**Clinical Decision Support (CDS) Content and Health Level 7 (HL7)-Compliant Knowledge Artifacts (KNARTs)**

**Rheumatology: Psoriatic Arthritis Clinical Content White Paper**

**Department of Veterans Affairs (VA)**

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**Knowledge Based Systems (KBS)**

**Office of Informatics and Information Governance (OIIG)**

**Clinical Decision Support (CDS)**

**Clinical Decision Support (CDS) Content and Health Level 7 (HL7)-Compliant Knowledge Artifacts (KNARTs): Rheumatology: Psoriatic Arthritis Clinical Content White Paper**

by Department of Veterans Affairs (VA)

Publication date April 2018

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

**Table 1. Relevant KNART Information: Rheumatology: Psoriatic Arthritis KNART**

| **KNART Name** | **Associated CLIN** |
| --- | --- |
| Psoriatic Arthritis - Order Set | CLIN0008CA |

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**VA Subject Matter Expert (SME) Panel**

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**Introduction**

The VA is committed to improving the ability of clinicians to provide care for patients while increasing quality, safety, and efficiency. Recognizing the importance of standardizing clinical knowledge in support of this goal, VA is implementing the Health Level 7 ([HL7](#d17e290)) Knowledge Artifact Specification for a wide range of VA clinical use cases. Knowledge Artifacts, referred to as ([KNARTs](#d17e350)), enable the structuring and encoding of clinical knowledge so the knowledge can be integrated with electronic health records to enable clinical decision support.

The purpose of this Clinical Content White Paper ([CCWP](#d17e128)) is to capture the clinical context and intent of [KNART](#d17e344) use cases in sufficient detail to provide the [KNART](#d17e344) authoring team with the clinical source material to construct the corresponding knowledge artifacts using the HL7 Knowledge Artifact Specification. This paper has been developed using material from a variety of sources: VA artifacts, clinical practice guidelines, evidence in the body of medical literature, and clinical expertise. After reviewing these sources, the material has been synthesized and harmonized under the guidance of VA subject matter experts to reflect clinical intent for this use case.

Unless otherwise noted, items within this white paper (e.g., documentation template fields, orderable items, etc.) are chosen to reflect the clinical intent at the time of creation. To provide an exhaustive list of all possible items and their variations is beyond the scope of this work.

**Conventions Used**

Conventions used within the knowledge artifact descriptions include:

<obtain>: Indicates a prompt to obtain the information listed

* If possible, the requested information should be obtained from the underlying system(s). Otherwise, prompting the user for information may be required
* The technical and clinical notes associated with a section should be consulted for specific constraints on the information (e.g., time-frame, patient interview, etc.)
* Default Values: Unless otherwise noted, <obtain> indicates to obtain the most recent observation. It is recognized that this default time-frame value may be altered by future implementations

[...]: Square brackets enclose explanatory text that indicates some action on the part of the clinical user, or general guidance to the clinical or technical teams. Examples include, but are not limited to:

[Begin ...], [End ...]: Indicates the start and end of specific areas to clearly delineate them for technical purposes.

[Activate ...]: Initiates another knowledge artifact or knowledge artifact section.

[Section Prompt: ...]: If this section is applicable, then the following prompt should be displayed to the user.

[Section Selection Behavior: ...]: Indicates technical constraints or considerations for the selection of items within the section.

[Attach: ...]: Indicates that the specified item should be attached to the documentation template if available.

[Link: ...]: Indicates that rather than attaching an item, a link should be included in the documentation template.

[Clinical Comment: ...]: Indicates clinical rationale or guidance.

[Technical Note: ...]: Indicates technical considerations or notes.

[If ...]: Indicates the beginning of a conditional section.

[Else, ...]: Indicates the beginning of the alternative branch of a conditional section.

[End if ...]: Indicates the end of a conditional section.

☐ [Check box]: Indicates items that should be selected based upon the section selection behavior.

**Chapter 1. Rheumatology: Psoriatic Arthritis**

**1.1. Clinical Context**

[Begin Clinical Context.]

Psoriatic arthritis is a common comorbidity among patients with psoriasis. As a seronegative spondyloarthropathy, psoriatic arthritis requires clinical acumen for accurate diagnosis. Clinical suspicions can be confirmed through a careful history and physical exam with support from laboratory and radiographic studies. Nonsteroidal anti-inflammatory drugs are the mainstay of therapy to alleviate painful symptoms. Early referral to a rheumatologist for evaluation and initiation of disease-modifying antirheumatic drugs (DMARDs) is recommended. “This order set may be used to assist a primary care or other clinical provider with evaluation, early treatment, and referral to rheumatology for a patient with possible psoriatic arthritis.”

**Table 1.1. Clinical Context Domains**

|  |  |
| --- | --- |
| Target User | Provider to include Primary Care |
| Patient | Adult Patients |
| Priority | Routine |
| Specialty | Primary Care |
| Location | Outpatient |

[End Clinical Context.]

**1.2. Knowledge Artifacts**

[Begin Knowledge Artifacts.]

This section describes the CDS knowledge artifact of the Psoriatic Arthritis/Rheumatology group:

* Order Set: Rheumatology: Psoriatic Arthritis KNART
* Orderable items
* Includes logic for appropriate display of the order set

[End Knowledge Artifacts.]

**Chapter 2. Rheumatology: Psoriatic Arthritis - Order Set**

[Begin Rheumatology: Psoriatic Arthritis - Order Set.]

**2.1. Knowledge Narrative**

[Begin Knowledge Narrative.]

[See Clinical Context Chapter 1.]

[End Knowledge Narrative.]

**2.2. Medications**

[Begin Medications.]

[Section Prompt: Consider one of the following medications for alleviation of pain.

Note that nonsteroidal anti-inflammatory drugs (NSAIDs) may be contraindicated in patients with certain renal, gastrointestinal, or cardiovascular conditions.]

[Technical Note: Medications that display may need to be revised to match availability in local formularies.]

[Technical Note: If a clinician attempts to submit an order with more than 1 month's supply, the clinician should be prompted to consider that monitoring labs are required for > 1 month’s supply.]

[Section Selection Behavior: Select one only. Optional.]

☐ Ibuprofen 600 mg tablet oral every 6 hours as needed for pain 120 tablets 0 refills routine

☐ Ibuprofen 800 mg tablet oral every 8 hours as needed for pain 90 tablets 0 refills routine

☐ Meloxicam 15 mg tablet oral daily 30 tablets 0 refills routine

☐ Naproxen 500 mg tablet oral twice a day as needed for pain 60 tablets 0 refills routine

[End Medications.]

**2.3. Laboratory Studies**

[Begin Laboratory Studies.]

[Technical Note: This section should be available for primary care providers and dermatologists performing pre-diagnostic workup for suspected psoriatic arthritis.]

[Section Prompt: Laboratory Studies.]

[Section Prompt: The following laboratory studies will display below for you to order only if the patient has not had the study done in the last 3 months]

☐ Complete blood count 1 time routine

☐ Complete metabolic panel 1 time routine

☐ C-reactive protein 1 time routine

☐ Erythrocyte sedimentation rate 1 time routine

[Section Prompt: The following laboratory studies will display below for you to order only if the patient has never had this study done at any time in the past:]

☐ Anti-cyclic citrullinated peptide 1 time routine

☐ Human leukocyte antigen B27 1 time routine

☐ Rheumatoid factor 1 time routine

☐ Uric acid 1 time routine

[End Laboratory Studies.]

**2.4. Imaging and Diagnostic Studies**

[Begin Imaging and Diagnostic Studies.]

[Technical Note: This section should be available for primary care providers and dermatologists performing pre-diagnostic workup for suspected psoriatic arthritis.]

[Section Prompt: To avoid unnecessary imaging, please order imaging for only the most severely affected joints based upon history and clinical examination.]

☐ X-ray symptomatic joints to evaluate for possible psoriatic arthritis, routine

☐ Hand-Left

☐ Hand-Right

☐ Foot-Left

☐ Foot-Right

☐ Knee-Left

☐ Knee-Right

☐ Other <obtain> joints

[Section Prompt: The following should be ordered for patients with complaint of low back pain.]

☐ X-ray sacroiliac joint to evaluate for possible psoriatic arthritis, routine

[End Imaging and Diagnostic Studies.]

**2.5. Consult Request**

[Begin Consult Request.]

[Section Prompt: Consult request]

☐ Referral to rheumatology evaluate for possible psoriatic arthritis

[Section Prompt: Reason for Consult: Suspected Psoriatic Arthritis]

<Obtain> Details

[Technical Note: Reason for Consult “rheumatology” should be selected automatically and displayed.]

Goal of Consult: Would you please provide your recommendations and:

☐ Return to PCP for therapy

☐ Start treatment and return to PCP for follow up and maintenance

☐ Start treatment, monitor for effect and when on stable therapy return to PCP

☐ Treat as long as necessary (or indefinitely)

[Section Prompt: Consult Specialty: Rheumatology]

[Technical Note: Consult specialty “rheumatology” should be selected automatically and displayed.]

[Section Prompt: Priority: Routine]

[Technical Note: Priority “routine” should be selected automatically and displayed.]

[Section Select Behavior: Select one or more. Optional.]

☐ Morning Stiffness > 1 hour

<obtain> number of affected joints

☐ Diagnosis of Psoriasis confirmed

☐ Presence of back pain that improves with use

☐ Presence of joint swelling

<obtain> Referring Physician

<obtain> Referring Physician Contact Information

[End Consult Request.]

**2.6. Patient and Caregiver Education**

[Begin Patient and Caregiver Education.]

[Section Prompt: Consider the following links as examples of patient educational material: http://www.arthritis.org/living-with-arthritis/; https://www.rheumatology.org/I-Am-A/Patient-Caregiver.]

☐ Psoriatic arthritis education

[End Patient and Caregiver Education.]

**2.7. Reference for Provider Use**

[Begin Reference for Provider Use.]

[Section Prompt: The following link contains clinical practice guidelines for education for the clinical provider:]

http://www.arthritis.org/; https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines/Psoriatic-Arthritis.

[End Reference for Provider Use.]

[End Rheumatology: Psoriatic Arthritis - Order Set.]

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U.S. National Library of Medicine. NAPROSYN- naproxen tablet; EC-NAPROSYN- naproxen tablet, delayed release; NAPROSYN- naproxen suspension; ANAPROX- naproxen sodium tablet; ANAPROX DS- naproxen sodium tablet [Genentech, Inc.]. DailyMed website. Revised March 2016. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=68848217-03c9-4377-9be6-6f567e629129>.

U.S. National Library of Medicine. OXAPROZIN- oxaprozin tablet [Amneal Pharmaceuticals LLC]. DailyMed website. Revised May 2017. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=d9b0ca6c-4c53-4f6e-918b-02a8c472a194>.

U.S. National Library of Medicine. REDICARE IBUPROFEN- ibuprofen 200mg tablet, film coated [Redicare LLC]. DailyMed website. Revised January 2017. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=45eb33f0-71e2-11d5-e054-00144ff88e88>.

U.S. National Library of Medicine. SULINDAC- sulindac tablet [Actavis Pharma, Inc.]. DailyMed website. Revised May 2016. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=d8b9d517-5dd4-4c6b-8aa0-736bce87e7b4>.

U.S. National Library of Medicine. TYLENOL REGULAR STRENGTH- acetaminophen tablet [Johnson and Johnson Consumer Inc., McNeil Consumer Healthcare Division]. DailyMed Website. Revised October 2016.

**Appendix A. Psoriatic Arthritis Guidelines**

The following links should be available for provider reference: http://www.arthritis.org/; https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines/Psoriatic-Arthritis.

**Appendix B. Basic Laboratory Panel Definition**

* Blood Urea Nitrogen
* Calcium
* Chloride
* CO2 (Carbon Dioxide, Bicarbonate)
* Creatinine
* Glucose
* Potassium
* Sodium

**Acronyms**

|  |  |
| --- | --- |
| **Acronyms** | **Description** |
| CCWP | Clinical Content White Paper |
| CDS | Clinical Decision Support |
| DMARDs | Disease-modifying antirheumatic drugs |
| HL7 | Health Level 7 |
| KBS | Knowledge Based Systems |
| KNART | Knowledge Artifact |
| NSAIDs | Nonsteroidal anti-inflammatory drugs |
| OIIG | Office of Informatics and Information Governance |
| PCP | Primary Care Providers |
| SME | Subject Matter Expert |
| TO | Task Order |
| VA | Department of Veteran Affairs |
| VAMC | VA Medical Center |