RESOURCE AND PATIENT MANAGEMENT SYSTEM

IHS Standard Terminology Application Programming Interface

(BSTS)

Addendum to the Technical Manual

Version 1.0 Patch 2
June 2015
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Preface

The purpose of this manual is to provide technical information about the Indian Health Service (IHS) Standard Terminology (BSTS) package, specifically changes introduced in p2 of the v1.0 release. The BSTS package contains a number of Application Programming Interface (API) calls developed to interface with Apelon’s Distributed Terminology System (DTS). These APIs provide a general interface and caching mechanism for MUMPS-based/FileMan-based systems to interact with an external terminology server, specifically DTS.

DTS 4.2, provided by Apelon is a comprehensive open source solution for the acquisition, management and practical deployment of standardized terminologies, with local enhancements, into distributed application environments. DTS establishes a single common resource for an organization’s terminology assets that can be deployed across the spectrum of health information delivery systems.
1.0 Introduction

The BSTS package is a component of the IHS Resource and Patient Management System (RPMS) that provides a general interface and caching mechanism for MUMPS-based/FileMan-based systems to interact with an external terminology server, specifically DTS. The APIs are designed to be application independent, and stand-alone interfaces.

This manual provides IHS site managers with a technical description of the BSTS APIs, routines, files, menus, cross references, globals, and other necessary information required to effectively utilize the APIs from an external application to access Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT®), RxNorm, Unique Ingredient Identifier (UNII) codesets as well as IHS defined custom mapping codesets located in an external terminology service. The APIs also have the flexibility to retrieve other terminologies from DTS in the future, such as, International Classification of Diseases (ICD) Codes.

All APIs, routines, files, options, and keys are namespaced starting with the letters BSTS. The file number range for this package is 9002318–9002318.99.
2.0 Orientation

The BSTS package consists of a set of APIs to be called from an external application to search and return valid terminology concepts and associated information. The API package is distributed as a Kernel Installation and Distribution System (KIDS) package which contains the appropriate files and routines to enable data storage, auditing/logging, performance metrics and tools for monitoring and analysis, and a formal error handling and reporting mechanism.

Interaction between the external application (e.g., IHS Electronic Health Record (EHR), iCare) and the DTS is accomplished through the BSTSs via web service calls or requests. All APIs in this package begin with the namespace letters BSTS.

A high-level diagram of the terminology services architecture is shown in Figure 2-1. Each of the main components identified is detailed in the sections that follow.

![Figure 2-1: High-level Application Architecture Diagram for the IHS Terminology Services Solution](image-url)
2.1 RPMS Applications

Pictured on the left-hand portion of Figure 2-1 are the various RPMS applications that interact with the terminology systems. Several development modalities exist for these RPMS applications, including those created using Microsoft® .NET Framework, components with the IHS EHR, as well as the traditional character based green screen applications.

Each of these types of applications connects to RPMS in different ways.

- The Microsoft .NET applications utilize an ADO.NET adapter for RPMS that is called BMXNet.
- The EHR components utilize a Remote Procedure Call (RPC) broker mechanism referred to as the “CIA Broker”.
- The character-based applications are executed directly within the RPMS InterSystems Caché® database and therefore have direct access to the RPMS database.

In the proposed solution, each of these types of applications would continue to interact with RPMS using the same mechanisms they currently utilize and would interact with the terminology services via the new RPMS Terminology Services API that is described within this document.

2.2 Terminology Service RPMS API

For the initial set of SNOMED CT related use cases, applications will interact with a new MUMPS-based API that exposes functions and classes that encapsulate the interface with the DTS terminology server. This API will return information in familiar data array format and will eliminate the need for the applications to directly interface with the web service interface and related XML messaging.

While this RPMS API is expected to be the primary means through which RPMS-based applications will interact with the terminology server functions, there may be valid use-cases that arise in the future that would be best accommodated through direct web-service interaction with the terminology service. There is nothing that would preclude this direct access by applications in the future.

The majority of this technical manual is focused on describing the current implementation of this terminology API.
2.3 Stand-alone Terminology Service Instance

The terminology service solution component selected for this proposed design is the DTS Version 4 created by Apelon. Specific information about the DTS 4 application follows:

- **Solution/Product Name**: Apelon DTS Version 4.2
- **Company Website**: [http://www.apelon.com](http://www.apelon.com)
- **Description**: Apelon DTS is developed and supported by Apelon Inc. and consists of the following components:
  - A core terminology server
  - DTS Editor, a standalone application for managing the terminologies on the server
  - DTS Browser, a web-based front-end for viewing terminology trees
  - Import and Migration utilities
  - API and Web Services to support application development
- **Licensing**: Open Source (Apache License Version 2)
- **Cost**: The DTS 4.2 software is currently available at no cost. Apelon offers other paid services for standard code-set updates and mapping information from published sources. Annual fee is $20K for content subscription for all of IHS organization.
- **Support**: Available as a paid service from Apelon. Annual fee of $15K per year for full support services. Ad hoc support and training also available.
- **Developer Communities** (Open source, etc.): Yes, but not a large participation at this point.
- **Active Development**: Current version in use is DTS Version 4.2. The 4.2 production version was released in January 2015.
- **Language Support**: English
- **Server-side Operating System (OS)/Platform**: Java™, JBoss® AS 7
- **Client-side OS/Platform**: Client applications are written in Java™, and as such have wide platform support. Also browser access for browsing and searching terminology included.
- **Terminology Database Storage Options**:
  - **Windows®**:
    - Oracle® Database 10g or 11g Standard or Enterprise Edition
- InterSystems Caché 2010.2 or later
- IBM DB2® 9.7 Workgroup or Enterprise Edition
- MySQL 5.5
  - Linux:
    - Oracle Database 10g or 11g Standard or Enterprise Edition
    - InterSystems Caché 2010.2 or later
    - IBM DB2 9.7 Workgroup or Enterprise Edition
    - MySQL 5.5
- API/Interoperability Capabilities:
  - Java™ and .NET Application APIs, Web services (Version 4).
  - CTS2 compliant web interface on development roadmap for 2013, but not included in the initial version 4 release. Option exists to develop a subset of CTS2 interface implementation.
- Adopters:
  - Amgen
  - Axolotl
  - Canada Health Infoway
  - CHCA
  - Elsevier
  - Epocrates
  - Harris
  - Hong Kong Hospital Authority and Hong Kong MoH
  - HP (Federal and S&L)
  - Humedica
  - IBM
  - JEMBI (South Africa)
  - Kaiser
  - MModal/MedQuist
  - Next Gen
  - Premier
  - NASA
  - New York State Office of Mental Health
  - SSA
- RIQI
- Telus (Canada)
- University of Utah
- VA
- WoltersKluwer-Medispan

Additional design information for the terminology service architecture to support utilization of terminologies such as SNOMED CT is documented in the document titled “IHS Terminology Services – High-level Technical Design Version 1.5”.
3.0 Implementation and Maintenance

The BSTS APIs are designed to provide a MUMPS-based programming interface for RPMS development teams to work with terminology data. The API in turn utilizes a web service interface to interact with the terminology servers, with the initial implementation being an interface with the Apelon DTS 4.2 terminology service.

3.1 General Information

The following table shows the prerequisite patch requirements.

<table>
<thead>
<tr>
<th>Package and Version</th>
<th>Associated Patch Designations</th>
<th>Brief Patch Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IHS STANDARD TERMINOLOGY 1.0 (BSTS)</td>
<td>v1.0 Release</td>
<td>The initial release of the BSTS package.</td>
</tr>
</tbody>
</table>

3.2 System Requirements

The following table shows the versions of other packages that should be installed for BSTS to work properly. These packages are not required for the installation of BSTS v1.0.

<table>
<thead>
<tr>
<th>Module</th>
<th>Minimum Version</th>
<th>Recommended Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensemble 2012</td>
<td>v2012.2</td>
<td></td>
</tr>
<tr>
<td>VA FileMan (DI)</td>
<td>v22.0 p1017</td>
<td></td>
</tr>
<tr>
<td>IHS/VA Utilities (XB)</td>
<td>v3.0 through p11</td>
<td></td>
</tr>
<tr>
<td>IHS Kernel Toolkit (XT)</td>
<td>V7.3 through p1017</td>
<td></td>
</tr>
<tr>
<td>VA Kernel (XU)</td>
<td>v8.0 p1017</td>
<td></td>
</tr>
</tbody>
</table>

3.3 Package-wide Variables

There are no package-wide BSTS variables in RPMS.

3.4 Security Keys

The security keys that govern BSTS, which can be assigned to users, are:

<table>
<thead>
<tr>
<th>Key Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSTSZMENU</td>
<td>This security key should only be assigned to those persons who will manage the BSTS system. It should not be given to the general RPMS user population.</td>
</tr>
</tbody>
</table>
3.5 Secondary Menu Options

All users of the BSTS GUI lookup tool (found on the EHR Integrated Problem List, Order Entry, and in other EHR components) must have BSTSRPC assigned as a secondary menu option in their RPMS user definition.
4.0 Menu Diagram

RPMS menus in the BSTS system:

**IHS Standard Terminology Management** [BSTSMENU]. This menu option requires key BSTSZMENU and contains the following five options for managing BSTS:

- **Add/Edit Terminology Web Service** [BSTS WEB SERVICE]. Updates information about web services used by the site. This option requires the BSTSZMENU security key.
- **Edit Terminology Site Parameters** [BSTS EDIT SITE PARAMETERS]. Updates site specific configuration settings. This option requires the BSTSZMENU security key.
- **Terminology Web Service Test** [BSTS TEST WEB SERVICE]. Performs a test call to a web service. This option requires the BSTSZMENU security key.
- **Refresh IHS Standard Terminology Subsets** [BSTS REFRESH SUBSETS]. This option refreshes all of the subsets for a given codeset.
- **Check Terminology Web Service Status** [BSTS CHECK WEB SERVICE]. This option is a utility which allows site managers to monitor and control the DTS interface link.

4.1 Menu Option Descriptions

4.1.1 Add/Edit Terminology Web Service

Site Managers will use this option to enter the connection properties for the server (or servers) that their site will utilize to retrieve codeset information. With the release of BSTS v1.0 p2, the values needed for the site to connect to the IHS DTS PRODUCTION server are as follows:

<table>
<thead>
<tr>
<th>Select IHS Standard Terminology Management Option: WEB Add/Edit Terminology Web Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select BSTS WEB SERVICE ENDPOINT NAME: PRODUCTION SERVER</td>
</tr>
<tr>
<td>URL ROOT: <a href="https://dtsservices.ihs.gov">https://dtsservices.ihs.gov</a> Replace</td>
</tr>
<tr>
<td>PORT NUMBER: 42102//</td>
</tr>
<tr>
<td>TYPE: DTS4//</td>
</tr>
<tr>
<td>TIMEOUT OVERRIDE: 60//</td>
</tr>
<tr>
<td>CONNECTION TIMEOUT OVERRIDE:</td>
</tr>
<tr>
<td>USERNAME: DTSUser//</td>
</tr>
<tr>
<td>PASSWORD: DTSPW!//</td>
</tr>
<tr>
<td>SERVICE PATH: /soap//</td>
</tr>
<tr>
<td>SSL/TLS CONFIGURATION: SNOMEDServer//</td>
</tr>
<tr>
<td>CHECK FOR DTS CONNECTION ON:</td>
</tr>
<tr>
<td>CHECK FOR CONNECTION AFTER:</td>
</tr>
<tr>
<td>MAXIMUM REMOTE SEARCH TIME:</td>
</tr>
</tbody>
</table>
Some of the properties listed are site adjustable. They can be modified to account for network issues and site preferences. These properties are explained as follows:

- **TIMEOUT OVERRIDE** – This is a maximum time a DTS web service call will wait for a query to finish before it quits (if null, the default is 60 seconds). If a DTS call exceeds this value, the BSTS application will switch over to local access mode. Note that this property pertains to all calls to DTS. Many of these calls happen in the background and are not apparent to the user. Care should be taken to set this property to a value less than 60 seconds. To control DTS maximum DTS search times, please adjust the MAXIMUM REMOTE SEARCH TIME property instead of this property.

- **CONNECTION TIMEOUT OVERRIDE** – This is the maximum time a DTS web service call will wait for a connection to be established to the DTS server (if null, the default is 2 seconds). Sites with slower network connections may need to adjust this setting to a higher value. Every attempt should be taken however to keep this value as low as possible to avoid longer waits during SNOMED concept lookups. If the time to establish a connection with the DTS server exceeds this value, the BSTS application will switch over to local access mode.

- **CHECK FOR DTS CONNECTION ON** – When the DTS server is operating in local access mode this property will contain a date and time in the future. This is the date and time after which the application will attempt to contact the DTS server again to see if it is online. If the value of this property is null, the connection to the DTS server is operating successfully.

- **MAXIMUM REMOTE SEARCH TIME** - If after a search call to DTS is completed it is determined that, even though the call was successful, it still took longer to complete than the number of seconds listed in this field, it will switch the server of to local access mode. This value should be less than or equal to the TIMEOUT OVERRIDE value.

- **CHECK FOR CONNECTION AFTER** – When the DTS server switches to local access mode, it will remain in local access mode until the number of minutes specified in this property are reached. When that wait period has been reached the next call made to DTS after that will attempt to restore connection to the server. If the server is back online or search calls are now returning within the allowable MAXIMUM REMOTE SEARCH TIME, the DTS link will be switched back on.

### 4.1.2 Edit Terminology Site Parameters

This option is used during the initial installation of the BSTS version 1.0 application (please refer to the BSTS version 1.0 Installation Manual for further details). The only property that may ever need to be adjusted after the initial installation is the REFRESH SUBSETS EVERY # DAYS property which is documented below. Figure 4-1 shows a typical entry in the BSTS SITE PARAMETERS file.
Select OPTION NAME: BSTS EDIT SITE PARAMETERS
Edit Terminology Site Parameters
Select BSTS SITE PARAMETERS NAME: 2011 DEMO HOSPITAL
REFRESH SUBSETS EVERY # DAYS: 60
Select WEB SERVICE: PRODUCTION
Are you adding 'PRODUCTION' as a new WEB SERVICE (the 1ST for this BSTS SITE PARAMETERS)? No// Y (Yes)
PRIORITY: 1
DAYS TO KEEP RESPONSE:
Select WEB SERVICE:

Figure 4-1: Sample BSTS SITE PARAMETERS file entry

REFRESH SUBSETS EVERY # DAYS – This property controls how often to automatically refresh subsets at the site. Since this is a system intensive process care should be taken to not perform refreshes too often. The default value for this property is 60 days.

4.1.3 Terminology Web Service Test
This option allow users to test the DTS server to see if it is properly returning results. The option is documented in the BSTS version 1.0 Installation Manual.

4.1.4 Refresh IHS Standard Terminology Subsets
Since new content has not been delivered to the sites yet and is currently delivered with p2, there is no reason to run this option at this time unless issues occur and you are specifically advised to do so. Figure 4-2 shows a sample call to this option.

This option refreshes the IHS BSTS Terminology Subsets It will mark each concept's subsets as out of date and then start a background process to retrieve the subsets assigned to each concept.

Are you sure you want to do this? NO// YES
Select the codeset to refresh: 36 SCTUSEXT
Start the process? NO//

Figure 4-2: Sample subset refresh call

4.1.5 Check Terminology Web Service Status
This is a new option for p2. This option allows site managers to quickly determine the status of the DTS connection, to turn the link On/Off and to adjust the setup properties for the connection. Figure 4-3 shows a sample display of this option.
Select IHS Standard Terminology Management Option: STS Check Terminology Web Service Status

Select BSTS WEB SERVICE ENDPOINT NAME: PRODUCTION SERVER

Current Server Status:
- Web Service: PRODUCTION SERVER
- Current Status: ONLINE
- Offline Until: N/A
- Last Error Message: N/A

Current Server Settings:
- CHECK FOR CONNECTION AFTER: 60 minutes (default)
- CONNECTION TIMEOUT OVERRIDE: 2 seconds (default)
- MAXIMUM REMOTE SEARCH TIME: 60 seconds (default)
- TIMEOUT OVERRIDE: 60 seconds

Choose from the following options
1. Refresh Current information
2. Check DTS and Enable if Available
3. Turn off the DTS Link
4. Edit Server Settings

Select number or return to quit: (1-4):

Figure 4-3: Sample Check Terminology Web Service Status call

When running the option, the user will be prompted to enter the web service to monitor. Most sites will only have one web service (PRODUCTION or PRODUCTION SERVER) set up. After selecting the appropriate server, the user will be presented with a display similar to Figure 4-3. The user then has the following four options to choose from:

**Refresh Current information** – Running this option will refresh the current screen. It will not attempt to check to see if the DTS server is now available. It is possible that the screen display might change by running this option if the DTS server status became enabled/disabled by another process attempting to perform a call to DTS.

**Check DTS and Enable if Available** – This option will attempt to contact the DTS server. If the call is successful, it will place the server back online. If the call is not successful, it will update the Offline Until value to be the current date/time plus the number of minutes specified by the **CHECK FOR CONNECTION AFTER** property documented above.

**Turn off the DTS Link** – Running this option will manually turn off the link to DTS for the specified amount of time.

**Edit Server Settings** – This option will allow the setup properties specified earlier to be adjusted.
5.0 Routine

5.1 Routines with Description

This routine list describes each routine included in BSTS v1.0 p2. Other routines not listed here are documented in the original BSTS v1.0 Technical Manual.

<table>
<thead>
<tr>
<th>Routine</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSTS10P2</td>
<td>Environmental Checking/Pre-installation/Post-installation routine to convert mappings and switch connection settings</td>
</tr>
<tr>
<td>BSTSAPIA</td>
<td>API program routine</td>
</tr>
<tr>
<td>BSTSAPIB</td>
<td>API program routine</td>
</tr>
<tr>
<td>BSTSAPIC</td>
<td>API program routine</td>
</tr>
<tr>
<td>BSTSAPID</td>
<td>API program routine</td>
</tr>
<tr>
<td>BSTSAPIF</td>
<td>API program routine</td>
</tr>
<tr>
<td>BSTSCDET</td>
<td>Routine to return concept detail information</td>
</tr>
<tr>
<td>BSTSCMCL</td>
<td>Routine containing Caché method calls</td>
</tr>
<tr>
<td>BSTSDTS0</td>
<td>Routine for DTS specific processing</td>
</tr>
<tr>
<td>BSTSDTS1</td>
<td>Secondary routine for DTS specific processing</td>
</tr>
<tr>
<td>BSTSDTS3</td>
<td>Fourth routine for DTS specific processing</td>
</tr>
<tr>
<td>BSTSSSTA</td>
<td>DTS connection utility routine</td>
</tr>
<tr>
<td>BSTSUTIL</td>
<td>BSTS utility function routine</td>
</tr>
<tr>
<td>BSTSWSV</td>
<td>Routine used to retrieve web service connection information</td>
</tr>
<tr>
<td>BSTSWSV1</td>
<td>Second routine used to retrieve web service connection information</td>
</tr>
</tbody>
</table>

5.2 API List

5.2.1 $$SEARCH^BSTSAPI

This API allows a specific code set version to be searched on for a particular input string. The result set can be filtered by subset, maximum records, and other filtering criteria.

Parameter: OUT

- Data Type: String
- Description: Output variable/global to return information specified in the VAR parameter.
Parameter: IN

Data Type: String (Optional)

Description:
Search String^Search Type^Namespace ID^Filter Subset^Date to Check^Maximum Number Concepts^Return Info^Add/Retire Date^Batch Return^Batch Return Concept Number^Local^Debug

Values:
- **Search String.** String to search on
- **Search Type:**
  - F-Fully specified name
  - S-Synonyms
- **Namespace ID** (Optional). Default is 36 (SNOMED CT US Extension). Available namespaces are:
  - 36 (SNOMED CT US Extension)
  - 5180 (FDA UNII)
  - 1552 (RxNorm R)
  - 32773 (GMRA Allergies with Maps)
  - 32772 (GMRA Signs Symptoms)
  - 32771 (IHS VANDF)
  - 32774 (IHS Med Route)
  - 32770 (ECLIPS)
- **Filter Subset** (Optional). Subsets to filter on – separate multiple subsets using “~”. Default to “IHS Problem List”. Passing “ALL” returns all allowable SNOMED terms (when looking up on SNOMED).
- **Date to Check** (Optional). Default to Today (FileMan format)
- **Maximum Number of Concepts to Return** (Optional). Default 25
- **Return Info** (Optional). Default is all "PSBIXCAV":
  - P. Preferred
  - S. Synonym
  - B. Subset
  - I. IsA
  - X. ICD9
  - C. Children
  - A. Associations
  - V. Inv. Associations
- **Add or Retire Date Information** (Optional). Pass 1 to NOT return data
• **Batch Return** (Optional). Start at record # (used in conjunction with **Return Info**)

• **Batch Return** Concept Number (Optional). Number of concepts to return per batch (used in conjunction with **Maximum Number of Concepts to Return**)

• **Local** (Optional). Pass 1 to perform local listing, otherwise leave blank for remote listing

• **Debug** (Optional). Pass 1 to display debug information

**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the following sections (based on the IN Parameters **Maximum Number Concepts to Return** and **Return Info**):

• **Concept ID/DTSID:**
  - VAR(#,"CON")=Concept ID
  - VAR(#,"DTS")=Internal DTS ID

• **Fully Specified Name:**
  - VAR(#,"FSN","DSC")=Description ID of the FSN
  - VAR(#,"FSN","TRM")=Fully Specified Name
  - VAR(#,"FSN","XADT")=Date Added
  - VAR(#,"FSN","XRDT")=Date Retired

• **ICD9 Information - Multiple Records Returned (CTR):**
  - VAR(#,"ICD",CTR,"COD")=ICD9 Code
  - VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
  - VAR(#,"ICD",CTR,"XADT")=Date Added
  - VAR(#,"ICD",CTR,"XRDT")=Date Retired

• **IsA Information - Multiple Records Returned (CTR):**
  - VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
  - VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
  - VAR(#,"ISA",CTR,"TRM")=IsA Term Name
  - VAR(#,"ISA",CTR,"XADT")=Date Added
  - VAR(#,"ISA",CTR,"XRDT")=Date Retired

• **Association Information (SNOMED) - Multiple Records Returned (CTR):**
  - VAR(#,"ASM",CTR,"CON")=SNOMED Concept CT Association
  - VAR(#,"ASM",CTR,"DTS")=DTSId of the SNOMED Concept

• **Association Information (RxNorm) - Multiple Records Returned (CTR):**
- \text{VAR}(\#, "ARX", \text{CTR}, "CON")=\text{RxNorm Code Value Association}
- \text{VAR}(\#, "ARX", \text{CTR}, "DTS")=\text{DTSId of the RxNorm Concept}

- **Association Information (UNII) - Multiple Records Returned (CTR):**
  - \text{VAR}(\#, "ASN", \text{CTR}, "CON")=UNII Code Value Association
  - \text{VAR}(\#, "ASN", \text{CTR}, "DTS")=\text{DTSId of the UNII Concept}

- **Inverse Association Information (RxNorm) - Multiple Records Returned (CTR):**
  - \text{VAR}(\#, "IAR", \text{CTR}, "CON")=\text{RxNorm Code Value of Inverse Association}
  - \text{VAR}(\#, "IAR", \text{CTR}, "DTS")=\text{DTSId of the RxNorm Concept}
  - \text{VAR}(\#, "IAR", \text{CTR}, "TRM")=Inverse Association Term

- **Child Information - Multiple Records Returned (CTR):**
  - \text{VAR}(\#, "CHD", \text{CTR}, "CON")=Concept ID of Child Term (may be blank prior to detail lookup)
  - \text{VAR}(\#, "CHD", \text{CTR}, "DTS")=\text{DTSId of the Child Term}
  - \text{VAR}(\#, "CHD", \text{CTR}, "TRM")=\text{IsA Term Name}
  - \text{VAR}(\#, "CHD", \text{CTR}, "XADT")=\text{Date Added}
  - \text{VAR}(\#, "CHD", \text{CTR}, "XRDT")=\text{Date Retired}

- **Lookup Problem Column Value (Preferred Term Information for concept for Search Type \([F]\) or Synonym or Preferred Term Information for Search Type \([S]\)):**
  - \text{VAR}(\#, "PRB", "DSC")=Description ID of a Pref Term (Type F) or Synonym/Pref Term (S)
  - \text{VAR}(\#, "PRB", "TRM")=Preferred Name of a Concept (F) or a Synonym/Pref Term (S)

- **Preferred Term Information:**
  - \text{VAR}(\#, "PRE", "DSC")=Description ID of Preferred Term
  - \text{VAR}(\#, "PRE", "TRM")=Preferred Term
  - \text{VAR}(\#, "PRE", "XADT")=Date Added
  - \text{VAR}(\#, "PRE", "XRDT")=Date Retired

- **Subset Information - Multiple Records Returned (CTR):**
  - \text{VAR}(\#, "SUB", \text{CTR}, "SUB")=Subset Name
  - \text{VAR}(\#, "SUB", \text{CTR}, "XADT")=Date Added
  - \text{VAR}(\#, "SUB", \text{CTR}, "XRDT")=Date Retired

- **Synonym Information - Multiple Records Returned (CTR):**
  - \text{VAR}(\#, "SYN", \text{CTR}, "DSC")=Description ID of Synonym
  - \text{VAR}(\#, "SYN", \text{CTR}, "TRM")=Synonym Term
  - \text{VAR}(\#, "SYN", \text{CTR}, "XADT")=Date Added
VAR(#,"SYN",CTR,"XRDT")=Date Retired

- Date Concept Added/Retired:
  - VAR(#,"XADT")=Date Added
  - VAR(#,"XRDT")=Date Retired

Parameter: <return value>

Data Type: String

Description:
Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:

- Status:
  - 2: Remote information returned
  - 1: Local information returned
  - 0: No Information Returned

- Primary Remote Error Message
- Secondary Remote Error Message (if applicable)

5.2.2 $$CODESETS^BSTSAPI$

This API returns a list of available terminology code sets supported by the Apelon DTS Version 4 software.

Parameter: OUT

Data Type: String

Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String

Description (Optional):
Local^Debug

Values:

- Local (Optional). Pass 1 to perform local listing, otherwise leave blank for remote listing.
- Debug (Optional). Pass 1 to display debug information.
Parameter: VAR

Data Type: String List
Description: List of records in the format:
   Codeset ID^Codeset Code^Codeset Name

Parameter: <return value>

Data Type: String
Description:
   Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:
- Status:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned
- Primary Remote Error Message
- Secondary Remote Error Message (if applicable)

5.2.3 $$VERSIONS^BSTSAPI

This API will return a list of available versions for the supplied code set.

Parameter: OUT

Data Type: String
Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String
Description (Optional):
   Namespace^Local^Debug.

Values:
- Namespace ID (Optional). Default to SNOMED CT US Extensions (#36)
- Local (Optional). Pass 1 to perform local listing, otherwise leave blank for remote listing.
- Debug (Optional). Pass 1 to display debug information.
Parameter: VAR
  Data Type: String List
  Description (List of records):
  Version ID^Version Name^Version Release Date^Version Install Date

Parameter: <return value>
  Data Type: String
  Description:
  Status^PrimaryErrorMsg^SecondaryErrorMsg
  Values:
  • Status:
    – 2: Remote information returned
    – 1: Local information returned
    – 0: No Information Returned
  • Primary Remote Error Message
  • Secondary Remote Error Message (if applicable)

5.2.4 $$CVRSN^BSTSAPI
This API will return the current version in use for the supplied code set.

Parameter: OUT
  Data Type: String
  Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN
  Data Type: String (Optional)
  Description:
  Namespace ID^Local^Debug
  Values:
  • Namespace ID (Optional). Default to SNOMED CT US Extensions (#36).
  • Local (Optional). Pass 1 to perform local listing, otherwise leave blank for remote listing.
  • Debug (Optional). Pass 1 to display debug information.
Parameter: VAR
   Data Type: String List
   Description (List of records):
      Version ID^Version Name^Version Release Date^Version Install Date (if available).

Parameter: <return value>
   Data Type: String
   Description:
      Status^PrimaryErrorMsg^SecondaryErrorMsg

   Values:
      • Status:
         – 2. Remote information returned
         – 1. Local information returned
         – 0. No Information Returned
      • Primary Remote Error Message
      • Secondary Remote Error Message (if applicable).

5.2.5 $$MPADVICE^BSTSAPI
This API will return map advice information for a particular SNOMED® Term.

Parameter: OUT
   Data Type: String
   Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN
   Data Type: String (Optional)
   Description:
      The Concept ID^Local^Exclude Info^Debug

   Values:
      • Concept ID. The Concept ID to look up.
      • Local (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
      • Exclude Info. Pass 1 to exclude add/retired date info from the output.
      • Debug (Optional). Pass 1 to display debug information.
**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the mapping information on file for the specified concept. Multiple records per concept could be returned.

**Format:**

- VAR(#,"MPADV","VAL")=Mapping Advice
- VAR(#,"MPCVL","VAL")=Map Classification Information
- VAR(#,"MPGRP","VAL")=Map Group
- VAR(#,"MPPRI","VAL")=Map Priority
- VAR(#,"MPRUL","VAL")=Map Rule
- VAR(#,"MPTGN","VAL")=Map Target Name
- VAR(#,"MPTGT","VAL")=Map Target Code

**Parameter:** <return value>

**Data Type:** String

**Description:**

- Status^PrimaryErrorMsg^SecondaryErrorMsg

**Values:**

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message**

- **Secondary Remote Error Message** (if applicable)

---

### 5.2.6 $$SUBSET^BSTSAPI$$

This API will return all of the available subsets that are available for a given code set.

**Parameter:** OUT

**Data Type:** String

**Description:** Output variable/global to return information specified in the VAR parameter that follows.
Parameter: IN

Data Type: String (Optional)

Description:

Namespace ID^Local^Debug

Values:

- **Namespace ID** (Optional). Default to SNOMED CT US Extension (#36)
- **Local** (Optional). Pass 1 or leave blank to perform local listing. Pass 2 for remote DTS listing
- **Debug** (Optional). Pass 1 to display debug information

Parameter: VAR

Data Type: String List

Description: The VAR(#) list of records returns the list of available subsets for the given namespace.

Format:

VAR(#)=Subset Name

Parameter: <return value>

Data Type: String

Description:

Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:

- **Status**:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned
- **Primary Remote Error Message**
- **Secondary Remote Error Message** (if applicable)
5.2.7 **$SUBLST^BSTSAPI**

This API will return all of the concepts found in a specified subset. Since these results could be quite extensive, it is recommended that the results be returned in a scratch global.

**Parameter:** OUT

**Data Type:** String

**Description:** Output variable/global to return information specified in the VAR parameter that follows.

**Parameter:** IN

**Data Type:** String (Optional)

**Description:**

Subset^Namespace ID^Local^Debug

**Values:**

- **Subset** (Required). The name of the subset to list the concepts for
- **Namespace ID** (Optional). Default to SNOMED CT US Extension (#36)
- **Local** (Optional). Pass 1 or leave blank to perform local listing. Pass 2 for remote DTS listing
- **Debug** (Optional). Pass 1 to display debug information

**Parameter:** VAR

**Data Type:** String List

**Description:**

**Format:**

VAR(#)=Concept ID^Description ID of Preferred Term^Preferred Term

**Parameter:** <return value>

**Data Type:** String

**Description:**

**Status^PrimaryErrorMsg^SecondaryErrorMsg**

**Values:**

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message**
• Secondary Remote Error Message (if applicable)

5.2.8 $$\text{VALTERM}^{\text{BSTSAPI}}$$

This API will determine whether a supplied term is a valid in a given code set and version.

**Parameter**: OUT

**Data Type**: String

**Description**: Output variable/global to return information specified in the VAR parameter that follows.

**Parameter**: IN

**Data Type**: String (Optional)

**Description**:

Search Term^Codeset ID^Snapshot Date^Local^Debug

**Values**:

- **Search Term**. The exact term for lookup.
- **Codeset ID** (Optional). Default to SNOMED CT US Extension (‘36’). Available namespaces are:
  - 36 (SNOMED CT US Extension)
  - 5180 (FDA UNII)
  - 1552 (RxNorm R)
  - 32773 (GMRA Allergies with Maps)
  - 32772 (GMRA Signs Symptoms)
  - 32771 (IHS VANDF)
  - 32774 (IHS Med Route)
  - 32770 (ECLIPS)
- **Snapshot Date**. Snapshot Date to check. Default Today’s Date.
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.

**Parameter**: VAR

**Data Type**: String List

**Description**: The VAR(#) list of records returns the following sections (based on the IN Parameters **Maximum Number Concepts** and **Return Info**):

- **Concept ID/DTSID**:
- VAR(#,"CON")=Concept ID
- VAR(#,"DTS")=Internal DTS ID

**Fully Specified Name:**
- VAR(#,"FSN","DSC")= Description ID of the FSN
- VAR(#,"FSN","TRM")=Fully Specified Name
- VAR(#,"FSN","XADT")=Date Added
- VAR(#,"FSN","XRDT")=Date Retired

**ICD9 Information - Multiple Records Returned (CTR):**
- VAR(#,"ICD",CTR,"COD")=ICD9 Code
- VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
- VAR(#,"ICD",CTR,"XADT")=Date Added
- VAR(#,"ICD",CTR,"XRDT")=Date Retired

**IsA Information - Multiple Records Returned (CTR):**
- VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
- VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
- VAR(#,"ISA",CTR,"TRM")=IsA Term Name
- VAR(#,"ISA",CTR,"XADT")=Date Added
- VAR(#,"ISA",CTR,"XRDT")=Date Retired

**Association Information (SNOMED) - Multiple Records Returned (CTR):**
- VAR(#,"ASM",CTR,"CON")=SNOMED Concept CT Association
- VAR(#,"ASM",CTR,"DTS")=DTSId of the SNOMED Concept

**Association Information (RxNorm) - Multiple Records Returned (CTR):**
- VAR(#,"ARX",CTR,"CON")=RxNorm Code Value Association
- VAR(#,"ARX",CTR,"DTS")=DTSId of the RxNorm Concept

**Association Information (UNII) - Multiple Records Returned (CTR):**
- VAR(#,"ASN",CTR,"CON")=UNII Code Value Association
- VAR(#,"ASN",CTR,"DTS")=DTSId of the UNII Concept

**Inverse Association Information (RxNorm) - Multiple Records Returned (CTR):**
- VAR(#,"IAR",CTR,"CON")=RxNorm Code Value of Inverse Association
- VAR(#,"IAR",CTR,"DTS")=DTSId of the RxNorm Concept
- VAR(#,"IAR",CTR,"TRM")=Inverse Association Term

**Child Information - Multiple Records Returned (CTR):**
- \( \text{VAR}(#\text{,"CHD"},\text{CTR},\text{"CON"})=\) Concept ID of Child Term (may be blank prior to detail lookup)
- \( \text{VAR}(#\text{,"CHD"},\text{CTR},\text{"DTS"})=\) DTSId of the Child Term
- \( \text{VAR}(#\text{,"CHD"},\text{CTR},\text{"TRM"})=\) IsA Term Name
- \( \text{VAR}(#\text{,"CHD"},\text{CTR},\text{"XADT"})=\) Date Added
- \( \text{VAR}(#\text{,"CHD"},\text{CTR},\text{"XRDT"})=\) Date Retired

- **Lookup Problem Column Value** (Preferred Term Information for concept for Search Type [F] or Synonym or Preferred Term Information for Search Type [S]):
  - \( \text{VAR}(#\text{,"PRB"},\text{"DSC"})=\) Description ID of a Pref Term (Type F) or Synonym/Pref Term (S)
  - \( \text{VAR}(#\text{,"PRB"},\text{"TRM"})=\) Preferred Name of a Concept (F) or a Synonym/Pref Name (S)

- **Preferred Term Information:**
  - \( \text{VAR}(#\text{,"PRE"},\text{"DSC"})=\) Description ID of Preferred Term
  - \( \text{VAR}(#\text{,"PRE"},\text{"TRM"})=\) Preferred Term
  - \( \text{VAR}(#\text{,"PRE"},\text{"XADT"})=\) Date Added
  - \( \text{VAR}(#\text{,"PRE"},\text{"XRDT"})=\) Date Retired

- **Subset Information - Multiple Records Returned (CTR):**
  - \( \text{VAR}(#\text{,"SUB"},\text{CTR},\text{"SUB"})=\) Subset Name
  - \( \text{VAR}(#\text{,"SUB"},\text{CTR},\text{"XADT"})=\) Date Added
  - \( \text{VAR}(#\text{,"SUB"},\text{CTR},\text{"XRDT"})=\) Date Retired

- **Synonym Information - Multiple Records Returned (CTR):**
  - \( \text{VAR}(#\text{,"SYN"},\text{CTR},\text{"DSC"})=\) Description ID of Synonym
  - \( \text{VAR}(#\text{,"SYN"},\text{CTR},\text{"TRM"})=\) Synonym Term
  - \( \text{VAR}(#\text{,"SYN"},\text{CTR},\text{"XADT"})=\) Date Added
  - \( \text{VAR}(#\text{,"SYN"},\text{CTR},\text{"XRDT"})=\) Date Retired

- **Date Concept Added/Retired:**
  - \( \text{VAR}(#\text{,"XADT"})=\) Date Added
  - \( \text{VAR}(#\text{,"XRDT"})=\) Date Retired

**Result returned as:**

Status^PrimaryErrorMsg^SecondaryErrorMsg

**Values:**

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
– 0. No Information Returned

**Primary Remote Error Message**

**Secondary Remote Error Message** (if applicable)

**Parameter:** <return value>

*Data Type:* String

*Description:* Result returned as:

Status^PrimaryErrorMsg^SecondaryErrorMsg

*Values:*

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message.**

- **Secondary Remote Error Message** (if applicable).

### 5.2.9 $$VALSBTRM^BSTSAPI$$

This API will return whether a given term is a valid within the supplied subset.

**Parameter:** OUT

*Data Type:* String

*Description:* Output variable/global to return information specified in the VAR parameter that follows.

**Parameter:** IN

*Data Type:* String (Optional)

*Description:* Specified as:

Description ID^Subset Codeset ID^Local^Debug

*Values:*

- **Description ID.** The Description ID for lookup.

- **Subset.** Subset to look for.

- **Codeset ID.** Default to SNOMED CT US Extension (‘36’).

- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.

- **Debug** (Optional). Pass 1 to display debug information.
Parameter: VAR

Data Type: String List
Description: Single VAR record is returned.
Values:
- 1. Term is in the provided subset
- 0. Term is not in the provided subset

Parameter: <return value>

Data Type: String
Description: Result returned as:
Status^PrimaryErrorMsg^SecondaryErrorMsg
Values:
- Status:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned
- Primary Remote Error Message.
- Secondary Remote Error Message (if applicable).

5.2.10 $$CNCLKP^BSTSAPI

This API will return the detail information for the specified Concept ID.

Parameter: OUT

Data Type: String
Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String (Optional)
Description: Specified as:
The Concept ID^Codeset ID^Snapshot Date^Local^Debug
Values:
- Concept ID. The Concept ID to look up
- Codeset ID (Optional). Default to SNOMED CT US Extensions (36) – Available namespaces are 36 (SNOMED CT US Extension, 5180 (FDA UNII), 1552 (RxNorm R))
- **Snapshot Date.** Snapshot Date to check. Default Today’s Date.
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 to perform a remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.

**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the following:

- **Concept ID/DTSID:**
  - VAR(#,"CON")=Concept ID
  - VAR(#,"DTS")=Internal DTS ID
- **Fully Specified Name:**
  - VAR(#,"FSN", "DSC")= Description ID of the FSN
  - VAR(#,"FSN", "TRM")=Fully Specified Name
  - VAR(#,"FSN", "XADT")=Date Added
  - VAR(#,"FSN", "XRDT")=Date Retired
- **ICD9 Information - Multiple Records Returned (CTR):**
  - VAR(#,"ICD",CTR,"COD")=ICD9 Code
  - VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
  - VAR(#,"ICD",CTR,"XADT")=Date Added
  - VAR(#,"ICD",CTR,"XRDT")=Date Retired
- **IsA Information - Multiple Records Returned (CTR):**
  - VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
  - VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
  - VAR(#,"ISA",CTR,"TRM")=IsA Term Name
  - VAR(#,"ISA",CTR,"XADT")=Date Added
  - VAR(#,"ISA",CTR,"XRDT")=Date Retired
- **Association Information (SNOMED) - Multiple Records Returned (CTR):**
  - VAR(#,"ASM",CTR,"CON")=SNOMED Concept CT Association
  - VAR(#,"ASM",CTR,"DTS")=DTSId of the SNOMED Concept
- **Association Information (RxNorm) - Multiple Records Returned (CTR):**
  - VAR(#,"ARX",CTR,"CON")=RxNorm Code Value Association
  - VAR(#,"ARX",CTR,"DTS")=DTSId of the RxNorm Concept
- **Association Information (UNII) - Multiple Records Returned (CTR):**
• Inverse Association Information (RxNorm) - Multiple Records Returned (CTR):
  – VAR(#,"IAR",CTR,"CON")=RxNorm Code Value of Inverse Association
  – VAR(#,"IAR",CTR,"DTS")=DTSId of the RxNorm Concept
  – VAR(#,"IAR",CTR,"TRM")=Inverse Association Term

• Child Information - Multiple Records Returned (CTR):
  – VAR(#,"CHD",CTR,"CON")=Concept ID of Child Term (may be blank prior to detail lookup)
  – VAR(#,"CHD",CTR,"DTS")=DTSId of the Child Term
  – VAR(#,"CHD",CTR,"TRM")=IsA Term Name
  – VAR(#,"CHD",CTR,"XADT")=Date Added
  – VAR(#,"CHD",CTR,"XRDT")=Date Retired

• Lookup Problem Column:
  – VAR(#,"PRB","DSC")=Description ID of a Pref Term (Type F) or Synonym/Pref Term (S)
  – VAR(#,"PRB","TRM")=Preferred Name of a Concept (F) or a Synonym/Preferred Name (S)

• Preferred Term Information:
  – VAR(#,"PRE","DSC")=Description ID of Preferred Term
  – VAR(#,"PRE","TRM")=Preferred Term
  – VAR(#,"PRE","XADT")=Date Added
  – VAR(#,"PRE","XRDT")=Date Retired

• Subset Information - Multiple Records Returned (CTR):
  – VAR(#,"SUB",CTR,"SUB")=Subset Name
  – VAR(#,"SUB",CTR,"XADT")=Date Added
  – VAR(#,"SUB",CTR,"XRDT")=Date Retired

• Synonym Information - Multiple Records Returned (CTR):
  – VAR(#,"SYN",CTR,"DSC")=Description ID of Synonym
  – VAR(#,"SYN",CTR,"TRM")=Synonym Term
  – VAR(#,"SYN",CTR,"XADT")=Date Added
  – VAR(#,"SYN",CTR,"XRDT")=Date Retired

• Date Concept Added/Retired:
  – VAR(#,"XADT")=Date Added
  – VAR(#,"XRDT")=Date Retired
Parameter: <return value>

Data Type: String

Description: Result returned as:

Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:

- Status:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- Primary Remote Error Message.
- Secondary Remote Error Message (if applicable).

5.2.11 $$DTSLKP^BSTSAPI

This API will return the detail information for the specified DTS ID.

Parameter: OUT

Data Type: String

Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String

Description: Specified as:

The DTS ID^Codeset ID^Snapshot Date^Local^Debug

Values:

- DTS ID. The DTS ID to look up.
- Codeset ID (Optional). Default to SNOMED CT US Extensions (‘36’) - Available namespaces are:
  - 36 (SNOMED CT US Extension)
  - 5180 (FDA UNII)
  - 1552 (RxNorm R)
  - 32773 (GMRA Allergies with Maps)
  - 32772 (GMRA Signs Symptoms)
  - 32771 (IHS VANDF)
  - 32774 (IHS Med Route).
  - 32770 (ECLIPS)
- **Snapshot Date.** Snapshot Date to check. Default Today’s Date.
- **Local** (Optional). Pass 1 to perform local listing, otherwise leave blank for remote listing.
- **Debug** (Optional). Pass 1 to display debug information.

**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the following:

- **Concept ID/DTSID:**
  - VAR(#,"CON")=Concept ID
  - VAR(#,"DTS")=Internal DTS ID

- **Fully Specified Name:**
  - VAR(#,"FSN", "DSC")= Description ID of the FSN
  - VAR(#,"FSN","TRM")=Fully Specified Name
  - VAR(#,"FSN","XADT")=Date Added
  - VAR(#,"FSN","XRDT")=Date Retired

- **ICD9 Information - Multiple Records Returned (CTR):**
  - VAR(#,"ICD",CTR,"COD")=ICD9 Code
  - VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
  - VAR(#,"ICD",CTR,"XADT")=Date Added
  - VAR(#,"ICD",CTR,"XRDT")=Date Retired

- **IsA Information - Multiple Records Returned (CTR):**
  - VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
  - VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
  - VAR(#,"ISA",CTR,"TRM")=IsA Term Name
  - VAR(#,"ISA",CTR,"XADT")=Date Added
  - VAR(#,"ISA",CTR,"XRDT")=Date Retired

- **Association Information (SNOMED) - Multiple Records Returned (CTR):**
  - VAR(#,"ASM",CTR,"CON")=SNOMED Concept CT Association
  - VAR(#,"ASM",CTR,"DTS")=DTSId of the SNOMED Concept

- **Association Information (RxNorm) - Multiple Records Returned (CTR):**
  - VAR(#,"ARX",CTR,"CON")=RxNorm Code Value Association
  - VAR(#,"ARX",CTR,"DTS")=DTSId of the RxNorm Concept

- **Association Information (UNII) - Multiple Records Returned (CTR):**
- \(\text{VAR}(#,"\text{ASN}",\text{CTR},"\text{CON}")=\text{UNII Code Value Association}\)
- \(\text{VAR}(#,"\text{ASN}",\text{CTR},"\text{DTS}")=\text{DTSId of the UNII Concept}\)

**Inverse Association Information (RxNorm) - Multiple Records Returned (CTR):**
- \(\text{VAR}(#,"\text{IAR}",\text{CTR},"\text{CON}")=\text{RxNorm Code Value of Inverse Association}\)
- \(\text{VAR}(#,"\text{IAR}",\text{CTR},"\text{DTS}")=\text{DTSId of the RxNorm Concept}\)
- \(\text{VAR}(#,"\text{IAR}",\text{CTR},"\text{TRM}")=\text{Inverse Association Term}\)

**Child Information - Multiple Records Returned (CTR):**
- \(\text{VAR}(#,"\text{CHD}",\text{CTR},"\text{CON}")=\text{Concept ID of Child Term (may be blank prior to detail lookup)}\)
- \(\text{VAR}(#,"\text{CHD}",\text{CTR},"\text{DTS}")=\text{DTSId of the Child Term}\)
- \(\text{VAR}(#,"\text{CHD}",\text{CTR},"\text{TRM}")=\text{IsA Term Name}\)
- \(\text{VAR}(#,"\text{CHD}",\text{CTR},"\text{XADT}")=\text{Date Added}\)
- \(\text{VAR}(#,"\text{CHD}",\text{CTR},"\text{XRDT}")=\text{Date Retired}\)

**Lookup Problem Column Value:**
- \(\text{VAR}(#,"\text{PRB}","\text{DSC}")=\text{Description ID of a Pref Term (Type F) or Synonym/Pref Term (S)}\)
- \(\text{VAR}(#,"\text{PRB}","\text{TRM}")=\text{Preferred Name of a Concept (F) or a Synonym/Preferred Name (S)}\)

**Preferred Term Information:**
- \(\text{VAR}(#,"\text{PRE}","\text{DSC}")=\text{Description ID of Preferred Term}\)
- \(\text{VAR}(#,"\text{PRE}","\text{TRM}")=\text{Preferred Term}\)
- \(\text{VAR}(#,"\text{PRE}","\text{XADT}")=\text{Date Added}\)
- \(\text{VAR}(#,"\text{PRE}","\text{XRDT}")=\text{Date Retired}\)

**Subset Information - Multiple Records Returned (CTR):**
- \(\text{VAR}(#,"\text{SUB}",\text{CTR},"\text{SUB}")=\text{Subset Name}\)
- \(\text{VAR}(#,"\text{SUB}",\text{CTR},"\text{XADT}")=\text{Date Added}\)
- \(\text{VAR}(#,"\text{SUB}",\text{CTR},"\text{XRDT}")=\text{Date Retired}\)

**Synonym Information - Multiple Records Returned (CTR):**
- \(\text{VAR}(#,"\text{SYN}",\text{CTR},"\text{DSC}")=\text{Description ID of Synonym}\)
- \(\text{VAR}(#,"\text{SYN}",\text{CTR},"\text{TRM}")=\text{Synonym Term}\)
- \(\text{VAR}(#,"\text{SYN}",\text{CTR},"\text{XADT}")=\text{Date Added}\)
- \(\text{VAR}(#,"\text{SYN}",\text{CTR},"\text{XRDT}")=\text{Date Retired}\)

**Date Concept Added/Retired:**
- \(\text{VAR}(#,"\text{XADT}")=\text{Date Added}\)
- \(\text{VAR}(#,"\text{XRDT}")=\text{Date Retired}\)
Parameter: <return value>

Data Type: String

Description: Result returned as:

Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:

- **Status**:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message**.

- **Secondary Remote Error Message** (if applicable).

5.2.12 $$DSCLKP^BSTSAPI

This API will return the detail information for the specified Description ID.

Parameter: OUT

Data Type: String

Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String

Description: Specified as:

Description ID^Codeset ID^Local^Debug

Values:

- **Description ID**. The Description ID to look up.
- **Codeset ID** (Optional). Default to SNOMED CT US Extensions (‘36’) – Available codesets are:
  - 36 (SNOMED CT US Extensions)
  - 1552 (RxNorm R)
  - 5180 (FDA UNII)
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.
**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the following sections (based on the IN Parameters **Maximum Number Concepts** and **Return Info**):

- **Concept ID/DTSID:**
  - VAR(#,"CON")=Concept ID
  - VAR(#,"DTS")=Internal DTS ID

- **Fully Specified Name:**
  - VAR(#,"FSN", "DSC")= Description ID of the FSN
  - VAR(#,"FSN","TRM")=Fully Specified Name
  - VAR(#,"FSN","XADT")=Date Added
  - VAR(#,"FSN","XRDT")=Date Retired

- **ICD9 Information - Multiple Records Returned (CTR):**
  - VAR(#,"ICD",CTR,"COD")=ICD9 Code
  - VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
  - VAR(#,"ICD",CTR,"XADT")=Date Added
  - VAR(#,"ICD",CTR,"XRDT")=Date Retired

- **IsA Information - Multiple Records Returned (CTR):**
  - VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
  - VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
  - VAR(#,"ISA",CTR,"TRM")=IsA Term Name
  - VAR(#,"ISA",CTR,"XADT")=Date Added
  - VAR(#,"ISA",CTR,"XRDT")=Date Retired

- **Association Information (SNOMED) - Multiple Records Returned (CTR):**
  - VAR(#,"ASM",CTR,"CON")=SNOMED Concept CT Association
  - VAR(#,"ASM",CTR,"DTS")=DTSId of the SNOMED Concept

- **Association Information (RxNorm) - Multiple Records Returned (CTR):**
  - VAR(#,"ARX",CTR,"CON")=RxNorm Code Value Association
  - VAR(#,"ARX",CTR,"DTS")=DTSId of the RxNorm Concept

- **Association Information (UNII) - Multiple Records Returned (CTR):**
  - VAR(#,"ASN",CTR,"CON")=UNII Code Value Association
  - VAR(#,"ASN",CTR,"DTS")=DTSId of the UNII Concept
- **Inverse Association Information (RxNorm) - Multiple Records Returned (CTR):**
  - VAR(#,"IAR",CTR,"CON")=RxNorm Code Value of Inverse Association
  - VAR(#,"IAR",CTR,"DTS")=DTSId of the RxNorm Concept
  - VAR(#,"IAR",CTR,"TRM")=Inverse Association Term

- **Child Information - Multiple Records Returned (CTR):**
  - VAR(#,"CHD",CTR,"CON")=Concept ID of Child Term (may be blank prior to detail lookup)
  - VAR(#,"CHD",CTR,"DTS")=DTSId of the Child Term
  - VAR(#,"CHD",CTR,"TRM")=IsA Term Name
  - VAR(#,"CHD",CTR,"XADT")=Date Added
  - VAR(#,"CHD",CTR,"XRDT")=Date Retired

- **Lookup Problem Column Value** (Preferred Term Information for concept for Search Type [F] or Synonym or Preferred Term Information for Search Type [S]):
  - VAR(#,"PRB","DSC")=Description ID of a Pref Term (Type F) or Synonym/Preferred Term (S)
  - VAR(#,"PRB","TRM")=Preferred Name of a Concept (F) or a Synonym/Preferred Name (S)

- **Preferred Term Information:**
  - VAR(#,"PRE","DSC")=Description ID of Preferred Term
  - VAR(#,"PRE","TRM")=Preferred Term
  - VAR(#,"PRE","XADT")=Date Added
  - VAR(#,"PRE","XRDT")=Date Retired

- **Subset Information - Multiple Records Returned (CTR):**
  - VAR(#,"SUB",CTR,"SUB")=Subset Name
  - VAR(#,"SUB",CTR,"XADT")=Date Added
  - VAR(#,"SUB",CTR,"XRDT")=Date Retired

- **Synonym Information - Multiple Records Returned (CTR):**
  - VAR(#,"SYN",CTR,"DSC")=Description ID of Synonym
  - VAR(#,"SYN",CTR,"TRM")=Synonym Term
  - VAR(#,"SYN",CTR,"XADT")=Date Added
  - VAR(#,"SYN",CTR,"XRDT")=Date Retired

- **Date Concept Added/Retired:**
  - VAR(#,"XADT")=Date Added
  - VAR(#,"XRDT")=Date Retired
Parameter: <return value>

Data Type: String

Description: Result returned as:

Status^PrimaryErrorMsg^SecondaryErrorMsg

Values:

- **Status**:
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message**.

- **Secondary Remote Error Message** (if applicable).

5.2.13 **$CONC^BSTSAPI**

This API will return the detail information for the specified Concept ID.

Parameter: OUT

Data Type: String

Description: Output variable/global to return information specified in the VAR parameter that follows.

Parameter: IN

Data Type: String

Description: Specified as:

The Concept ID^Codeset ID^Snapshot Date^Local^Debug

Values:

- **Concept ID**. The Concept ID to look up.

- **Codeset ID** (Optional). Default to ‘36’ (SNOMED CT US Extensions) – Available codesets are:
  - 36 (SNOMED CT US Extensions)
  - 1552 (RxNorm R)
  - 5180 (FDA UNII)

- **Snapshot Date**. Snapshot Date to check. Default Today’s Date.

- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.

- **Debug** (Optional). Pass 1 to display debug information.
Parameter: <return value>

Data Type: String

Description: Result returned as:
FSN Desc ID^FSN^Pref Desc ID^Pref Term^ICD9 list

Values:
- Description ID of Fully Specified Name
- Fully Specified Name
- Description ID of Preferred Term
- Preferred Term
- Delimited list of mapped ICD9 codes (‘;’ delimiter)

5.2.14 $$DESC^BSTSAPI

This API takes specific information returned by the $$DSCLKP^BSTSAPI API and returns it as part of a function call.

Parameter: IN

Data Type: String

Description: Specified as:
The Description ID^Codeset ID^Local^Debug

Values:
- Description ID. The Description ID to look up.
- Codeset ID (Optional). Default to ‘36’ (SNOMED CT US Extensions) - Available namespaces are:
  - 36 (SNOMED CT US Extension)
  - 5180 (FDA UNII)
  - 1552 (RxNorm R).
- Local (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- Debug (Optional). Pass 1 to display debug information.
Parameter: <return value>

Data Type: String

Description: Result returned as:

- Concept ID
- Term Description
- ICD9 list

Values:

- **Concept ID.** The Concept ID associated with the specified Description ID.
- **Term Description.** The Term associated with the specified Description ID.
- **ICD9 list.** Delimited list of mapped ICD9 codes (‘;’ delimiter).

### 5.2.15 $$$VSBTRMF^BSTSAPI

This API takes specific information returned by the $$$VALSBTRM^BSTSAPI API and returns it as part of a function call.

Parameter: IN

Data Type: String (Optional)

Description: Specified as:

- Description ID
- Subset Codeset ID
- Local
- Debug

Values:

- **Description ID.** The Description ID for lookup.
- **Subset.** Subset to look for.
- **Codeset ID.** Default to ‘36’ (SNOMED CT US Extensions).
- **Local (Optional).** Pass 1 to perform local listing, otherwise leave blank for remote listing.
- **Debug (Optional).** Pass 1 to display debug information.

Parameter: <return value>

Data Type: String

Description: Single VAR record is returned.

Value:

- 1. Term is in the provided subset
- 0. Term is not in the provided subset
5.2.16 $ICD2SMD^{BSTSAPI}$

This API Returns the SNOMED terms which map to a given ICD9 code.

**Parameter:** OUT

**Data Type:** String

**Description:** Output variable/global to return information specified in the VAR parameter.

**Parameter:** IN

**Data Type:** String (Optional)

**Description:** Specified as:

- ICD9 Code^Return Info^Local^Debug^Lookup Date

**Values:**

- **ICD9 Code.** The ICD9 code to find the SNOMED mappings for.
- **Return Info (Optional).** Default is BCI
  - P. Preferred
  - S. Synonyms
  - B. Subset
  - I. IsA
  - X. ICD9/ICD10
  - C. Children
- **Local (Optional).** Pass 1 to perform local listing, otherwise leave blank for remote listing
- **Debug (Optional).** Pass 1 to display debug information
- **Lookup Date (Optional).** The date to lookup on (default to T+2).

**Parameter:** VAR

**Data Type:** String List

**Description:** The VAR(#) list of records returns the following sections (based on the IN Parameters Maximum Number Concepts and Return Info):

- **Concept ID/DTSID:**
  - VAR(#,"CON")=Concept ID
  - VAR(#,"DTS")=Internal DTS ID
- **Fully Specified Name:**
  - VAR(#,"FSN", "DSC")= Description ID of the FSN
  - VAR(#,"FSN","TRM")=Fully Specified Name
• **ICD9 Information - Multiple Records Returned (CTR):**
  - VAR(#,"ICD",CTR,"COD")=ICD9 Code
  - VAR(#,"ICD",CTR,"TYP")=Code Type(ICD)
  - VAR(#,"ICD",CTR,"XADT")=Date Added
  - VAR(#,"ICD",CTR,"XRDT")=Date Retired

• **IsA Information - Multiple Records Returned (CTR):**
  - VAR(#,"ISA",CTR,"CON")=Concept ID of IsA Term (may be blank prior to lookup)
  - VAR(#,"ISA",CTR,"DTS")=DTSId of the IsA Term
  - VAR(#,"ISA",CTR,"TRM")=IsA Term Name
  - VAR(#,"ISA",CTR,"XADT")=Date Added
  - VAR(#,"ISA",CTR,"XRDT")=Date Retired

• **Lookup Problem Column Value** (Preferred Term Information for concept):
  - VAR(#,"PRB","DSC")=Description ID of a Pref Term
  - VAR(#,"PRB","TRM")=Preferred Name of a Concept

• **Preferred Term Information:**
  - VAR(#,"PRE","DSC")=Description ID of Preferred Term
  - VAR(#,"PRE","TRM")=Preferred Term
  - VAR(#,"PRE","XADT")=Date Added
  - VAR(#,"PRE","XRDT")=Date Retired

• **Subset Information - Multiple Records Returned (CTR):**
  - VAR(#,"SUB",CTR,"SUB")=Subset Name
  - VAR(#,"SUB",CTR,"XADT")=Date Added
  - VAR(#,"SUB",CTR,"XRDT")=Date Retired

• **Synonym Information - Multiple Records Returned (CTR):**
  - VAR(#,"SYN",CTR,"DSC")=Description ID of Synonym
  - VAR(#,"SYN",CTR,"TRM")=Synonym Term
  - VAR(#,"SYN",CTR,"XADT")=Date Added
  - VAR(#,"SYN",CTR,"XRDT")=Date Retired

• **Date Concept Added/Retired:**
  - VAR(#,"XADT")=Date Added
  - VAR(#,"XRDT")=Date Retired
**Parameter:** <return value>

**Data Type:** String

**Description:** Result returned as:

Status^PrimaryErrorMsg^SecondaryErrorMsg

**Values:**

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned

- **Primary Remote Error Message.**

- **Secondary Remote Error Message** (if applicable).

### 5.2.17 $DILKP^BSTSAPI$

This API takes accepts a NDC or VUID code and returns the any RxNorm values mapped to that code.

**Parameter:** OUT

**Data Type:** String

**Description:** Output variable/global to return information specified in the VAR parameter that follows.

**Parameter:** IN

**Data Type:** String

**Description:** Specified as:

Code^Type^Local^Debug

**Values:**

- **Code.** The NDC or VUID code to lookup.
- **Type.** Pass:
  - N for NDC lookup
  - V for VUID lookup
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.
**Parameter:** VAR  
**Data Type:** String List  
**Description:** The VAR(#) list of records returns the following information:

- **RxNorm Mappings:**
  - VAR(#,"RXN","CON")=RxNorm Code
  - VAR(1,"RXN","TRM")=RxNorm Code
  - VAR(1,"RXN","TDC")=Tradename Code
  - VAR(1,"RXN","TDT")= Tradename Term

**Parameter:** <return value>  
**Data Type:** String  
**Description:** Result returned as:

- Status^PrimaryErrorMsg^SecondaryErrorMsg

**Values:**

- **Status:**
  - 2. Remote information returned
  - 1. Local information returned
  - 0. No Information Returned
- **Primary Remote Error Message.**
- **Secondary Remote Error Message** (if applicable).

### 5.2.18 **ASSOC^BSTSAPI**

This API calls the existing **VALTERM^BSTSAPI** API call (accepting the same input parameters) and returns any association entries for only the first VAR(#) entry. Since most mapping files will return only one VAR(#) entry, this API can be used so its results can be parsed (rather than having to pull the data out of the VAR(#) array pieces).

**Parameter:** IN  
**Data Type:** String (Optional)  
**Description:** Specified as:

- Search Term^Codeset ID^Snapshot Date^Local^Debug

**Values:**

- **Search Term.** The exact term for lookup.
- **Codeset ID** (Optional). Default to SNOMED CT US Extension (‘36’) - Available namespaces are:
- 36 (SNOMED CT US Extension)
- 5180 (FDA UNII)
- 1552 (RxNorm R)
- 32773 (GMRA Allergies with Maps)
- 32772 (GMRA Signs Symptoms)
- 32771 (IHS VANDF)
- 32774 (IHS Med Route)

- **Snapshot Date.** Snapshot Date to check. Default Today’s Date.
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.

**Parameter:** <return value>

**Data Type:** String

**Description:** Result returned as:

\[1]^[2]^\[3]\]

**Values:**

- [1] SNOMED Association(s) (”,;” delimited)
- [2] RxNorm Association(s) (”,;” delimited)
- [3] UNII Association(s) (”,;” delimited)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Data Type</th>
<th>Description</th>
</tr>
</thead>
</table>
5.2.19 $$DI2RX^BSTSAPI

This API calls the existing $$DILKP^BSTSAPI API call (accepting the same input parameters) and returns only the first RxNorm value associated with the entry.

**Parameter:** IN

**Data Type:** String

**Description:** Specified as:

Code^Type Local^Debug

**Values:**

- **Code.** The NDC or VUID code to lookup.
- **Type.** Pass:
  - N for NDC lookup
  - V for VUID lookup
- **Local** (Optional). Pass 1 or blank to perform local listing. Pass 2 for remote DTS listing.
- **Debug** (Optional). Pass 1 to display debug information.

**Parameter:** <return value>

**Data Type:** String

**Description:** Result returned as:

[1]^2^3^4

**Values:**

- [1] RxNorm Code
- [2] RxNorm Term
- [4] Tradename RxNorm Term
6.0 Files and Tables

6.1 File List

The following table contains a list of files included with BSTS v1.0 p2.

<table>
<thead>
<tr>
<th>File #</th>
<th>Filename</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002318.1</td>
<td>BSTS CODESET</td>
<td>This file contains layout templates uploaded for use by any BSTS user.</td>
</tr>
<tr>
<td>9002318.2</td>
<td>BSTS WEB SERVICE ENDPOINT</td>
<td>This file contains information about the connections to web service endpoints.</td>
</tr>
<tr>
<td>9002318.3</td>
<td>BSTS TERMINOLOGY</td>
<td>This file contains information that was downloaded via the web service interface.</td>
</tr>
<tr>
<td>9002318.4</td>
<td>BSTS CONCEPT</td>
<td>This file contains the concepts that were downloaded via the web service interface.</td>
</tr>
<tr>
<td>9002318.5</td>
<td>BSTS CACHE CLASS TRANSPORT</td>
<td>This file contains the classes that will need to be defined as part of the installation.</td>
</tr>
</tbody>
</table>

6.2 File Access

The following table contains the FileMan access to the files.

<table>
<thead>
<tr>
<th>File #</th>
<th>Filename</th>
<th>GL</th>
<th>RD</th>
<th>WR</th>
<th>LYG</th>
<th>DD</th>
<th>DEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>9002318.1</td>
<td>BSTS CODESET</td>
<td>^BSTS(9002318.1,</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
</tr>
<tr>
<td>9002318.2</td>
<td>BSTS WEB SERVICE ENDPOINT</td>
<td>^BSTS(9002318.2,</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
</tr>
<tr>
<td>9002318.3</td>
<td>BSTS TERMINOLOGY</td>
<td>^BSTS(9002318.3,</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
</tr>
<tr>
<td>9002318.4</td>
<td>BSTS CONCEPT</td>
<td>^BSTS(9002318.4,</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
</tr>
<tr>
<td>9002318.5</td>
<td>BSTS CACHE CLASS TRANSPORT</td>
<td>^BSTSCLS(</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
<td>@</td>
</tr>
</tbody>
</table>

6.3 Cross References

The following indices are defined for the files included in BSTS v1.0 p2:
9002318.1 (BSTS CODESET)
   .01 Name
       B Regular type cross reference
   .02 Code
       C Regular type cross reference

9002318.2 (BSTS WEB SERVICE ENDPOINT)
   .01 Name
       B Regular type cross reference

9002318.3 (BSTS TERMINOLOGY)
   .01 Counter
       B Regular type cross reference
   1 Term
       E MUMPS
   New Style Cross References
       C Codeset, Concept ID, IEN
       D Codeset, Description ID
9002318.4 (BSTS CONCEPT)
  .01 Counter
   B Regular type cross reference
   4 Subsets (multiple)
  .01 Subsets
   B Regular type cross reference
   E Regular type cross reference for entire file
   New Style Cross References
   C Codeset,Concept ID,IEN
   D Codeset,DTS ID,IEN
   3 ICD Mapping (multiple)
  .02 CODE
   F Codeset,CODE, IEN
   7 NDC (multiple)
  .01 NDC
   B Regular type cross reference
   G Regular type cross reference for entire file
   New Style Cross References
   Codeset, NDC, IEN, NDC IEN
   8 VUID (multiple)
  .01 VUID
   B Regular type cross reference
   H Regular type cross reference for entire file
   New Style Cross References
   Codeset, VUID, IEN, VUID IEN
.01 ICD9 TO SNOMED MAP
   B Regular type cross reference
   I Regular type cross reference for entire file
New Style Cross Reference
Codeset, ICD TO SNOMED MAP, IEN, ICD TO SNOMED MAP IEN

9002318.5 (BSTS CACHE CLASS TRANSPORT)
   .01 Package Name
      B Regular type cross reference
   11 Class (multiple)
   .01 Class
      B Regular type cross reference

6.4 Table File
The following data file definitions are included in BSTS v1.0 p2:

File: 9002318.1 BSTS CODESET
Global: ^BSTS(9002318.1,

<table>
<thead>
<tr>
<th>Field #</th>
<th>Field Name</th>
<th>Subscript</th>
<th>Piece</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>.01</td>
<td>ID</td>
<td>D0,0</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>.02</td>
<td>CODE</td>
<td>&quot;</td>
<td>2</td>
<td>F</td>
</tr>
<tr>
<td>.03</td>
<td>NAME</td>
<td>&quot;</td>
<td>3</td>
<td>F</td>
</tr>
<tr>
<td>.04</td>
<td>CURRENT VERSION</td>
<td>&quot;</td>
<td>4</td>
<td>F</td>
</tr>
<tr>
<td>.05</td>
<td>LAST VERSION CHECK</td>
<td>&quot;</td>
<td>5</td>
<td>D</td>
</tr>
<tr>
<td>.06</td>
<td>LAST SUBSET CHECK</td>
<td>&quot;</td>
<td>6</td>
<td>D</td>
</tr>
<tr>
<td>.07</td>
<td>TASK NUMBER</td>
<td>&quot;</td>
<td>7</td>
<td>F</td>
</tr>
<tr>
<td>.08</td>
<td>SUBSET TASK NUMBER</td>
<td>&quot;</td>
<td>8</td>
<td>F</td>
</tr>
<tr>
<td>.09</td>
<td>ICD2SMD TASK NUMBER</td>
<td>&quot;</td>
<td>9</td>
<td>F</td>
</tr>
<tr>
<td>1</td>
<td>VERSIONS (9002318.11)</td>
<td>D0,1,D1,0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>.01</td>
<td>ID</td>
<td>&quot;</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>.02</td>
<td>NAME</td>
<td>2</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>.03</td>
<td>RELEASE DATE</td>
<td>3</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>.04</td>
<td>INSTALL DATE</td>
<td>4</td>
<td>D</td>
<td></td>
</tr>
</tbody>
</table>
### File: 9002318.2 BSTS WEB SERVICE ENDPOINT

#### Global: ^BSTS(9002318.2,

<table>
<thead>
<tr>
<th>Field #</th>
<th>Field Name</th>
<th>Subscript</th>
<th>Piece</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>.01</td>
<td>NAME</td>
<td>D0,0</td>
<td>1</td>
<td>F</td>
</tr>
<tr>
<td>.02</td>
<td>URL ROOT</td>
<td>&quot;</td>
<td>2</td>
<td>F</td>
</tr>
<tr>
<td>.03</td>
<td>PORT NUMBER</td>
<td>&quot;</td>
<td>3</td>
<td>F</td>
</tr>
<tr>
<td>.04</td>
<td>TYPE</td>
<td>&quot;</td>
<td>4</td>
<td>S</td>
</tr>
<tr>
<td>.05</td>
<td>TIMEOUT OVERRIDE</td>
<td>&quot;</td>
<td>5</td>
<td>F</td>
</tr>
<tr>
<td>.06</td>
<td>CURRENT VERSION</td>
<td>&quot;</td>
<td>6</td>
<td>F</td>
</tr>
<tr>
<td>.07</td>
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File: 9002318.5 BSTS CACHE CLASS TRANSPORT

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6.5 Callable Routines

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6.6 Published Entry Points

- BSTSAPI.INT
- SEARCH(OUT, IN); PEP - Perform Codeset Search
- CODESETS(OUT, IN); PEP - Return list of available code sets
- VERSIONS(OUT, IN); PEP - Return a list of available versions for a code set
- CVRSN(OUT, IN); PEP - Return the Current Version For the Code Set
- SUBSET(OUT, IN); PEP - Return the list of subsets available for a Code Set
- VALTERM(); PEP - Returns whether a given term is valid
- DSCLKP(OUT, IN); PEP - Returns detail information for a specified Description ID
- DTSLKP(OUT, IN); PEP - Returns detail information for a specified DTS ID
- CNCLKP(OUT, IN); PEP - Returns detail information for a specified Concept ID
- ASSOC(IN); PEP - Returns the associations for each type (SMD, RxNorm, UNII)
- DI2RX(IN); PEP - Performs a drug ingredient lookup on a specified value
- MPADVICE(OUT, IN); PEP – Returns ICD-10 mapping advice for a specified Concept ID
- SUBLST(OUT, IN); PEP – Returns a list of concepts in a specified subset
- VALSBTRM(OUT, IN); PEP - Returns whether a given term is in a particular subset
- VSBTRMF(IN); PEP – Function form of the VALSBTRM call
- ICD2SMD(OUT, IN); PEP - Returns the SNOMED terms which map to a given ICD9 code
- DILKP(OUT, IN); PEP - Performs a drug ingredient lookup on a specified value
- DESC(IN); Function form of the DSCLKP call
• CONC(IN) – Function form of the CNCLKP call
7.0 Internal Relations

All functions within this application work independently.

There are no documented internal relations in BSTS.
8.0 External Relations

8.1 External Calls

8.2 Callable Routines–Published Entry Points
This application contains no calls to external published entry points other than to standard Kernel/FileMan calls.

8.3 Exported options
Two options were included in the release of BSTS v1.0 p2.

<table>
<thead>
<tr>
<th>Option Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSTSMENU</td>
<td>Menu option</td>
</tr>
<tr>
<td>BSTS CHECK WEB SERVICE</td>
<td>New utility to check the status of the DTS connection</td>
</tr>
</tbody>
</table>
9.0 Archiving and Purging

There is no archiving or purging in BSTS.
10.0 **Documentation Resources**

This section describes a few methods to generate BSTS technical documentation.

10.1 **%INDEX Option**

This option analyzes the structure of a routine to determine in part if the routine adheres to RPMS programming standards. The %INDEX output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references

Running %INDEX for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist in the selected routines and to see how routines interact with one another (i.e., which routines call or are called by other routines).

To run %INDEX for the Patient Registration package, type the BSTS namespace at the “Routine(s)?>” prompt.

10.2 **List File Attributes Option**

This VA FileMan option allows users to generate documentation pertaining to files and file structure. Using the standard format of this option yields the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files that point to the file specified
- Input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
• Global location
• “Help” prompt
• Cross-references
• Input transform
• Date last edited
• Notes

Using the Global Map format of this option generates an output that lists the following information:

• All cross-references for the file selected
• Global location of each field in the file
• Input, print, and sort templates
11.0 SAC Requirements and Exemptions

No Standards and Conventions (SAC) exemptions are noted at this time, although we may need to pursue an exemption for the use of some Caché classes within the BSTSCMCL routine.
12.0 Templates, Forms, and Protocols

12.1 Print Templates
There are no print templates in BSTS.

12.2 Sort Templates
There are no sort templates in BSTS.

12.3 Input Templates
- BSTS ADD/EDIT WEB SERVICE
- BSTS EDIT SITE PARAMETERS

12.4 List Templates
There are no list templates in BSTS.

12.5 Forms
There are no forms in BSTS.

12.6 Protocols
There are no protocols in BSTS.
13.0 SNOMED CT Search API

13.1 Description of Development Environment

The SNOMED CT Search API was developed using the programming language C# within Microsoft Visual Studio® 2012 integrated development environment. SNOMED CT Search API is written to utilize the .NET 2.0 Framework. All new classes created for the SNOMED CT Search API exist within the namespace IndianHealthService.SNOMEDCTSearch.

In addition to the standard .NET object classes, the SNOMED CT Search API also uses commercially available Windows form controls from Infragistics. All the controls used were part of a package of controls named Infragistics NetAdvantage® for Windows Forms 2010 Volume 3.

In addition, the SNOMED CT Search API also utilizes the BMX version 4.0 software to facilitate data retrieval and updates are handled through the RPCs defined in the BSTSRPC and BMXRPC namespaces.

All of the dynamic link library (dll) files upon which SNOMED CT Search API depend are delivered with the SNOMED CT Search API install package and are stored in the directory specified by the user (default install directory is: C:\GDIT\SNOMED CT Search API).

13.2 SNOMED CT Search API RPMS Server Requirements

The RPMS server portion of the iCare application does not require a specific version of Caché or OS. However, the server needs to be able to support BMX 4.0 fully, and is therefore subject to any requirements needed to run that application. Please refer to the BMX version 4.0 Technical Manual for details.

13.3 List of SNOMED CT Search API Dependencies

The following table shows the graphical user interface dependencies associated with the SNOMED CT Search API application.

<table>
<thead>
<tr>
<th>Dependency</th>
<th>Assembly Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS .Net 2.0 Framework</td>
<td>Version 2.0 with any subsequent service packs from Microsoft</td>
<td>The Microsoft .NET 2.0 Framework is required for the iCare allocation. The iCare installation package will check this prerequisite during install and will assist with the download of this update from Microsoft. If online download is not available, installation will not be allowed until .Net 4.0 has been installed by other means.</td>
</tr>
</tbody>
</table>
13.4 SNOMED CT Search API–Install

The following table shows all of the files that will be installed with the SNOMED CT Search API. These files are installed in the directory specified by the user (default install directory is: C:\GDIT\SNOMED CT Search API).

<table>
<thead>
<tr>
<th>Filename</th>
<th>Assembly Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIANhealthServicE.sNoMEDCTSeArch</td>
<td>1.0.0.5</td>
<td>This is the main SNOMED CT Search dll. Provides access to search methods.</td>
</tr>
<tr>
<td>BMXNET40.dll</td>
<td>4.0.0.2</td>
<td>This library file contains the general BMXNet 4.0 client-side utilities and functions for connecting to the RPMS server and managing data connections.</td>
</tr>
</tbody>
</table>

The following table shows all of the files that are part of a set of enhanced user interface (UI) controls from Infragistics called NetAdvantage for Windows Forms Version 2010 Volume 3.

<table>
<thead>
<tr>
<th>Filename</th>
<th>Assembly Version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infragistics4.ShareD.v10.3.dll</td>
<td>10.3.20103.1000</td>
<td>This file contains general functions and types common to all of the Infragistics controls.</td>
</tr>
<tr>
<td>Infragistics4.Win.Misc.v10.3.dll</td>
<td>10.3.20103.1000</td>
<td>This is a set of other miscellaneous functions and data types used when working with the other Infragistics classes.</td>
</tr>
<tr>
<td>Infragistics4.Win.UltraWinEditors.v10_3.dll</td>
<td>10.3.20103.1000</td>
<td>This dll file contains enhanced user interface input controls such as the calendar date picker and special combo boxes.</td>
</tr>
<tr>
<td>Infragistics4.Win.UltraWinGrid.v10.3.dll</td>
<td>10.3.20103.1000</td>
<td>The UltraGrid™ is an enhanced data-bound DataGrid used to display tabular data to the user. This also allows users to sort, filter, arrange columns, and select rows of data at run time.</td>
</tr>
<tr>
<td>Infragistics4.Win.v10.3.dll</td>
<td>10.3.20103.1000</td>
<td>This file contains classes used at a high level to control application-wide styles and appearances and interface with Windows XP themes, etc.</td>
</tr>
</tbody>
</table>
13.5 SNOMED CT Search API — List of Object Classes

The following table shows the new object classes used within the SNOMED CT Search API. All of the specified class names exist within the namespace IndianHealthService.SNOMEDCTSearch.

<table>
<thead>
<tr>
<th>Class Name</th>
<th>Assembly</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNOMEDCTLookup</td>
<td>IndianHealthService.SNOMEDCTSearch.dll</td>
<td>DSNOMEDCTSearch class provides a view to allow users to search SNOMED CT.</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>IndianHealthService.SNOMEDCTSearch.dll</td>
<td>DSNOMEDCTSearch class provides a view to allow users to search SNOMED CT based on ICD 9 values.</td>
</tr>
</tbody>
</table>

13.6 SNOMED CT Search API — List of Properties by Class

The following table shows the methods by classes used within the SNOMED CT Search API. All of the specified class names exist within the namespace IndianHealthService.SNOMEDCTSearch.

<table>
<thead>
<tr>
<th>Class Name</th>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSNOMEDCTLookup</td>
<td>FormSize</td>
<td>Overrides default form size (Width: 800, Height: 600).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.Drawing.Size</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>FormTitle</td>
<td>Overrides default form title (SNOMED CT Lookup).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>Namespace</td>
<td>Overrides default DTS namespace (36 – SNOMED CT) used to perform search.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>SearchValue</td>
<td>Value passed initially search on. If blank, no search will be performed until user intervention.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>DescriptionID</td>
<td>SNOMED CT Description ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>Description</td>
<td>SNOMED CT Description</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>ConceptID</td>
<td>SNOMED CT Concept ID</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>ICD</td>
<td>ICD Value associated with returned SNOMED CT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>NumberOfRecords</td>
<td>Maximum number of records to display.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DataType: System.String</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>DefaultSubset</td>
<td>List of subsets to use for the subset listbox. Overrides the default values provided by SNOMED CT Search API.</td>
</tr>
<tr>
<td>Class Name</td>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>SelectedSubset</td>
<td>List of subsets to have selected in subset listbox. Appending &quot;.1&quot; will cause the subset to permanent. Users will be unable to deselect it from the subset listbox. &quot;Appending &quot;.0&quot; or leaving the subset as is will continue to allow users to deselect them. Data Type: System.Collections.ArrayList</td>
</tr>
<tr>
<td>DSNOMEDCTLookup</td>
<td>SNOMEDCTRemoteSession</td>
<td>BMX RemoteSession used to perform data calls to SNOMED CT Search (Terminology Search) RPMS area. Data Type: IndianHealthService.BMXNet.RemoteSession</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>FormSize</td>
<td>Overrides default form size (Width: 800, Height: 600). Data Type: System.Drawing.Size</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>SearchValue</td>
<td>Value passed initially search on. If blank, no search will be performed until user intervention. Data Type: System.String</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>DescriptionID</td>
<td>SNOMED CT Description ID Data Type: System.String</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>Description</td>
<td>SNOMED CT Description Data Type: System.String</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>ConceptID</td>
<td>SNOMED CT Concept ID Data Type: System.String</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>DefaultSubset</td>
<td>List of subsets to use for the subset listbox. Overrides the default values provided by SNOMED CT Search API. Data Type: System.Collections.ArrayList</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>SelectedSubset</td>
<td>List of subsets to have selected in subset listbox. Data Type: System.Collections.ArrayList</td>
</tr>
<tr>
<td>ICD9ToSNOMEDCTLookup</td>
<td>SNOMEDCTRemoteSession</td>
<td>BMX RemoteSession used to perform data calls to SNOMED CT Search (Terminology Search) RPMS area. Data Type: IndianHealthService.BMXNet.RemoteSession</td>
</tr>
</tbody>
</table>
14.0 Accessibility Checklist

IHS Section 508 36 CFR Part §1194.21 Software Applications and Operating Systems Checklist

The BSTS package is not a software application that includes a user interface and therefore Section 508 compliance checklist is not applicable.
Appendix A: Sample API Calls

A.1 $$SEARCH^BSTSAPI

The following example shows the records returned of a Fully Specified Name lookup listing:

```
> S OUT="VAR", IN="CEREBRAL EDEMA^F"
> W $$SEARCH^BSTSAPI(OUT, IN)
2^>ZW @OUT
VAR(1, "CHD", 1, "CON")=230760006
VAR(1, "CHD", 1, "DTS")=230760
VAR(1, "CHD", 1, "TRM")="Cytotoxic cerebral edema (disorder)"
VAR(1, "CHD", 1, "XADT")=""
VAR(1, "CHD", 1, "XRDT")=""
VAR(1, "CHD", 2, "CON")=230762003
VAR(1, "CHD", 2, "DTS")=230762
VAR(1, "CHD", 2, "TRM")="High altitude cerebral edema (disorder)"
VAR(1, "CHD", 2, "XADT")=""
VAR(1, "CHD", 2, "XRDT")=""
VAR(1, "CHD", 3, "CON")=230761005
VAR(1, "CHD", 3, "DTS")=230761
VAR(1, "CHD", 3, "TRM")="Periventricular cerebrospinal fluid edema (disorder)"
VAR(1, "CHD", 3, "XADT")=""
VAR(1, "CHD", 3, "XRDT")=""
VAR(1, "CHD", 4, "CON")=230763008
VAR(1, "CHD", 4, "DTS")=230763
VAR(1, "CHD", 4, "TRM")="Traumatic cerebral edema (disorder)"
VAR(1, "CHD", 4, "XADT")=""
VAR(1, "CHD", 5, "CON")=230759001
VAR(1, "CHD", 5, "DTS")=230759
VAR(1, "CHD", 5, "TRM")="Vasogenic cerebral edema (disorder)"
VAR(1, "CHD", 5, "XADT")=""
VAR(1, "CHD", 5, "XRDT")=""
VAR(1, "CON")=2032001
VAR(1, "DTS")=2032
VAR(1, "FSN", "DSC")=749395013
VAR(1, "FSN", "TRM")="Cerebral edema (disorder)"
VAR(1, "FSN", "XADT")=3120301.07
VAR(1, "ICD", 1, "COD")=348.5
VAR(1, "ICD", 1, "TYP")="IC9"
VAR(1, "ICD", 1, "XADT")=""
VAR(1, "ICD", 1, "XRDT")=""
VAR(1, "ISA", 1, "CON")=118654009
VAR(1, "ISA", 1, "DTS")=118654
VAR(1, "ISA", 1, "TRM")="Disorder characterized by edema (disorder)"
VAR(1, "ISA", 1, "XADT")=""
VAR(1, "ISA", 1, "XRDT")=""
VAR(1, "ISA", 2, "CON")=813080009
VAR(1, "ISA", 2, "DTS")=81308
VAR(1, "ISA", 2, "TRM")="Disorder of brain (disorder)"
VAR(1, "ISA", 2, "XADT")=""
VAR(1, "ISA", 2, "XRDT")=""
VAR(1, "PRB", "DSC")=4508017
VAR(1, "PRB", "TRM")="Cerebral edema"
```
VAR(1,"PRE","DSC")=4508017
VAR(1,"PRE","TRM")="Cerebral edema"
VAR(1,"PRE","XADT")=3120301.07
VAR(1,"PRE","XRDT")=""
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(1,"SUB",1,"XADT")=""
VAR(1,"SUB",1,"XRDT")=""
VAR(1,"SUB",2,"SUB")="PICK Neurology Long"
VAR(1,"SUB",2,"XADT")=""
VAR(1,"SUB",2,"XRDT")=""
VAR(1,"SUB",3,"SUB")="SRCH Emergency Department"
VAR(1,"SUB",3,"XADT")=""
VAR(1,"SUB",3,"XRDT")=""
VAR(1,"SUB",4,"SUB")="SRCH Family Practice"
VAR(1,"SUB",4,"XADT")=""
VAR(1,"SUB",4,"XRDT")=""
VAR(1,"SUB",5,"SUB")="SRCH Medicine - Inpatient"
VAR(1,"SUB",5,"XADT")=""
VAR(1,"SUB",5,"XRDT")=""
VAR(1,"SUB",6,"SUB")="SRCH Medicine - Urgent Care"
VAR(1,"SUB",6,"XADT")=""
VAR(1,"SUB",6,"XRDT")=""
VAR(1,"SUB",7,"SUB")="SRCH Neurology"
VAR(1,"SUB",7,"XADT")=""
VAR(1,"SUB",7,"XRDT")=""
VAR(1,"SUB",8,"SUB")="SRCH Problem List - Medical"
VAR(1,"SUB",8,"XADT")=""
VAR(1,"SUB",8,"XRDT")=""
VAR(1,"SUB",9,"SUB")="IHS Problem List"
VAR(1,"SUB",9,"XADT")=""
VAR(1,"SUB",9,"XRDT")=""
VAR(1,"SYN",1,"DSC")=480612016
VAR(1,"SYN",1,"TRM")="Cerebral oedema"
VAR(1,"SYN",1,"XADT")=3120301.07
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"SYN",2,"DSC")=4509013
VAR(1,"SYN",2,"TRM")="Intracranial swelling"
VAR(1,"SYN",2,"XADT")=3120301.07
VAR(1,"SYN",2,"XRDT")=""
VAR(1,"XADT")=3120301
VAR(1,"XRDT")=3500101
VAR(2,"CON")=230762003
VAR(2,"DTS")=230762
VAR(2,"FSN","DSC")=618614019
VAR(2,"FSN","TRM")="High altitude cerebral edema (disorder)"
VAR(2,"FSN","XADT")=3120301.07
VAR(2,"FSN","XRDT")=""
VAR(2,"ICD",1,"COD")=348.5
VAR(2,"ICD",1,"TYP")="IC9"
VAR(2,"ICD",1,"XADT")=""
VAR(2,"ICD",1,"XRDT")=""
VAR(2,"ICD",2,"COD")=993.2
VAR(2,"ICD",2,"TYP")="IC9"
VAR(2,"ICD",2,"XADT")=""
VAR(2,"ICD",2,"XRDT")=""
VAR(2,"ISA",1,"CON")=249605001
VAR(2,"ISA",1,"DTS")=249605
VAR(2,"ISA",1,"TRM")="Andes disease (disorder)"
VAR(2,"ISA",1,"XADT")=""
VAR(2,"ISA",1,"XRDT")=""
VAR(2,"ISA",2,"CON")=2032001
<p>| VAR(2,&quot;ISA&quot;,2,&quot;DTS&quot;)=2032       | VAR(2,&quot;ISA&quot;,2,&quot;TRM&quot;)=&quot;Cerebral edema (disorder)&quot; |
| VAR(2,&quot;ISA&quot;,2,&quot;XADT&quot;)=&quot;&quot;       | VAR(2,&quot;ISA&quot;,2,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(2,&quot;PRB&quot;,&quot;DSC&quot;)=345754010   | VAR(2,&quot;PRB&quot;,&quot;TRM&quot;)=&quot;High altitude cerebral edema&quot;   |
| VAR(2,&quot;PRE&quot;,&quot;DSC&quot;)=345754010   | VAR(2,&quot;PRE&quot;,&quot;TRM&quot;)=&quot;High altitude cerebral edema&quot;   |
| VAR(2,&quot;PRE&quot;,&quot;XADT&quot;)=3120301.07 | VAR(2,&quot;PRE&quot;,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(2,&quot;SUB&quot;,1,&quot;SUB&quot;)=&quot;SRCH Emergency Department&quot; | VAR(2,&quot;SUB&quot;,1,&quot;XADT&quot;)=&quot;&quot;                           |
| VAR(2,&quot;SUB&quot;,1,&quot;XRDT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,2,&quot;SUB&quot;)=&quot;SRCH Family Practice&quot;          |
| VAR(2,&quot;SUB&quot;,2,&quot;XADT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,2,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(2,&quot;SUB&quot;,3,&quot;XRDT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,4,&quot;SUB&quot;)=&quot;SRCH Medicine - Urgent Care&quot;  |
| VAR(2,&quot;SUB&quot;,4,&quot;XADT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,4,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(2,&quot;SUB&quot;,5,&quot;SUB&quot;)=&quot;SRCH Neurology&quot; | VAR(2,&quot;SUB&quot;,5,&quot;XADT&quot;)=&quot;&quot;                           |
| VAR(2,&quot;SUB&quot;,5,&quot;XRDT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,6,&quot;SUB&quot;)=&quot;SRCH Problem List - Medical&quot;  |
| VAR(2,&quot;SUB&quot;,6,&quot;XADT&quot;)=&quot;&quot;       | VAR(2,&quot;SUB&quot;,6,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(2,&quot;SUB&quot;,7,&quot;SUB&quot;)=&quot;IHS Problem List&quot; | VAR(2,&quot;SUB&quot;,7,&quot;XADT&quot;)=&quot;&quot;                           |
| VAR(2,&quot;SUB&quot;,7,&quot;XRDT&quot;)=&quot;&quot;       | VAR(2,&quot;SYN&quot;,1,&quot;DSC&quot;)=345755011                       |
| VAR(2,&quot;SYN&quot;,1,&quot;TRM&quot;)=&quot;High altitude cerebral oedema&quot; | VAR(2,&quot;SYN&quot;,1,&quot;XADT&quot;)=3120301.07                     |
| VAR(2,&quot;SYN&quot;,1,&quot;XRDT&quot;)=&quot;&quot;       | VAR(2,&quot;XADT&quot;)=3120301                                 |
| VAR(2,&quot;XADT&quot;)=350010           | VAR(3,&quot;CHD&quot;,1,&quot;CON&quot;)=206238001                       |
| VAR(3,&quot;CHD&quot;,1,&quot;DTS&quot;)=206238    | VAR(3,&quot;CHD&quot;,1,&quot;TRM&quot;)=&quot;Cerebral edema due to birth injury (disorder)&quot; |
| VAR(3,&quot;CHD&quot;,1,&quot;XADT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,1,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(3,&quot;CHD&quot;,2,&quot;CON&quot;)=311826007 | VAR(3,&quot;CHD&quot;,2,&quot;DTS&quot;)=311826                          |
| VAR(3,&quot;CHD&quot;,2,&quot;XADT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,2,&quot;TRM&quot;)=&quot;Traumatic cerebral edema with open intracranial wound (disorder)&quot; |
| VAR(3,&quot;CHD&quot;,2,&quot;XRDT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,2,&quot;XADT&quot;)=&quot;&quot;                             |
| VAR(3,&quot;CHD&quot;,3,&quot;CON&quot;)=311825006 | VAR(3,&quot;CHD&quot;,3,&quot;DTS&quot;)=311825                         |
| VAR(3,&quot;CHD&quot;,3,&quot;XRDT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,3,&quot;TRM&quot;)=&quot;Traumatic cerebral edema without open intracranial wound (disorder)&quot; |
| VAR(3,&quot;CHD&quot;,3,&quot;XADT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,3,&quot;XRDT&quot;)=&quot;&quot;                             |
| VAR(3,&quot;CHD&quot;,4,&quot;CON&quot;)=262695000 | VAR(3,&quot;CHD&quot;,4,&quot;DTS&quot;)=262695                          |
| VAR(3,&quot;CHD&quot;,4,&quot;XADT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,4,&quot;TRM&quot;)=&quot;Traumatic focal cerebral edema (disorder)&quot; |
| VAR(3,&quot;CHD&quot;,4,&quot;XRDT&quot;)=&quot;&quot;       | VAR(3,&quot;CHD&quot;,4,&quot;XADT&quot;)=&quot;&quot;                             |
| VAR(3,&quot;CHD&quot;,5,&quot;CON&quot;)=262694001 | VAR(3,&quot;CHD&quot;,5,&quot;DTS&quot;)=262694                          |</p>
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VAR(4, "PFB", "DSC")=455457012
VAR(4, "PFB", "TRM")="Traumatic cerebral edema with open intracranial wound"
VAR(4, "PRE", "DSC")=455457012
VAR(4, "PRE", "TRM")="Traumatic cerebral edema with open intracranial wound"
VAR(4, "PRE", "XADT")=3120301.07
VAR(4, "PRE", "XRDT")=""
VAR(4, "SUB", 1, "SUB")="IHS PROBLEM SUPERSET"
VAR(4, "SUB", 1, "XADT")=""
VAR(4, "SUB", 1, "XRDT")=""
VAR(4, "SUB", 2, "SUB")="SRCH Musculoskeletal"
VAR(4, "SUB", 2, "XADT")=""
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VAR(4, "SUB", 3, "SUB")="SRCH Neurology"
VAR(4, "SUB", 3, "XADT")=""
VAR(4, "SUB", 3, "XRDT")=""
VAR(4, "SUB", 4, "SUB")="SRCH Nursing - Public Health"
VAR(4, "SUB", 4, "XADT")=""
VAR(4, "SUB", 4, "XRDT")=""
VAR(4, "SUB", 5, "SUB")="SRCH Pain Management"
VAR(4, "SUB", 5, "XADT")=""
VAR(4, "SUB", 5, "XRDT")=""
VAR(4, "SUB", 6, "SUB")="SRCH Pediatrics"
VAR(4, "SUB", 6, "XADT")=""
VAR(4, "SUB", 6, "XRDT")=""
VAR(4, "SUB", 7, "SUB")="SRCH Trauma"
VAR(4, "SUB", 7, "XADT")=""
VAR(4, "SUB", 7, "XRDT")=""
VAR(4, "SUB", 8, "SUB")="IHS Problem List"
VAR(4, "SUB", 8, "XADT")=""
VAR(4, "SUB", 8, "XRDT")=""
VAR(4, "SYN", 1, "DSC")=455458019
VAR(4, "SYN", 1, "TRM")="Traumatic cerebral edema with open intracranial wound"
VAR(4, "SYN", 1, "XADT")=3120301.07
VAR(4, "SYN", 1, "XRDT")=""
VAR(4, "XADT")=3120301
VAR(4, "XRDT")=3500101
VAR(5, "CON")=311825006
VAR(5, "DTS")=311825
VAR(5, "FSN", "DSC")=708426011
VAR(5, "FSN", "TRM")="Traumatic cerebral edema without open intracranial wound (disorder)"
VAR(5, "ICD", 1, "COD")="854.00"
VAR(5, "ICD", 1, "TYP")="IC9"
VAR(5, "ICD", 1, "XADT")=""
VAR(5, "ICD", 1, "XRDT")=""
VAR(5, "ISA", 1, "CON")=230763008
VAR(5, "ISA", 1, "DTS")=230763
VAR(5, "ISA", 1, "TRM")="Traumatic cerebral edema (disorder)"
VAR(5, "ISA", 1, "XADT")=""
VAR(5, "ISA", 1, "XRDT")=""
VAR(5, "PRB", "DSC")=455456015
VAR(5, "PRB", "TRM")="Traumatic cerebral edema without open intracranial wound"
VAR(5, "PRE", "DSC")=455456015
VAR(5, "PRE", "TRM")="Traumatic cerebral edema without open intracranial wound"
VAR(5, "PRE", "XADT")=3120301.07
The following example shows the records returned of a Fully Specified Name lookup listing, with the add/retire date information being omitted:

```plaintext
>S OUT="VAR",IN="CEREBRAL EDEMA^F^^^^^^1"

>W $$SEARCH^BSTSAPI(OUT,IN)
   2^   
>ZW @OUT

VAR(1,"CHD",1,"CON")=230760006
VAR(1,"CHD",1,"DTS")=230760
VAR(1,"CHD",1,"TRM")="Cytotoxic cerebral edema (disorder)"
VAR(1,"CHD",2,"CON")=230762003
VAR(1,"CHD",2,"DTS")=230762
VAR(1,"CHD",2,"TRM")="High altitude cerebral edema (disorder)"
VAR(1,"CHD",3,"CON")=230761005
VAR(1,"CHD",3,"DTS")=230761
VAR(1,"CHD",3,"TRM")="Periventricular cerebrospinal fluid edema (disorder)"
VAR(1,"CHD",4,"CON")=230763008
VAR(1,"CHD",4,"DTS")=230763
VAR(1,"CHD",4,"TRM")="Traumatic cerebral edema (disorder)"
VAR(1,"CHD",5,"CON")=230759001
VAR(1,"CHD",5,"DTS")=230759
VAR(1,"CHD",5,"TRM")="Vasogenic cerebral edema (disorder)"
VAR(1,"CON")=2032001
VAR(1,"DTS")=2032
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VAR(1,"FSN","DSC")=749395013
VAR(1,"FSN","TRM")="Cerebral edema (disorder)"
VAR(1,"ICD",1,"COD")=348.5
VAR(1,"ICD",1,"TYP")="IC9"
VAR(1,"ISA",1,"CON")=118654009
VAR(1,"ISA",1,"DTS")=118654
VAR(1,"ISA",1,"TRM")="Disorder characterized by edema (disorder)"
VAR(1,"ISA",2,"CON")=81308009
VAR(1,"ISA",2,"DTS")=81308
VAR(1,"ISA",2,"TRM")="Disorder of brain (disorder)"
VAR(1,"PRB","DSC")=4508017
VAR(1,"PRB","TRM")="Cerebral edema"
VAR(1,"PRE","DSC")=4508017
VAR(1,"PRE","TRM")="Cerebral edema"
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(1,"SUB",2,"SUB")="PICK Neurology Long"
VAR(1,"SUB",3,"SUB")="SRCH Emergency Department"
VAR(1,"SUB",4,"SUB")="SRCH Family Practice"
VAR(1,"SUB",5,"SUB")="SRCH Medicine - Inpatient"
VAR(1,"SUB",6,"SUB")="SRCH Medicine - Urgent Care"
VAR(1,"SUB",7,"SUB")="SRCH Neurology"
VAR(1,"SUB",8,"SUB")="SRCH Problem List - Medical"
VAR(1,"SUB",9,"SUB")="IHS Problem List"
VAR(1,"SYN",1,"DSC")=480612016
VAR(1,"SYN",1,"TRM")="Cerebral oedema"
VAR(1,"SYN",2,"DSC")=4509013
VAR(1,"SYN",2,"TRM")="Disorder of brain (disorder)"
VAR(2,"CON")=230762003
VAR(2,"DTS")=230762
VAR(2,"FSN","DSC")=618614019
VAR(2,"FSN","TRM")="High altitude cerebral edema (disorder)"
VAR(2,"ICD",1,"COD")=348.5
VAR(2,"ICD",1,"TYP")="IC9"
VAR(2,"ICD",2,"COD")=993.2
VAR(2,"ICD",2,"TYP")="IC9"
VAR(2,"ISA",1,"CON")=249605001
VAR(2,"ISA",1,"DTS")=249605
VAR(2,"ISA",1,"TRM")="Andes disease (disorder)"
VAR(2,"ISA",2,"CON")=2032001
VAR(2,"ISA",2,"DTS")=2032
VAR(2,"ISA",2,"TRM")="Cerebral edema (disorder)"
VAR(2,"PRB","DSC")=345754010
VAR(2,"PRB","TRM")="Cerebral edema (disorder)"
VAR(2,"PRE","DSC")=345754010
VAR(2,"PRE","TRM")="High altitude cerebral edema"
VAR(2,"SUB",1,"SUB")="SRCH Emergency Department"
VAR(2,"SUB",2,"SUB")="SRCH Family Practice"
VAR(2,"SUB",3,"SUB")="SRCH Medicine - Inpatient"
VAR(2,"SUB",4,"SUB")="SRCH Medicine - Urgent Care"
VAR(2,"SUB",5,"SUB")="SRCH Neurology"
VAR(2,"SUB",6,"SUB")="SRCH Problem List - Medical"
VAR(2,"SUB",7,"SUB")="IHS Problem List"
VAR(2,"SYN",1,"DSC")=345755011
VAR(2,"SYN",1,"TRM")="High altitude cerebral oedema"
VAR(3,"CHD",1,"CON")=206238001
VAR(3,"CHD",1,"DTS")=206238
VAR(3,"CHD",1,"TRM")="Cerebral edema due to birth injury (disorder)"
VAR(3,"CHD",2,"CON")=311826007
VAR(3,"CHD",2,"DTS")=311826
VAR(3,"CHD",2,"TRM")="Traumatic cerebral edema with open intracranial wound (disorder)"
Addendum to the Technical Manual
Accessibility Checklist
June 2015

VAR(3,"CHD",3,"CON")=311825006
VAR(3,"CHD",3,"DTS")=311825
VAR(3,"CHD",3,"TRM")="Traumatic cerebral edema without open intracranial wound (disorder)"
VAR(3,"CHD",4,"CON")=262695000
VAR(3,"CHD",4,"DTS")=262695
VAR(3,"CHD",4,"TRM")="Traumatic focal cerebral edema (disorder)"
VAR(3,"CHD",5,"CON")=262694001
VAR(3,"CHD",5,"DTS")=262694
VAR(3,"CHD",5,"TRM")="Traumatic generalized cerebral edema (disorder)"
VAR(3,"CON")=230763008
VAR(3,"DTS")=230763
VAR(3,"FSN","DSC")=618615018
VAR(3,"FSN","TRM")="Traumatic cerebral edema (disorder)"
VAR(3,"ICD",1,"COD")=348.5
VAR(3,"ICD",1,"TYP")="IC9"
VAR(3,"ISA",1,"CON")=2032001
VAR(3,"ISA",1,"DTS")=2032
VAR(3,"ISA",1,"TRM")="Cerebral edema (disorder)"
VAR(3,"ISA",2,"CON")=127295002
VAR(3,"ISA",2,"DTS")=127295
VAR(3,"ISA",2,"TRM")="Traumatic brain injury (disorder)"
VAR(3,"PRB","DSC")=345757015
VAR(3,"PRB","TRM")="Traumatic cerebral edema"
VAR(3,"PRE","DSC")=345757015
VAR(3,"PRE","TRM")="Traumatic cerebral edema"
VAR(3,"SUB",1,"SUB")="SRCH Emergency Department"
VAR(3,"SUB",2,"SUB")="SRCH Neurology"
VAR(3,"SYN",1,"DSC")=345756012
VAR(3,"SYN",1,"TRM")="Traumatic cerebral edema (disorder)"

VAR(4,"CON")=311826007
VAR(4,"DTS")=311826
VAR(4,"FSN","DSC")=708428012
VAR(4,"FSN","TRM")="Traumatic cerebral edema with open intracranial wound (disorder)"
VAR(4,"ICD",1,"COD")=854.10
VAR(4,"ICD",1,"TYP")="IC9"
VAR(4,"ISA",1,"CON")=28188001
VAR(4,"ISA",1,"DTS")=28188
VAR(4,"ISA",1,"TRM")="Brain injury with open intracranial wound (disorder)"
VAR(4,"ISA",2,"CON")=230763008
VAR(4,"ISA",2,"DTS")=230763
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VAR(4,"PRB","DSC")=455457012
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VAR(4,"PRE","DSC")=455457012
VAR(4,"PRE","TRM")="Traumatic cerebral edema with open intracranial wound"
VAR(4,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(4,"SUB",2,"SUB")="SRCH Musculoskeletal"
VAR(4,"SUB",3,"SUB")="SRCH Neurology"
VAR(4,"SUB",4,"SUB")="SRCH Nursing - Public Health"
VAR(4,"SUB",5,"SUB")="SRCH Pain Management"
VAR(4,"SUB",6,"SUB")="SRCH Pediatrics"
VAR(4,"SUB",7,"SUB")="SRCH Trauma"
VAR(4,"SUB",8,"SUB")="IHS Problem List"
VAR(4,"SYN",1,"DSC")=455458019
VAR(4,"SYN",1,"TRM")="Traumatic cerebral oedema with open intracranial wound"
VAR(5,"CON")=311825006
VAR(5,"DTS")=311825
VAR(5,"FSN","DSC")=708426011
The following example shows the records returned of a Fully Specified Name lookup listing, with the add/retire date information being omitted and only the Synonyms requested:

```plaintext
> S OUT="VAR", IN="CHRONIC OTITIS EXTERNA^F^^^^^S^1"
> W $$SEARCH^BSTSAPI(OUT, IN)
2^>ZW @OUT
VAR(1, "CON")=53295002
VAR(1, "DTS")=53295
VAR(1, "FSN", "DSC")=791398013
VAR(1, "FSN", "TRM")="Chronic otitis externa (disorder)"
VAR(1, "PRB", "DSC")=88624014
VAR(1, "PRB", "TRM")="Chronic otitis externa"
VAR(1, "SYN", 1, "DSC")=88625010
VAR(1, "SYN", 1, "TRM")="Chronic otitis externa, NOS"
VAR(2, "CON")=194207002
VAR(2, "DTS")=194207
VAR(2, "FSN", "DSC")=578170015
VAR(2, "FSN", "TRM")="Chronic otitis externa due to aspergillosis (disorder)"
VAR(2, "PRB", "DSC")=298966014
VAR(2, "PRB", "TRM")="Chronic otitis externa due to aspergillosis"
VAR(3, "CON")=194208007
VAR(3, "DTS")=194208
VAR(3, "FSN", "DSC")=578171016
VAR(3, "FSN", "TRM")="Chronic otitis externa due to moniliasis (disorder)"
VAR(3, "PRB", "DSC")=298967017
VAR(3, "PRB", "TRM")="Chronic otitis externa due to moniliasis"
VAR(4, "CON")=232240007
VAR(4, "DTS")=232240
VAR(4, "FSN", "DSC")=620279010
VAR(4, "FSN", "TRM")="Chronic allergic otitis externa (disorder)"
VAR(5, "FSN", "TRM")="Traumatic cerebral edema without open intracranial wound (disorder)"
VAR(5, "ICD", 1, "COD")="854.00"
VAR(5, "ICD", 1, "TYP")="IC9"
VAR(5, "ISA", 1, "CON")=230763008
VAR(5, "ISA", 1, "DTS")=230763
VAR(5, "ISA", 1, "TRM")="Traumatic cerebral edema (disorder)"
VAR(5, "PRB", "DSC")=455456015
VAR(5, "PRB", "TRM")="Traumatic cerebral edema without open intracranial wound"
VAR(5, "PRE", "DSC")=455456015
VAR(5, "PRE", "TRM")="Traumatic cerebral edema without open intracranial wound"
VAR(5, "SUB", 1, "SUB")="IHS PROBLEM SUPERSET"
VAR(5, "SUB", 2, "SUB")="SRCH Musculoskeletal"
VAR(5, "SUB", 3, "SUB")="SRCH Neurology"
VAR(5, "SUB", 4, "SUB")="SRCH Nursing - Public Health"
VAR(5, "SUB", 5, "SUB")="SRCH Pain Management"
VAR(5, "SUB", 6, "SUB")="SRCH Pediatrics"
VAR(5, "SUB", 7, "SUB")="SRCH Trauma"
VAR(5, "SUB", 8, "SUB")="IHS Problem List"
VAR(5, "SYN", 1, "DSC")=455455016
VAR(5, "SYN", 1, "TRM")="Traumatic cerebral oedema without open intracranial wound"
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VAR(4,"PRB","DSC")=347960018
VAR(4,"PRB","TRM")="Chronic allergic otitis externa"
VAR(5,"CON")=232225005
VAR(5,"DTS")=232225
VAR(5,"FSN","DSC")=620262016
VAR(5,"FSN","TRM")="Chronic bacterial otitis externa (disorder)"
VAR(5,"PRB","DSC")=347943011
VAR(5,"PRB","TRM")="Chronic bacterial otitis externa"
VAR(6,"CON")=232224009
VAR(6,"DTS")=232224
VAR(6,"FSN","DSC")=620261011
VAR(6,"FSN","TRM")="Chronic infective otitis externa (disorder)"
VAR(6,"PRB","DSC")=347942018
VAR(6,"PRB","TRM")="Chronic infective otitis externa"
VAR(6,"SYN",1,"DSC")="T1999003447"
VAR(6,"SYN",1,"TRM")="Chronic infectious otitis externa"
VAR(7,"CON")=232239005
VAR(7,"DTS")=232239
VAR(7,"FSN","DSC")=620278019
VAR(7,"FSN","TRM")="Chronic irritant otitis externa (disorder)"
VAR(7,"PRB","DSC")=347959011
VAR(7,"PRB","TRM")="Chronic irritant otitis externa"
VAR(8,"CON")=111898002
VAR(8,"DTS")=111898
VAR(8,"FSN","DSC")=634690013
VAR(8,"FSN","TRM")="Chronic mycotic otitis externa (disorder)"
VAR(8,"PRB","DSC")=179051014
VAR(8,"PRB","TRM")="Chronic mycotic otitis externa"
VAR(8,"SYN",1,"DSC")="T1999006250"
VAR(8,"SYN",1,"TRM")="Chronic fungal otitis externa"
VAR(8,"SYN",2,"DSC")=1219702011
VAR(8,"SYN",2,"TRM")="Chronic fungal otitis externa"
VAR(9,"CON")=232236003
VAR(9,"DTS")=232236
VAR(9,"FSN","DSC")=620275016
VAR(9,"FSN","TRM")="Chronic non-infective otitis externa (disorder)"
VAR(9,"PRB","DSC")=347956016
VAR(9,"PRB","TRM")="Chronic non-infective otitis externa"
VAR(9,"SYN",1,"DSC")="T1999006249"
VAR(9,"SYN",1,"TRM")="Chronic noninfectious otitis externa"
VAR(9,"SYN",2,"DSC")="T1999003458"
VAR(9,"SYN",2,"TRM")="Chronic noninfectious otitis externa"
VAR(10,"CON")=232237007
VAR(10,"DTS")=232237
VAR(10,"FSN","DSC")=620276015
VAR(10,"FSN","TRM")="Chronic radiation otitis externa (disorder)"
VAR(10,"PRB","DSC")=347957013
VAR(10,"PRB","TRM")="Chronic radiation otitis externa"
VAR(11,"CON")=402208007
VAR(11,"DTS")=402208
VAR(11,"FSN","DSC")=1770132013
VAR(11,"FSN","TRM")="Chronic seborrheic otitis externa (disorder)"
VAR(11,"PRB","DSC")=1774879018
VAR(11,"PRB","TRM")="Chronic seborrheic otitis externa"
VAR(11,"SYN",1,"DSC")=1773593014
VAR(11,"SYN",1,"TRM")="Chronic seborrhoeic otitis externa"
VAR(12,"CON")=232241006
VAR(12,"DTS")=232241
VAR(12,"FSN","DSC")=620280013
VAR(12,"FSN","TRM")="Chronic traumatic otitis externa (disorder)"
VAR(12,"PRB","DSC")=347961019
VAR(12,"PRB","TRM")="Chronic traumatic otitis externa"
VAR(13,"CON")=232226006
VAR(13,"DTS")=232226
VAR(13,"FSN","DSC")=620264015
VAR(13,"FSN","TRM")="Chronic viral otitis externa (disorder)"
VAR(13,"PRB","DSC")=347944017
VAR(13,"PRB","TRM")="Chronic viral otitis externa"
VAR(14,"CON")=427348001
VAR(14,"DTS")=427348
VAR(14,"FSN","DSC")=2662309013
VAR(14,"FSN","TRM")="Chronic eczema of external auditory canal (disorder)"
VAR(14,"PRB","DSC")=2674115017
VAR(14,"PRB","TRM")="Chronic eczema of external auditory canal"
VAR(14,"SYN",1,"DSC")="T1999003433"
VAR(14,"SYN",1,"TRM")="Chronic eczematoid otitis externa"
>

The following example shows only the first and last record (of the up to 25 records) returned of a Synonym lookup listing, with the add/retire date information being omitted:

>\$OUT="VAR",IN="CHRONIC OTITIS EXTERNA^S^^^^^1"
>\$SEARCH^BSTSAPI(OUT,IN)
>2^
>\$OUT
VAR(1,"CHD",1,"CON")=111898002
VAR(1,"CHD",1,"DTS")=111898
VAR(1,"CHD",1,"TRM")="Chronic mycotic otitis externa (disorder)"
VAR(1,"CHD",2,"CON")=232236003
VAR(1,"CHD",2,"DTS")=232236
VAR(1,"CHD",2,"TRM")="Chronic non-infective otitis externa (disorder)"
VAR(1,"CHD",3,"CON")=402208007
VAR(1,"CHD",3,"DTS")=402208
VAR(1,"CHD",3,"TRM")="Chronic seborrheic otitis externa (disorder)"
VAR(1,"CHD",4,"CON")=232241006
VAR(1,"CHD",4,"DTS")=232241
VAR(1,"CHD",4,"TRM")="Chronic traumatic otitis externa (disorder)"
VAR(1,"CON")=53295002
VAR(1,"DTS")=53295
VAR(1,"FSN","DSC")=791398013
VAR(1,"FSN","TRM")="Chronic otitis externa (disorder)"
VAR(1,"ICD",1,"COD")=380.23
VAR(1,"ICD",1,"TYP")="IC9"
VAR(1,"ISA",1,"CON")=34936007
VAR(1,"ISA",1,"DTS")=34936
VAR(1,"ISA",1,"TRM")="Chronic dermatitis (disorder)"
VAR(1,"ISA",2,"CON")=128297008
VAR(1,"ISA",2,"DTS")=128297
VAR(1,"ISA",2,"TRM")="Chronic disease of ear (disorder)"
VAR(1,"ISA",3,"CON")=3135009
VAR(1,"ISA",3,"DTS")=3135
VAR(1,"ISA",3,"TRM")="Otitis externa (disorder)"
VAR(1,"PRB","DSC")=88624014
VAR(1,"PRB","TRM")="Chronic otitis externa"
VAR(1,"PRE","DSC")=88624014
VAR(1,"PRE","TRM")="Chronic otitis externa"
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
The following example shows the first and last records returned of a Synonym lookup listing, with the add/retire date information being omitted and the Synonym, Preferred, and ICD information getting returned:

```
>S OUT="VAR",IN="CHRONIC OTITIS EXTERNA" SPX^1
>W $$SEARCH^BSTSAPI(OUT,IN)
>2^W @OUT
```
The following example shows the first and last records returned by a Synonym lookup listing where a local search was performed:

```plaintext
>S OUT="VAR",IN="CHRONIC OTITIS EXTERNA"^S^^^1
>W $$SEARCH^BSTSAPI(OUT,IN)
1
>ZW @OUT
VAR(1,"CHD",1,"CON")=111898002
VAR(1,"CHD",1,"DTS")=111898
VAR(1,"CHD",1,"TRM")="Chronic mycotic otitis externa (disorder)"
VAR(1,"CHD",1,"XADT")=""
VAR(1,"CHD",1,"XRDT")=""
VAR(1,"CHD",2,"CON")=232236003
VAR(1,"CHD",2,"DTS")=232236
VAR(1,"CHD",2,"TRM")="Chronic non-infective otitis externa (disorder)"
VAR(1,"CHD",2,"XADT")=""
VAR(1,"CHD",2,"XRDT")=""
VAR(1,"CHD",3,"CON")=402208007
VAR(1,"CHD",3,"DTS")=402208
VAR(1,"CHD",3,"TRM")="Chronic seborrheic otitis externa (disorder)"
VAR(1,"CHD",3,"XADT")=""
VAR(1,"CHD",3,"XRDT")=""
VAR(1,"CHD",4,"CON")=232241006
VAR(1,"CHD",4,"DTS")=232241
VAR(1,"CHD",4,"TRM")="Chronic traumatic otitis externa (disorder)"
VAR(1,"CHD",4,"XADT")=""
VAR(1,"CHD",4,"XRDT")=""
```

```plaintext
VAR(25,"CON")=111898002
VAR(25,"DTS")=111898
VAR(25,"FSN","DSC")=634690013
VAR(25,"FSN","TRM")="Chronic mycotic otitis externa (disorder)"
VAR(25,"ICD",1,"COD")=380.15
VAR(25,"ICD",1,"TYP")="IC9"
VAR(25,"PRE","DSC")="T1999006250"
VAR(25,"PRE","TRM")="Otitis externa (ear canal infection), chronic mycotic"
VAR(25,"PRB","DSC")="T1999006250"
VAR(25,"PRB","TRM")="Otitis externa (ear canal infection), chronic mycotic"
VAR(25,"SYN",1,"DSC")=1219702011
VAR(25,"SYN",1,"TRM")="Chronic fungal otitis externa"
VAR(25,"SYN",2,"DSC")=1219702011
VAR(25,"SYN",2,"TRM")="Otitis externa (ear canal infection), chronic mycotic"
```

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VAR(1,"CHD",4,"XRDT")="" 
VAR(1,"CON")=53295002 
VAR(1,"DTS")=53295 
VAR(1,"FSN","DSC")=791398013 
VAR(1,"FSN","TRM")="Chronic otitis externa (disorder)" 
VAR(1,"FSN","XADT")=3120301.07 
VAR(1,"FSN","XRDT")="" 
VAR(1,"ICD",1,"COD")=380.23 
VAR(1,"ICD",1,"TYP")="IC9" 
VAR(1,"ICD",1,"XADT")="" 
VAR(1,"ICD",1,"XRDT")="" 
VAR(1,"ISA",1,"CON")=34936007 
VAR(1,"ISA",1,"DTS")=34936 
VAR(1,"ISA",1,"TRM")="Chronic dermatitis (disorder)" 
VAR(1,"ISA",1,"XADT")="" 
VAR(1,"ISA",1,"XRDT")="" 
VAR(1,"ISA",2,"CON")=128297008 
VAR(1,"ISA",2,"DTS")=128297 
VAR(1,"ISA",2,"TRM")="Chronic disease of ear (disorder)" 
VAR(1,"ISA",2,"XADT")="" 
VAR(1,"ISA",2,"XRDT")="" 
VAR(1,"ISA",3,"CON")=3135009 
VAR(1,"ISA",3,"DTS")=3135 
VAR(1,"ISA",3,"TRM")="Otitis externa (disorder)" 
VAR(1,"ISA",3,"XADT")="" 
VAR(1,"ISA",3,"XRDT")="" 
VAR(1,"PRB","DSC")=88624014 
VAR(1,"PRB","TRM")="Chronic otitis externa" 
VAR(1,"PRE","DSC")=88624014 
VAR(1,"PRE","TRM")="Chronic otitis externa" 
VAR(1,"PRE","XADT")=3120301.07 
VAR(1,"PRE","XRDT")="" 
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET" 
VAR(1,"SUB",1,"XADT")="" 
VAR(1,"SUB",1,"XRDT")="" 
VAR(1,"SUB",2,"SUB")="Infectious Disease" 
VAR(1,"SUB",2,"XADT")="" 
VAR(1,"SUB",2,"XRDT")="" 
VAR(1,"SUB",3,"SUB")="PICK ENT" 
VAR(1,"SUB",3,"XADT")="" 
VAR(1,"SUB",3,"XRDT")="" 
VAR(1,"SUB",4,"SUB")="PICK ENT - Ear" 
VAR(1,"SUB",4,"XADT")="" 
VAR(1,"SUB",4,"XRDT")="" 
VAR(1,"SUB",5,"SUB")="SRCH ENT" 
VAR(1,"SUB",5,"XADT")="" 
VAR(1,"SUB",5,"XRDT")="" 
VAR(1,"SUB",6,"SUB")="SRCH Gastrointestinal" 
VAR(1,"SUB",6,"XADT")="" 
VAR(1,"SUB",6,"XRDT")="" 
VAR(1,"SUB",7,"SUB")="IHS Problem List" 
VAR(1,"SUB",7,"XADT")="" 
VAR(1,"SUB",7,"XRDT")="" 
VAR(1,"SYN",1,"DSC")=88625010 
VAR(1,"SYN",1,"TRM")="Chronic otitis externa, NOS" 
VAR(1,"SYN",1,"XADT")=3120301.07 
VAR(1,"SYN",1,"XRDT")="" 
VAR(1,"XADT")=3120301
VAR(21, "CHD", 1, "CON")=194207002
VAR(21, "CHD", 1, "DTS")=194207
VAR(21, "CHD", 1, "TRM")="Chronic otitis externa due to aspergillosis (disorder)"
VAR(21, "CHD", 1, "XADT")=""
VAR(21, "CHD", 1, "XRDT")=""
VAR(21, "CON")=111898002
VAR(21, "DTS")=111898
VAR(21, "FSN", "DSC")=634690013
VAR(21, "FSN", "TRM")="Chronic mycotic otitis externa (disorder)"
VAR(21, "FSN", "XADT")=3120301.07
VAR(21, "FSN", "XRDT")=""
VAR(21, "ICD", 1, "COD")=380.15
VAR(21, "ICD", 1, "TYE")="IC9"
VAR(21, "ICD", 1, "XADT")=""
VAR(21, "ICD", 1, "XRDT")=""
VAR(21, "ISA", 1, "CON")=177010002
VAR(21, "ISA", 1, "DTS")=177010
VAR(21, "ISA", 1, "TRM")="Chronic infectious disease (disorder)"
VAR(21, "ISA", 1, "XADT")=""
VAR(21, "ISA", 1, "XRDT")=""
VAR(21, "ISA", 2, "CON")=232224009
VAR(21, "ISA", 2, "DTS")=232224
VAR(21, "ISA", 2, "TRM")="Chronic infective otitis externa (disorder)"
VAR(21, "ISA", 2, "XADT")=""
VAR(21, "ISA", 2, "XRDT")=""
VAR(21, "ISA", 3, "CON")=53295002
VAR(21, "ISA", 3, "DTS")=53295
VAR(21, "ISA", 3, "TRM")="Chronic otitis externa (disorder)"
VAR(21, "ISA", 3, "XADT")=""
VAR(21, "ISA", 3, "XRDT")=""
VAR(21, "ISA", 4, "CON")=53316003
VAR(21, "ISA", 4, "DTS")=53316
VAR(21, "ISA", 4, "TRM")="Otomycosis (disorder)"
VAR(21, "ISA", 4, "XADT")=""
VAR(21, "ISA", 4, "XRDT")=""
VAR(21, "PRB", "DSC")=1219702011
VAR(21, "PRB", "TRM")="Chronic fungal otitis externa"
VAR(21, "PRE", "DSC")=179051014
VAR(21, "PRE", "TRM")="Chronic mycotic otitis externa"
VAR(21, "PRE", "XADT")=3120301.07
VAR(21, "PRE", "XRDT")=""
VAR(21, "SUB", 1, "SUB")="IHS PROBLEM SUPERSET"
VAR(21, "SUB", 1, "XADT")=""
VAR(21, "SUB", 1, "XRDT")=""
VAR(21, "SUB", 2, "SUB")="Infectious Disease"
VAR(21, "SUB", 2, "XADT")=""
VAR(21, "SUB", 2, "XRDT")=""
VAR(21, "SUB", 3, "SUB")="PICK ENT - Ear"
VAR(21, "SUB", 3, "XADT")=""
VAR(21, "SUB", 3, "XRDT")=""
VAR(21, "SUB", 4, "SUB")="SRCH ENT"
VAR(21, "SUB", 4, "XADT")=""
VAR(21, "SUB", 4, "XRDT")=""
VAR(21, "SUB", 5, "SUB")="SRCH Gastrointestinal"
VAR(21, "SUB", 5, "XADT")=""
VAR(21, "SUB", 5, "XRDT")=""
VAR(21, "SUB", 6, "SUB")="IHS Problem List"
VAR(21, "SUB", 6, "XADT")=""
VAR(21, "SUB", 6, "XRDT")=""
VAR(21, "SYN", 1, "DSC")="T1999006250"
VAR(21, "SYN", 1, "TRM") = "Otitis externa (ear canal infection), chronic mycotic"
VAR(21, "SYN", 1, "XADT") = 3140301.07
VAR(21, "SYN", 1, "XRDT") = ""
VAR(21, "SYN", 2, "DSC") = 1219702011
VAR(21, "SYN", 2, "TRM") = "Chronic fungal otitis externa"
VAR(21, "SYN", 2, "XADT") = 3120301.07
VAR(21, "SYN", 2, "XRDT") = ""
VAR(21, "XADT") = 3120301
VAR(21, "XRDT") = 3500101

The following example shows the records returned of a search to look in a specified subset:

```plaintext
>S OUT="VAR",IN="HEART^F^36^SRCH Family History^^^^1"
>W $$SEARCH^BSTSAPI(OUT,IN)
>ZW @OUT
VAR(1, "CON") = 429958001
VAR(1, "DTS") = 429958
VAR(1, "FSN", "DSC") = 2708295011
VAR(1, "FSN", "TRM") = "Family history of conduction disorder of the heart (situation)"
VAR(1, "ICD", 1, "COD") = "V17.49"
VAR(1, "ICD", 1, "TYP") = "IC9"
VAR(1, "ISA", 1, "CON") = 698248002
VAR(1, "ISA", 1, "DTS") = 1124046853
VAR(1, "ISA", 1, "TRM") = "Family history of cardiac arrhythmia (situation)"
VAR(1, "PRB", "DSC") = 2764080015
VAR(1, "PRB", "TRM") = "Family history of conduction disorder of the heart"
VAR(1, "PRE", "DSC") = 2764080015
VAR(1, "PRE", "TRM") = "Family history of conduction disorder of the heart"
VAR(1, "SUB", 1, "SUB") = "SRCH Family History"
VAR(1, "SUB", 2, "SUB") = "IHS Problem List"
VAR(1, "SYN", 1, "DSC") = 2764079018
VAR(1, "SYN", 1, "TRM") = "Family history of cardiac arrhythmia"
VAR(2, "CON") = 433305001
VAR(2, "DTS") = 433305
VAR(2, "FSN", "DSC") = 2708363012
VAR(2, "FSN", "TRM") = "Family history of congestive heart failure (situation)"
VAR(2, "ICD", 1, "COD") = "V19.8"
VAR(2, "ICD", 1, "TYP") = "IC9"
VAR(2, "ISA", 1, "CON") = 429959009
VAR(2, "ISA", 1, "DTS") = 429959
VAR(2, "ISA", 1, "TRM") = "Family history of heart failure (situation)"
VAR(2, "PRB", "DSC") = 2764062012
VAR(2, "PRB", "TRM") = "Family history of congestive heart failure"
VAR(2, "PRE", "DSC") = 2764062012
VAR(2, "PRE", "TRM") = "Family history of congestive heart failure"
VAR(2, "SUB", 1, "SUB") = "SRCH Cardiology"
VAR(2, "SUB", 2, "SUB") = "SRCH Complimentary Medicine"
VAR(2, "SUB", 3, "SUB") = "SRCH Family History"
VAR(2, "SUB", 4, "SUB") = "IHS Problem List"
VAR(3, "CHD", 1, "CON") = 433305001
VAR(3, "CHD", 1, "DTS") = 433305
VAR(3, "CHD", 1, "TRM") = "Family history of congestive heart failure (situation)"
```
VAR(5,"CHD",1,"DTS")=417648
VAR(5,"CHD",1,"TRM")="Family history of pulmonary infundibular stenosis (situation)"
VAR(5,"CON")=160364005
VAR(5,"DTS")=160364
VAR(5,"FSN","DSC")=2607149013
VAR(5,"FSN","TRM")="Family history: Congenital heart disease (situation)"
VAR(5,"ICD",1,"COD")="V17.49"
VAR(5,"ICD",1,"TYP")="IC9"
VAR(5,"ISA",1,"CON")=266908007
VAR(5,"ISA",1,"DTS")=266908
VAR(5,"ISA",1,"TRM")="Family history of congenital anomaly of cardiovascular system (situation)"
VAR(5,"ISA",2,"CON")=275120007
VAR(5,"ISA",2,"DTS")=275120
VAR(5,"ISA",2,"TRM")="Family history: Cardiac disorder (situation)"
VAR(5,"PRB","DSC")=249974019
VAR(5,"PRB","TRM")="FH: Congenital heart disease"
VAR(5,"PRE","DSC")=249974019
VAR(5,"PRE","TRM")="FH: Congenital heart disease"
VAR(5,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(5,"SUB",2,"SUB")="SRCH Family History"
VAR(5,"SYN",1,"DSC")=2666595013
VAR(5,"SYN",1,"TRM")="Family history: Congenital heart disease"
VAR(5,"SYN",2,"DSC")=541268018
VAR(5,"SYN",2,"TRM")="Family history: Congenital heart disease (context-dependent category)"
VAR(5,"SYN",3,"DSC")=249973013
VAR(5,"SYN",3,"TRM")="FH: Congen heart disease"
VAR(6,"CON")=266896003
VAR(6,"DTS")=266896
VAR(6,"FSN","DSC")=2610064016
VAR(6,"FSN","TRM")="Family history: Ischemic heart disease at greater than 60 years (situation)"
VAR(6,"ICD",1,"COD")="V17.3"
VAR(6,"ICD",1,"TYP")="IC9"
VAR(6,"ISA",1,"CON")=297242006
VAR(6,"ISA",1,"DTS")=297242
VAR(6,"ISA",1,"TRM")="Family history of ischemic heart disease (situation)"
VAR(6,"PRB","DSC")=397698019
VAR(6,"PRB","TRM")="FH: Ischemic heart disease at greater than 60 years"
VAR(6,"PRE","DSC")=397698019
VAR(6,"PRE","TRM")="FH: Ischemic heart disease at greater than 60 years"
VAR(6,"SUB",1,"SUB")="SRCH Family History"
VAR(6,"SYN",1,"DSC")=2838827016
VAR(6,"SYN",1,"TRM")="Family history: Ischaemic heart disease at greater than 60 years"
VAR(6,"SYN",2,"DSC")=2669638016
VAR(6,"SYN",2,"TRM")="Family history: Ischaemic heart disease at greater than 60 years (context-dependent category)"
VAR(6,"SYN",3,"DSC")=659445017
VAR(6,"SYN",3,"TRM")="Family history: Ischemic heart disease at greater than 60 years (context-dependent category)"
VAR(6,"SYN",4,"DSC")=397699010
VAR(6,"SYN",4,"TRM")="FH: Ischaemic heart disease at greater than 60 years"
VAR(7,"CON")=266895004
VAR(7,"DTS")=266895
VAR(7,"FSN","DSC")=2610063010
VAR(7,"FSN","TRM")="Family history: Ischemic heart disease at less than 60 years"
years (situation)"
VAR(7,"ICD",1,"COD")="V17.3"
VAR(7,"ICD",1,"TYP")="IC9"
VAR(7,"ISA",1,"CON")=297242006
VAR(7,"ISA",1,"DTS")=297242
VAR(7,"ISA",1,"TRM")="Family history of ischemic heart disease (situation)"
VAR(7,"PRB","DSC")=397696015
VAR(7,"PRB","TRM")="FH: Ischemic heart disease at less than 60 years"
VAR(7,"PRE","DSC")=397696015
VAR(7,"PRE","TRM")="FH: Ischemic heart disease at less than 60 years"
VAR(7,"SUB",1,"SUB")="SRCH Family History"
VAR(7,"SUB",2,"SUB")="IHS Problem List"
VAR(7,"SYN",1,"DSC")=2838291017
VAR(7,"SYN",1,"TRM")="Family history: Ischaemic heart disease at less than 60 years"
VAR(7,"SYN",2,"DSC")=2669637014
VAR(7,"SYN",2,"TRM")="Family history: Ischemic heart disease at less than 60 years"
VAR(7,"SYN",3,"DSC")=659444018
VAR(7,"SYN",3,"TRM")="Family history: Ischemic heart disease at less than 60 years (context-dependent category)"
VAR(7,"SYN",4,"DSC")=397697012
VAR(7,"SYN",4,"TRM")="FH: Ischemic heart dis. <60"
VAR(7,"SYN",5,"DSC")=397695016
VAR(7,"SYN",5,"TRM")="FH: Ischaemic heart disease at less than 60 years"
VAR(7,"SYN",6,"DSC")=397694017
VAR(7,"SYN",6,"TRM")="FH: Ischaemic heart dis. <60"
VAR(8,"CON")=134439009
VAR(8,"DTS")=134439
VAR(8,"FSN","DSC")=2606613016
VAR(8,"FSN","TRM")="Family history: premature coronary heart disease (situation)"
VAR(8,"ICD",1,"COD")=.9999
VAR(8,"ICD",1,"TYP")="IC9"
VAR(8,"ISA",1,"CON")=266894000
VAR(8,"ISA",1,"DTS")=266894
VAR(8,"ISA",1,"TRM")="Family history: Cardiovascular disease (situation)"
VAR(8,"PRB","DSC")=216245011
VAR(8,"PRB","TRM")="FH: premature coronary heart disease"
VAR(8,"PRE","DSC")=216245011
VAR(8,"PRE","TRM")="FH: premature coronary heart disease"
VAR(8,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(8,"SUB",2,"SUB")="SRCH Family History"
VAR(8,"SUB",3,"SUB")="IHS Problem List"
VAR(8,"SYN",1,"DSC")=2664552011
VAR(8,"SYN",1,"TRM")="Family history: premature coronary heart disease"
VAR(8,"SYN",2,"DSC")=514018012
VAR(8,"SYN",2,"TRM")="Family history: premature coronary heart disease (context-dependent category)"
VAR(8,"CHD",1,"CON")=698248002
VAR(8,"CHD",1,"DTS")=1124046853
VAR(8,"CHD",1,"TRM")="Family history of cardiac arrhythmia (situation)"
VAR(8,"CHD",2,"CON")=430091005
VAR(8,"CHD",2,"DTS")=430091
VAR(8,"CHD",2,"TRM")="Family history of coronary arteriosclerosis (situation)"
VAR(8,"CHD",3,"CON")=429978009
VAR(8,"CHD",3,"DTS")=429978
VAR(8,"CHD",3,"TRM")="Family history of endocarditis (situation)"
VAR(8,"CHD",4,"CON")=429959009
VAR(8,"CHD",4,"DTS")=429959
VAR(8,"CHD",4,"TRM")="Family history of heart failure (situation)"
VAR(9,"CHD",5,"CON")=297242006
VAR(9,"CHD",5,"DTS")=297242
VAR(9,"CHD",5,"TRM")="Family history of ischemic heart disease (situation)"
VAR(9,"CHD",6,"CON")=430730004
VAR(9,"CHD",6,"DTS")=430730
VAR(9,"CHD",6,"TRM")="Family history of mitral valve regurgitation (situation)"
VAR(9,"CHD",7,"CON")=439154009
VAR(9,"CHD",7,"DTS")=439154
VAR(9,"CHD",7,"TRM")="Family history of myocarditis (situation)"
VAR(9,"CHD",8,"CON")=429952000
VAR(9,"CHD",8,"DTS")=429952
VAR(9,"CHD",8,"TRM")="Family history of stenosis of aortic valve (situation)"
VAR(9,"CHD",9,"CON")=390915000
VAR(9,"CHD",9,"DTS")=390915
VAR(9,"CHD",9,"TRM")="Family history: Cardiomyopathy (situation)"
VAR(9,"CHD",10,"CON")=160364005
VAR(9,"CHD",10,"DTS")=160364
VAR(9,"CHD",10,"TRM")="Family history: Congenital heart disease (situation)"
VAR(9,"CHD",11,"CON")=275124003
VAR(9,"CHD",11,"DTS")=275124
VAR(9,"CHD",11,"TRM")="Family history: Coronary thrombosis (situation)"
VAR(9,"CON")=275120007
VAR(9,"DTS")=275120
VAR(9,"FSN","DSC")=2610340013
VAR(9,"FSN","TRM")="Family history: Cardiac disorder (situation)"
VAR(9,"ICD",1,"COD")="V17.49"
VAR(9,"ICD",1,"TYP")="IC9"
VAR(9,"ISA",1,"CON")=266894000
VAR(9,"ISA",1,"DTS")=266894
VAR(9,"ISA",1,"TRM")="Family history: Cardiovascular disease (situation)"
VAR(9,"PRB","DSC")=411052015
VAR(9,"PRB","TRM")="FH: Cardiac disorder"
VAR(9,"PRE","DSC")=411052015
VAR(9,"PRE","TRM")="FH: Cardiac disorder"
VAR(9,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(9,"SUB",2,"SUB")="SRCH Family History"
VAR(9,"SUB",3,"SUB")="IHS Problem List"
VAR(9,"SYN",1,"DSC")=2669864012
VAR(9,"SYN",1,"TRM")="Family history: Cardiac disorder"
VAR(9,"SYN",2,"DSC")=1495321016
VAR(9,"SYN",2,"TRM")="FH: heart disorder"
VAR(9,"SYN",3,"DSC")=1495320015
VAR(9,"SYN",3,"TRM")="FH: cardiac disorder"
VAR(9,"SYN",4,"DSC")=1495319014
VAR(9,"SYN",4,"TRM")="FH: Heart disorder"
VAR(9,"SYN",5,"DSC")=667954016
VAR(9,"SYN",5,"TRM")="Family history: Cardiac disorder (context-dependent category)"
VAR(10,"CHD",1,"CON")=161513002
VAR(10,"CHD",1,"DTS")=161513
VAR(10,"CHD",1,"TRM")="History of ventricular fibrillation (situation)"
VAR(10,"CON")=429007001
VAR(10,"DTS")=429007
VAR(10,"FSN","DSC")=2689980014
VAR(10,"FSN","TRM")="History of cardiac arrest (situation)"
VAR(10,"ICD",1,"COD")="V12.53"
VAR(10,"ICD",1,"TYP")="IC9"
VAR(10,"ISA",1,"CON")=131471000119104
The following example shows how to utilize the parameter to control the maximum results to return. In this case ‘4’ results were asked for. Just Synonym/Preferred information is getting returned:

```
>S OUT="VAR",IN="EDEMA^S^^^^4^SP^1"
>W $SSSEARCH^BSTSAPI(OUT,IN)
2^  
>ZW @OUT
VAR(1,"CON")=79654002
VAR(1,"DTS")=79654
VAR(1,"FSN","DSC")=820728017
VAR(1,"FSN","TRM")="Edema (morphologic abnormality)"
VAR(1,"PRB","DSC")=132147018
VAR(1,"PRB","TRM")="Edema"
VAR(1,"PRE","DSC")=132147018
VAR(1,"PRE","TRM")="Edema"
VAR(1,"SYN",1,"DSC")=1218450019
VAR(1,"SYN",1,"TRM")="Edema - lesion"
VAR(1,"SYN",2,"DSC")=1218449019
VAR(1,"SYN",2,"TRM")="Edematous"
VAR(1,"SYN",3,"DSC")=1216963010
VAR(1,"SYN",3,"TRM")="Oedematous"
VAR(1,"SYN",4,"DSC")=1216962017
VAR(1,"SYN",4,"TRM")="Oedema - lesion"
VAR(1,"SYN",5,"DSC")=504173016
VAR(1,"SYN",5,"TRM")="Oedema"
VAR(1,"SYN",6,"DSC")=132149015
VAR(1,"SYN",6,"TRM")="Oedema, NOS"
VAR(1,"SYN",7,"DSC")=132148011
VAR(1,"SYN",7,"TRM")="Edema, NOS"
VAR(2,"CON")=267038008
VAR(2,"DTS")=267038
VAR(2,"FSN","DSC")=659606016
VAR(2,"FSN","TRM")="Edema (finding)"
VAR(2,"PRB","DSC")=397895018
VAR(2,"PRB","TRM")="Edema"
VAR(2,"PRE","DSC")=397895018
VAR(2,"PRE","TRM")="Edema"
VAR(2,"SYN",1,"DSC")=T1999004064
```
The following examples show how the Batch parameters can be utilized to return partial search listings.

The first call performs a search which will return up to four records. In this case two terms will be returned, starting with the first term:

```
>S OUT="VAR",IN="EDEMA^S^^^^4^SP^1^1^2"
>W $$SEARCH^BSTSAPI(OUT,IN)
2^
```
The next call performs a search which will return up to four records. In this case two terms will be returned, starting with the third term:

```
>S OUT="VAR",IN="EDEMA\S\^4\SP\1\^3\^2"

>W $$SEARCH^BSTSAPI(OUT,IN)

ZW @OUT
VAR(1,"CON")=79654002
VAR(1,"DTS")=79654
VAR(1,"FSN","DSC")=820728017
VAR(1,"FSN","TRM")="Edema (morphologic abnormality)"
VAR(1,"PRB","DSC")=132147018
VAR(1,"PRB","TRM")="Edema"
VAR(1,"PRE","DSC")=132147018
VAR(1,"PRE","TRM")="Edema"
VAR(1,"SYN",1,"DSC")=1218450019
VAR(1,"SYN",1,"TRM")="Edema - lesion"
VAR(1,"SYN",2,"DSC")=1218449019
VAR(1,"SYN",2,"TRM")="Edematous"
VAR(1,"SYN",3,"DSC")=1216963010
VAR(1,"SYN",3,"TRM")="Oedematous"
VAR(1,"SYN",4,"DSC")=1216962017
VAR(1,"SYN",4,"TRM")="Oedema - lesion"
VAR(1,"SYN",5,"DSC")=504173016
VAR(1,"SYN",5,"TRM")="Oedema"
VAR(1,"SYN",6,"DSC")=132149015
VAR(1,"SYN",6,"TRM")="Oedema, NOS"
VAR(1,"SYN",7,"DSC")=132148011
VAR(1,"SYN",7,"TRM")="Edema, NOS"
VAR(2,"CON")=267038008
VAR(2,"DTS")=267038
VAR(2,"FSN","DSC")=659606016
VAR(2,"FSN","TRM")="Edema (finding)"
VAR(2,"PRB","DSC")=397895018
VAR(2,"PRB","TRM")="Edema"
VAR(2,"PRE","DSC")=397895018
VAR(2,"PRE","TRM")="Edema"
VAR(2,"SYN",1,"DSC")="T1999004064"
VAR(2,"SYN",1,"TRM")="Edema (swelling)"
VAR(2,"SYN",2,"DSC")=397896017
VAR(2,"SYN",2,"TRM")="Interstitial oedema"
VAR(2,"SYN",3,"DSC")=397894019
VAR(2,"SYN",3,"TRM")="Oedema"
VAR(2,"SYN",4,"DSC")=397893013
VAR(2,"SYN",4,"TRM")="Interstitial edema"

>```

```
The following example shows the only the first and last records (of the up to 25 records) returned of a RxNorm codeset lookup:

```
> S OUT="VAR",IN="ACACIA^S^1552"

> Z W $$SEARCH^BSTSAPI(OUT,IN)

> Z W @OUT

    VAR(1,"CON")=851732
    VAR(1,"DTS")=11328554
    VAR(1,"FSN","DSC")=2973307
    VAR(1,"FSN","TRM")="Acacia pollen extract"
    VAR(1,"FSN","XADT")=""
    VAR(1,"FSN","XRDT")=""
    VAR(1,"PRB","DSC")=2973307
    VAR(1,"PRB","TRM")="Acacia pollen extract"
    VAR(1,"PRE","DSC")=2973307
    VAR(1,"PRE","TRM")="Acacia pollen extract"
    VAR(1,"TTY",1,"TTY")="IN"
    VAR(1,"TTY",1,"XADT")=3091101.06
    VAR(1,"TTY",1,"XRDT")=3500101.19
    VAR(1,"XADT")=""
    VAR(1,"XRDT")=""
```

...
The following example shows the records returned on a search on the GMRA Signs Symptoms (32772) namespace lookup:

```plaintext
>S OUT="VAR",IN="ABDOMINAL^S^32772"

>W $SEARCH^BSTSAPI(OUT,IN)

>ZW @OUT

VAR(1,"ASM",1,"CON")=21522001
VAR(1,"ASM",1,"DTS")=21522
VAR(1,"CON")="ABDOMINAL PAIN"
VAR(1,"DTS")=692
VAR(1,"FSN","DSC")="T122"
VAR(1,"FSN","TRM")="ABDOMINAL PAIN"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")="T122"
VAR(1,"PRB","TRM")="ABDOMINAL PAIN"
VAR(1,"PRE","DSC")="T578"
VAR(1,"PRE","TRM")="GI PAIN"
VAR(1,"PRE","XADT")=""
VAR(1,"PRE","XRDT")=""
VAR(1,"SYN",1,"DSC")="T577"
VAR(1,"SYN",1,"TRM")="GASTROINTESTINAL PAIN"
VAR(1,"SYN",1,"XADT")=""
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"XADT")=""
VAR(1,"XRDT")=""

VAR(2,"ASM",1,"CON")=51197009
VAR(2,"ASM",1,"DTS")=51197
VAR(2,"CON")="ABDOMINAL CRAMPS"
```
VAR(2,"DTS")=572
VAR(2,"FSN", "DSC")="T2"
VAR(2,"FSN", "TRM")="ABDOMINAL CRAMPS"
VAR(2,"FSN", "XADT")=
VAR(2,"FSN", "XRDT")=
VAR(2,"PRB", "DSC")="T2"
VAR(2,"PRB", "TRM")="ABDOMINAL CRAMPS"
VAR(2,"XADT")=
VAR(2,"XRDT")=
VAR(3,"ASM",1,"CON")=116289008
VAR(3,"ASM",1,"DTS")=116289
VAR(3,"CON")="ABDOMINAL BLOATING"
VAR(3,"DTS")=603
VAR(3,"FSN", "DSC")="T33"
VAR(3,"FSN", "TRM")="ABDOMINAL BLOATING"
VAR(3,"FSN", "XADT")=
VAR(3,"FSN", "XRDT")=
VAR(3,"PRB", "DSC")="T33"
VAR(3,"PRB", "TRM")="ABDOMINAL BLOATING"
VAR(3,"XADT")=
VAR(3,"XRDT")=
VAR(4,"ASM",1,"CON")=43364001
VAR(4,"ASM",1,"DTS")=43364
VAR(4,"CON")="ABDOMINAL DISCOMFORT"
VAR(4,"DTS")=960
VAR(4,"FSN", "DSC")="T390"
VAR(4,"FSN", "TRM")="ABDOMINAL DISCOMFORT"
VAR(4,"FSN", "XADT")=
VAR(4,"FSN", "XRDT")=
VAR(4,"PRB", "DSC")="T390"
VAR(4,"PRB", "TRM")="ABDOMINAL DISCOMFORT"
VAR(4,"XADT")=
VAR(4,"XRDT")=

The following example shows the only the records returned of a GMRA Allergies with Maps namespace search:

>S OUT="VAR",IN="ABALONE^S^32773"

>W $SSEARCH^BSTSAPI(OUT, IN)
2^>
ZW @OUT
VAR(1,"AUN",1,"CON")="9V427P292D"
VAR(1,"AUN",1,"DTS")=43
VAR(1,"CON")="ABALONE"
VAR(1,"DTS")=1
VAR(1,"FSN", "DSC")="T1"
VAR(1,"FSN", "TRM")="ABALONE"
VAR(1,"FSN", "XADT")=
VAR(1,"FSN", "XRDT")=
VAR(1,"PRB", "DSC")="T1"
VAR(1,"PRB", "TRM")="ABALONE"
VAR(1,"XADT")=
VAR(1,"XRDT")=

>
The following example shows the only the records returned of a IHS VANDF namespace search:

```
> S OUT="VAR",IN="1,1,1 TRICHLOROETHANE^S^32771"
> W $$SEARCH^BSTSAPI(OUT,IN)
> ZW @OUT
VAR(1,"CON")="1,1,1 TRICHLOROETHANE"
VAR(1,"DTS")=4779
VAR(1,"FSN","DSC")="T4775"
VAR(1,"FSN","TRM")="1,1,1 TRICHLOROETHANE"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")="T4775"
VAR(1,"PRB","TRM")="1,1,1 TRICHLOROETHANE"
VAR(1,"XADT")=""
VAR(1,"XRDT")=""
```

The following example shows the only the records returned of a IHS Med Route namespace search:

```
> S OUT="VAR",IN="ORAL^S^32774"
> W $$SEARCH^BSTSAPI(OUT,IN)
> ZW @OUT
VAR(1,"ASM",1,"CON")=26643006
VAR(1,"ASM",1,"DTS")=26643
VAR(1,"CON")="ORAL"
VAR(1,"DTS")=23
VAR(1,"FSN","DSC")="T23"
VAR(1,"FSN","TRM")="ORAL"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")="T23"
VAR(1,"PRB","TRM")="ORAL"
VAR(1,"XADT")=""
VAR(1,"XRDT")=""
```

### A.2 $$CODESETS^BSTSAPI$$

The following example displays the results of a standard call to this function as well as shows how information can be stored in a scratch global:

```
> S OUT=$NA(^TMP("BSTSAPI",$J)),IN=""
> W $$CODESETS^BSTSAPI(OUT,IN)
> ZW @OUT
^TMP("BSTSAPI",5720,1)="32768^32768^IHS"
^TMP("BSTSAPI",5720,2)="32771^32771^IHS VANDF"
^TMP("BSTSAPI",5720,3)="32772^32772^GMRA Signs Symptoms"
^TMP("BSTSAPI",5720,4)="32773^32773^GMRA Allergies with Maps"
```
A.3 $$$$VERSIONS^BSTSAPI

The following example displays a list of versions available for the SNOMED codeset:

```
>S OUT=$NA(^TMP("BSTSAPI",$J)),IN="36"
>W $$$$VERSIONS^BSTSAPI(OUT,IN)
2^
>ZW @OUT
^TMP("BSTSAPI",5720,1)="20120301^2012.03.11AB^2012-03-01 07:00:00^"
^TMP("BSTSAPI",5720,2)="20120901^2012.09.12AA^2012-09-01 06:00:00^"
^TMP("BSTSAPI",5720,3)="20130301^2013.03.12AB^2013-03-01 07:00:00^"
^TMP("BSTSAPI",5720,4)="20130901^2013.09.13AA^2013-09-01 06:00:00^"
^TMP("BSTSAPI",5720,5)="20140301^2014.03.14AB^2014-03-01 07:00:00^"
^TMP("BSTSAPI",5720,6)="20140901^2014.09.14AA^2014-09-01 06:00:00^"
```

A.4 $$$$MPADVICE^BSTSAPI

The following example displays ICD-10 mapping information available for a particular concept ID (utilizing a local cache lookup):

```
>S OUT="VAR",IN=2032001
>W $$$$MPADVICE^BSTSAPI(OUT,IN)
1^
>ZW @OUT
VAR(1,"MPADV","VAL")="ALWAYS G93.6"
VAR(1,"MPCVL","VAL")="Map source concept is properly classified"
VAR(1,"MPGRP","VAL")=1
VAR(1,"MPPRI","VAL")=5
VAR(1,"MPRUL","VAL")="OTHERWISE TRUE"
VAR(1,"MPTGN","VAL")="Cerebral edema"
VAR(1,"MPTGT","VAL")="G93.6"
VAR(2,"MPADV","VAL")="IF CEREBRAL EDEMA DUE TO BIRTH INJURY CHOOSE P11.0 | MAP OF SOURCE CONCEPT IS CONTEXT DEPENDENT"
VAR(2,"MPCVL","VAL")="Map of source concept is context dependent"
VAR(2,"MPGRP","VAL")=1
VAR(2,"MPPRI","VAL")=1
```

VAR(2, "MPRUL", "VAL") = "IFA 206238001 | Cerebral edema due to birth injury (disorder) |
VAR(2, "MPTGN", "VAL") = "Cerebral edema due to birth injury"
VAR(2, "MPTGT", "VAL") = "P11.0"
VAR(3, "MPADV", "VAL") = "IF TRAUMATIC CEREBRAL EDEMA WITH OPEN INTRACRANIAL WOUND CHOOSE S01.80X? | EPISODE OF CARE INFORMATION NEEDED | POSSIBLE REQUIREMENT FOR AN EXTERNAL CAUSE CODE | MAP OF SOURCE CONCEPT IS CONTEXT DEPENDENT"
VAR(3, "MPCVL", "VAL") = "Map of source concept is context dependent"
VAR(3, "MPGRP", "VAL") = 2
VAR(3, "MPPRI", "VAL") = 1
VAR(3, "MPRUL", "VAL") = "IFA 311826007 | Traumatic cerebral edema with open intracranial wound (disorder) |
VAR(3, "MPTGN", "VAL") = "Unspecified open wound of other part of head, episode of care unspecified"
VAR(3, "MPTGT", "VAL") = "S01.80X?"
VAR(4, "MPADV", "VAL") = "IF TRAUMATIC CEREBRAL EDEMA CHOOSE S06.1X0? | CONSIDER ADDITIONAL CODE TO IDENTIFY SPECIFIC CONDITION OR DISEASE | EPISODE OF CARE INFORMATION NEEDED | POSSIBLE REQUIREMENT FOR AN EXTERNAL CAUSE CODE | MAP OF SOURCE CONCEPT IS CONTEXT DEPENDENT"
VAR(4, "MPCVL", "VAL") = "Map of source concept is context dependent"
VAR(4, "MPGRP", "VAL") = 1
VAR(4, "MPPRI", "VAL") = 4
VAR(4, "MPRUL", "VAL") = "IFA 230763008 | Traumatic cerebral edema (disorder) |
VAR(4, "MPTGN", "VAL") = "Traumatic cerebral edema without loss of consciousness, episode of care unspecified"
VAR(4, "MPTGT", "VAL") = "S06.1X0?"
VAR(5, "MPADV", "VAL") = "IF TRAUMATIC CEREBRAL EDEMA WITH OPEN INTRACRANIAL WOUND CHOOSE S06.1X0? | EPISODE OF CARE INFORMATION NEEDED | POSSIBLE REQUIREMENT FOR AN EXTERNAL CAUSE CODE | MAP OF SOURCE CONCEPT IS CONTEXT DEPENDENT"
VAR(5, "MPCVL", "VAL") = "Map of source concept is context dependent"
VAR(5, "MPGRP", "VAL") = 1
VAR(5, "MPPRI", "VAL") = 3
VAR(5, "MPRUL", "VAL") = "IFA 311826007 | Traumatic cerebral edema with open intracranial wound (disorder) |
VAR(5, "MPTGN", "VAL") = "Traumatic cerebral edema without loss of consciousness, episode of care unspecified"
VAR(5, "MPTGT", "VAL") = "S06.1X0?"
VAR(6, "MPADV", "VAL") = "IF TRAUMATIC CEREBRAL EDEMA WITHOUT OPEN INTRACRANIAL WOUND CHOOSE S06.1X0? | EPISODE OF CARE INFORMATION NEEDED | POSSIBLE REQUIREMENT FOR AN EXTERNAL CAUSE CODE | MAP OF SOURCE CONCEPT IS CONTEXT DEPENDENT"
VAR(6, "MPCVL", "VAL") = "Map of source concept is context dependent"
VAR(6, "MPGRP", "VAL") = 1
VAR(6, "MPPRI", "VAL") = 2
VAR(6, "MPRUL", "VAL") = "IFA 311825006 | Traumatic cerebral edema without open intracranial wound (disorder) |
VAR(6, "MPTGN", "VAL") = "Traumatic cerebral edema without loss of consciousness, episode of care unspecified"
VAR(6, "MPTGT", "VAL") = "S06.1X0?"
VAR(7, "MPADV", "VAL") = "MAP SOURCE CONCEPT CANNOT BE CLASSIFIED WITH AVAILABLE DATA"
VAR(7, "MPCVL", "VAL") = "Map source concept cannot be classified with available data"
VAR(7, "MPGRP", "VAL") = 2
VAR(7, "MPPRI", "VAL") = 2
VAR(7, "MPRUL", "VAL") = "OTHERWISE TRUE"
VAR(7, "MPTGN", "VAL") = ""
VAR(7, "MPTGT", "VAL") = ""
A.5 $\text{CVRSN}^\text{BSTSAPI}$

The following example returns the current version for the SNOMED codeset:

```
>S OUT="VAR",IN="36"
>W $\text{CVRSN}^\text{BSTSAPI}$(OUT,IN)
2^Z
ZW @OUT
VAR="20140901^2014.09.14AA^2014-09-01 06:00:00^"
>```

A.6 $\text{SUBSET}^\text{BSTSAPI}$

The following example displays a list of subsets available for the SNOMED CT US Extensions codeset, using a local cache lookup:

```
>S OUT=$\text{NA}$("\text{TMP("BSTSAPI",$J")},IN="36"
>W $\text{SUBSET}^\text{BSTSAPI}$(OUT,IN)
1
ZW @OUT
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,1)="EHR IPL ASTHMA DXS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,2)="EHR IPL ASTHMA TX REGIMEN"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,3)="EHR IPL CLINICAL COURSE"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,4)="EHR IPL PICK ASTHMA"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,5)="EHR IPL POV EPISODICITIES"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,6)="EHR IPL PROBLEM QUALIFIERS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,7)="EHR IPL SEVERITY"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,8)="EHR REASONS NOT DONE"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,9)="EHR REASONS NOT DONE MDS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,10)="EHR REASONS NOT DONE OTHERS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,11)="EHR REFERRAL TYPE"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,12)="EHR SUICIDE RELATED"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,13)="EHR V AMI CHEST PAIN"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,14)="EHR V AMI EKG FINDINGS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,15)="EHR V STROKE NEURO SYMPTOMS"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,16)="IHS PROBLEM ALL SNOMED"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,17)="IHS PROBLEM SUPERSET"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,18)="IHS Problem List"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,19)="Infectious Disease"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,20)="Nonhuman RefSet 20130901"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,21)="PICK Abnormal Findings"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,22)="PICK Administrative"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,23)="PICK Audiology"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,24)="PICK BH-SUD"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,25)="PICK BH-Social Family Issues"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,26)="PICK Behavioral Health"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,27)="PICK Behavioral Health Long"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,28)="PICK Cardiology"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,29)="PICK Case Management"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,30)="PICK Complimentary Medicine"}}}}}
\text{\text{\text{\text{\text{TMP("BSTSAPI",5720,31)="PICK Dental"}}}}}
```
^TMP("BSTSAPI",5720,32)="PICK Dermatology"
^TMP("BSTSAPI",5720,33)="PICK Diabetes"
^TMP("BSTSAPI",5720,34)="PICK Diabetes Education"
^TMP("BSTSAPI",5720,35)="PICK ENT"
^TMP("BSTSAPI",5720,36)="PICK ENT - Ear"
^TMP("BSTSAPI",5720,37)="PICK ENT - Face and Neck"
^TMP("BSTSAPI",5720,38)="PICK ENT - Fractures"
^TMP("BSTSAPI",5720,39)="PICK ENT - Mouth and Throat"
^TMP("BSTSAPI",5720,40)="PICK ENT - Neoplasm"
^TMP("BSTSAPI",5720,41)="PICK ENT - Nose and Sinus"
^TMP("BSTSAPI",5720,42)="PICK ENT - Sleep"
^TMP("BSTSAPI",5720,43)="PICK Emergency Department"
^TMP("BSTSAPI",5720,44)="PICK Eye General"
^TMP("BSTSAPI",5720,45)="PICK Eye General Long"
^TMP("BSTSAPI",5720,46)="PICK Eye Surgery"
^TMP("BSTSAPI",5720,47)="PICK Family Practice"
^TMP("BSTSAPI",5720,48)="PICK Family Practice Long"
^TMP("BSTSAPI",5720,49)="PICK Gastrointestinal"
^TMP("BSTSAPI",5720,50)="PICK Health Maint/Screenings"
^TMP("BSTSAPI",5720,51)="PICK Heme/Onc"
^TMP("BSTSAPI",5720,52)="PICK Heme/Onc Long"
^TMP("BSTSAPI",5720,53)="PICK Immunizations"
^TMP("BSTSAPI",5720,54)="PICK Laboratory"
^TMP("BSTSAPI",5720,55)="PICK MH-Anxiety Disorders"
^TMP("BSTSAPI",5720,56)="PICK MH-Bipolar Disorders"
^TMP("BSTSAPI",5720,57)="PICK MH-Depressive Disorders"
^TMP("BSTSAPI",5720,58)="PICK MH-Disrupt Imp Conduct"
^TMP("BSTSAPI",5720,59)="PICK MH-Neurocog Disorders"
^TMP("BSTSAPI",5720,60)="PICK MH-Neurodevelopmental"
^TMP("BSTSAPI",5720,61)="PICK MH-Other Disorders"
^TMP("BSTSAPI",5720,62)="PICK MH-Schiz and Psychotic"
^TMP("BSTSAPI",5720,63)="PICK MH-Trauma And Stress"
^TMP("BSTSAPI",5720,64)="PICK Medicine"
^TMP("BSTSAPI",5720,65)="PICK Medicine - Inpatient"
^TMP("BSTSAPI",5720,66)="PICK Medicine - Inpatient Long"
^TMP("BSTSAPI",5720,67)="PICK Medicine - Urgent Care"
^TMP("BSTSAPI",5720,68)="PICK Musculoskeletal-Fx"
^TMP("BSTSAPI",5720,69)="PICK Musculoskeletal-Non Fx"
^TMP("BSTSAPI",5720,70)="PICK Neurology"
^TMP("BSTSAPI",5720,71)="PICK Neurology Long"
^TMP("BSTSAPI",5720,72)="PICK Nursing"
^TMP("BSTSAPI",5720,73)="PICK Nursing - Ambulatory"
^TMP("BSTSAPI",5720,74)="PICK Nursing - ED/UC"
^TMP("BSTSAPI",5720,75)="PICK Nursing - Inpatient"
^TMP("BSTSAPI",5720,76)="PICK Nursing - Public Health"
^TMP("BSTSAPI",5720,77)="PICK Nutrition"
^TMP("BSTSAPI",5720,78)="PICK Pain Management"
^TMP("BSTSAPI",5720,79)="PICK Pediatrics"
^TMP("BSTSAPI",5720,80)="PICK Pharmacy"
^TMP("BSTSAPI",5720,81)="PICK Physical Medicine"
^TMP("BSTSAPI",5720,82)="PICK Podiatry"
^TMP("BSTSAPI",5720,83)="PICK Podiatry-Fx"
^TMP("BSTSAPI",5720,84)="PICK Podiatry-Non Fx"
^TMP("BSTSAPI",5720,85)="PICK Postpartum"
^TMP("BSTSAPI",5720,86)="PICK Prenatal"
^TMP("BSTSAPI",5720,87)="PICK Prenatal - Care"
^TMP("BSTSAPI",5720,88)="PICK Prenatal - Problem Fetus"
^TMP("BSTSAPI",5720,89)="PICK Prenatal - Problem Preg"
^TMP("BSTSAPI",5720,90)="PICK Prenatal - Risk"
^TMP("BSTSAPI",5720,91)="PICK Preventive Care"
^TMP("BSTSAPI",5720,92)="PICK Problem List - Social Env"
"^TMP("BSTSAPI",5720,93)="PICK Respiratory"
^TMP("BSTSAPI",5720,94)="PICK Rheumatology"
^TMP("BSTSAPI",5720,95)="PICK Social Services"
^TMP("BSTSAPI",5720,96)="PICK Social Services Long"
^TMP("BSTSAPI",5720,97)="PICK Urology/Nephrology"
^TMP("BSTSAPI",5720,98)="PICK Urology/Nephrology Long"
^TMP("BSTSAPI",5720,99)="PICK WH - Family Planning"
^TMP("BSTSAPI",5720,100)="PICK WH - General"
^TMP("BSTSAPI",5720,101)="PICK WH - Pap Results"
^TMP("BSTSAPI",5720,102)="PICK WH - Pelvic Pain"
^TMP("BSTSAPI",5720,103)="PXRM ASTHMA"
^TMP("BSTSAPI",5720,104)="PXRM COLORECTAL CANCER"
^TMP("BSTSAPI",5720,105)="PXRM DIABETES"
^TMP("BSTSAPI",5720,106)="PXRM DIABETIC NEPHROPATHY"
^TMP("BSTSAPI",5720,107)="PXRM DIALYSIS"
^TMP("BSTSAPI",5720,108)="PXRM END STAGE RENAL DISEASE"
^TMP("BSTSAPI",5720,109)="PXRM ESSENTIAL HYPERTENSION"
^TMP("BSTSAPI",5720,110)="PXRM HEPATITIS C"
^TMP("BSTSAPI",5720,111)="PXRM HIV"
^TMP("BSTSAPI",5720,112)="PXRM HYPERTENSION"
^TMP("BSTSAPI",5720,113)="PXRM ISCHEMIC HEART DISEASE"
^TMP("BSTSAPI",5720,114)="PXRM OSTEOARTHRITIS-OSTEOPENIA"
^TMP("BSTSAPI",5720,115)="SRCH Abnormal Findings"
^TMP("BSTSAPI",5720,116)="SRCH Administrative"
^TMP("BSTSAPI",5720,117)="SRCH Asthma"
^TMP("BSTSAPI",5720,118)="SRCH Audiology"
^TMP("BSTSAPI",5720,119)="SRCH Behavioral Health"
^TMP("BSTSAPI",5720,120)="SRCH COG FUNCT STATUS"
^TMP("BSTSAPI",5720,121)="SRCH Cardiology"
^TMP("BSTSAPI",5720,122)="SRCH Case Management"
^TMP("BSTSAPI",5720,123)="SRCH Complimentary Medicine"
^TMP("BSTSAPI",5720,124)="SRCH Congenital Anomalies"
^TMP("BSTSAPI",5720,125)="SRCH DM Education"
^TMP("BSTSAPI",5720,126)="SRCH Dental"
^TMP("BSTSAPI",5720,127)="SRCH Dermatology"
^TMP("BSTSAPI",5720,128)="SRCH Diabetes"
^TMP("BSTSAPI",5720,129)="SRCH Diabetes Education"
^TMP("BSTSAPI",5720,130)="SRCH ENT"
^TMP("BSTSAPI",5720,131)="SRCH Emergency Department"
^TMP("BSTSAPI",5720,132)="SRCH Eye General"
^TMP("BSTSAPI",5720,133)="SRCH Eye Surgery"
^TMP("BSTSAPI",5720,134)="SRCH Family History"
^TMP("BSTSAPI",5720,135)="SRCH Family Planning"
^TMP("BSTSAPI",5720,136)="SRCH Family Practice"
^TMP("BSTSAPI",5720,137)="SRCH Gastrointestinal"
^TMP("BSTSAPI",5720,138)="SRCH Health Maint/Screenings"
^TMP("BSTSAPI",5720,139)="SRCH Hematology/Oncology"
^TMP("BSTSAPI",5720,140)="SRCH Immunizations"
^TMP("BSTSAPI",5720,141)="SRCH Laboratory"
^TMP("BSTSAPI",5720,142)="SRCH Medicine - Inpatient"
^TMP("BSTSAPI",5720,143)="SRCH Medicine - Urgent Care"
^TMP("BSTSAPI",5720,144)="SRCH Musculoskeletal"
^TMP("BSTSAPI",5720,145)="SRCH Neurology"
^TMP("BSTSAPI",5720,146)="SRCH Nursing"
^TMP("BSTSAPI",5720,147)="SRCH Nursing - Ambulatory"
^TMP("BSTSAPI",5720,148)="SRCH Nursing - ED/UC"
^TMP("BSTSAPI",5720,149)="SRCH Nursing - Inpatient"
^TMP("BSTSAPI",5720,150)="SRCH Nursing - Public Health"
^TMP("BSTSAPI",5720,151)="SRCH Nutrition"
^TMP("BSTSAPI",5720,152)="SRCH Pain Management"
^TMP("BSTSAPI",5720,153)="SRCH Pediatrics"
The following example displays a list of subsets available for the SNOMED CT US Extensions codeset, utilizing a remote lookup to the DTS server:

```
&S OUT=$NA(^TMP("BSTSAPI",$J)),IN="36^2"
&W $$SUBSET^BSTSAPI(OUT,IN)
2^ 
@OUT
^TMP("BSTSAPI",5720,1)="EHR IPL ASTHMA DXS"
^TMP("BSTSAPI",5720,2)="EHR IPL ASTHMA TX REGIMEN"
^TMP("BSTSAPI",5720,3)="EHR IPL CLINICAL COURSE"
^TMP("BSTSAPI",5720,4)="EHR IPL PICK ASTHMA"
^TMP("BSTSAPI",5720,5)="EHR IPL POV EPISODICITIES"
^TMP("BSTSAPI",5720,6)="EHR IPL PROBLEM QUALIFIERS"
^TMP("BSTSAPI",5720,7)="EHR IPL SEVERITY"
^TMP("BSTSAPI",5720,8)="EHR REASONS NOT DONE"
^TMP("BSTSAPI",5720,9)="EHR REASONS NOT DONE MEDS"
^TMP("BSTSAPI",5720,10)="EHR REASONS NOT DONE OTHERS"
^TMP("BSTSAPI",5720,11)="EHR REFERRAL TYPE"
^TMP("BSTSAPI",5720,12)="EHR SUICIDE RELATED"
^TMP("BSTSAPI",5720,13)="EHR V AMI CHEST PAIN"
^TMP("BSTSAPI",5720,14)="EHR V AMI EKG FINDINGS"
^TMP("BSTSAPI",5720,15)="EHR V STROKE NEURO SYMPTOMS"
^TMP("BSTSAPI",5720,16)="IHS PROBLEM ALL SNOMED"
^TMP("BSTSAPI",5720,17)="IHS Problem List"
^TMP("BSTSAPI",5720,18)="IHS PROBLEM SUPERSET"
```
"^TMP("BSTSAPI",5720,19)="Infectious Disease""  
"^TMP("BSTSAPI",5720,20)="Nonhuman RefSet 20130901""  
"^TMP("BSTSAPI",5720,21)="PICK Abnormal Findings""  
"^TMP("BSTSAPI",5720,22)="PICK Administrative""  
"^TMP("BSTSAPI",5720,23)="PICK Audiology""  
"^TMP("BSTSAPI",5720,24)="PICK Behavioral Health""  
"^TMP("BSTSAPI",5720,25)="PICK Behavioral Health Long""  
"^TMP("BSTSAPI",5720,26)="PICK BH-Social Family Issues""  
"^TMP("BSTSAPI",5720,27)="PICK BH-SUD""  
"^TMP("BSTSAPI",5720,28)="PICK Cardiology""  
"^TMP("BSTSAPI",5720,29)="PICK Case Management""  
"^TMP("BSTSAPI",5720,30)="PICK Complimentary Medicine""  
"^TMP("BSTSAPI",5720,31)="PICK Dental""  
"^TMP("BSTSAPI",5720,32)="PICK Dermatology""  
"^TMP("BSTSAPI",5720,33)="PICK Diabetes""  
"^TMP("BSTSAPI",5720,34)="PICK Diabetes Education""  
"^TMP("BSTSAPI",5720,35)="PICK Emergency Department""  
"^TMP("BSTSAPI",5720,36)="PICK ENT""  
"^TMP("BSTSAPI",5720,37)="PICK ENT - Ear""  
"^TMP("BSTSAPI",5720,38)="PICK ENT - Face and Neck""  
"^TMP("BSTSAPI",5720,39)="PICK ENT - Fractures""  
"^TMP("BSTSAPI",5720,40)="PICK ENT - Mouth and Throat""  
"^TMP("BSTSAPI",5720,41)="PICK ENT - Neoplasm""  
"^TMP("BSTSAPI",5720,42)="PICK ENT - Nose and Sinus""  
"^TMP("BSTSAPI",5720,43)="PICK ENT - Sleep""  
"^TMP("BSTSAPI",5720,44)="PICK Eye General""  
"^TMP("BSTSAPI",5720,45)="PICK Eye General Long""  
"^TMP("BSTSAPI",5720,46)="PICK Eye Surgery""  
"^TMP("BSTSAPI",5720,47)="PICK Family Practice""  
"^TMP("BSTSAPI",5720,48)="PICK Family Practice Long""  
"^TMP("BSTSAPI",5720,49)="PICK Gastrointestinal""  
"^TMP("BSTSAPI",5720,50)="PICK Health Maint/Screenings""  
"^TMP("BSTSAPI",5720,51)="PICK Heme/Onc""  
"^TMP("BSTSAPI",5720,52)="PICK Heme/Onc Long""  
"^TMP("BSTSAPI",5720,53)="PICK Immunizations""  
"^TMP("BSTSAPI",5720,54)="PICK Laboratory""  
"^TMP("BSTSAPI",5720,55)="PICK Medicine""  
"^TMP("BSTSAPI",5720,56)="PICK Medicine - Inpatient""  
"^TMP("BSTSAPI",5720,57)="PICK Medicine - Inpatient Long""  
"^TMP("BSTSAPI",5720,58)="PICK Medicine - Urgent Care""  
"^TMP("BSTSAPI",5720,59)="PICK MH-Anxiety Disorders""  
"^TMP("BSTSAPI",5720,60)="PICK MH-Bipolar Disorders""  
"^TMP("BSTSAPI",5720,61)="PICK MH-Depressive Disorders""  
"^TMP("BSTSAPI",5720,62)="PICK MH-Disrupt Imp Conduct""  
"^TMP("BSTSAPI",5720,63)="PICK MH-Neurocog Disorders""  
"^TMP("BSTSAPI",5720,64)="PICK MH-Neurodevelopmental""  
"^TMP("BSTSAPI",5720,65)="PICK MH-Other Disorders""  
"^TMP("BSTSAPI",5720,66)="PICK MH-Schiz and Psychotic""  
"^TMP("BSTSAPI",5720,67)="PICK MH-Trauma And Stress""  
"^TMP("BSTSAPI",5720,68)="PICK Musculoskeletal-Fx""  
"^TMP("BSTSAPI",5720,69)="PICK Musculoskeletal-Non Fx""  
"^TMP("BSTSAPI",5720,70)="PICK Neurology""  
"^TMP("BSTSAPI",5720,71)="PICK Neurology Long""  
"^TMP("BSTSAPI",5720,72)="PICK Nursing""  
"^TMP("BSTSAPI",5720,73)="PICK Nursing - Ambulatory""  
"^TMP("BSTSAPI",5720,74)="PICK Nursing - ED/UC""  
"^TMP("BSTSAPI",5720,75)="PICK Nursing - Inpatient""  
"^TMP("BSTSAPI",5720,76)="PICK Nursing - Public Health""  
"^TMP("BSTSAPI",5720,77)="PICK Nutrition""  
"^TMP("BSTSAPI",5720,78)="PICK Pain Management""  
"^TMP("BSTSAPI",5720,79)="PICK Pediatrics"
"^TMP("BSTSAPI",5720,80)="PICK Pharmacy"
^TMP("BSTSAPI",5720,81)="PICK Physical Medicine"
^TMP("BSTSAPI",5720,82)="PICK Podiatry"
^TMP("BSTSAPI",5720,83)="PICK Podiatry-Fx"
^TMP("BSTSAPI",5720,84)="PICK Podiatry-Non Fx"
^TMP("BSTSAPI",5720,85)="PICK Postpartum"
^TMP("BSTSAPI",5720,86)="PICK Frenatal"
^TMP("BSTSAPI",5720,87)="PICK Frenatal - Care"
^TMP("BSTSAPI",5720,88)="PICK Frenatal - Problem Fetus"
^TMP("BSTSAPI",5720,89)="PICK Frenatal - Problem Preg"
^TMP("BSTSAPI",5720,90)="PICK Frenatal - Risk"
^TMP("BSTSAPI",5720,91)="PICK Preventive Care"
^TMP("BSTSAPI",5720,92)="PICK Problem List - Social Env"
^TMP("BSTSAPI",5720,93)="PICK Respiratory"
^TMP("BSTSAPI",5720,94)="PICK Rheumatology"
^TMP("BSTSAPI",5720,95)="PICK Social Services"
^TMP("BSTSAPI",5720,96)="PICK Social Services Long"
^TMP("BSTSAPI",5720,97)="PICK Urology/Nephrology"
^TMP("BSTSAPI",5720,98)="PICK Urology/Nephrology Long"
^TMP("BSTSAPI",5720,99)="PICK WH - Family Planning"
^TMP("BSTSAPI",5720,100)="PICK WH - General"
^TMP("BSTSAPI",5720,101)="PICK WH - Pap Results"
^TMP("BSTSAPI",5720,102)="PICK WH - Pelvic Pain"
^TMP("BSTSAPI",5720,103)="PXRM ASThma"
^TMP("BSTSAPI",5720,104)="PXRM COLORECTAL CANCER"
^TMP("BSTSAPI",5720,105)="PXRM DIABETES"
^TMP("BSTSAPI",5720,106)="PXRM DIABETIC NEPHROPATHY"
^TMP("BSTSAPI",5720,107)="PXRM DIALYSIS"
^TMP("BSTSAPI",5720,108)="PXRM END STAGE RENAL DISEASE"
^TMP("BSTSAPI",5720,109)="PXRM ESSENTIAL HYPERTENSION"
^TMP("BSTSAPI",5720,110)="PXRM HEPATITIS C"
^TMP("BSTSAPI",5720,111)="PXRM HIV"
^TMP("BSTSAPI",5720,112)="PXRM HYPERTENSION"
^TMP("BSTSAPI",5720,113)="PXRM ISCHEMIC HEART DISEASE"
^TMP("BSTSAPI",5720,114)="PXRM OSTEOPOROSIS-OSTEOPENIA"
^TMP("BSTSAPI",5720,115)="SRCH Abnormal Findings"
^TMP("BSTSAPI",5720,116)="SRCH Administrative"
^TMP("BSTSAPI",5720,117)="SRCH Asthma"
^TMP("BSTSAPI",5720,118)="SRCH Audiology"
^TMP("BSTSAPI",5720,119)="SRCH Behavioral Health"
^TMP("BSTSAPI",5720,120)="SRCH Cardiology"
^TMP("BSTSAPI",5720,121)="SRCH Case Management"
^TMP("BSTSAPI",5720,122)="SRCH COG FUNC STATUS"
^TMP("BSTSAPI",5720,123)="SRCH Complimentary Medicine"
^TMP("BSTSAPI",5720,124)="SRCH Congenital Anomalies"
^TMP("BSTSAPI",5720,125)="SRCH Dental"
^TMP("BSTSAPI",5720,126)="SRCH Dermatology"
^TMP("BSTSAPI",5720,127)="SRCH Diabetes"
^TMP("BSTSAPI",5720,128)="SRCH Diabetes Education"
^TMP("BSTSAPI",5720,129)="SRCH DM Education"
^TMP("BSTSAPI",5720,130)="SRCH Emergency Department"
^TMP("BSTSAPI",5720,131)="SRCH ENT"
^TMP("BSTSAPI",5720,132)="SRCH Eye General"
^TMP("BSTSAPI",5720,133)="SRCH Eye Surgery"
^TMP("BSTSAPI",5720,134)="SRCH Family History"
^TMP("BSTSAPI",5720,135)="SRCH Family Planning"
^TMP("BSTSAPI",5720,136)="SRCH Family Practice"
^TMP("BSTSAPI",5720,137)="SRCH Gastrointestinal"
^TMP("BSTSAPI",5720,138)="SRCH Health Maint/Screenings"
^TMP("BSTSAPI",5720,139)="SRCH Hematology/Oncology"
^TMP("BSTSAPI",5720,140)="SRCH Immunizations"
A.7 $$VALTERM^BSTSAPI

The following example will return whether a supplied term is a valid in a given code set and version (utilizing a lookup to the local cache):

```
>S OUT="VAR",IN="COMMON COLD"
>W $$VALTERM^BSTSAPI (OUT, IN)
1
>ZW @OUT
```
VAR(1,"CON")=82272006
VAR(1,"DTS")=82272
VAR(1,"FSN","DSC")=823660015
VAR(1,"FSN","TRM")="Common cold (disorder)"
VAR(1,"FSN","XADT")=3120301.07
VAR(1,"FSN","XRDT")=""
VAR(1,"ICD",1,"COD")="460."
VAR(1,"ICD",1,"TYP")="IC9"
VAR(1,"ICD",1,"XADT")=""
VAR(1,"ICD",1,"XRDT")=""
VAR(1,"ISA",1,"CON")=281794004
VAR(1,"ISA",1,"DTS")=281794
VAR(1,"ISA",1,"TRM")="Viral upper respiratory tract infection (disorder)"
VAR(1,"ISA",1,"XADT")=""
VAR(1,"ISA",1,"XRDT")=""
VAR(1,"PRB","DSC")=136463019
VAR(1,"PRB","TRM")="Common cold"
VAR(1,"PRE","DSC")=136463019
VAR(1,"PRE","TRM")="Common cold"
VAR(1,"PRE","XADT")=3120301.07
VAR(1,"PRE","XRDT")=""
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(1,"SUB",1,"XADT")=""
VAR(1,"SUB",1,"XRDT")=""
VAR(1,"SUB",2,"SUB")="PICK Complimentary Medicine"
VAR(1,"SUB",2,"XADT")=""
VAR(1,"SUB",2,"XRDT")=""
VAR(1,"SUB",3,"SUB")="PICK ENT - Fractures"
VAR(1,"SUB",3,"XADT")=""
VAR(1,"SUB",3,"XRDT")=""
VAR(1,"SUB",4,"SUB")="PICK ENT - Nose and Sinus"
VAR(1,"SUB",4,"XADT")=""
VAR(1,"SUB",4,"XRDT")=""
VAR(1,"SUB",5,"SUB")="PICK Family Practice"
VAR(1,"SUB",5,"XADT")=""
VAR(1,"SUB",5,"XRDT")=""
VAR(1,"SUB",6,"SUB")="PICK Family Practice Long"
VAR(1,"SUB",6,"XADT")=""
VAR(1,"SUB",6,"XRDT")=""
VAR(1,"SUB",7,"SUB")="PICK Medicine - Inpatient"
VAR(1,"SUB",7,"XADT")=""
VAR(1,"SUB",7,"XRDT")=""
VAR(1,"SUB",8,"SUB")="SRCH Asthma"
VAR(1,"SUB",8,"XADT")=""
VAR(1,"SUB",8,"XRDT")=""
VAR(1,"SUB",9,"SUB")="SRCH Audiology"
VAR(1,"SUB",9,"XADT")=""
VAR(1,"SUB",9,"XRDT")=""
VAR(1,"SUB",10,"SUB")="SRCH Complimentary Medicine"
VAR(1,"SUB",10,"XADT")=""
VAR(1,"SUB",10,"XRDT")=""
VAR(1,"SUB",11,"SUB")="SRCH Emergency Department"
VAR(1,"SUB",11,"XADT")=""
VAR(1,"SUB",11,"XRDT")=""
VAR(1,"SUB",12,"SUB")="SRCH ENT"
VAR(1,"SUB",12,"XADT")=""
VAR(1,"SUB",12,"XRDT")=""
VAR(1,"SUB",13,"SUB")="SRCH Family Practice"
VAR(1,"SUB",13,"XADT")=""
VAR(1,"SUB",13,"XRDT")=""
VAR(1,"SUB",14,"SUB")="SRCH Medicine - Inpatient"
VAR(1,"SUB",14,"XADT")=""
VAR(1,"SUB",14,"XRDT")=""
VAR(1,"SUB",15,"SUB")="SRCH Medicine - Urgent Care"
VAR(1,"SUB",15,"XADT")=""
VAR(1,"SUB",15,"XRDT")=""
VAR(1,"SUB",16,"SUB")="SRCH Problem List - Medical"
VAR(1,"SUB",16,"XADT")=""
VAR(1,"SUB",16,"XRDT")=""
VAR(1,"SUB",17,"SUB")="SRCH Respiratory"
VAR(1,"SUB",17,"XADT")=""
VAR(1,"SUB",17,"XRDT")=""
VAR(1,"SUB",18,"SUB")="SRCH Pediatrics"
VAR(1,"SUB",18,"XADT")=""
VAR(1,"SUB",18,"XRDT")=""
VAR(1,"SUB",19,"SUB")="IHS Problem List"
VAR(1,"SUB",19,"XADT")=""
VAR(1,"SUB",19,"XRDT")=""
VAR(1,"SYN",1,"DSC")=504996015
VAR(1,"SYN",1,"TRM")="Cold"
VAR(1,"SYN",1,"XADT")=3120301.07
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"SYN",2,"DSC")=504995016
VAR(1,"SYN",2,"TRM")="Acute infective rhinitis"
VAR(1,"SYN",2,"XADT")=3120301.07
VAR(1,"SYN",2,"XRDT")=""
VAR(1,"SYN",3,"DSC")=200997013
VAR(1,"SYN",3,"TRM")="Head cold"
VAR(1,"SYN",3,"XADT")=3120301.07
VAR(1,"SYN",3,"XRDT")=""
VAR(1,"SYN",4,"DSC")=136471015
VAR(1,"SYN",4,"TRM")="Infective nasopharyngitis"
VAR(1,"SYN",4,"XADT")=3120301.07
VAR(1,"SYN",4,"XRDT")=""
VAR(1,"SYN",5,"DSC")=136470019
VAR(1,"SYN",5,"TRM")="Acute nasopharyngitis"
VAR(1,"SYN",5,"XADT")=3120301.07
VAR(1,"SYN",5,"XRDT")=""
VAR(1,"SYN",6,"DSC")=136469015
VAR(1,"SYN",6,"TRM")="Infective rhinitis"
VAR(1,"SYN",6,"XADT")=3120301.07
VAR(1,"SYN",6,"XRDT")=""
VAR(1,"SYN",7,"DSC")=136468011
VAR(1,"SYN",7,"TRM")="Acute rhinitis"
VAR(1,"SYN",7,"XADT")=3120301.07
VAR(1,"SYN",7,"XRDT")=""
VAR(1,"SYN",8,"DSC")=136467018
VAR(1,"SYN",8,"TRM")="Infective nasopharyngitis, NOS"
VAR(1,"SYN",8,"XADT")=3120301.07
VAR(1,"SYN",8,"XRDT")=""
VAR(1,"SYN",9,"DSC")=136466010
VAR(1,"SYN",9,"TRM")="Acute nasal catarrh"
VAR(1,"SYN",9,"XADT")=3120301.07
VAR(1,"SYN",9,"XRDT")=""
VAR(1,"SYN",10,"DSC")=136465014
VAR(1,"SYN",10,"TRM")="Acute coryza"
VAR(1,"SYN",10,"XADT")=3120301.07
VAR(1,"SYN",10,"XRDT")=""
VAR(1,"SYN",11,"DSC")=136464013
VAR(1,"SYN",11,"TRM")="Acute nasopharyngitis, NOS"
VAR(1,"SYN",11,"XADT")=3120301.07
VAR(1,"SYN",11,"XRDT")=""
The following example will return whether a supplied term is a valid in a given code set and version (utilizing a lookup to the remote DTS server):

```
>S OUT="VAR",IN="COMMON COLD^^2"
>W $VALTERM^BSTSAPI(OUT,IN)
^2^
ZW @OUT
VAR(1,"CON")=82272006
VAR(1,"DTS")=82272
VAR(1,"FSN","DSC")=823660015
VAR(1,"FSN","TRM")="Common cold (disorder)"
VAR(1,"FSN","XADT")=3120301.07
VAR(1,"FSN","XRDT")=""
VAR(1,"ICD",1,"COD")="460."
VAR(1,"ICD",1,"TYP")="IC9"
VAR(1,"ICD",1,"XADT")=""
VAR(1,"ICD",1,"XRDT")=""
VAR(1,"ISA",1,"CON")=281794004
VAR(1,"ISA",1,"DTS")=281794
VAR(1,"ISA",1,"TRM")="Viral upper respiratory tract infection (disorder)"
VAR(1,"ISA",1,"XADT")=""
VAR(1,"ISA",1,"XRDT")=""
VAR(1,"PRB","DSC")=136463019
VAR(1,"PRE","DSC")=136463019
VAR(1,"PRE","TRM")="Common cold"
VAR(1,"PRE","XADT")=3120301.07
VAR(1,"PRE","XRDT")=""
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(1,"SUB",1,"XADT")=""
VAR(1,"SUB",1,"XRDT")=""
VAR(1,"SUB",2,"SUB")="PICK Complimentary Medicine"
VAR(1,"SUB",2,"XADT")=""
VAR(1,"SUB",2,"XRDT")=""
VAR(1,"SUB",3,"SUB")="PICK ENT - Fractures"
VAR(1,"SUB",3,"XADT")=""
VAR(1,"SUB",3,"XRDT")=""
VAR(1,"SUB",4,"SUB")="PICK ENT - Nose and Sinus"
VAR(1,"SUB",4,"XADT")=""
VAR(1,"SUB",4,"XRDT")=""
VAR(1,"SUB",5,"SUB")="PICK Family Practice"
VAR(1,"SUB",5,"XADT")=""
VAR(1,"SUB",5,"XRDT")=""
VAR(1,"SUB",6,"SUB")="PICK Family Practice Long"
VAR(1,"SUB",6,"XADT")=""
VAR(1,"SUB",6,"XRDT")=""
VAR(1,"SUB",7,"SUB")="PICK Medicine - Inpatient"
VAR(1,"SUB",7,"XADT")=""
VAR(1,"SUB",7,"XRDT")=""
VAR(1,"SUB",8,"SUB")="SRCH Asthma"
VAR(1,"SUB",8,"XADT")=""
VAR(1,"SUB",8,"XRDT")=""
```
VAR(1,"SUB",9,"SUB")="SRCH Audiology"
VAR(1,"SUB",9,"XADT")=""
VAR(1,"SUB",9,"XRDT")=""
VAR(1,"SUB",10,"SUB")="SRCH Complimentary Medicine"
VAR(1,"SUB",10,"XADT")=""
VAR(1,"SUB",10,"XRDT")=""
VAR(1,"SUB",11,"SUB")="SRCH Emergency Department"
VAR(1,"SUB",11,"XADT")=""
VAR(1,"SUB",11,"XRDT")=""
VAR(1,"SUB",12,"SUB")="SRCH ENT"
VAR(1,"SUB",12,"XADT")=""
VAR(1,"SUB",12,"XRDT")=""
VAR(1,"SUB",13,"SUB")="SRCH Family Practice"
VAR(1,"SUB",13,"XADT")=""
VAR(1,"SUB",13,"XRDT")=""
VAR(1,"SUB",14,"SUB")="SRCH Medicine - Inpatient"
VAR(1,"SUB",14,"XADT")=""
VAR(1,"SUB",14,"XRDT")=""
VAR(1,"SUB",15,"SUB")="SRCH Medicine - Urgent Care"
VAR(1,"SUB",15,"XADT")=""
VAR(1,"SUB",15,"XRDT")=""
VAR(1,"SUB",16,"SUB")="SRCH Problem List - Medical"
VAR(1,"SUB",16,"XADT")=""
VAR(1,"SUB",16,"XRDT")=""
VAR(1,"SUB",17,"SUB")="SRCH Respiratory"
VAR(1,"SUB",17,"XADT")=""
VAR(1,"SUB",17,"XRDT")=""
VAR(1,"SUB",18,"SUB")="SRCH Pediatrics"
VAR(1,"SUB",18,"XADT")=""
VAR(1,"SUB",18,"XRDT")=""
VAR(1,"SUB",19,"SUB")="IHS Problem List"
VAR(1,"SUB",19,"XADT")=""
VAR(1,"SUB",19,"XRDT")=""
VAR(1,"SYN",1,"DSC")=504996015
VAR(1,"SYN",1,"TRM")="Cold"
VAR(1,"SYN",1,"XADT")=3120301.07
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"SYN",2,"DSC")=504995016
VAR(1,"SYN",2,"TRM")="Acute infective rhinitis"
VAR(1,"SYN",2,"XADT")=3120301.07
VAR(1,"SYN",2,"XRDT")=""
VAR(1,"SYN",3,"DSC")=200997013
VAR(1,"SYN",3,"TRM")="Head cold"
VAR(1,"SYN",3,"XADT")=3120301.07
VAR(1,"SYN",3,"XRDT")=""
VAR(1,"SYN",4,"DSC")=136471015
VAR(1,"SYN",4,"TRM")="Infective nasopharyngitis"
VAR(1,"SYN",4,"XADT")=3120301.07
VAR(1,"SYN",4,"XRDT")=""
VAR(1,"SYN",5,"DSC")=136470019
VAR(1,"SYN",5,"TRM")="Acute nasopharyngitis"
VAR(1,"SYN",5,"XADT")=3120301.07
VAR(1,"SYN",5,"XRDT")=""
VAR(1,"SYN",6,"DSC")=136469015
VAR(1,"SYN",6,"TRM")="Infective rhinitis"
VAR(1,"SYN",6,"XADT")=3120301.07
VAR(1,"SYN",6,"XRDT")=""
VAR(1,"SYN",7,"DSC")=136468011
VAR(1,"SYN",7,"TRM")="Acute rhinitis"
VAR(1,"SYN",7,"XADT")=3120301.07
VAR(1,"SYN",7,"XRDT")=""
The following example will return whether the given term is a valid entry in the “GMRA Signs Symptoms” namespace (utilizing a lookup to the local cache):

```
>S OUT="VAR",IN="ABDOMINAL BLOATING^32772"

>W $$VALTERM^BSTSAPI(OUT,IN) 1
>ZW @OUT
VAR(1,"ASM",1,"CON")=116289008
VAR(1,"ASM",1,"DTS")=116289
VAR(1,"CON")="ABDOMINAL BLOATING"
VAR(1,"DTS")=603
VAR(1,"FSN","DSC")="T33"
VAR(1,"FSN","TRM")="ABDOMINAL BLOATING"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")="T33"
VAR(1,"PRB","TRM")="ABDOMINAL BLOATING"
VAR(1,"XADT")=""
VAR(1,"XRDT")=""

>`
```

A.8 $$VALSBTRM^BSTSAPI

The following example will return whether a supplied term is in a particular subset (utilizing a local cache lookup):

```
>S OUT="VAR",IN="93565019^IHS Problem List"

>W $$VALSBTRM^BSTSAPI(OUT,IN) 1
>ZW @OUT
VAR=1
```

---

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June 2015

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A.9 **$$VALSBTRMF^BSTSAPI**

The following example will return whether a supplied term is in a particular subset:

```plaintext
>S OUT="VAR",IN="93565019^IHS Problem List"

>W $$VSBTRMF^BSTSAPI(IN)
1
ZW @OUT
VAR=1
```

A.10 **$$CNCLKP^BSTSAPI**

The following example retrieves the detail for a concept when the Concept ID is provided, utilizing a local cache listing:

```plaintext
>S OUT="VAR",IN="2032001"

>W $$CNCLKP^BSTSAPI(OUT,IN)
1
ZW @OUT
```

- VAR(1,"CHD",1,"CON")=230760006
- VAR(1,"CHD",1,"DTS")=230760
- VAR(1,"CHD",1,"TRM")="Cytotoxic cerebral edema (disorder)"
- VAR(1,"CHD",1,"XADT")=""
- VAR(1,"CHD",1,"XRDT")=""
- VAR(1,"CHD",2,"CON")=230762003
- VAR(1,"CHD",2,"DTS")=230762
- VAR(1,"CHD",2,"TRM")="High altitude cerebral edema (disorder)"
- VAR(1,"CHD",2,"XADT")=""
- VAR(1,"CHD",2,"XRDT")=""
- VAR(1,"CHD",3,"CON")=230761005
- VAR(1,"CHD",3,"DTS")=230761
- VAR(1,"CHD",3,"TRM")="Periventricular cerebrospinal fluid edema (disorder)"
- VAR(1,"CHD",3,"XADT")=""
- VAR(1,"CHD",3,"XRDT")=""
- VAR(1,"CHD",4,"CON")=230763008
- VAR(1,"CHD",4,"DTS")=230763
- VAR(1,"CHD",4,"TRM")="Traumatic cerebral edema (disorder)"
- VAR(1,"CHD",4,"XADT")=""
- VAR(1,"CHD",4,"XRDT")=""
- VAR(1,"CHD",5,"CON")=230759001
- VAR(1,"CHD",5,"DTS")=230759
- VAR(1,"CHD",5,"TRM")="Vasogenic cerebral edema (disorder)"
- VAR(1,"CHD",5,"XADT")=""
- VAR(1,"CHD",5,"XRDT")=""
- VAR(1,"CON")=2032001
- VAR(1,"DTS")=2032
- VAR(1,"FSN","DSC")=749395013
- VAR(1,"FSN","TRM")="Cerebral edema (disorder)"
- VAR(1,"FSN","XADT")=3120301.07
- VAR(1,"FSN","XRDT")=""
- VAR(1,"ICD",1,"COD")=348.5
VAR(1, "ICD", 1, "TYP") = "IC9"
VAR(1, "ICD", 1, "XADT") = "" 
VAR(1, "ICD", 1, "XRDT") = ""
VAR(1, "ISA", 1, "CON") = 118654009 
VAR(1, "ISA", 1, "DTS") = 118654 
VAR(1, "ISA", 1, "TRM") = "Disorder characterized by edema (disorder)"
VAR(1, "ISA", 1, "XADT") = "" 
VAR(1, "ISA", 1, "XRDT") = ""
VAR(1, "ISA", 2, "CON") = 81308009 
VAR(1, "ISA", 2, "DTS") = 81308 
VAR(1, "ISA", 2, "TRM") = "Disorder of brain (disorder)"
VAR(1, "ISA", 2, "XADT") = "" 
VAR(1, "ISA", 2, "XRDT") = ""
VAR(1, "PRB", "DSC") = 4508017 
VAR(1, "PRB", "TRM") = "Cerebral edema" 
VAR(1, "PRE", "DSC") = 4508017 
VAR(1, "PRE", "TRM") = "Cerebral edema" 
VAR(1, "PRE", "XADT") = 3120301.07 
VAR(1, "PRE", "XRDT") = ""
VAR(1, "SUB", 1, "SUB") = "IHS PROBLEM SUPERSET" 
VAR(1, "SUB", 1, "XADT") = "" 
VAR(1, "SUB", 1, "XRDT") = ""
VAR(1, "SUB", 2, "SUB") = "PICK Neurology Long" 
VAR(1, "SUB", 2, "XADT") = "" 
VAR(1, "SUB", 2, "XRDT") = ""
VAR(1, "SUB", 3, "SUB") = "SRCH Emergency Department" 
VAR(1, "SUB", 3, "XADT") = "" 
VAR(1, "SUB", 3, "XRDT") = ""
VAR(1, "SUB", 4, "SUB") = "SRCH Family Practice" 
VAR(1, "SUB", 4, "XADT") = "" 
VAR(1, "SUB", 4, "XRDT") = ""
VAR(1, "SUB", 5, "SUB") = "SRCH Medicine - Inpatient" 
VAR(1, "SUB", 5, "XADT") = "" 
VAR(1, "SUB", 5, "XRDT") = ""
VAR(1, "SUB", 6, "SUB") = "SRCH Medicine - Urgent Care" 
VAR(1, "SUB", 6, "XADT") = "" 
VAR(1, "SUB", 6, "XRDT") = ""
VAR(1, "SUB", 7, "SUB") = "SRCH Neurology" 
VAR(1, "SUB", 7, "XADT") = "" 
VAR(1, "SUB", 7, "XRDT") = ""
VAR(1, "SUB", 8, "SUB") = "SRCH Problem List - Medical" 
VAR(1, "SUB", 8, "XADT") = "" 
VAR(1, "SUB", 8, "XRDT") = ""
VAR(1, "SUB", 9, "SUB") = "IHS Problem List" 
VAR(1, "SUB", 9, "XADT") = "" 
VAR(1, "SUB", 9, "XRDT") = ""
VAR(1, "SYN", 1, "DSC") = 480612016 
VAR(1, "SYN", 1, "TRM") = "Cerebral oedema" 
VAR(1, "SYN", 1, "XADT") = 3120301.07 
VAR(1, "SYN", 1, "XRDT") = ""
VAR(1, "SYN", 2, "DSC") = 4509013 
VAR(1, "SYN", 2, "TRM") = "Intracranial swelling" 
VAR(1, "SYN", 2, "XADT") = 3120301.07 
VAR(1, "SYN", 2, "XRDT") = ""
VAR(1, "XADT") = "" = 3120301 
VAR(1, "XRDT") = 3500101 
?>
The following example retrieves the detail for a concept when the Concept ID is provided, utilizing a remote DTS listing:

```
>S OUT="VAR",IN="2032001^^^2"
>W $CNCNLKP^BSTSAPI(OUT,IN)
>ZW @OUT
VAR(1,"CHD",1,"CON")=230760006
VAR(1,"CHD",1,"DTS")=230760
VAR(1,"CHD",1,"TRM")="Cytotoxic cerebral edema (disorder)"
VAR(1,"CHD",1,"XADT")=""
VAR(1,"CHD",1,"XRDT")=""
VAR(1,"CHD",2,"CON")=230762003
VAR(1,"CHD",2,"DTS")=230762
VAR(1,"CHD",2,"TRM")="High altitude cerebral edema (disorder)"
VAR(1,"CHD",2,"XADT")=""
VAR(1,"CHD",2,"XRDT")=""
VAR(1,"CHD",3,"CON")=230761005
VAR(1,"CHD",3,"DTS")=230761
VAR(1,"CHD",3,"TRM")="Periventricular cerebrospinal fluid edema (disorder)"
VAR(1,"CHD",3,"XADT")=""
VAR(1,"CHD",3,"XRDT")=""
VAR(1,"CHD",4,"CON")=230763008
VAR(1,"CHD",4,"DTS")=230763
VAR(1,"CHD",4,"TRM")="Traumatic cerebral edema (disorder)"
VAR(1,"CHD",4,"XADT")=""
VAR(1,"CHD",4,"XRDT")=""
VAR(1,"CHD",5,"CON")=230759001
VAR(1,"CHD",5,"DTS")=230759
VAR(1,"CHD",5,"TRM")="Vasogenic cerebral edema (disorder)"
VAR(1,"CHD",5,"XADT")=""
VAR(1,"CHD",5,"XRDT")=""
VAR(1,"CON")=2032001
VAR(1,"DTS")=2032
VAR(1,"FSN","DSC")=749395013
VAR(1,"FSN","TRM")="Cerebral edema (disorder)"
VAR(1,"FSN","XADT")=3120301.07
VAR(1,"FSN","XRDT")=""
VAR(1,"ICD",1,"COD")=348.5
VAR(1,"ICD",1,"TYP")="IC9"
VAR(1,"ICD",1,"XADT")=""
VAR(1,"ICD",1,"XRDT")=""
VAR(1,"ISA",1,"CON")=118654009
VAR(1,"ISA",1,"DTS")=118654
VAR(1,"ISA",1,"TRM")="Disorder characterized by edema (disorder)"
VAR(1,"ISA",1,"XADT")=""
VAR(1,"ISA",1,"XRDT")=""
VAR(1,"ISA",2,"CON")=81308009
VAR(1,"ISA",2,"DTS")=81308
VAR(1,"ISA",2,"TRM")="Disorder of brain (disorder)"
VAR(1,"ISA",2,"XADT")=""
VAR(1,"ISA",2,"XRDT")=""
VAR(1,"PRB","DSC")=4508017
VAR(1,"PRB","TRM")="Cerebral edema"
VAR(1,"PRE","DSC")=4508017
VAR(1,"PRE","TRM")="Cerebral edema"
VAR(1,"PRE","XADT")=3120301.07
VAR(1,"PRE","XRDT")=""
VAR(1,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(1,"SUB",1,"XADT")=""
```
The following example retrieves the detail for a concept when the Concept ID is provided (RxNorm Codeset), utilizing a local cache listing:

```plaintext
>S OUT="VAR",IN="851732^1552"
>W $\$CNCLKP^BSTSAPI(OUT,IN)
1
>ZW @OUT
VAR(1,"CON")=851732
VAR(1,"DTS")=11328554
VAR(1,"FSN","DSC")=2973307
VAR(1,"FSN","TRM")="Acacia pollen extract"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")=2973307
VAR(1,"PRB","TRM")="Acacia pollen extract"
VAR(1,"PRB","XADT")=""
VAR(1,"PRB","XRDT")=""
VAR(1,"PRE","DSC")=2973307
VAR(1,"PRE","TRM")="Acacia pollen extract"
VAR(1,"PRE","XADT")=""
VAR(1,"PRE","XRDT")=""
VAR(1,"TTY",1,"TTY")="IN"
VAR(1,"TTY",1,"XADT")=3091101.06
```
A.11 $$\text{DTSLKP}^\text{BSTSAPI}

The following example retrieves the detail for a concept when the DTS ID is provided:

```plaintext
>S OUT="VAR",IN="8801"
>W $$\text{DTSLKP}^\text{BSTSAPI}(OUT,IN)
>ZW @OUT
VARIABLE VALUES:

VAR(1,"CHD",1,"CON")=426705001
VAR(1,"CHD",1,"DTS")=426705
VAR(1,"CHD",1,"TRM")="Diabetes mellitus associated with cystic fibrosis (disorder)"
VAR(1,"CHD",1,"XADT")=""
VAR(1,"CHD",1,"XRDT")=""
VAR(1,"CHD",2,"CON")=5969009
VAR(1,"CHD",2,"DTS")=5969
VAR(1,"CHD",2,"TRM")="Diabetes mellitus associated with genetic syndrome (disorder)"
VAR(1,"CHD",2,"XADT")=""
VAR(1,"CHD",2,"XRDT")=""
VAR(1,"CHD",3,"CON")=59079001
VAR(1,"CHD",3,"DTS")=59079
VAR(1,"CHD",3,"TRM")="Diabetes mellitus associated with hormonal etiology (disorder)"
VAR(1,"CHD",3,"XADT")=""
VAR(1,"CHD",3,"XRDT")=""
VAR(1,"CHD",4,"CON")=51002006
VAR(1,"CHD",4,"DTS")=51002
VAR(1,"CHD",4,"TRM")="Diabetes mellitus associated with pancreatic disease (disorder)"
VAR(1,"CHD",4,"XADT")=""
VAR(1,"CHD",4,"XRDT")=""
VAR(1,"CHD",5,"CON")=42954008
VAR(1,"CHD",5,"DTS")=42954
VAR(1,"CHD",5,"TRM")="Diabetes mellitus associated with receptor abnormality (disorder)"
VAR(1,"CHD",5,"XADT")=""
VAR(1,"CHD",5,"XRDT")=""
VAR(1,"CHD",6,"CON")=75682002
VAR(1,"CHD",6,"DTS")=75682
VAR(1,"CHD",6,"TRM")="Diabetes mellitus due to insulin receptor antibodies (disorder)"
VAR(1,"CHD",6,"XADT")=""
VAR(1,"CHD",6,"XRDT")=""
VAR(1,"CHD",7,"CON")=276560009
VAR(1,"CHD",7,"DTS")=276560
VAR(1,"CHD",7,"TRM")="Diabetes mellitus in neonate small for gestational age (disorder)"
VAR(1,"CHD",7,"XADT")=""
VAR(1,"CHD",7,"XRDT")=""
VAR(1,"CHD",8,"CON")=5368009
```
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<th>Variable</th>
<th>Description</th>
<th>Value</th>
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<td>&quot;PICK Urology/Nephrology Long&quot;</td>
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A.12 $$DSCLKP^BSTSAPI$

The following example retrieves the detail for the associated concept when the Description ID for a term is provided (utilizing a lookup to the local cache):

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> S OUT="VAR", IN="830605015"
> W $$DSCLKP^BSTSAPI(OUT, IN)
1
>ZW @OUT
VAR(1,"CHD",1,"CON")=426705001
VAR(1,"CHD",1,"DTS")=426705
VAR(1,"CHD",1,"TRM")="Diabetes mellitus associated with cystic fibrosis (disorder)"
VAR(1,"CHD",1,"XADT")=""
VAR(1,"CHD",1,"XRDT")=""
VAR(1,"CHD",2,"CON")=5969009
VAR(1,"CHD",2,"DTS")=5969
VAR(1,"CHD",2,"TRM")="Diabetes mellitus associated with genetic syndrome (disorder)"
VAR(1,"CHD",2,"XADT")=""
VAR(1,"CHD",2,"XRDT")=""
VAR(1,"CHD",3,"CON")=59079001
VAR(1,"CHD",3,"DTS")=59079
VAR(1,"CHD",3,"TRM")="Diabetes mellitus associated with hormonal etiology (disorder)"
VAR(1,"CHD",3,"XADT")=""
VAR(1,"CHD",3,"XRDT")=""
VAR(1,"CHD",4,"CON")=51002006
VAR(1,"CHD",4,"DTS")=51002
VAR(1,"CHD",4,"TRM")="Diabetes mellitus associated with pancreatic disease (disorder)"
VAR(1,"CHD",4,"XADT")=""
VAR(1,"CHD",4,"XRDT")=""
VAR(1,"CHD",5,"CON")=42954008
VAR(1,"CHD",5,"DTS")=42954
VAR(1,"CHD",5,"TRM")="Diabetes mellitus associated with receptor
```
| VAR(1, "CHD", 5, "XADT") | "" |
| VAR(1, "CHD", 5, "XRDT") | "" |
| VAR(1, "CHD", 6, "CON") | 75682002 |
| VAR(1, "CHD", 6, "DTS") | 75682 |
| VAR(1, "CHD", 6, "TRM") | "Diabetes mellitus due to insulin receptor antibodies (disorder)" |
| VAR(1, "CHD", 6, "XADT") | "" |
| VAR(1, "CHD", 6, "XRDT") | "" |
| VAR(1, "CHD", 7, "CON") | 276560009 |
| VAR(1, "CHD", 7, "DTS") | 276560 |
| VAR(1, "CHD", 7, "TRM") | "Diabetes mellitus in neonate small for gestational age (disorder)" |
| VAR(1, "CHD", 7, "XADT") | "" |
| VAR(1, "CHD", 7, "XRDT") | "" |
| VAR(1, "CHD", 8, "CON") | 276560009 |
| VAR(1, "CHD", 8, "DTS") | 276560 |
| VAR(1, "CHD", 8, "TRM") | "Diabetes mellitus in neonate small for gestational age (disorder)" |
| VAR(1, "CHD", 8, "XADT") | "" |
| VAR(1, "CHD", 8, "XRDT") | "" |
| VAR(1, "CHD", 9, "CON") | 408539000 |
| VAR(1, "CHD", 9, "DTS") | 408539 |
| VAR(1, "CHD", 9, "TRM") | "Insulin autoimmune syndrome (disorder)" |
| VAR(1, "CHD", 9, "XADT") | "" |
| VAR(1, "CHD", 9, "XRDT") | "" |
| VAR(1, "CHD", 10, "CON") | 75524006 |
| VAR(1, "CHD", 10, "DTS") | 75524 |
| VAR(1, "CHD", 10, "TRM") | "Malnutrition related diabetes mellitus (disorder)" |
| VAR(1, "CHD", 10, "XADT") | "" |
| VAR(1, "CHD", 10, "XRDT") | "" |
| VAR(1, "CHD", 11, "CON") | 445260006 |
| VAR(1, "CHD", 11, "DTS") | 445260 |
| VAR(1, "CHD", 11, "TRM") | "Posttransplant diabetes mellitus (disorder)" |
| VAR(1, "CHD", 11, "XADT") | "" |
| VAR(1, "CHD", 11, "XRDT") | "" |
| VAR(1, "CHD", 12, "CON") | 237601000 |
| VAR(1, "CHD", 12, "DTS") | 237601 |
| VAR(1, "CHD", 12, "TRM") | "Secondary endocrine diabetes mellitus (disorder)" |
| VAR(1, "CHD", 12, "XADT") | "" |
| VAR(1, "CHD", 12, "XRDT") | "" |
| VAR(1, "CON") | 8801005 |
| VAR(1, "DTS") | 8801 |
| VAR(1, "FSN", "DSC") | 830605015 |
| VAR(1, "FSN", "TRM") | "Secondary diabetes mellitus (disorder)" |
| VAR(1, "FSN", "XADT") | 3120301.07 |
| VAR(1, "ICD", 1, "COD") | "250.80" |
| VAR(1, "ICD", 1, "TYP") | "IC9" |
| VAR(1, "ICD", 1, "XADT") | "" |
| VAR(1, "ICD", 1, "XRDT") | "" |
| VAR(1, "ISA", 1, "CON") | 73211009 |
| VAR(1, "ISA", 1, "DTS") | 73211 |
| VAR(1, "ISA", 1, "TRM") | "Diabetes mellitus (disorder)" |
| VAR(1, "ISA", 1, "XADT") | "" |
| VAR(1, "ISA", 1, "XRDT") | "" |
| VAR(1, "PRB", "DSC") | 830605015 |
| VAR(1, "PRB", "TRM") | "Secondary diabetes mellitus (disorder)" |
| VAR(1, "PRE", "DSC") | 15518018 |
| VAR(1, "PRE", "TRM") | "Secondary diabetes mellitus" |
| VAR(1, "PRE", "XADT") | 3120301.07 |
| VAR(1, "PRE", "XRDT") | "" |
| VAR(1, "SUB", 1, "SUB") | "IHS PROBLEM SUPERSET" |
VAR(1,"SUB",1,"XADT")=""
VAR(1,"SUB",1,"XRDT")=""
VAR(1,"SUB",2,"SUB")="PICK Urology/Nephrology Long"
VAR(1,"SUB",2,"XADT")=""
VAR(1,"SUB",2,"XRDT")=""
VAR(1,"SUB",3,"SUB")="SRCH Diabetes"
VAR(1,"SUB",3,"XADT")=""
VAR(1,"SUB",3,"XRDT")=""
VAR(1,"SUB",4,"SUB")="SRCH Neurology"
VAR(1,"SUB",4,"XADT")=""
VAR(1,"SUB",4,"XRDT")=""
VAR(1,"SUB",5,"SUB")="SRCH Pediatrics"
VAR(1,"SUB",5,"XADT")=""
VAR(1,"SUB",5,"XRDT")=""
VAR(1,"SUB",6,"SUB")="IHS Problem List"
VAR(1,"SUB",6,"XADT")=""
VAR(1,"SUB",6,"XRDT")=""
VAR(1,"SUB",7,"SUB")="PXRM DIABETES"
VAR(1,"SUB",7,"XADT")=""
VAR(1,"SUB",7,"XRDT")=""
VAR(1,"SYN",1,"DSC")=1109081000119118
VAR(1,"SYN",1,"TRM")="Secondary diabetes"
VAR(1,"SYN",1,"XADT")=3140301.07
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"SYN",2,"DSC")=1109071000119116
VAR(1,"SYN",2,"TRM")="Secondary dm"
VAR(1,"SYN",2,"XADT")=3140301.07
VAR(1,"SYN",2,"XRDT")=""
VAR(1,"SYN",3,"DSC")=15519014
VAR(1,"SYN",3,"TRM")="Secondary diabetes mellitus, NOS"
VAR(1,"SYN",3,"XADT")=3120301.07
VAR(1,"SYN",3,"XRDT")=""
VAR(1,"XADT")=3120301
VAR(1,"XRDT")=3500101
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The following example retrieves the detail for the associated concept when the Description ID for a term is provided (utilizing a remote DTS server lookup):

>S OUT="VAR",IN="830605015^^2"
>W $$DSCLKP^BSTSAPI(OUT,IN)
>ZW @OUT
VAR(1,"CHD",1,"CON")=426705001
VAR(1,"CHD",1,"DTS")=426705
VAR(1,"CHD",1,"TRM")="Diabetes mellitus associated with cystic fibrosis (disorder)"
VAR(1,"CHD",1,"XADT")=""
VAR(1,"CHD",1,"XRDT")=""
VAR(1,"CHD",2,"CON")=5969009
VAR(1,"CHD",2,"DTS")=5969
VAR(1,"CHD",2,"TRM")="Diabetes mellitus associated with genetic syndrome (disorder)"
VAR(1,"CHD",2,"XADT")=""
VAR(1,"CHD",2,"XRDT")=""
VAR(1,"CHD",3,"CON")=59079001
VAR(1,"CHD",3,"DTS")=59079
VAR(1,"CHD",3,"TRM")="Diabetes mellitus associated with hormonal etiology"
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<th>CON</th>
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<th>TRM</th>
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<tr>
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<td>&quot;Diabetes mellitus associated with pancreatic disease (disorder)&quot;</td>
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<td>42954008</td>
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<td>&quot;Diabetes mellitus associated with receptor abnormality (disorder)&quot;</td>
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<td>75682002</td>
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<td>&quot;Diabetes mellitus due to insulin receptor antibodies (disorder)&quot;</td>
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<td>445260006</td>
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VAR(1, "CHD", 1, "COD") = "250.80"
The following example retrieves the detail for the associated concept when the Description ID for a term is provided (UNII Codeset). A lookup to the local cache is getting utilized:

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>S OUT="VAR",IN="5C5403N26O.316825^5180"
>W $$DSCLKP^BSTSAPI(OUT,IN)
2^>
ZW @OUT
VAR(1,"CON")="5C5403N26O"
VAR(1,"DTS")=57
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VAR(1,"FSN","DSC")="5C5403N260.57"
VAR(1,"FSN","TRM")="ACACIA"
VAR(1,"FSN","XADT")=""
VAR(1,"FSN","XRDT")=""
VAR(1,"PRB","DSC")="5C5403N260.316825"
VAR(1,"PRB","TRM")="ACACIA POWDER [VANDF]"
VAR(1,"SYN",1,"DSC")="5C5403N260.316825"
VAR(1,"SYN",1,"TRM")="ACACIA POWDER [VANDF]"
VAR(1,"SYN",1,"XADT")=""
VAR(1,"SYN",1,"XRDT")=""
VAR(1,"SYN",2,"DSC")="5C5403N260.316824"
VAR(1,"SYN",2,"TRM")="ACACIA [VANDF]"
VAR(1,"SYN",2,"XADT")=""
VAR(1,"SYN",2,"XRDT")=""
VAR(1,"SYN",3,"DSC")="5C5403N260.316823"
VAR(1,"SYN",3,"TRM")="GUM ARABIC [VANDF]"
VAR(1,"SYN",3,"XADT")=""
VAR(1,"SYN",3,"XRDT")=""
VAR(1,"SYN",4,"DSC")="5C5403N260.316822"
VAR(1,"SYN",4,"TRM")="PLANTS AND PLANT PARTS, GUM, ACACIA OR ARABIC ACACIA SENEGAL"
VAR(1,"SYN",4,"XADT")=""
VAR(1,"SYN",4,"XRDT")=""
VAR(1,"SYN",5,"DSC")="5C5403N260.316821"
VAR(1,"SYN",5,"TRM")="ACACIA SENEGAL GUM [WHO-DD]"
VAR(1,"SYN",5,"XADT")=""
VAR(1,"SYN",5,"XRDT")=""
VAR(1,"SYN",6,"DSC")="5C5403N260.316820"
VAR(1,"SYN",6,"TRM")="ACACIA SENEGAL RESIN [WHO-DD]"
VAR(1,"SYN",6,"XADT")=""
VAR(1,"SYN",6,"XRDT")=""
VAR(1,"SYN",7,"DSC")="5C5403N260.316819"
VAR(1,"SYN",7,"TRM")="ACACIA [HSDB]"
VAR(1,"SYN",7,"XADT")=""
VAR(1,"SYN",7,"XRDT")=""
VAR(1,"SYN",8,"DSC")="5C5403N260.316818"
VAR(1,"SYN",8,"TRM")="ARABIC GUM ALLERGENIC EXTRACT"
VAR(1,"SYN",8,"XADT")=""
VAR(1,"SYN",8,"XRDT")=""
VAR(1,"SYN",9,"DSC")="5C5403N260.316817"
VAR(1,"SYN",9,"TRM")="ALLERGENIC EXTRACT- GUM, ACACIA OR ARABIC ACACIA SENEGAL"
VAR(1,"SYN",9,"XADT")=""
VAR(1,"SYN",9,"XRDT")=""
VAR(1,"SYN",10,"DSC")="5C5403N260.316816"
VAR(1,"SYN",10,"TRM")="AE-GUM, ACACIA"
VAR(1,"SYN",10,"XADT")=""
VAR(1,"SYN",10,"XRDT")=""
VAR(1,"SYN",11,"DSC")="5C5403N260.316815"
VAR(1,"SYN",11,"TRM")="AE-GUM, ARABIC"
VAR(1,"SYN",11,"XADT")=""
VAR(1,"SYN",11,"XRDT")=""
VAR(1,"SYN",12,"DSC")="5C5403N260.165026"
VAR(1,"SYN",12,"TRM")="ACACIA [II]"
VAR(1,"SYN",12,"XADT")=""
VAR(1,"SYN",12,"XRDT")=""
VAR(1,"SYN",13,"DSC")="5C5403N260.165025"
VAR(1,"SYN",13,"TRM")="ACACIA MUCILAGE [II]"
VAR(1,"SYN",13,"XADT")=""
VAR(1,"SYN",13,"XRDT")=""
VAR(1,"SYN",14,"DSC")="5C5403N260.165024"
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A.13 $$DESC^BSTSAPI
The following example returns the Concept ID, the Description Term, and the mapped ICD9 codes of the concept when a Description ID is provided (utilizing a local cache lookup):

>W $$DESC^BSTSAPI(459311019)
314903002^Type II diabetes mellitus with arthropathy^250.00;716.90

A.14 $$CONC^BSTSAPI
The following example returns the Fully Specified Name, its associated Description ID, the Preferred Term and its associated Description ID, and the mapped ICD9 codes when a Concept ID is provided (utilizing a local cache lookup):

>W $$CONC^BSTSAPI(314903002)
711739010^Type II diabetes mellitus with arthropathy (disorder)^459310018^Type 2 diabetes mellitus with arthropathy^250.00;716.90

A.15 $$SUBLST^BSTSAPI
The following example shows the concepts found in the “SRCH Preventive Care” subset, using a local cache lookup:

>S OUT="VAR",IN="SRCH Preventive Care"
>W $$SUBLST^BSTSAPI(OUT,IN)
1
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Accessibility Checklist
June 2015
(coinfection) with hepatic coma"
VAR(59)="235864009^353573018^Acute hepatitis B with hepatitis D"
VAR(60)="424099008^308432017^Hepatitis coma due to acute hepatitis B"
VAR(61)="186626002^286866016^Acute hepatitis B with delta-agent (coinfection) without hepatic coma"
VAR(62)="111880001^179043011^Acute HIV infection"
VAR(63)="81711006^144456015^HIV infection with acute lymphadenitis"
VAR(64)="40468003^67480019^Viral hepatitis, type A"
VAR(65)="66071002^109732016^Type B viral hepatitis"
VAR(66)="268565007^401591014^Adult health examination"
VAR(67)="78318003^129970016^History and physical examination, annual for health maintenance"
VAR(68)="281029006^418926017^Well man health examination"
VAR(69)="281031002^418928016^Well woman health examination"
VAR(70)="171208001^265301016^Alcohol consumption screening"
VAR(71)="84758004^140514014^Amphetamine abuse"
VAR(72)="227205009^267459017^Amphetamine abuse, continuous"
VAR(73)="429692000^2696065019^Amphetamine abuse, episodic"
VAR(74)="21647008^36324011^Amphetamine dependence"
VAR(75)="426873000^267603013^Methamphetamine dependence"
VAR(76)="191845006^29520014^Amphetamine or psychostimulant dependence in remission"
VAR(77)="191843004^295198015^Amphetamine or psychostimulant dependence, continuous"
VAR(78)="191844005^295199011^Amphetamine or psychostimulant dependence, episodic"
VAR(79)="234349007^351085011^Microcytic anemia"
VAR(80)="171201007^265284011^Anemia screening"
VAR(81)="79031007^131139015^Anicteric type A viral hepatitis"
VAR(82)="53425008^88836009^Anicteric type B viral hepatitis"
VAR(83)="30828007^516030016^Anoxia, in liveborn infant"
VAR(84)="281579001^419620017^Perinatal hypoxia"
VAR(85)="169595006^263136014^A/N care: H/O child abuse"
VAR(86)="243787009^364616017^Antenatal screening"
VAR(87)="231470001^346938014^Anxiolytic dependence"
VAR(88)="268640002^401791011^Hypnotic or anxiolytic dependence"
VAR(89)="80753001^133949013^Arrested dental caries"
VAR(90)="80967001^134311013^Dental caries"
VAR(91)="315019000^459483019^HIV infection with aseptic meningitis"
VAR(92)="91947003^152322017^Asymptomatic human immunodeficiency virus infection"
VAR(93)="275800005^142791015^Atypical isoimmunization of newborn"
VAR(94)="428015005^269486103^Chlamydia trachomatis infection of genital structure"
VAR(95)="188463006^289547011^Chlamydial pelvic inflammatory disease"
VAR(96)="367504009^492483019^PID with female sterility due to Chlamydia trachomatis"
VAR(97)="186731007^287038016^Chlamydial infection of anus and rectum"
VAR(98)="446752000^2884076018^Infection of peritoneum due to Chlamydia trachomatis"
VAR(99)="179101003^277121011^Urethritis due to Chlamydia trachomatis"
VAR(100)="231462006^346928016^Barbiturate abuse"
VAR(101)="64386003^107023015^Sedative abuse"
VAR(102)="231472009^346941017^Barbiturate dependence"
VAR(103)="427327003^267354010^Sedative dependence"
VAR(104)="231473004^346942012^Benzodiazepine dependence"
VAR(105)="231474005^346943019^Diazepam dependence"
VAR(106)="231475006^346945014^Librium dependence"
VAR(107)="206187005^316128013^Birth trauma, asphyxia and hypoxia"
VAR(108)="171176006^265234016^Breast neoplasm screening abnormal"
VAR(109)="171175005^265233010^Breast neoplasm screening normal"
VAR(110)="414025005^2532908019^Disorder of fetus or newborn"
VAR(111)="186723002^287029018^HIV disease resulting in Burkitt's lymphoma"
VAR(112)="171161003^265210014^Ca cervix screening abnormal"
VAR(113)="171160002^265209016^Ca cervix screening normal"
VAR(114)="186719005^287025012^HIV disease resulting in candidiasis"
VAR(115)="442231009^2819937013^Caries involving multiple surfaces of tooth"
VAR(116)="109577004^174181019^Primary dental caries, multisurface origin"
VAR(117)="109578009^174182014^Caries of infancy"
VAR(118)="109581004^174187015^Caries of infancy associated with bottle feeding"
VAR(119)="109580003^174185011^Caries of infancy associated with breast feeding"
VAR(120)="109579001^174184010^Caries of infancy, indeterminate origin"
VAR(121)="386230005^1480408011^Case management"
VAR(122)="30512007^51063015^Cementum caries"
VAR(123)="161062006^251124011^Physical child abuse"
VAR(124)="161062006^251124011^Child abuse in family"
VAR(125)="310240007^453842016^Hearing screening status"
VAR(126)="412718006^2474276012^Chlamydia screening declined"
VAR(127)="420910002^2693755012^Chlamydia trachomatis infection of anus and rectum"
VAR(128)="446642005^2884242016^Infection of anus due to Chlamydia trachomatis"
VAR(129)="447372001^2883731019^Infection of rectum due to Chlamydia trachomatis"
VAR(130)="447353001^2883503013^Infection of cervix due to Chlamydia trachomatis"
VAR(131)="447402003^2882845010^Infection of vagina due to Chlamydia trachomatis"
VAR(132)="44786002^288316015^Infection of vulva due to Chlamydia trachomatis"
VAR(133)="189312004^290842015^Pelvic inflammation with female sterility due to Chlamydia trachomatis"
VAR(134)="186729003^287036017^Chlamydial infection of lower genitourinary tract"
VAR(135)="237084006^355365012^Chlamydial cervicitis"
VAR(136)="238372002^357290012^Chlamydial dermatological disorders"
VAR(137)="237097008^355388013^Chlamydial vulvar vaginitis"
VAR(138)="237039009^355296017^Chlamydial salpingitis"
VAR(139)="198176005^304699015^Female chlamydial pelvic inflammatory disease"
VAR(140)="275972003^411949013^Cholesterol screening"
VAR(141)="50167007^83566015^Chronic active type B viral hepatitis"
VAR(142)="61977001^103019010^Chronic type B viral hepatitis"
VAR(143)="1116000^2956015^Chronic aggressive type B viral hepatitis"
VAR(144)="196299008^301926019^Chronic dentine dental caries"
VAR(145)="196302008^301929014^Chronic enamel dental caries"
VAR(146)="402894005^1781979011^Recurrent genital herpes simplex"
VAR(147)="38662009^64336013^Chronic persistent type B viral hepatitis"
VAR(148)="235869004^353579019^Chronic viral hepatitis B with hepatitis D"
VAR(149)="186639003^286879013^Chronic viral hepatitis B without delta agent"
VAR(150)="78267003^128972012^Cocaine abuse"
VAR(151)="191916008^295290015^Nondependent cocaine abuse"
VAR(152)="31956009^53398019^Cocaine dependence"
VAR(153)="191833002^295718013^Cocaine dependence in remission"
VAR(154)="191831000^295716012^Cocaine dependence, continuous"
VAR(155)="191832007^295717015^Cocaine dependence, episodic"
VAR(156)="444783004^2870627012^Screening colonoscopy"
VAR(157)="83607001^138662012^Gynecologic examination"
VAR(158)="75544000^125472011^Opioid dependence"
VAR(159)="11687002^20191016^Gestational diabetes mellitus"
VAR(160)="52079000^86691015^Congenital human immunodeficiency virus infection"
VAR(161)="206373002^316475015^Congenital hepatitis A infection"
VAR(162)="276666007^412920019^Congenital human immunodeficiency virus positive status syndrome"
VAR(163)="60498001^100520013^Congenital viral hepatitis B infection"
VAR(164)="191819002^295154015^Continuous opioid dependence"
VAR(165)="409063005^2469564010^Counseling"
VAR(166)="445142003^2871733018^Counseling about disease"
VAR(167)="186718002^287024011^HIV disease resulting in cytomegaloviral disease"
VAR(168)="196305005^30192012^Odontoclasia"
VAR(169)="163152009^254264018^O/E - dental caries"
VAR(170)="234976000^352147013^Rampant dental caries"
VAR(171)="95253003^15777013^Secondary dental caries associatd with enamel hypomineralization"
VAR(172)="109566009^174168014^Dental caries associated with enamel hypomineralization"
VAR(173)="95253003^157778013^Secondary dental caries associated with local or systemic factors"
VAR(174)="109566005^174170017^Dental caries associated with enamel hypoplasia"
VAR(175)="109569003^174173015^Dental caries secondary to acquired defects of tooth structure"
VAR(176)="109568006^174172013^Dental caries secondary to developmental defects of tooth structure"
VAR(177)="171207006^265300015^Depression screening"
VAR(178)="171183004^265249012^Diabetes mellitus screening"
VAR(179)="134395001^216201011^Diabetic retinopathy screening"
VAR(180)="235726002^353370019^Human immunodeficiency virus enteropathy"
VAR(181)="231461004^346927014^Hypnotic or anxiolytic abuse"
VAR(182)="191924003^295311015^Nondependent amphetamine or psychostimulant abuse, continuous"
VAR(183)="191918009^295301010^Nondependent cocaine abuse, continuous"
VAR(184)="191905001^295286018^Nondependent hypnotic or anxiolytic abuse, continuous"
VAR(185)="191912005^295295014^Nondependent opioid abuse, continuous"
VAR(186)="95247003^157768010^Salivary dysfunction caries secondary to medication"
VAR(187)="307337003^450578010^Duffy isoimmunization of the newborn"
VAR(188)="171219003^265315019^Ear disorder screening"
VAR(189)="15733007^26665015^Incipient enamel caries"
VAR(190)="109572005^174176011^Primary dental caries, cervical origin"
VAR(191)="109571003^174175010^Primary dental caries, indeterminate origin"
VAR(192)="109574006^174178012^Primary dental caries, nonproximal smooth surface origin"
VAR(193)="109575007^174179016^Primary dental caries, pit and fissure origin"
VAR(194)="109573000^174177019^Primary dental caries, proximal smooth surface origin"
VAR(195)="109576008^174180018^Primary dental caries, root surface origin"
VAR(196)="191820008^295155019^Episodic opioid dependence"
VAR(197)="427578006^2673528011^Herpes simplex of female genitalia"
VAR(198)="59819007^99366010^Herpetic ulceration of vulva"
VAR(199)="129670002^208500013^Herpetic cervicitis"
VAR(200)="426001001^2676030014^Fentanyl dependence"
VAR(201)="275367000^411339016^Intrauterine hypoxia"
VAR(202)="33839006^564850016^Genital herpes simplex virus type 1 infection"
VAR(203)="440714005^279166019^Genital Herpes simplex type 1 infection"
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<td>Primary herpes simplex infection of genitalia</td>
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<td>Gestational diabetes mellitus, class A&gt;1&lt;</td>
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<td>VAR(209)</td>
<td>Gestational diabetes mellitus, class A&gt;2&lt;</td>
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<td>VAR(210)</td>
<td>Heart disease screening</td>
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<td>VAR(211)</td>
<td>Hemolytic disease of fetus OR newborn due to ABO immunization</td>
</tr>
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<td>VAR(212)</td>
<td>Hemolytic disease of fetus OR newborn due to RhD isoimmunization</td>
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<td>Hemolytic disease of the newborn due to non-ABO, non-Rh isoimmunization</td>
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<td>Hydrops fetalis due to isoimmunization of the newborn</td>
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<td>VAR(215)</td>
<td>Kell isoimmunization of the newborn</td>
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<td>Kernicterus due to isoimmunization</td>
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<tr>
<td>VAR(217)</td>
<td>Kidd isoimmunization of the newborn</td>
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<tr>
<td>VAR(218)</td>
<td>Late anemia due to isoimmunization</td>
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<td>Hepatic coma due to viral hepatitis B</td>
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<td>Primary herpetic vulvovaginitis</td>
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<td>HIV disease resulting in multiple infections</td>
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<td>HIV disease resulting in multiple malignant neoplasms</td>
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<td>Human immunodeficiency virus II infection</td>
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<td>Human immunodeficiency virus with secondary cancers</td>
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<td>Human immunodeficiency virus-associated periodontitis</td>
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<td>VAR(250)</td>
<td>Human immunodeficiency virus encephalitis</td>
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<td>VAR(251)</td>
<td>Human immunodeficiency virus encephalopathy</td>
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VAR(252)="230180003^344966016^Human immunodeficiency virus leukoencephalopathy"
VAR(253)="391148009^1485170012^HPV - Human papillomavirus test negative"
VAR(254)="268552003^401571019^Hyperlipidemia screening"
VAR(255)="171222001^265318017^Hypertension screening"
VAR(256)="191827006^295170018^Hypnotic or anxiolytic dependence in remission"
VAR(257)="191825003^295168010^Hypnotic or anxiolytic dependence, continuous"
VAR(258)="191826002^295169019^Hypnotic or anxiolytic dependence, episodic"
VAR(259)="276570006^412764017^Perinatal hypoxia and asphyxia"
VAR(260)="294648008^434939017^Influenza split virion vaccine allergy"
VAR(261)="294647003^434938013^Influenza vaccine allergy"
VAR(262)="294649000^434940015^Influenza surface antigen vaccine allergy"
VAR(263)="191909007^295290016^Nondependent opioid abuse"
VAR(264)="171198002^265280105^Iron deficiency screening"
VAR(265)="445272000^2870751012^Late effect of child abuse"
VAR(266)="87199005^144596015^Lead screening"
VAR(267)="206266009^316280014^Liveborn with labor fetal distress"
VAR(268)="231478008^346940017^Methadone dependence"
VAR(269)="29062009^48647014^Relapsing type B viral hepatitis"
VAR(270)="95246007^157767017^Salivary dysfunction caries secondary to aging"
VAR(271)="268648009^401800012^Nondependent amphetamine or other psychostimulant abuse"
VAR(272)="414874007^2534808016^Nondependent amphetamine or psychostimulant abuse in remission"
VAR(273)="191925002^295312010^Nondependent amphetamine or psychostimulant abuse, episodic"
VAR(274)="191920007^295303013^Nondependent cocaine abuse in remission"
VAR(275)="191919001^295288017^Nondependent hypnotic or anxiolytic abuse in remission"
VAR(276)="268647004^401799013^Nondependent hypnotic or anxiolytic abuse"
VAR(277)="191907009^295280010^Nondependent hypnotic or anxiolytic abuse, episodic"
VAR(278)="5602001^10350013^Opioid abuse"
VAR(279)="95248008^157769019^Salivary dysfunction caries secondary to radiation therapy"
VAR(280)="446698005^2883285015^Reactivation of hepatitis B viral hepatitis"
VAR(281)="43634002^72756013^Relapsing type A viral hepatitis"
VAR(282)="160873007^250814011^Removed - child abuse register"
VAR(283)="171182009^265248016^Thyroid disorder screening"
The following example shows the concepts found in the “SRCH Preventive Care” subset, using a remote DTS lookup:

```plaintext
>S OUT="VAR",IN="SRCH Preventive Care^^2"
>W $$SUBLST^BSTSAPI(OUT,IN)
>ZW @OUT
VAR(1)="4854004^9091010^Acquired hemolytic anemia"
VAR(2)="62479008^103840012^AIDS"
VAR(3)="35791000^475161014^AIDS with dermatomycosis"
VAR(4)="77070006^127948012^AIDS with Salmonella infection"
VAR(5)="62246005^103445014^AIDS-like syndrome"
VAR(6)="196298000^301925015^Acute dentine dental caries"
VAR(7)="196301001^301928018^Acute enamel dental caries"
VAR(8)="18917003^31892013^Acute fulminating type A viral hepatitis"
VAR(9)="13265006^22692019^Acute fulminating type B viral hepatitis"
VAR(10)="426165006^2675239013^Acute genitourinary chlamydia infection"
VAR(11)="426247003^2676041011^Acute genitourinary Chlamydia trachomatis infection"
VAR(12)="186624004^286863012^Acute hepatitis B with delta agent (coinfection) with hepatic coma"
VAR(13)="186626002^286866016^Acute hepatitis B with delta-agent (coinfection) without hepatic coma"
VAR(14)="235864009^353573018^Acute hepatitis B with hepatitis D"
VAR(15)="111880001^179043011^Acute HIV infection"
VAR(16)="25102003^42082019^Acute type A viral hepatitis"
VAR(17)="76795007^127504014^Acute type B viral hepatitis"
VAR(18)="268650007^401591014^Adult health examination"
VAR(19)="418043000^2578952010^Advice given"
VAR(20)="171208001^265301016^Alcohol consumption screening"
VAR(21)="84758004^140514014^Amphetamine abuse"
VAR(22)="427205009^2674599017^Amphetamine abuse, continuous"
VAR(23)="429692000^2696065019^Amphetamine abuse, episodic"
VAR(24)="21647008^36324011^Amphetamine dependence"
VAR(25)="191845006^295200014^Amphetamine or psychostimulant dependence in remission"
VAR(26)="191843004^295198015^Amphetamine or psychostimulant dependence, continuous"
VAR(27)="191844005^295199011^Amphetamine or psychostimulant dependence, episodic"
VAR(28)="171201007^265284011^Anemia screening"
VAR(29)="79031007^131139015^Anicteric type A viral hepatitis"
VAR(30)="53425008^8836017^Anicteric type B viral hepatitis"
VAR(31)="30828007^516303016^Anoxia, in liveborn infant"
VAR(32)="389098007^1483154012^Anoxic encephalopathy"
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VAR(33)="169595006^263136014^A/N care: H/O child abuse"
VAR(34)="243787009^364616017^Antenatal screening"
VAR(35)="231472009^346941017^Barbiturate dependence"
VAR(36)="171226003^265323017^Aortic aneurysm screening"
VAR(37)="80753001^133949013^Arrested dental caries"
VAR(38)="91947003^152322017^Asymptomatic human immunodeficiency virus infection"
VAR(39)="276580005^412791015^Atypical isoimmunization of newborn"
VAR(40)="231462006^346928016^Barbiturate abuse"
VAR(41)="231473004^346942012^Benzodiazepine dependence"
VAR(42)="231472009^346941017^Barbiturate dependence"
VAR(43)="206187005^316128013^Birth trauma, asphyxia and hypoxia"
VAR(44)="185665008^285656016^BP screening - first call"
VAR(45)="171176006^265234016^Breast neoplasm screening abnormal"
VAR(46)="171175005^265233010^Breast neoplasm screening normal"
VAR(47)="392089008^1486075012^Breast procedure"
VAR(48)="171161003^265210014^Ca cervix screening abnormal"
VAR(49)="171160002^265209016^Ca cervix screening normal"
VAR(50)="44231009^281993013^Caries involving multiple surfaces of tooth"
VAR(51)="109578009^174182014^Caries of infancy"
VAR(52)="109581004^174187015^Caries of infancy associated with bottle feeding"
VAR(53)="109580003^174185011^Caries of infancy associated with breast feeding"
VAR(54)="109579001^174184010^Caries of infancy, indeterminate origin"
VAR(55)="386230005^1480408011^Case management"
VAR(56)="171216005^265312016^Cataract screening"
VAR(57)="30512007^51063015^Cementum caries"
VAR(58)="185665008^285656016^BP screening - first call"
VAR(59)="171164006^265213011^Child abuse in family"
VAR(60)="268563000^401589018^Child health medical examination"
VAR(61)="95922009^158895013^Child sex abuse"
VAR(62)="408761008^2470622012^Children's vision screening"
VAR(63)="412718006^2474276012^Chlamydia screening declining"
VAR(64)="240590008^360379017^Chlamydia trachomatis infection"
VAR(65)="420910002^2693755012^Chlamydia trachomatis infection of anus and rectum"
VAR(66)="428015005^2694861013^Chlamydia trachomatis infection of genitai structural system"
VAR(67)="237084006^355365012^Chlamydia cervicitis"
VAR(68)="238372002^357290012^Chlamydia dermatological disorders"
VAR(69)="105629000^169750018^Chlamydia infection"
VAR(70)="186731007^287038016^Chlamydia infection of anus and rectum"
VAR(71)="186729003^287036017^Chlamydia infection of lower genitourinary tract"
VAR(72)="188463006^289547011^Chlamydia pelvic inflammatory disease"
VAR(73)="237093009^355296017^Chlamydia salpingitis"
VAR(74)="237097008^355388013^Chlamydia vulvovaginitis"
VAR(75)="237092003^411949013^Cholesterol screening"
VAR(76)="50167007^83566015^Chronic active type B viral hepatitis"
VAR(77)="1116000^2956010^Chronic agressive type B viral hepatitis"
VAR(78)="196299008^301926019^Chronic dentine dental caries"
VAR(79)="196302008^301929014^Chronic enamel dental caries"
VAR(80)="38662009^64336013^Chronic persistent type B viral hepatitis"
VAR(81)="61977001^103019010^Chronic type B viral hepatitis"
VAR(82)="235869004^355390019^Chronic viral hepatitis B with hepatitis D"
VAR(83)="186629003^298679013^Chronic viral hepatitis B without delta-agent"
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VAR(85)="31956009^53398019^Cocaine dependence"
VAR(86)="191833002^295178013^Cocaine dependence in remission"
| VAR(87) | "191831000^295176012^Cocaine dependence, continuous" |
| VAR(88) | "191832007^295177015^Cocaine dependence, episodic" |
| VAR(89) | "206373002^316475015^Congenital hepatitis A infection" |
| VAR(90) | "52079000^86691015^Congenital human immunodeficiency virus infection" |
| VAR(91) | "276666007^412920019^Congenital human immunodeficiency virus positive status syndrome" |
| VAR(92) | "60498001^100520013^Congenital viral hepatitis B infection" |
| VAR(93) | "191819002^295154015^Continuous opioid dependence" |
| VAR(94) | "409063005^2469564010^Counseling" |
| VAR(95) | "445142003^2871733018^Counseling about disease" |
| VAR(96) | "80967001^134311013^Dental caries" |
| VAR(97) | "109564008^174168014^Dental caries associated with enamel hypomineralization" |
| VAR(98) | "109566005^174170017^Dental caries associated with enamel hypoplasia" |
| VAR(99) | "442551007^2820469019^Dental caries extending into dentine" |
| VAR(100) | "109569003^174173015^Dental caries secondary to acquired defects of tooth structure" |
| VAR(101) | "109568006^174172013^Dental caries secondary to developmental defects of tooth structure" |
| VAR(102) | "171207006^265300015^Depression screening" |
| VAR(103) | "428171000124102^635271000124117^Depression screening negative" |
| VAR(104) | "428181000124104^635251000124110^Depression screening positive" |
| VAR(105) | "134395005^216201011^Diabetic peripheral neuropathy screening" |
| VAR(106) | "231474005^346943019^Diazepam dependence" |
| VAR(107) | "414025005^2532908019^Disorder of fetus or newborn" |
| VAR(108) | "394642008^1488367018^Drug screening test" |
| VAR(109) | "307337003^450578010^Duffy is immunization of the newborn" |
| VAR(110) | "171219003^265315019^Ear disorder screening" |
| VAR(111) | "460617003^2922918015^Education of caregiver" |
| VAR(112) | "80353004^133324017^Enamel caries" |
| VAR(113) | "191812008^295155019^Episodic opioid dependence" |
| VAR(114) | "46662001^77772014^Examination of breast" |
| VAR(115) | "171253004^265358019^Exercise status screening" |
| VAR(116) | "274412005^410210013^Eye disorder screening" |
| VAR(117) | "397619005^2576233016^Family planning education" |
| VAR(118) | "410385005^2472046011^Family planning surveillance" |
| VAR(119) | "401212003^1774852017^Fecal screening tests" |
| VAR(120) | "198176005^304699015^Female chlamydial pelvic inflammatory disease" |
| VAR(121) | "426601001^267630014^Fentanyl dependence" |
| VAR(122) | "33839006^56485016^Genital herpes simplex" |
| VAR(123) | "440714005^279167015^Genital Herpes simplex type 1 infection" |
| VAR(124) | "423391007^264573011^Genital herpes simplex type 2" |
| VAR(125) | "312099009^455763019^Genitourinary chlamydia infection" |
| VAR(126) | "171313004^264575013^Geriatric screening" |
| VAR(127) | "11687002^20191016^Gestational diabetes mellitus" |
| VAR(128) | "75022004^124602011^Gestational diabetes mellitus, class A>1<" |
| VAR(129) | "46894009^78158011^Gestational diabetes mellitus, class A>2<" |
| VAR(130) | "83607001^138662012^Gynecologic examination" |
| VAR(131) | "130969003^210604017^Health seeking behavior" |
| VAR(132) | "310240007^453842010^Hearing screening status" |
| VAR(133) | "171221008^265317010^Heart disease screening" |
| VAR(134) | "32658009^54835019^Hemolytic disease of fetus OR newborn due to ABO immunization" |
| VAR(135) | "387705004^1477163017^Hemolytic disease of fetus OR newborn due to is immunization" |
| VAR(136) | "86986002^2155367014^Hemolytic disease of fetus OR newborn due to
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VAR(141)="424430000^3008410010^Hepatic coma due to chronic hepatitis B"
VAR(142)="16060001^3008400017^Hepatic coma due to viral hepatitis A"
VAR(143)="26206000^3008554017^Hepatic coma due to viral hepatitis B"
VAR(144)="252404004^375955013^Hepatitis A antigen screening"
VAR(145)="442374005^2818954010^Hepatitis B and hepatitis C"
VAR(146)="442134007^2819115019^Hepatitis B associated with Human immunodeficiency virus infection"
VAR(147)="235871004^3535820016^Hepatitis B carrier"
VAR(148)="171122006^2651640019^Hepatitis B screening"
VAR(149)="424460009^2643530016^Hepatitis B with hepatitis D superinfection"
VAR(150)="413107006^2474660102^Hepatitis C screening"
VAR(151)="231477003^3469470118^Heroin dependence"
VAR(152)="427578006^2673528011^Herpes simplex of female genitalia"
VAR(153)="129670002^208507013^Herpetic cervicitis"
VAR(154)="59819007^1550960010^Herpetic ulceration of vulva"
VAR(155)="27806000^346950010^Herpetic vesicle in vagina"
VAR(156)="27420004^45851012^Herpetic vulvovaginitis"
VAR(157)="78318003^129970016^History and physical examination, annual for health maintenance"
VAR(158)="315631004^460150015^H/O: influenza vaccine allergy"
VAR(159)="186723002^287029010^HIV disease resulting in Burkitt's lymphoma"
VAR(160)="186719005^287025012^HIV disease resulting in candidiasis"
VAR(161)="186718002^287024011^HIV disease resulting in cytomegaloviral disease"
VAR(162)="186726005^287032015^HIV disease resulting in lymphoid interstitial pneumonitis"
VAR(163)="186721000^287027016^HIV disease resulting in multiple infections"
VAR(164)="186725009^287031010^HIV disease resulting in multiple malignant neoplasms"
VAR(165)="186717007^287023017^HIV disease resulting in mycobacterial infection"
VAR(166)="235726002^3533700019^Human immunodeficiency virus enteropathy"
VAR(167)="40780007^68021013^Human immunodeficiency virus I infection"
VAR(168)="79019005^131125015^Human immunodeficiency virus II infection"
VAR(169)="86406008^143288017^Human immunodeficiency virus infection constitutional disease"
VAR(170)="186706006^287010012^Human immunodeficiency virus infection constitutional disease"
VAR(171)="87117006^144456015^HIV infection with acute lymphadenitis"
VAR(172)="315019000^459481013^HIV infection with aseptic meningitis"
VAR(173)="5810003^10682018^HIV infection with infection by another virus"
VAR(174)="48794007^81304010^HIV infection with infectious mononucleosis-like syndrome"
VAR(175)="186707002^281787010^Human immunodeficiency virus infection with neurological disease"
VAR(176)="186708007^287013014^Human immunodeficiency virus infection with secondary clinical infectious disease"
VAR(177)="240103002^359715014^Human immunodeficiency virus myopathy"
VAR(178)="171121004^265162015^HIV screening"
VAR(179)="402915006^1781998013^HIV seroconversion exanthem"
VAR(180)="402916007^1781999017^HIV seropositivity"
VAR(181)="186709004^287014015^Human immunodeficiency virus with secondary cancers"
VAR(182)="235009000^352196015^Human immunodeficiency virus-associated periodontitis"
VAR(183)="398329009^177865017^Human immunodeficiency virus encephalitis"
VAR(184)="397763006^177737016^Human immunodeficiency virus encephalopathy"
VAR(185)="230180003^344966016^Human immunodeficiency virus
leukoencephalopathy

VAR(187)="391148009^1485170012^HPV - Human papillomavirus test negative"
VAR(188)="391147004^1485169011^HPV - Human papillomavirus test positive"
VAR(189)="15539009^26354014^Hydrops fetalis due to isoimmunization"
VAR(190)="266552003^401571019^Hyperlipidemia screening"
VAR(191)="171222001^265318017^Hypertension screening"
VAR(192)="231461004^346927014^Hypnotic or anxiolytic abuse"
VAR(193)="268640002^401791011^Hypnotic or anxiolytic dependence"
VAR(194)="191827006^295170018^Hypnotic or anxiolytic dependence in remission"
VAR(195)="191825003^295168010^Hypnotic or anxiolytic dependence, continuous"
VAR(196)="191826002^295169019^Hypnotic or anxiolytic dependence, episodic"
VAR(197)="310373003^453951018^Immunization advised"
VAR(198)="266758009^397223010^Immunization contraindicated"
VAR(199)="157333007^26656015^Incipient enamel caries"
VAR(200)="446642005^2884242016^Infection of anus due to Chlamydia trachomatis"
VAR(201)="447353001^2883503013^Infection of cervix due to Chlamydia trachomatis"
VAR(202)="446752000^2884076018^Infection of peritoneum due to Chlamydia trachomatis"
VAR(203)="447372001^2883730109^Infection of rectum due to Chlamydia trachomatis"
VAR(204)="447402003^2882845010^Infection of vagina due to Chlamydia trachomatis"
VAR(205)="447386002^2883136015^Infection of vulva due to Chlamydia trachomatis"
VAR(206)="294648008^434939017^Influenza split virion vaccine allergy"
VAR(207)="294649000^434940015^Influenza surface antigen vaccine allergy"
VAR(208)="294647000^434938013^Influenza vaccine allergy"
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VAR(210)="307338008^450579019^Kidd isoimmunization of the newborn"
VAR(211)="68361004^144596015^Lead screening"
VAR(212)="234380002^351141012^Kell isoimmunization of the newborn"
VAR(213)="231475006^346945014^Librium dependence"
VAR(214)="230598008^345522015^Neuropathy due to human immunodeficiency virus"
VAR(215)="268648009^401800012^Nondependent amphetamine or other psychostimulant abuse"
VAR(216)="268647004^401799013^Nondependent hypnotic or anxiolytic abuse"
VAR(217)="191924003^295311015^Nondependent amphetamine or psychostimulant abuse in remission"
VAR(218)="191920007^295303013^Nondependent cocaine abuse in remission"
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VAR(221)="268644002^401799013^Nondependent hypnotic or anxiolytic abuse in remission"
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| VAR(236) | Nondependent hypnotic or anxiolytic abuse, episodic
| VAR(237) | Nondependent opioid abuse
| VAR(238) | Nondependent opioid abuse in remission
| VAR(239) | Nondependent opioid abuse, continuous
| VAR(240) | Nondependent opioid abuse, episodic
| VAR(241) | Obesity screening
| VAR(242) | Odontoclasia
| VAR(243) | Opioid abuse
| VAR(244) | Opioid abuse
| VAR(245) | Opioid dependence
| VAR(246) | Opioid dependence in remission
| VAR(247) | Opium dependence
| VAR(248) | Pelvic inflammation with female sterility due to Chlamydia trachomatis
| VAR(249) | PID with female sterility due to Chlamydia trachomatis
| VAR(250) | Perinatal hypoxia
| VAR(251) | Perinatal hypoxia and asphyxia
| VAR(252) | Person counseled
| VAR(253) | Physical child abuse
| VAR(254) | Postoperative care
| VAR(255) | Primary dental caries, cervical origin
| VAR(256) | Primary dental caries, indeterminate origin
| VAR(257) | Primary dental caries, multisurface origin
| VAR(258) | Primary dental caries, nonproximal smooth surface origin
| VAR(259) | Primary dental caries, pit and fissure origin
| VAR(260) | Primary dental caries, proximal smooth surface origin
| VAR(261) | Primary dental caries, root surface origin
| VAR(262) | Primary herpes simplex infection of genitalia
| VAR(263) | Primary herpetic vulvovaginitis
| VAR(264) | Psychologically abused elder
| VAR(265) | Rampant dental caries
| VAR(266) | Reactivation of hepatitis B viral hepatitis
| VAR(267) | Recurrent genital herpes simplex
| VAR(268) | Recurrent genital Herpes simplex type 1 infection
| VAR(269) | Recurrent genital Herpes simplex type 2 infection
| VAR(270) | Recurrent herpetic vulvovaginitis
| VAR(271) | Relapsing type A viral hepatitis
| VAR(272) | Relapsing type B viral hepatitis
| VAR(273) | Relative counseled
| VAR(274) | Removed - child abuse register
| VAR(275) | Salivary dysfunction caries secondary to aging
| VAR(276) | Salivary dysfunction caries secondary to medication
| VAR(277) | Salivary dysfunction caries secondary to radiation therapy
| VAR(278) | Salivary dysfunction dental caries
| VAR(279) | Screening colonoscopy
| VAR(280) | Screening for cancer
| VAR(281) | Screening for Chlamydia trachomatis
| VAR(282) | Screening for malignant neoplasm of breast |
VAR(283)="275978004^2821318010^Screening for malignant neoplasm of colon"
VAR(284)="444822002^2872725016^Screening for malignant neoplasm of prostate"
VAR(285)="444638005^2872563014^Screening for malignant neoplasm of skin"
VAR(286)="300040007^440991014^Screening for osteoporosis"
VAR(287)="95254009^157779017^Secondary dental caries"
VAR(288)="95252008^157777015^Secondary dental caries associated with failed or defective dental restoration"
VAR(289)="95253003^157778013^Secondary dental caries associated with local or systemic factors"
VAR(290)="64386003^107023015^Sedative abuse"
VAR(291)="427327003^267354010^Sedative dependence"
VAR(292)="185186007^285166011^Seen in well child clinic"
VAR(293)="162596006^3006600017^Suspected victim of child abuse"
VAR(294)="171209009^265248016^Thyroid disorder screening"
VAR(295)="171210009^265352011^Tobacco usage screening"
VAR(296)="171120009^265107012^Tuberculosis screening"
VAR(297)="179910103^277120111^Urethritis due to Chlamydia trachomatis"
VAR(298)="171128005^265217012^Venereal disease screening"
VAR(299)="397940009^177736016^Victim of child abuse"
VAR(300)="111879004^179042018^Viral hepatitis A without hepatic coma"
VAR(301)="111879004^2643521012^Viral hepatitis A without hepatic coma, without hepatitis delta"
VAR(302)="111891008^179047012^Viral hepatitis B without hepatic coma"
VAR(303)="60710002^109732019^Type B viral hepatitis"
VAR(304)="40468003^67480019^Viral hepatitis, type A"
VAR(305)="408760009^270621017^Vision screening"
VAR(306)="410200009^270274014^Well child visit"
VAR(307)="410642005^270279015^Well child visit, 10 years"
VAR(308)="281029006^418926017^Well man health examination"
VAR(309)="281031002^418928016^Well woman health examination"
VAR(310)="81302007^134872016^Worried well"

A.16 $$ICD2SMD^BSTSAPI

The following example shows the first five records and the last five records returned on an ICD2SMD API call (returning SNOMED concepts mapped to ICD9 code 250.00):

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S OUT="VAR",IN="250.00"
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2W @OUT
VAR(1,"CON")=170746002
VAR(1,"DTS")=170746
VAR(1,"FSN","DSC")=552732015
VAR(1,"FSN","TRM")="Diabetic on oral treatment (finding)"
VAR(1,"ISA",1,"CON")=""
VAR(1,"ISA",1,"DTS")=243860
VAR(1,"ISA",1,"TRM")="Diabetic monitoring status (finding)"
VAR(1,"PRB","DSC")=264681018
VAR(1,"PRB","TRM")="Diabetic on oral treatment"
VAR(1,"SUB",1,"SUB")="IHS PROBLEM ALL SNOMED"
VAR(2,"CHD",1,"CON")=394674001
VAR(2,"CHD",1,"DTS")=394674
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VAR(4,"CHD",1,"TRM")="Diabetic severe hyperglycemia (disorder)"
VAR(4,"CHD",2,"CON")=761000119102
VAR(4,"CHD",2,"DTS")=1199000076
VAR(4,"CHD",2,"TRM")="Dyslipidemia associated with type II diabetes mellitus (disorder)"
VAR(4,"CHD",3,"CON")=441656006
VAR(4,"CHD",3,"DTS")=441656
VAR(4,"CHD",3,"TRM")="Hyperglycemic crisis in diabetes mellitus (disorder)"
VAR(4,"CHD",4,"CON")=428896009
VAR(4,"CHD",4,"DTS")=428896
VAR(4,"CHD",4,"TRM")="Hyperosmolality due to uncontrolled type I diabetes mellitus (disorder)"
VAR(4,"CHD",5,"CON")=421725003
VAR(4,"CHD",5,"DTS")=421725
VAR(4,"CHD",5,"TRM")="Malnutrition-related diabetes mellitus with multiple complications (disorder)"
VAR(4,"CHD",6,"CON")=190411003
VAR(4,"CHD",6,"DTS")=190411
VAR(4,"CHD",6,"TRM")="Mixed hyperlipidemia associated with type I diabetes mellitus (disorder)"
VAR(4,"CHD",7,"CON")=1571000119104
VAR(4,"CHD",7,"DTS")=1199000157
VAR(4,"CHD",7,"TRM")="Mixed hyperlipidemia associated with type II diabetes mellitus (disorder)"
VAR(4,"CHD",8,"CON")=190330002
VAR(4,"CHD",8,"DTS")=190330
VAR(4,"CHD",8,"TRM")="Type 1 diabetes mellitus with hyperosmolar coma (disorder)"
VAR(4,"CHD",9,"CON")=190331003
VAR(4,"CHD",9,"DTS")=190331
VAR(4,"CHD",9,"TRM")="Type 2 diabetes mellitus with hyperosmolar coma (disorder)"
VAR(4,"CON")=237620003
VAR(4,"DTS")=237620
VAR(4,"FSN","DSC")=626375013
VAR(4,"FSN","TRM")="Abnormal metabolic state in diabetes mellitus (disorder)"
VAR(4,"ISA",1,"CON")=74627003
VAR(4,"ISA",1,"DTS")=74627
VAR(4,"ISA",1,"TRM")="Diabetic complication (disorder)"
VAR(4,"ISA",2,"CON")=75934005
VAR(4,"ISA",2,"DTS")=75934
VAR(4,"ISA",2,"TRM")="Metabolic disease (disorder)"
VAR(4,"PRB","DSC")=356119011
VAR(4,"PRB","TRM")="Abnormal metabolic state in diabetes mellitus"
VAR(4,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(4,"SUB",2,"SUB")="SRCH Abnormal Findings"
VAR(4,"SUB",3,"SUB")="IHS Problem List"
VAR(5,"CHD",1,"CON")=290002008
VAR(5,"CHD",1,"DTS")=290002
VAR(5,"CHD",1,"TRM")="Brittle type I diabetes mellitus (finding)"
VAR(5,"CHD",2,"CON")=445353002
VAR(5,"CHD",2,"DTS")=445353
VAR(5,"CHD",2,"TRM")="Brittle type II diabetes mellitus (finding)"
VAR(5,"CON")=11530004
VAR(5,"DTS")=11530
VAR(5,"FSN","DSC")=2870119016
VAR(5,"FSN","TRM")="Brittle diabetes mellitus (finding)"
VAR(5,"ISA",1,"CON")=""
VAR(5,"ISA",1,"DTS")=441742
VAR(5,"ISA",1,"TRM")="Evaluation finding (finding)"
VAR(5,"PRB","DSC")=2658852011
VAR(5,"PRB","TRM")="Brittle diabetes mellitus"
VAR(5,"SUB",1,"SUB")="IHS PROBLEM SUPERSET"
VAR(5,"SUB",2,"SUB")="IHS Problem List"

VAR(42,"CON")=609575003
VAR(42,"DTS")=609575
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VAR(42,"FSN","TRM")="Maturity-onset diabetes of the young, type 8 (disorder)"
VAR(42,"ISA",1,"CON")=609561005
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VAR(43,"FSN","DSC")=2967825015
VAR(43,"FSN","TRM")="Maturity-onset diabetes of the young, type 9 (disorder)"
VAR(43,"ISA",1,"CON")=609561005
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VAR(43,"ISA",1,"TRM")="Maturity-onset diabetes of the young (disorder)"
VAR(43,"PRB","DSC")=2967816014
VAR(43,"PRB","TRM")="Maturity-onset diabetes of the young, type 9"
VAR(43,"SUB",1,"SUB")="PXRM DIABETES"
VAR(44,"CON")=237611007
VAR(44,"DTS")=237611
VAR(44,"FSN","DSC")=626365010
VAR(44,"FSN","TRM")="Muscular atrophy, ataxia, retinitis pigmentosa, and diabetes mellitus (disorder)"
VAR(44,"ISA",1,"CON")=281867008
VAR(44,"ISA",1,"DTS")=281867
VAR(44,"ISA",1,"TRM")="Multisystem disorder (disorder)"
VAR(44,"ISA",2,"CON")=88092000
VAR(44,"ISA",2,"DTS")=88092
VAR(44,"ISA",2,"TRM")="Muscle atrophy (disorder)"
VAR(44,"PRB","DSC")=356098018
VAR(44,"PRB","TRM")="Muscular atrophy, ataxia, retinitis pigmentosa, and diabetes mellitus"
VAR(44,"SUB",1,"SUB")="SRCH Emergency Department"
VAR(44,"SUB",2,"SUB")="SRCH Family Practice"
VAR(44,"SUB",3,"SUB")="SRCH Medicine - Inpatient"
VAR(44,"SUB",4,"SUB")="SRCH Medicine - Urgent Care"
VAR(44,"SUB",5,"SUB")="SRCH Problem List - Medical"
VAR(44,"SUB",6,"SUB")="IHS Problem List"
VAR(45,"CON")=609567009
VAR(45,"DTS")=609567
VAR(45,"FSN","DSC")=2967856011
VAR(45,"FSN","TRM")="Pre-existing type 2 diabetes mellitus in pregnancy (disorder)"
VAR(45,"ISA",1,"CON")=609563008
VAR(45,"ISA",1,"DTS")=609563
VAR(45,"ISA",1,"TRM")="Pre-existing diabetes mellitus in pregnancy (disorder)"
VAR(45,"ISA",2,"CON")=199230006
VAR(45,"ISA",2,"DTS")=199230
VAR(45,"ISA",2,"TRM")="Pre-existing type 2 diabetes mellitus (disorder)"
VAR(45,"ISA",3,"CON")=237627000
VAR(45,"ISA",3,"DTS")=237627
VAR(45,"ISA",3,"TRM")="Pregnancy and type 2 diabetes mellitus (disorder)"
VAR(45,"PRB","DSC")=2967850017
VAR(45,"PRB","TRM")="Pre-existing type 2 diabetes mellitus in pregnancy"
VAR(45,"SUB",1,"SUB")="FXRM DIABETES"
VAR(46,"CON")=473189005
VAR(46,"DTS")=473189
VAR(46,"FSN","DSC")=2956089017
VAR(46,"FSN","TRM")="On subcutaneous insulin for diabetes mellitus (finding)"
VAR(46,"ISA",1,"CON")=""
VAR(46,"ISA",1,"DTS")=243860
VAR(46,"ISA",1,"TRM")="Diabetic monitoring status (finding)"
VAR(46,"ISA",2,"CON")=""
VAR(46,"ISA",2,"DTS")=309298
VAR(46,"ISA",2,"TRM")="Drug therapy finding (finding)"
VAR(46,"PRB","DSC")=2955928018
VAR(46,"PRB","TRM")="On subcutaneous insulin for diabetes mellitus"

A.17 $$DILKP^BSTSAPI

The following example shows how to look up the RxNorm for a given NDC number (utilizing a local cache lookup):

```plaintext
>S OUT="VAR",IN="00713011850^N"
>W $$DILKP^BSTSAPI(OUT,IN)
1
ZW @OUT
VAR(1,"RXN","CON")=209352
VAR(1,"RXN","TDC")=198434
VAR(1,"RXN","TDT")="Acetaminophen 120 MG Rectal Suppository [198434]"
VAR(1,"RXN","TRM")="Acetaminophen 120 MG Rectal Suppository [Acephen]"
VAR(1,"RXN","TTY")="SBD"

The following example shows how to look up the RxNorm for a given NDC number (utilizing a remote DTS lookup):

```plaintext
>S OUT="VAR",IN="00713011850^N^2"
>W $$DILKP^BSTSAPI(OUT,IN)
2^ZW @OUT
VAR(1,"RXN","CON")=209352
VAR(1,"RXN","TDC")=198434
VAR(1,"RXN","TDT")="Acetaminophen 120 MG Rectal Suppository [198434]"
VAR(1,"RXN","TRM")="Acetaminophen 120 MG Rectal Suppository [Acephen]"
VAR(1,"RXN","TTY")="SBD"
>

The following example shows how to look up the RxNorm for a given VUID number (utilizing a local cache lookup):

>S OUT="VAR",IN="4000734^V"
>W $$DILKP^BSTSAPI(OUT,IN)
>ZW @OUT
VAR(1,"RXN","CON")=702519
VAR(1,"RXN","TDC")=""
VAR(1,"RXN","TDT")=""
VAR(1,"RXN","TRM")="Phenobarbital 4 MG/ML Oral Solution"
VAR(1,"RXN","TTY")="SCD"
>

A.18 $$ASSOC^BSTSAPI

The following example shows how to display any associations for a given term. In this case, it is looking up the SNOMED CT information for a given GMRA Signs Symptoms entry (utilizing a local cache lookup):

>W $$ASSOC^BSTSAPI("ABDOMINAL BLOATING^32772")
116289008^^
>

The following example shows the same call but instead of looking in local cache, it is doing a remote DTS lookup:

>W $$ASSOC^BSTSAPI("ABDOMINAL BLOATING^32772^2")
116289008^^
>

In this case, it is looking up the SNOMED CT information for a given IHS Med Route entry (utilizing a local cache lookup):

>W $$ASSOC^BSTSAPI("ORAL^32774")
26643006^^
>

A.19 $$DI2RX^BSTSAPI

The following example shows how to display the first RxNorm mapping for a particular NDC value (utilizing a local cache lookup):

>S IN="00713011850^N"
>W $$DI2RX^BSTSAPI(IN)
209352^Acetaminophen 120 MG Rectal Suppository
[Acephen]^198434^Acetaminophen 12
0 MG Rectal Suppository [198434]^SBD
Glossary

**Electronic Health Record**
An application used by medical organizations to track patient medical records and care.

**ICD Codes**
One of several code sets used by the healthcare industry to standardize data. The International Classification of Disease (ICD) codes are an international diagnostic coding scheme. In addition to diseases, ICD also includes several families of terms for medical-specialty diagnoses, health status, disablements, procedures, and reasons for contact with HCPs. IHS currently uses ICD-9 for coding.

**Office of Information Technology**
The organization within IHS that is responsible for developing and maintaining RPMS and related IT functions.

**Resource and Patient Management System**
A series of integrated software components that includes clinical, administrative, and financial functions.
# Acronym List

<table>
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<tr>
<th>Acronym</th>
<th>Meaning</th>
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<tr>
<td>API</td>
<td>Application Programming Interface</td>
</tr>
<tr>
<td>dll</td>
<td>Dynamic Linked Library</td>
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<tr>
<td>DTS</td>
<td>Distributed Terminology System</td>
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<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
</tr>
<tr>
<td>IHS</td>
<td>Indian Health Service</td>
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<tr>
<td>OS</td>
<td>Operating System</td>
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<td>RPC</td>
<td>Remote Procedure Call</td>
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<td>RPMS</td>
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<td>SNOMED CT</td>
<td>Systematized Nomenclature of Medicine-Clinical Terms</td>
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Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

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