**SQL Stored Procedure for FTP Clinical Reminders**

**INPUT**

**SQL call syntax:**

Call VISTA.HDSREPRPC\_FtpClinicalRemindersBLOB('requestID','callname',’DFN’,’DUZ’,’DUEflag’,'customFlag','debugFlag')

**Cache OS call syntax:**

Do ##class(%Library.ResultSet).RunQuery("VISTA.HDSREPRPCFtpClinicalRemindersBLOB", "RPCFtpClinicalRemindersBLOB", "requestID", "callName", ”DFN”, “DUZ”, “DUEflag”,”customFlag”,”debugFlag”)

**Input Parameters—Notes:**

|  |  |  |
| --- | --- | --- |
| ClassName | (Required) | Only used in Cache OS call - VISTA.HDSREPRPCFtpClinicalRemindersBLOB |
| Stored Proc | (Required) | Only used in Cache OS call - RPCFtpClinicalRemindersBLOB |
| requestID | (Optional) | A string usable by calling layer as an identifier; can be any string, or null. |
| className | (Optional) | String that can contain any information, or be null. |
| DFN | (Required) | Patient ID from FileMan File 2  Class Name = VISTA.PATIENT  SQL Table Name = VISTA.PATIENT\_2 |
| DUZ | (Required) | VistA user id – This to be replaced by SAML token |
| DUEflag | (Optional) | Can be (code – returns):   * Null -  Returns all Clinical Reminders (no Filter) * 1 - Only returns DUE NOW – Applicable and due only (mimics CPRS behavior) * 2 - Only returns N/A – Not Applicable * 3 - Only returns ERROR – Error during evaluation * 4 - Only returns CNBD – cannot be determined   All other values including null – Returns all Clinical Reminders (no filter - default) |
| customFlag | (Optional) | Can be as follows:  2 - Data only returned  All other values including null - <Defs> and data returned |
| debugFlag | (Optional) | Cache Team uses this parameter for low-level debugging in Cache |

**RETURNS**

**Result Set Columns – Notes:**

1. requestID: Echo of requestID from Input parameter
2. SiteID: Site ID of Source System
3. callName: Echo of callName from Input parameter
4. returnType: For future use
5. Params: Returns the Timestamp as processed by source system along with the input Parameters (i.e. 2015-11-18 14:32:30,100848,1,1)
6. CustomFlag Echo of CustomFlag from Input parameter
7. returnError: Return Error message
8. stream Resulting Blob containing XML like data (see Stream Definition)

**Errors/Warnings**

Errors and warnings will be noted by checking the returnError column. When an error occurs no Blob/Stream will be created. However, the returnError column should always be checked. For a mere warning the stream will still be created.

**Possible Errors:**

ERROR: Invalid patientID – received when no patientID parameter is sent or the patientID does not exist

ERROR: Invalid Requester (DUZ) - received when no requester parameter is sent or the requester does not exist

ERROR: No CR Records – No data found based on parameters sent

**Possible Warnings:** <None>

**Stream/BLOB Definition**

**Delimiters**:

* Field delimiter for individual data elements: ^
* Records delimiter: CR/LF

**Definition Tags:**

|  |  |  |
| --- | --- | --- |
| **<ClinicalReminders>** |  |  |
| **<ClinicalReminder>** | IEN | IEN of the clinical reminder |
|  | PRINT NAME | Name of the clinical reminder |
|  | DUE DATE | Date due. Text or date. Can be DUE NOW or DUE SOON. |
|  | LAST DATE | Last resolution date |
|  | PRIORITY | Priority |
|  | DUE | Due code - Should be a number from 1-4 (see DUE TEXT) |
|  | DUE TEXT | Can be (code – value):   * 1 - DUE NOW –Applicable and due * 2 - N/A – Not Applicable * 3 - ERROR – Error during evaluation * 4 - CNBD – Cannot be determined * UNKNOWN – not 1-4, should never get this |
|  | PATIENT ID | DFN passed in |
|  | PATIENT NAME | As found in PATIENT file (File #2) |
| **</ClinicalReminder>** |  |  |
| **<DetailText>** | DETAIL TEXT | Record from Clinical Reminders word processing field – reminder description |
| **</DetailText>** |  |  |
| **</ClinicalReminders>** |  |  |

**Definition Tags Example:**

<DefClinicalReminders>IEN^PRINT NAME^DUE DATE^LAST DATE^PRIORITY^DUE^DUE TEXT^</DefClinicalReminders>

<DefDetailText>DETAIL TEXT^</DefDetailText> (May be zero-multiple records)

**Notes:** When the RPC evaluates a clinical reminder for a given patient and requester, the reminder is first checked to make sure it is applicable for both the patient and the requester. Once this has been established, the process checks to see if the reminder is due.

When text is prepared for output, special characters which could interfere with XML are converted to escape sequences.

**Example 1 –**Note: The DUE flag filter is 1, so only Applicable Clinical Reminders that are DUE are returned.

**call VISTA.HDSREPRPC\_FtpClinicalRemindersBLOB('RequestID','callName',100848,1,1,,)**

**Results:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Seq** | **requestID** | **siteID** | **callName** | **returnType** | **Params** | **customFlags** | **returnError** | **stream** | |
| 1 | RequestID | 578 | callName |  | 2015-11-18 14:32:30,100848,1,1 | 1 |  | 3c446566436c696e6963616c52656d696e646572733e49454e5e5052494e54204e414d455e4**●●● Much additional data ●●●** |

**Stream Data:**

<DefClinicalReminders>

<DefClinicalReminders>

<DefClinicalReminder>IEN^PRINT NAME^DUE DATE^LAST DATE^PRIORITY^DUE^DUE TEXT^PATIENT ID^PATIENT NAME^</DefClinicalReminder>

<DefDetailText>DETAIL TEXT^</DefDetailText>

</DefClinicalReminders>

<ClinicalReminders>

**Many additional records ●●●**

<ClinicalReminders>

<ClinicalReminder>46^Hypertension^DUE NOW^^2^1^DUE NOW^100848^AVIVAPATIENT,EIGHT^</ClinicalReminder>

<DetailText> --STATUS-- --DUE DATE-- --LAST DONE-- --STATUS-- --DUE DATE-- --LAST DONE--^</DetailText>

<DetailText> DUE NOW DUE NOW unknown DUE NOW DUE NOW unknown^</DetailText>

<DetailText>Frequency: Due every 1 year for all ages.Frequency: Due every 1 year for all ages.^</DetailText>

<DetailText>^</DetailText>

<DetailText>Cohort:Cohort:^</DetailText>

<DetailText> Problem Diagnosis: Problem Diagnosis:^</DetailText>

<DetailText> 12/17/2015@14:38:18 401.9 (ICD-9-CM) Essential Hypertension 12/17/2015@14:38:18 401.9 (ICD-9-CM) Essential Hypertensi

on^</DetailText>

<DetailText> Date Entered: 03/02/2011; Date Last Modified: 04/06/2010 Date Entered: 03/02/2011; Date Last Modified: 04/06/2010^<

/DetailText>

<DetailText> Status: ACTIVE; Priority: CHRONIC Status: ACTIVE; Priority: CHRONIC^</DetailText>

<DetailText> Prov. Narr. - HTN Prov. Narr. - HTN^</DetailText>

<DetailText>^</DetailText>

</ClinicalReminders>

<ClinicalReminders>

<ClinicalReminder>55^SUICIDE HOTLINE^DUE NOW^^2^1^DUE NOW^100848^AVIVAPATIENT,EIGHT^</ClinicalReminder>

<DetailText> --STATUS-- --DUE DATE-- --LAST DONE-- --STATUS-- --DUE DATE-- --LAST DONE--^</DetailText>

<DetailText> DUE NOW DUE NOW unknown DUE NOW DUE NOW unknown^</DetailText>

<DetailText>Frequency: Due every 1 year for all ages.Frequency: Due every 1 year for all ages.^</DetailText>

<DetailText>^</DetailText>

<DetailText>Resolution:Resolution:^</DetailText>

<DetailText> Patient has not had progress note titled &quot;SUICIDE HOTLINE PHONE NUMBER&quot; Patient has not had progress note t

itled &quot;SUICIDE HOTLINE PHONE NUMBER&quot;^</DetailText>

<DetailText> completed during the last year. completed during the last year. ^</DetailText>

<DetailText>^</DetailText>

<DetailText>Age/Frequency:Age/Frequency:^</DetailText>

<DetailText> Patient has not had progress note titled &quot;SUICIDE HOTLINE PHONE NUMBER&quot; Patient has not had progress note t

itled &quot;SUICIDE HOTLINE PHONE NUMBER&quot;^</DetailText>

<DetailText> completed during the last year. completed during the last year. ^</DetailText>

</ClinicalReminders>

**Example 2 –** Note: no requestID or callName. Also, the DUE flag filter is not set, so all Clinical Reminders are returned.

**call VISTA.HDSREPRPC\_FtpClinicalRemindersBLOB(,,100848,1,,,)**

**Results:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Seq** | **requestID** | **siteID** | **callName** | **returnType** | **Params** | **customFlags** | **returnError** | **Stream** | |
| 1 |  | 578 |  |  | 2015-11-18 14:32:30,100848,1,1 | 1 |  | 3c446566436c696e6963616c52656d696e646572733e49454e5e5052494e54204e414d455e445**●●● Much additional data ●●●** |

**Stream Data:**

<DefClinicalReminders>

<DefClinicalReminder>IEN^PRINT NAME^DUE DATE^LAST DATE^PRIORITY^DUE^DUE TEXT^PATIENT ID^PATIENT NAME^</DefClinicalReminder>

<DefDetailText>DETAIL TEXT^</DefDetailText>

</DefClinicalReminders>

<ClinicalReminders>

<ClinicalReminder>33^Diabetes - Creatinine^^^^2^N/A^100848^AVIVAPATIENT,EIGHT^</ClinicalReminder>

<DetailText> --STATUS-- --DUE DATE-- --LAST DONE--^</DetailText>

<DetailText> N/A 4/6/2010^</DetailText>

<DetailText>Frequency: Due every 1 year for all ages.^</DetailText>

<DetailText>^</DetailText>

<DetailText>Resolution: Last done - 04/06/2010@14:00:03^</DetailText>

<DetailText> Laboratory test: CREATININE; specimen: SERUM^</DetailText>

<DetailText> 04/06/2010@14:00:03 value - 1^</DetailText>

<DetailText>^</DetailText>

</ClinicalReminders>

<ClinicalReminders>

<ClinicalReminder>44^Diabetes - Hb A1c^^^^2^N/A^100848^AVIVAPATIENT,EIGHT^</ClinicalReminder>

<DetailText> --STATUS-- --DUE DATE-- --LAST DONE--^</DetailText>

<DetailText> N/A ^</DetailText>

<DetailText>Frequency: Due every 1 year for all ages.^</DetailText>

<DetailText>^</DetailText>

<DetailText>Resolution:^</DetailText>

<DetailText> No Hemoglobin A1c result is available for this patient. ^</DetailText>

</ClinicalReminders>

<ClinicalReminders>

**Many additional records ●●●**

<ClinicalReminders>

<ClinicalReminder>55^SUICIDE HOTLINE^DUE NOW^^2^1^DUE NOW^100848^AVIVAPATIENT,EIGHT^</ClinicalReminder>

<DetailText> --STATUS-- --DUE DATE-- --LAST DONE--^</DetailText>

<DetailText> DUE NOW DUE NOW unknown^</DetailText>

<DetailText>Frequency: Due every 1 year for all ages.^</DetailText>

<DetailText>^</DetailText>

<DetailText>Resolution:^</DetailText>

<DetailText> Patient has not had progress note titled &#quot;SUICIDE HOTLINE PHONE NUMBER&#quot;^</DetailText>

<DetailText> completed during the last year. ^</DetailText>

<DetailText>^</DetailText>

<DetailText>Age/Frequency:^</DetailText>

<DetailText> Patient has not had progress note titled &#quot;SUICIDE HOTLINE PHONE NUMBER&#quot;^</DetailText>

<DetailText> completed during the last year. ^</DetailText>

</ClinicalReminders>