Questions and Answers for DSVA

Questions

We were wondering if user research and speaking with VSRs was ever done and if so, could we talk about your findings?

Our research was investigative in nature — we have artifacts from our processes that we could provide, although they’re mostly around constructing UI in the form of checklists for criteria for evaluation. These materials were produced using HCD design exploration with former RVSRs. Most of our learnings from *last* contract are more about general processes for rating, and not specific to Hypertension — but would still be valuable for review. Definitely happy to discuss findings in a meeting.

Some key notes we captured from RVSR SMEs regarding the evidence used to adjudicate claims for 7101. Note: This information was captured from our work a couple years ago:

* Hypertension or isolated systolic hypertension must be confirmed by readings taken two or more times on at least three different days. For purposes of this section, the term hypertension means that the diastolic blood pressure is predominantly 90mm. or greater, and isolated systolic hypertension means that the systolic blood pressure is predominantly 160mm. or greater with a diastolic blood pressure of less than 90mm
* Evaluate hypertension due to aortic insufficiency or hyperthyroidism, which is usually the isolated systolic type, as part of the condition causing it rather than by a separate evaluation
* Evaluate hypertension separately from hypertensive heart disease and other types of heart disease

Would you be able to run us through the data you've been looking at to see what is available and how it is being used to determine if a case is hypertension or something else?

We wrote a stored procedure in CDW that queries the data relevant for rating hypertension. The stored procedure exists in VBHA\_AVD workgroup, so it can be run using

* **EXECUTE** [VBA\_AVD].[Dflt].[IDRC\_BloodPressure] @Icn=:icn
  + Where icn is the Patient ICN number

In this stored procedure, we looked at the following tables in CDWWork:

* [CDWWork].[Vital].[VitalSign]
* [CDWWork].[Dim].[VitalType]
* [CDWWork].[SPatient].[SPatient]
* [CDWWork].[Dim].[VistaSite]

For specific details about the stored procedure, please take a look at the **WHERE** clause in the query in section Blood Pressure SQL.

Blood Pressure SQL

Below is the full query in the stored procedure [VBA\_AVD].[Dflt].[IDRC\_BloodPressure]:

**IF** object\_id('Dflt.IDRC\_BloodPressure', 'p') **IS** NULL

EXEC ('CREATE PROCEDURE Dflt.IDRC\_BloodPressure AS SELECT 1')

**GO**

**ALTER** **PROCEDURE** Dflt.IDRC\_BloodPressure

@Icn varchar(50)

**AS**

**BEGIN**

**SET** NOCOUNT **ON**;

**SELECT**

vistaSite.[Sta3n] **AS** stationNumber,

vistaSite.[facility] **AS** facility,

vital.[Systolic] **AS** systolic,

vital.[Diastolic] **AS** diastolic,

**FORMAT**(vital.[VitalSignTakenDateTime], 'yyyy-MM-dd HH\:mm') **AS** datetime

**FROM**

[CDWWork].[Vital].[VitalSign] vital,

[CDWWork].[Dim].[VitalType] vitalType,

[CDWWork].[SPatient].[SPatient] patient,

[CDWWork].[Dim].[VistaSite] vistaSite

**WHERE**

patient.[PatientICN] = @Icn **AND**

vistaSite.[Sta3n] = patient.[Sta3n] **AND**

vital.[Sta3n] = patient.[Sta3n] **AND**

vital.[PatientSID] = patient.[PatientSID] **AND**

vitalType.[VitalType] **like** 'BLOOD PRESSURE' **AND**

vitalType.[Sta3n] = vital.[Sta3n] **AND**

vital.[VitalTypeSID] = vitalType.[VitalTypeSID] **AND**

(vital.[EnteredInErrorFlag] **IS** NULL **OR** vital.[EnteredInErrorFlag] != 'Y') **AND**

vital.[VitalSignTakenDateTime] >= **DATEADD**(yy, -1, SYSDATETIME())

**ORDER** **BY**

vital.[VitalSignTakenDateTime] **DESC**

**END**

**GO**

Follow-Up Questions Asked on 10/14/2020

1. For claim submission, do readings have to be taken by a doctor or by patient and then confirmed by a doctor?

We are not certain, but we suspect the true answer might be quite complex. VA is required to review all evidence submitted; thus, our interpretation is that if data came directly from a patient it would still need to be reviewed. Similarly, on the DBQs it specifically asks if the document was filled by a medical examiner. Therefore, we suspect it’s not specifically a requirement for the data to be produced by a medical professional, but it must be considered truthful and medically valid (e.g. *not* a blood pressure reading collected right after surgery) in its collection.

2. What RVSR SMEs did you talk to to get the regulations for hypertension? We can follow up to see if anything has changed with requirements to process a claim.

We worked with Machelle Harrel, Janel Keyes, and Janice Stewart. Machelle is now a Chief on the Disability examination program management (218b) team. We are working with her and her team regularly on other aspects of MCP.

General not about engaging with RVSRs: There is a general challenge with adjudicator availability to support projects like this, due to the field’s desire to avoid pulling adjudicators off the production line.

All that said, we would recommend talking to Leah Haynes—an RVSR out of Houston, who has demonstrated tremendous expertise in precise detail related to other (very complex) disabilities such as ALS and diabetes. She has almost always been available to help MCP efforts and has said that her local leadership generally supports her time/efforts spent helping MCP (and I would assume this applies to similar initiatives). We can reach out to her and try to set up a meeting if you would like. In fact, we would love to join you in this meeting, as learning further details about hypertension would be helpful to our other efforts on MCP.

Another note: We are concerned that the field might get scared if they hear about “hypertension automation”. Paul recommended that we figure out how to refer to the project in a little bit different way when we talk to RVSRs. He suggested framing it as a project to help adjudicators faster and more informed decisions when adjudicating hypertension claims. Leah herself never expressed such fears—and actually has responded positively to our other “automation” efforts. This concern is only general in nature.

3. What data sources are needed to hook up to in order to get required data points? Have these already been established and for what/with which groups?

Regarding Data *Location*:

For blood pressure data...

A fairly (or perhaps completely) comprehensive place to start is CDWWork (“Work1), and the Cardio Hypertension DBQ (DBQ number 8045). These two sources might be sufficient.

Also, in order to grab Cerner Millennium data (for Veterans who visit VAMCs using Cerner), CDWWork2 (“Work2”) is the place to look. Whether Work2 will have the proper data points, we do not know for certain (due to the fact that Work2 is not importing all Millennium data). However, based on our current understanding we are fairly confident that blood pressure and medication data will indeed be loaded into Work2. As we dig into Work2 for our Hospitalization Reporting workstream, we will become more familiar Work2 in general and able to look into this deeper. We are currently on track to get read-only access to Work2 and Work3.

For medication data…

All of the above is generally true.

At the end of this section is the Work1 query Afsin put together a couple of years ago to fetch medication data. From his best recollection, he isn’t certain this fetches all of the relevant medication data in Work1. From his vague recollection, medications fall into four categories based on the type of medical service provided (categories roughly like “inpatient”, “outpatient”, etc.), and he cannot recall if this query fetches all of it.

Regarding Data Connection:

We have been consistently unsuccessful in our attempts to work with the CDW team to get their data connected and flowing to other groups in VBA (for example, PA&I).

For situational awareness: Our Hospitalization Reports have been successfully operationalized because we have connected the reports into our CDW SharePoint area (VBA\_AVD), which Paul and his team can access via a web browser to run the reports.

Several years before our Hospitalization Reports project, a VA employee named Michael van Gaalen (who is a fantastic SME currently helping us with several other MCP projects) attempted to create a hospitalization reporting solution similar to what we have now built. When we talked to him about it, he said the problem he ran into when attempting to setup CDW data sharing with VBA was simply that nobody in VA (on the VHA side, I believe) was willing to take responsibility for signing the necessary data sharing agreements (or similar types of authorization paperwork).

Our ~2 Year Old Query Against Work1 to Fetch Medication:

USE [VBA\_AVD]

GO

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

IF object\_id('Dflt.IDRC\_Medication', 'p') IS NULL

EXEC ('CREATE PROCEDURE Dflt.IDRC\_Medication AS SELECT 1')

GO

ALTER PROCEDURE Dflt.IDRC\_Medication

@Icn varchar(50), @VASRDCode varchar(4)

AS

BEGIN

SET NOCOUNT ON;

SELECT

drug.[DrugNameWithoutDose] AS genericName,

FORMAT(rx.[IssueDate], 'yyyy-MM-dd') AS datetime,

instruction.[MedRoute] AS route,

instruction.[Schedule] AS schedule,

instruction.[DoseOrdered] AS doseOrdered,

instruction.[Unit] AS unit,

sig.Sig As sig,

vistaSite.[Sta3n] AS stationNumber,

vistaSite.[facility] AS facility

FROM

[CDWWork].[RxOut].[RxOutpat] rx

INNER JOIN [CDWWork].[SPatient].[SPatient] pat

ON pat.[PatientICN] = @Icn AND rx.[PatientSID] = pat.[PatientSID] AND rx.[Sta3n] = pat.[Sta3n]

INNER JOIN [CDWWork].[Dim].[LocalDrug] drug

ON drug.[LocalDrugSID] = rx.[LocalDrugSID] AND drug.[Sta3n] = pat.[Sta3n]

INNER JOIN IDRCMedicationInfo info

ON info.VASRDCode = @VASRDCode AND info.GenericName = drug.DrugNameWithoutDose

LEFT JOIN [CDWWork].[RxOut].[RxOutpatMedInstructions] instruction

ON instruction.[Sta3n] = rx.[Sta3n] AND instruction.RxOutpatIEN = rx.RxOutpatIEN

LEFT JOIN [CDWWork].[RxOut].[RxOutpatSig] sig

ON sig.[Sta3n] = rx.[Sta3n] AND sig.RxOutpatIEN = rx.RxOutpatIEN

LEFT JOIN [CDWWork].[Dim].[VistaSite] vistaSite

ON vistaSite.[Sta3n] = pat.[Sta3n]

WHERE

rx.[IssueDate] >= DATEADD(yy, -1, SYSDATETIME()) AND

rx.CancelDate IS NULL

ORDER BY

rx.[IssueDate] DESC

END

GO

4. How many hypertension claims for increase come through VA.gov, Benefits Intake API, and/or Benefits Claims API per week or month right now? (These are three intake methods that could provide our system's "inputs", since all three our within our sphere of influence. It'd probably be harder to ask the Mail Automation IBM team or the GovernmentCIO / Leidos / GDIT mail intake teams to send claims our way)

Paul offered to submit a data request to PA&I to identify the full population. Would you like him to do that?

5. How long does it currently take to process them?

Paul offered to submit a data request to PA&I to identify processing time. If we were to do this, would you like him to request data on hypertension claims for increase alone or hypertension claims that might be included in other claimed issues?

6. What proportion of them do we estimate we could make an automated decision on?

Paul says that once we’ve identified the full population, he would like to interrogate the medical data that was available during the period of time leading up to the claim submission and determine if we could successfully identify the “predominant” (see diagnostic code 7101) evaluation level. He also said that working to our advantage is the fact that many of these claims will already have been decided, so we’ll be able to compare our “recommended evaluation” to the “actual evaluation” assigned.

7. Who might be the user on the other side of our output, and relatedly, what might the shape of our system's output be?

We figure this would be RVSRs, or VSRs working in award/promulgation, given there's a rating decision (which requires the final approval of a human)—but we need to validate this.

Paul’s take: I agree with Amida. The RVSR is the most likely user on the other end of our output. We also have a few options related to the shape of our system output. We could…

1. Query the treatment data and if we’re able to return the results, set the status of the claim to ‘Ready for Decision’ and use our DMDT to pass the data to the VASRD Rules Manager
2. Use the data from the query to populate the information on the hypertension DBQ template and either pass it to the VASRD rules manager or drop it on the VBMS eFolder
3. Simply reference the applicable treatment data and records, include a cover sheet that describes the “recommended evaluation” and allow the RVSR to pull the records over from CAPRI and enter the appropriate symptoms into VBMS-R.