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

Mental Health: Homelessness Clinical Content White Paper

Department of Veterans Affairs (VA)

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): Mental Health: Homelessness Clinical Content White Paper

by Department of Veterans Affairs (VA), , , , and

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Table 1. Relevant KNART Information: Mental Health: Homelessness

Mental Health KNART	Associated CLIN
Homelessness – Documentation Template	CLIN0005AA

B3 Group, Inc.

Cognitive Medical Systems, Inc.

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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 HL7 Knowledge Artifact Specification for a wide range of VA clinical use cases. Knowledge Artifacts, referred to as *KNARTs*, 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*) is to capture the clinical context and intent of *KNART* use cases in sufficient detail to provide the *KNART* 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
- 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 Behavior: ...]: Indicates technical constraints or considerations for the selection of items outlined in the section prompt.

[Attach: ...]: Indicates that the specified item (e.g. procedure or result interpretation) should be attached to the documentation template if available.

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

[Clinical Comment: ...]: Indicates technical considerations or notes to be utilized for KNART authoring and at time of implementation planning.

[Technical Note: ...]: Indicates technical considerations or notes to be utilized for KNART authoring and at time of implementation planning.

[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. Mental Health: Homelessness

Clinical Context

[Begin Clinical Context.]

[Clinical Comment: Intended to support decision-making and documentation related to annual homelessness and food insecurity screening for veterans, and to promote appropriate ordering based on patient-specific risk factors and preferences.]

Table 1.1. Clinical Context Domains

Target User	Mental Health Providers; Primary Care Providers (PCPs)
Patient	All patients
Priority	Routine
Specialty	Mental Health; Primary Care
Location	All locations

[End Clinical Context.]

Knowledge Artifacts

[Begin Knowledge Artifacts.]

This section describes the CDS knowledge artifact that is intended to support documentation of homelessness and food insecurity screening-related findings and decisions. The existing VA national clinical reminder is regarded as the preferred source.

The knowledge artifact defines this clinical use case. The artifact is the Documentation Template and is described in detail in the following sections.

• A Documentation Template: Mental Health: Homelessness KNART

  • Documents screening for homelessness

  • Includes logic for appropriate display of documentation sections

[End Knowledge Artifacts.]

Chapter 2. Documentation Template - Homelessness

[Begin Documentation Template – Homelessness.]

Knowledge Narrative

[Begin Knowledge Narrative.]

[See Clinical Context in Chapter 1.]

Veterans are at increased risk of homelessness compared with the civilian population; yet clinical decision support for homelessness in the Veteran population, such as clinical practice guidelines and validated screening and evaluation instruments, remain undeveloped compared with other areas of health care for the Veteran population. VA has identified the end of homelessness among Veterans as a major initiative. An essential step in advancing this objective is the identification of Veterans who are either homeless or at increased risk of near-term homelessness; identified Veterans should be referred to available programs and services as appropriate (VA, 2017).

[End Knowledge Narrative.]

Screening

[Begin Screening.]

[Section Prompt: All Veterans should be screened for homelessness (and near-future risk) annually, unless the Veteran is a long-term resident of a nursing home/long-term care facility.]

[Section Prompt: Homelessness Screening:]

[Section Selection Behavior: Select one. Required.]

☐ Homeless screen performed

[Section Prompt: Ask Patient: "In the past 2 months, have you been living in stable housing? By that, we mean housing that is affordable, permanent, safe, decent, and livable."]

☐ Yes, living in stable housing

[Technical Note: Display the next 2 options only if "yes" is selected".]

[Section Prompt: Ask Patient: "Are you confident that you will continue living in stable housing for at least the next 60 days?"]

☐ Yes, confident in continuing to live in stable housing

☐ No, not confident in continuing to live in stable housing

<obtain> Other details

☐ No, not living in stable housing

[Technical Note: Display the following only if "No, not living in stable housing" or "No, not confident in continuing to live in stable housing" is selected.]

[Section Selection Behavior: Select one. Required.]

[Section Prompt: Ask Patient "Where have you lived for MOST of the past 2 months?"]

☐ Apartment/house/room, no government subsidy

☐ Apartment/house/room, with government subsidy

☐ With friend/family

☐ Motel/hotel

☐ Short-term institution, such as hospital, rehab center, drug treatment center

☐ Homeless shelter

☐ Anywhere outside, such as street, vehicle, abandoned building

☐ Other

<obtain> Detail

[Technical Note: Display the following only if "No, not living in stable housing" or "No, not confident in continuing to live in stable housing" is selected.]

[Section Prompt: Ask Patient: "Would you like to be referred to talk more about your housing situation?"]

[Section Prompt: Select one. Required.]

☐ Patient agrees to referral for homelessness services or assistance

☐ Patient declines referral at this time; given information for future reference

[Technical Note: Display the following only if "No, not living in stable housing" or "No, not confident in continuing to live in stable housing" is selected.]

[Section Prompt: Ask Patient: " What is the best way to reach you?"]

<obtain> Contact information for patient

☐ Homeless screen not performed

[Technical Note: The following options should only be displayed when "Homeless screen not performed" is selected.]

[Section Selection Behavior: Select one. Required.]

☐ Already receiving homelessness services or assistance

☐ Long-term resident of nursing home/long-term care facility

☐ Declines screening at this time

☐ Veteran/caregiver unable to answer

☐ Other

<obtain> Detail

[Technical Note: End Screening IF "Long-term resident of nursing home/long-term care facility" is selected.]

[Section Prompt: All Veterans should be screened for food insecurity unless the Veteran is a resident of a nursing home/long-term care facility.]

[Section Selection Behavior: Select one. Required.]

☐ Food insecurity screen performed

[Section Prompt: Ask Patient "In the past 3 months, did you ever run out of food and you were not able to access more food or have the money to buy more food?"]

☐ Yes, food shortage and no money to buy food or access to food

☐ No food shortage

[Technical Note: Display the following options only if "No food shortage" is chosen.]

[Section Prompt: Ask patient "Are you confident that you will continue to have enough food or money to buy food for at least the next 3 months?']

[Section Selection Behavior: Select one. Required.]

☐ Yes, confident in continued access to food

☐ No, not confident in continued access to food

[Technical Note: Display the following choices only if "Yes, food shortage and no money to buy food or access to food" or "No, not confident in continued access to food" is selected.]

[Section Prompt: Ask Patient: "Would you like to be referred to talk more about your food shortage situation?"]

[Section Selection Behavior: Select any that apply. Required.]

☐ Patient agrees to referral to social services

☐ Patient agrees to referral to nutrition and food services

☐ Patient declines referral at this time; given information for future reference

☐ Food Insecurity Screen not performed

[Technical Note: The following options should only be displayed when "Food Insecurity Screen not performed" is selected.]

[Section Selection Behavior: Select one. Required.]

☐ Already receiving services or assistance to address known food insecurity issue

☐ Resident of nursing home/long-term care facility

☐ Declines screening at this time

☐ Veteran/caregiver unable to answer

☐ Other

<obtain> Detail

[End Screening.]

Plan

[Begin Plan.]

[Technical Note: Include in Future Implementation Concerns: Separate KNART order set to address items included in this "plan" section.]

[Technical Note: Only display the "Plan" section if any of the following items are selected above "Patient agrees to referral for homelessness services or assistance" or "Patient agrees to referral to social services" or "Patient agrees to referral for nutrition and food services".]

[Section Prompt: Provide homelessness educational materials: http://www.va.gov/homeless/.]

[Section Prompt: Order consult for homeless program.]

[Section Prompt: Reason for request.]

☐ Veteran has been identified as being currently homeless or homeless within the past 2 months

☐ Veteran has been identified as being at risk of homelessness within the next 60 days

<obtain> Describe in detail the Veteran's current living situation

[Section Prompt: Order consult for social work or for nutrition and food services.]

[Section Prompt: Reason for request.]

☐ Veteran has been identified as having a current food shortage or a food shortage within the past 3 months

☐ Veteran has been identified as being at risk of a food shortage within the next 90 days

<obtain> Describe in detail the Veteran's current food situation

<obtain> Other details

[End Plan.]

[End Documentation Template – Homelessness.]

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Reminder resolution: homelessness screening. Homelessness Screening.docx. August 31, 2017, Microsoft Word document (David Douglas, MD, provided documentation from Portland VA).

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Appendix A. Existing Sample VA Artifacts

The following Figures 1-3 are from the National Homelessness Reminder.

Figure A.1. VA National Homelessness and Food Insecurity Screening (Image 1 of 3)

Figure A.2. VA National Homelessness and Food Insecurity Screening (Image 2 of 3)

Figure A.3. VA National Homelessness and Food Insecurity Screening (Image 3 of 3)

Appendix B. Acronyms

Acronym	Definition
CCWP	Clinical Content White Paper CDS Clinical Decision Support HL7 Health Level 7
KBS	Knowledge Based Systems KNART Knowledge Artifact
OIIG	Office of Informatics and Information Governance PCP Primary Care Provider
SME	Subject Matter Expert
TO	Task Order
VA	Department of Veterans Affairs VACO VA Central Office
VHA	Veterans Health Administration