0.035 mg/norgestimate 0.18 mg, ethinyl estradiol 0.035 mg/norgestimate 0.215 mg, ethinyl estradiol 0.035 mg/norgestimate 0.25 mg (triphasic). Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;749784 {7 (Ethinyl Estradiol 0.035 MG / norgestimate 0.18 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / norgestimate 0.215 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / norgestimate 0.25 MG Oral Tablet) / 7 (Inert Ingredients 1 MG Oral Tablet) } Pack] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1

requestedResult.includeLowerBound: true

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression

421026006 |Conventional release oral tablet (dose form)| repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

repetition[0].periodDuration.includeLowerBound: true repetition[0].periodDuration.includeUpperBound: true repetition[0].periodDuration.resolution: 1 repetition[0].periodDuration.measureSemantic: Precoordinated Expression 258703001 |day (qualifier value)| repetition[0].eventFrequency.lowerBound: 1 repetition[0].eventFrequency.upperBound: 1 repetition[0].eventFrequency.includeLowerBound: true repetition[0].eventFrequency.includeUpperBound: true repetition[0].eventFrequency.measureSemantic: Precoordinated Expression 258703001 |day (qualifier value)| ♦ Mestranol 0.05 mg/norethindrone 1 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills actionSentence[type=elm:Instance, classType=anf:ClinicalStatement] statementType: Precoordinated Expression 385644000 | Requested (qualifier value)

topic: Postcoordinated Expression [416118004 | Administration

(procedure)] ->(260686004 | Method (attribute))->[129445006 |Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;198043 Mestranol 0.05 MG / Norethindrone 1 MG Oral Tablet] ->(410675002 | Route of administration (attribute))->[26643006 |Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

requestedResult.upperBound: 1 requestedResult.includeLowerBound: true

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 168

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

♦ Ethinyl estradiol 0.03 mg/levonorgestrel 0.15 mg, ethinyl estradiol 0.01 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;749761 {7 (Ethinyl Estradiol 0.01 MG Oral Tablet) / 84 (Ethinyl Estradiol 0.03 MG / Levonorgestrel 0.15 MG Oral Tablet) } Pack] ->(410675002 | Route of administration (attribute))->[26643006 | Oral route (qualifier value)]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requested Result.lower Bound: 1

requestedResult.upperBound: 1

requestedResult.includeLowerBound: true

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition [0]. period Duration. lower Bound: 1

repetition[0].periodDuration.upperBound: 168

 $repetition [0]. period Duration. include Lower Bound: \ true$

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258703001 |day (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258703001 |day (qualifier value)|

Combined Contraceptive Vaginal Ring

Ethinyl estradiol 0.015 mg/day/etonogestrel ethinyl 0.120 mg/day. 1 vaginal ring. Insert ring into vagina. Leave in place continuously for 3 weeks. Remove for 1 week. Then immediately replace. Dispense 1 box. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[257867005 | Insertion - action (qualifier value)] ->(363701004 | Direct

substance (attribute))->[Rx;1367436 21 DAY Ethinyl Estradiol 0.000625 MG/HR / Etonogestrel 0.005 MG/HR Vaginal Ring]

unstructured[0]: Insert ring into vagina. Leave in place continuously for 3 weeks. Remove for 1 week. Then immediately replace. Dispense 1 box. 3 refills

requestedResult.lowerBound: 1 requestedResult.upperBound: 1

requestedResult.includeLowerBound: true requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 385292009 |Vaginal dose form (dose form)|

repetition[0].periodDuration.lowerBound: 1 repetition[0].periodDuration.upperBound: 48

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.measureSemantic: Precoordinated Expression 258705008 | week (qualifier value)|

Progestin-Only Contraceptive Pill

Norethindrone 0.35 mg. Take 1 tablet oral daily 1 time. Take pills in sequence. Do not skip pills. Dispense 3 kits. 3 refills

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;198042 Norethindrone 0.35 MG Oral Tablet]

unstructured[0]: Take pills in sequence. Do not skip pills.

Dispense 3 kits. 3 refills

requestedResult.lowerBound: 1

 $requested Result. upper Bound: \ 1$

 $requested Result. include Lower Bound: \ true$

 $requested Result. include Upper Bound: \ true$

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition [0]. period Duration. lower Bound: 1

repetition [0]. period Duration. upper Bound: 168

repetition[0].periodDuration.includeLowerBound: true

repetition[0].periodDuration.includeUpperBound: true

repetition [0]. period Duration. resolution: 1

 $repetition [0]. period Duration. measure Semantic:\ Precoordinated$

Expression 258703001 |day (qualifier value)| repetition[0].eventFrequency.lowerBound: 1

repetition[0].eventFrequency.upperBound: 1
repetition[0].eventFrequency.includeLowerBound: true
repetition[0].eventFrequency.includeUpperBound: true
repetition[0].eventFrequency.measureSemantic:
Precoordinated Expression 258703001 |day (qualifier value)|

Emergency Contraceptive

"1 refill now" allows the patient to take home medications for future emergency use when indicated.

♠ Levonorgestrel 0.75 mg tablet. Take one tablet oral every 12 hours. Take first tablet as soon as possible after and within 72 hours of unprotected intercourse. Take second tablet 12 hours after first tablet. Dispense 1 box containing 2 tablets. 1 refill now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;259218 Levonorgestrel 0.75 MG Oral Tablet]

unstructured[0]: Take first tablet as soon as possible after and within 72 hours of unprotected intercourse. Take second tablet 12 hours after first tablet. Dispense 1 box containing 2 tablets. 1 refill now

requestedResult.lowerBound: 1 requestedResult.upperBound: 1

 $requested Result. include Lower Bound: \ true$

requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1

repetition[0].periodDuration.upperBound: 84

 $repetition [0]. period Duration. include Lower Bound: \ true$

 $repetition [0]. period Duration. include Upper Bound: \ true$

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated

Expression 258702006 |hour (qualifier value)|

repetition[0].eventFrequency.lowerBound: 12

repetition[0].eventFrequency.upperBound: 12

repetition[0].eventFrequency.includeLowerBound: true

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 258702006 | hour (qualifier value) |

♦ Levonorgestrel 1.5 mg tablet oral 1 time. Take as soon as possible after and within 72 hours of unprotected intercourse. Dispense 1 box containing 1 tablet. 1 refill now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 | Requested (qualifier value)|

topic: Postcoordinated Expression [416118004 | Administration (procedure)] ->(260686004 | Method (attribute))->[129445006 | Administration - action (qualifier value)] ->(363701004 | Direct substance (attribute))->[Rx;483325 Levonorgestrel 1.5 MG Oral Tablet]

unstructured[0]: Take as soon as possible after and within 72 hours of unprotected intercourse. Dispense 1 box containing 1 tablet. 1 refill now

requestedResult.lowerBound: 1 requestedResult.upperBound: 1

requestedResult.includeLowerBound: true requestedResult.includeUpperBound: true

requestedResult.measureSemantic: Precoordinated Expression 421026006 |Conventional release oral tablet (dose form)|

repetition[0].periodDuration.lowerBound: 1 repetition[0].periodDuration.upperBound: 72

repetition[0].periodDuration.includeLowerBound: true repetition[0].periodDuration.includeUpperBound: true

repetition[0].periodDuration.resolution: 1

repetition[0].periodDuration.measureSemantic: Precoordinated Expression 258702006 |hour (qualifier value)|

repetition[0].eventFrequency.lowerBound: 1 repetition[0].eventFrequency.upperBound: 1

 $repetition [0]. event Frequency. include Lower Bound: \ true$

repetition[0].eventFrequency.includeUpperBound: true

repetition[0].eventFrequency.measureSemantic:

Precoordinated Expression 246432004 |Number of occurrences (qualifier value)|

Chapter 6. Procedures

Select procedures from the following list. All procedures are priority of "now" unless otherwise specified.

Essure permanent contraceptive device. Schedule for insertion now

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [410538000 | Scheduling (procedure)] ->(363702006 | Has focus (attribute))->[65200003 | Insertion of intrauterine contraceptive device (procedure)]

unstructured[0]: Essure permanent contraceptive device priority: Precoordinated Expression 50811001 |Routine (qualifier value)|

Contraceptive implant implantation

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Postcoordinated Expression [71861002 | Implantation (procedure)] ->(363699004 | Direct device (attribute))->[468312002 | Drug-eluting contraceptive implant (physical

object)]

Intrauterine device insertion

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)|

topic: Precoordinated Expression 65200003 |Insertion of

intrauterine contraceptive device (procedure)

Diaphragm fitting

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 275811000 | Diaphragm fit

(procedure)

Cervical cap fitting

actionSentence[type=elm:Instance, classType=anf:ClinicalStatement]

statementType: Precoordinated Expression 385644000 |

Requested (qualifier value)

topic: Precoordinated Expression 225251006 |Fitting of

cervical cap (procedure)

Chapter 7. Tabular List

Terminology Service Request (TSR) Mappings

Table 7.1. Terminology Versions

Name Identifer		Version
SNOMED CT	2.16.840.1.113883.6.96	United States Edition 20180301

Table 7.2. Terminology References

System	Code	Display Text ^a	References ^b
SNOMED CT	104405006 Urine pregnancy test, by visual color comparison methods	Precoordinated Expression	1
SNOMED CT	104405006 Urine pregnancy test, by visual color comparison methods (procedure)	Precoordinated Expression	1
SNOMED CT	167037004 Measurement of serum total human chorionic gonadotropin (procedure)	Precoordinated Expression	1
SNOMED CT	171121004 Human immunodeficiency virus screening (procedure)	Precoordinated Expression	1
SNOMED CT	225251006 Fitting of cervical cap (procedure)	Precoordinated Expression	1
SNOMED CT	236886002 Hysterectomy (procedure)	Precoordinated Expresssion	1
SNOMED CT	246432004 Number of occurrences (qualifier value)	Precoordinated Expression	1
SNOMED CT	248152002 Female (finding)	Female	1
SNOMED CT	258702006 hour (qualifier value)	Precoordinated Expression	3
SNOMED CT	258703001 day (qualifier value)	Precoordinated Expression	19
SNOMED CT	258705008 week (qualifier value)	Precoordinated Expression	1
SNOMED CT	258706009 month (qualifier value)	Precoordinated Expression	1
SNOMED CT	258773002 Milliliter (qualifier value)	Precoordinated Expression	2
SNOMED CT	275811000 Diaphragm fit (procedure)	Precoordinated Expression	1

System	Code	Display Text ^a	References ^b
SNOMED CT	33022008 Hospital-based outpatient department (environment)	Outpatient	1
SNOMED CT	385292009 Vaginal dose form (dose form)	Precoordinated Expression	1
SNOMED CT	385644000 Requested (qualifier value)	Precoordinated Expression	29
SNOMED CT	398166005 Performed (qualifier value)	Precoordinated Expression	1
SNOMED CT	421026006 Conventional release oral tablet (dose form)	Precoordinated Expression	12
SNOMED CT	453231000124104 Primary care provider (occupation)	Primary Care	1
SNOMED CT	50811001 Routine (qualifier value)	Precoordinated Expression	12
SNOMED CT	65200003 Insertion of intrauterine contraceptive device (procedure)	Precoordinated Expression	2
SNOMED CT	76876009 Bilateral oophorectomy (procedure)	Precoordinated Expresssion	1
SNOMED CT	77543007 Ligation of fallopian tube (procedure)	Precoordinated Expresssion	1
SNOMED CT	[398381009 Neisseria gonorrhoeae nucleic acid assay (procedure)] ->(116686009 Has specimen (attribute))- >[258520000 Vaginal swab (specimen)]	Postcoordinated Expression	1
SNOMED CT	[398452009 Chlamydia trachomatis nucleic acid assay (procedure)]- >(116686009 Has specimen (attribute))- >[258520000 Vaginal swab (specimen)]	Postcoordinated Expression	1
SNOMED CT	[410538000 Scheduling (procedure)] ->(363702006 Has focus (attribute))->[65200003 Insertion of intrauterine contraceptive device (procedure)]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004	Postcoordinated Expression	1

System	Code	Display Text ^a	References ^b
	Method (attribute))- >[129326001 Injection - action (qualifier value)] ->(363701004 Direct substance (attribute))- >[Rx;1000153 1 ML medroxyPROGESTERone acetate 150 MG/ML Prefilled Syringe] - >(410675002 Route of administration (attribute))- >[78421000 Intramuscular route (qualifier value)]		
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;198042 Norethindrone 0.35 MG Oral Tablet]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] - >(363701004 Direct substance (attribute))- >[Rx;198043 Mestranol 0.05 MG / Norethindrone 1 MG Oral Tablet] - >(410675002 Route of administration (attribute))- >[26643006 Oral route (qualifier value)]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] - >(363701004 Direct substance (attribute))- >[Rx;238019 Ethinyl	Postcoordinated Expression	1

System	Code	Display Text ^a	References ^b
	Estradiol 0.03 MG / Levonorgestrel 0.15 MG Oral Tablet] ->(410675002 Route of administration (attribute))->[26643006 Oral route (qualifier value)]		
Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] - >(363701004 Direct substance (attribute))- >[Rx;240128 Ethinyl Estradiol 0.035 MG / norgestimate 0.25 MG Oral Tablet] ->(410675002 Route of administration (attribute))->[26643006 Oral route (qualifier value)]		Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] - >(363701004 Direct substance (attribute))- >[Rx;240707 Desogestrel 0.15 MG / Ethinyl Estradiol 0.03 MG Oral Tablet] ->(410675002 Route of administration (attribute))->[26643006 Oral route (qualifier value)]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] - >(363701004 Direct substance (attribute))- >[Rx;242297 Ethinyl	Postcoordinated Expression	1

System	Code	Display Text ^a	References ^b
	Estradiol 0.02 MG / Levonorgestrel 0.1 MG Oral Tablet] ->(410675002 Route of administration (attribute))->[26643006 Oral route (qualifier value)]		
SNOMED CT [416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[129445006 Administration - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;259218 Levonorgestrel 0.75 MG Oral Tablet]		Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))->[129445006 Administration - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;483325 Levonorgestrel 1.5 MG Oral Tablet]	Postcoordinated Expression	1
Oral Tablet]		Postcoordinated Expression	

System	Code	Display Text ^a	References ^b
	Oral Tablet) } Pack] -		
	>(410675002 Route of administration (attribute))-		
	>[26643006 Oral route		
	(qualifier value)]		
CANON TED CIT	+ · • · · · · · · · · · · · · · · · · ·	B	1
SNOMED CT	[416118004 Administration	Postcoordinated Expression	1
	(procedure)] ->(260686004		
	Method (attribute))-		
	>[129445006]		
	Administration - action		
	(qualifier value)] -		
	>(363701004 Direct		
	substance (attribute))-		
	>[Rx;749761 {7 (Ethinyl		
	Estradiol 0.01 MG Oral		
	Tablet) / 84 (Ethinyl		
	Estradiol 0.03 MG /		
	Levonorgestrel 0.15 MG		
	Oral Tablet) } Pack] -		
	>(410675002 Route of		
	administration (attribute))-		
	>[26643006 Oral route		
	(qualifier value)]		
SNOMED CT	[416118004	Postcoordinated Expression	1
	Administration		
	(procedure)] ->(260686004		
	Method (attribute))-		
	>[129445006		
	Administration - action		
	(qualifier value)] -		
	>(363701004 Direct substance (attribute))-		
	>[Rx;749784 {7 (Ethinyl		
	Estradiol 0.035 MG /		
	norgestimate 0.18 MG		
	Oral Tablet) / 7 (Ethinyl		
	Estradiol 0.035 MG /		
	norgestimate 0.215		
	MG Oral Tablet) / 7		
	(Ethinyl Estradiol 0.035		
	MG / norgestimate 0.25		
	MG Oral Tablet) / 7		
	(Inert Ingredients 1 MG		
	Oral Tablet) } Pack] -		
	>(410675002 Route of		
	administration (attribute))-		
	>[26643006 Oral route		
	(qualifier value)]		
SNOMED CT	[416118004	Postcoordinated Expression	1
	Administration		

System	Code	Display Text ^a	References ^b
	(procedure)] ->(260686004 Method (attribute))->[129445006 Administration - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;749852 {7 (Ethinyl Estradiol 0.035 MG / Norethindrone 0.5 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / Norethindrone 0.75 MG Oral Tablet) / 7 (Ethinyl Estradiol 0.035 MG / Norethindrone 1 MG Oral Tablet) / 7 (Inert Ingredients 1 MG Oral Tablet) } 7 (Inert Ingredients 1 MG Oral Tablet) } Pack] ->(410675002 Route of administration (attribute))->[26643006 Oral route (qualifier value)]		
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[257867005 Insertion - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;1366334 Levonorgestrel 0.000583 MG/HR Intrauterine System]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004 Method (attribute))- >[257867005 Insertion - action (qualifier value)] ->(363701004 Direct substance (attribute))- >[Rx;1367436 21 DAY Ethinyl Estradiol 0.000625 MG/HR / Etonogestrel 0.005 MG/HR Vaginal Ring]	Postcoordinated Expression	1
SNOMED CT	[416118004 Administration (procedure)] ->(260686004	Postcoordinated Expression	1

System	Code	Display Text ^a	References ^b
	Method (attribute))- >[257867005 Insertion - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;804156 Levonorgestrel 0.000833 MG/HR Intrauterine System]		
SNOMED CT	[71861002 Implantation (procedure)] ->(260686004 Method (attribute))->[257867005 Insertion - action (qualifier value)] ->(363701004 Direct substance (attribute))->[Rx;389221 Etonogestrel 68 MG Drug Implant]	Postcoordinated Expression	1
SNOMED CT	[71861002 Implantation (procedure)] ->(363699004 Direct device (attribute))- >[468312002 Drug- eluting contraceptive implant (physical object)]	Postcoordinated Expression	1
SNOMED CT	[a997cc03-3e99-40eb-833a- Observation procedure (procedure)] ->(363702006 Has focus (attribute))- >[105726004 Age AND/ OR growth finding (finding)]	ଫେମ୍ୟୁଟେମିମରି nated Expression	1
SNOMED CT	[a997cc03-3e99-40eb-833a- Observation procedure (procedure)] ->(363702006 Has focus (attribute))- >[248152002 Female (finding)]	ଫେମ୍ବାଟୋମନ ated Expression	2
SNOMED CT	Observation procedure (procedure)] - >(363702006 Has focus (attribute))->[76498008 Postmenopausal state (finding)]	Postcoordinated Expresssion	1
SNOMED CT	Observation procedure (procedure)] ->(363702006 Has focus (attribute))- d5d1c4f4-5d27-4e48-94b9- Failure to conceive (finding)]		1

^aIf a code is used multiple times in the KNART, only the display text of the first instance is shown.

Tabular List

^bCount of the number of times the given code system and code pair is used in the KNART.

Chapter 8. Behavior Symbols

Table 8.1. 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 8.2. 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.
0	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 8.3. 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.

Sym	ıbol	Name	Definition
>	>		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 8.4. 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 "prechecking" 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 8.5. 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 8.6. Item Flags

Symbol	Name	Definition
4	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 8.7. Read Only Behavior

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

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] Women's Health: Reproductive Health Clinical Content White Paper

[CSD] Women's Health: Reproductive Health Order Set Conceptual Structure Document

[KVRpt] Women's Health: Reproductive Health Order Set KNART Validation Report

Supporting Evidence

- [ACOG 2017] American College of Obstetricians and Gynecologists Committee on Adolescent Health Care. Committee Opinion No 699: Adolescent Pregnancy, Contraception, and Sexual Activity. Obstet Gynecol. 2017;129(5):e142-e149 (link [https://doi.org/10.1097/AOG.000000000002045])
- [ACOG 2014] American College of Obstetricians and Gynecologists. ACOG Committee Opinion no. 598: Committee on Adolescent Health Care: The initial reproductive health visit. 2014;123(5):1143-1147 (link [https://doi.org/10.1097/01.AOG.0000446826.46833.c0])
- [Bayer 2002] Bayer Pharma AG. Berlin. Essure: Permanent Birth Control. Germany: 2002. (link [https://doi.org/10.1016/j.nwh.2017.07.006])
- [NLM 2014] U.S. National Library of Medicine. BREVICON- norethindrone and ethinyl estradiol; NORINYL-norethindrone and ethinyl estradiol; NORINYL-norethindrone and mestranol [Actavis Pharma, Inc.]. August 2014 (link [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=aaaf32ea-045b-436c-b125-767f95f4cf0e])
- [NLM 2017-1] U.S. National Library of Medicine. IMPLANON- etonogestrel implant [Organon USA Inc.]. May 2017. (link [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=50ed7e31-b9b7-4f0a-8e36-91ed5af86b81])
- [NLM 2012-1] U.S. National Library of Medicine. LUTERA- levonorgestrel and ethinyl estradiol [Watson Pharma, Inc.]. March 2012. (link [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm? setid=435f565c-771d-44ff-88b7-4e089767c25f])
- [NLM 2017-2] U.S. National Library of Medicine. MEDROXYPROGESTERONE ACETATE- medroxyprogesterone acetate injection, suspension [Teva Parenteral Medicines, Inc.]. January 2017. (link [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=d279981c-e9e4-4989-bafb-1e184a6d3dd2])
- [NLM 2013-1] U.S. National Library of Medicine. MIRENA- levonorgestrel intrauterine device [Bayer HealthCare Pharmaceuticals Inc.]. February 2013. (link [https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm? setid=92231d6f-f4d8-43b0-aa95-f7cec1cc18c5])
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