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Medicare Imaging Demonstration—Convener Data Collection Requirements and CSV File Specification

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Convener Requirements

Conveners must arrange for the availability of a DSS for their panel of physician practices participating in the demonstration. CMS will collect only data relevant to the 11 targeted advanced imaging procedures and guidelines identified for use in the demonstration. All guidelines must be transparent to the participating physician practices. The convener must recruit physician practices and make the DSS available to physician practices participating in the demonstration. For the duration of the demonstration period, the convener must ensure the DSS for advanced diagnostic imaging services is in agreement with the most current medical specialty society guidelines available. A list of the medical specialty guidelines for the 11 targeted procedures is available on the MID website.

The demonstration employs a pre-post research design. During the first 6 months of the demonstration, CMS will collect baseline data on the appropriateness of orders for advanced diagnostic imaging services. For this period, the DSS will not include presentation to the physician practice of the assessment links in order to capture the individual physician's ordering methods. After the initial testing and baseline data collection period, the remaining 18 months of the demonstration will be considered the intervention period during which assessment of appropriateness of orders will be presented at the time the order is entered into the DSS.

During both the baseline and intervention period the DSS must capture and report all data included in the CSV specification. Conveners must adhere to the following requirements regarding the DSS structure and data capture for the 11 targeted advanced imaging procedures selected for study under this demonstration:

► The DSS must include decision support ordering for the 11 targeted procedures selected for study under this demonstration;

► The DSS must evaluate these procedures using the medical specialty society guidelines identified by CMS in the final terms and conditions (a list of guidelines is available at CMS' Demonstration Projects & Evaluation Overview http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/Medicare_Imaging_Demonstration.pdf);

► Except for the (pre-intervention) baseline data collection period, systems must be transparent and show the source of the medical specialty society guidelines that underlies the DSS algorithm logic;

► Except for the (pre-intervention) baseline period, the DSS must provide an assessment that conveys to the physician practice whether its orders for advanced diagnostic imaging services are: appropriate, inconclusive/uncertain, or not appropriate; During the baseline period the DSS must still capture data on appropriateness scoring (appropriate, inconclusive/uncertain, or not appropriate)

► The DSS must provide decision support feedback on appropriateness (including, if applicable, more appropriate alternative tests) to ordering physician practices at the time of order (except during the baseline data collection period);

► If medical specialty society guidelines do not provide guidance regarding a particular clinical scenario (e.g., possible diagnoses, signs/symptoms), the DSS needs to provide physician practices information indicating that appropriateness criteria do not address the clinical scenario;

► Test cases will be run to ensure comparability across all conveners' DSSs and CMS will require system modification if discrepancies are discovered;

► In the event that medical specialty guidelines are updated, the DSS must be able to be modified and the convener must ensure that these modifications transpire;

► The DSS must have the capacity to distinguish between advanced diagnostic imaging services for the 11 targeted procedures and other imaging services;

► The DSS must comply with all applicable Federal and State privacy and security requirements for the transfer and storage of such data; and

► The DSS must be consistent with current Medicare policy (e.g., covered services).

The DSS must capture and provide the following data elements for each of the 11 targeted advanced diagnostic imaging procedures:

► Physician name;

► Practice TIN;

► Physician National Provider Identifier (NPI);

► Practice name and location;

► Patient name;

► Medicare Patient Health Insurance Claim Number (HICN);

► Patient demographics (e.g., date of birth, gender);

► Physician attestation that the data to determine appropriateness and recommendations were reviewed by the physician and confirmed with the beneficiary;

► Date of the order, and system capture of the date of data entry of order;

► Diagnosis and/or any relevant signs and/or symptoms and International Classification of Diseases Ninth Edition (ICD-9 or ICD-10 if applicable to convener DSS) codes needed to support guideline based algorithms;

► Procedure name and CPT code of imaging service originally ordered;

► Reason for ordering (i.e., initial diagnosis, follow-up study, other - specify);

► Name and CPT code of imaging test ordered and performed (i.e., captures any changes in order after interaction with the DSS), or decision not to order a service;

► Appropriateness determination (appropriate/inappropriate/inconclusive/no guideline) of original procedure ordered;

► Appropriateness determination (appropriate/inappropriate/inconclusive/no guideline) of final procedure ordered; and

► If an advanced imaging test is performed, the date of service of the test and the results of imaging procedure(s) administered (i.e., positive, negative, indeterminate) and system capture of the date of data entry of service performed.

Conveners will be required on a quarterly basis to submit via a Secure File Transfer Protocol site the data in a format to be specified by CMS. A database on imaging orders at both the physician NPI level and the practice level will be constructed for quarterly reporting. Conveners should be prepared to address issues related to the performance standard of the completeness of reporting identified by CMS.

CSV Data File Specifications

A **comma-separated values (CSV)** file is used for the digital storage of data structured in a table of lists form, where each associated item (member) in a group is in association with others also separated by the commas of its set. Each line in the CSV file corresponds to a row of complete data elements for a single record from the DSS (e.g. the variable in Column A of an Excel worksheet would start at cell A1 which would be ORDERING_PHYSICIAN_LAST_NAME). Within a line, fields are separated by commas, each field belonging to one table column. Since it is a common and simple file format, CSV files are often used for moving tabular data between two different computer programs, for example between a database program and a spreadsheet program. When saving your data file select the file extension .csv from the available options to ensure your data is in the format requested.

A **complete record** is all required fields completed and if the IMAGE_ORDER_CANCELLED (AZ = Yes) or the RENDERED_IMAGE_CPT (BD) and TEST_RESULT (BE) are entered in the DSS. The convener needs to certify that the record is complete at RECORD_COMPLETE (BF)

Table 1

Column	Indicator Name	Required Field	System Generated	Format Type	Notes about the Indicator
A	ORDERING_PHYSICIAN_LAST_NAME	Yes	Optional search function	Character	Last name of physician ordering image
B	ORDERING_PHYSICIAN_FIRST_NAME	Yes	Optional search function	Character	First name of physician ordering image
C	ORDERING_PHYSCIAN_NPI	Yes	Optional search function	Character	NPI of physician ordering image
D	PRACTICE_TIN	Yes	Optional search function	Character	TIN for the practice where the image order was written
E	PRACTICE_NAME	Yes	Optional search function	Character	Legal name of the practice where the image order was written

Column	Indicator Name	Required Field	System Generated	Format Type	Notes about the Indicator
F	PRACTICE_ADDRESS1	Yes	Optional search function	Character	Address line 1 for the practice where order was written
G	PRACTICE_ADDRESS2	Yes	Optional search function	Character	Address line 2 for the practice where order was written
H	PRACTICE_CITY	Yes	Optional search function	Character	City of the practice where order was written
I	PRACTICE_STATE	Yes	Optional search function	Character	Two letter state abbreviation for the practice
J	PRACTICE_ZIP	Yes	Optional search function	Character	Protect leading zeros
K	PRACTICE_MAIN_PHONE	Yes	Optional search function	Character	123-456-7890 Numeric phone number format
L	PRACTICE_MAIN_FAX	No	No	Character	123-456-7890 Numeric phone number format
M	PATIENT_NAME_FIRST	Yes	No	Character	**Patient's given name**
N	PATIENT_NAME_LAST	Yes	No	Character	**Patient's surname**
O	PATIENT_HICN	Yes	No	Character	Medicare Patient Health Insurance Claim Number
P	PATIENT_DOB	Yes	No	mmddyyyy	Patient date of birth
Q	PATIENT_GENDER	Yes	No	Character	Male = M and Female = F
R	PATIENT_PRIMARY_DIAGNOSIS	Yes	No	Character	International Classification of Diseases 9th Ed (ICD-9)
S	PATIENT_DIAG1	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
T	PATIENT_DIAG2	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
U	PATIENT_DIAG3	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
V	PATIENT_DIAG4	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
W	PATIENT_DIAG5	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)

Column	Indicator Name	Required Field	System Generated	Format Type	Notes about the Indicator
X	PATIENT_DIAG6	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
Y	PATIENT_DIAG7	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
Z	PATIENT_DIAG8	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
AA	PATIENT_DIAG9	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
AB	PATIENT_DIAG10	No	No	Character	International Classification of Diseases 9th Ed (ICD-9)
AC	DATE_OF_IMAGE_ORDER	Yes	No	mmddyyyy	Date of the original imaging order was prescribed
AD	DATE_OF_DATA_ENTRY (system capture)	Yes	Yes	mmddyyyy	The date the order was entered into DSS
AE	REASON_FOR_ORDER	Yes	No	Numeric	1=initial diagnosis, 2=follow-up study, 3 = other
AF	REASON_OTHER_TEXT	Required if AE = Other	No	Character	Text explanation for 3=Other in AE above
AG	REASON_FOLLOWUP_OPTIONAL_TEXT	No	No	Text	Optional field for additional text explanation of follow-up order
AH	ORIGINAL_IMAGE_ORDER_DESC	Yes	Optional search function	Character	Procedure name standardized presentation for user
AI	ORIGINAL_IMAGE_ORDER_CPT	Yes	Yes	Character	CPT code of the original imaging test order
AJ	ORIGINAL_ORDER_DETERMINATION	Yes	Yes	NUMERIC	1 = appropriate, 2 = inappropriate, 3 = uncertain, 4 =not covered by guideline
AK	ATTESTATION	Yes	No	Yes / No	Physician attestation that the data to determine appropriateness and recommendations were reviewed by the physician and confirmed with the beneficiary
AL	DSS_ALT_IMAGE_ORDER	Yes	Yes	Yes / No	Alternate image order recommended by DSS
AM	DSS_ALT_IMAGE_ORDER_CPT1	No	Yes	Character	If alternate image recommended, enter CPT here
AN	DSS_ALT_IMAGE_ORDER_CPT2	No	Yes	Character	If multiple alternate images recommended, enter CPT here
AO	DSS_ALT_IMAGE_ORDER_DESC2	No	Yes	Character	Procedure(s) name
AP	DSS_ALT_IMAGE_ORDER_DESC1	No	Yes	Character	Procedure(s) name

Column	Indicator Name	Required Field	System Generated	Format Type	Notes about the Indicator
AQ	PHYSICIAN_DECISION	No	No	YES / NO	Physician ACCEPTS or REJECTS the DSS alternative
AR	PHYSICIAN_DECISION_REASON	No	Optional search function	Character	Reason Options: 1.) Guideline does not apply to patient condition; 2.) Physician does not agree with guideline; 3.) Other evidence base; 4.) Other specify
AS	PHYSICIAN_DECISION_EXPLANATION	No	No	Character	Open text field for physician explanation to PHYSICIAN_DECISION_REASON
AT	IMAGE_ORDER_SELECTED_DESC	Yes	Optional search function	Character	Procedure name standardized presentation for user. If decision not to order, enter "N/O" (no order).
AU	IMAGE_ORDER_SELECTED_CPT	Yes	Yes	Character	CPT code of the final imaging test order after DSS interaction. If decision not to order, enter "N/O" (no order).
AV	IMAGE_ORDER_DETERMINIATION	Yes	Yes	NUMERIC	1 = appropriate, 2 = inappropriate, 3 = uncertain, 4 = not covered by guideline
AW	RAD_ALT_IMAGE_ORDER	No	No	YES / NO	Alternate image order recommended by Radiologist
AX	RAD_ALT_IMAGE_ORDER_DESC	No	Optional search function	Character	Procedure name standardized presentation for user
AY	RAD_ALT_IMAGE_ORDER_CPT	No	Yes	Character	If alternate image recommended and accepted, enter CPT here
AZ	IMAGE_ORDER_CANCELLED	No	No	YES / NO	Enter "no" if any image rendered; enter "yes" if no image rendered and order is cancelled entirely
BA	DATE_IMAGE_RENDERED	Yes	No	mmddyyyy	Date of the actual imaging order was rendered i.e. date of service
BB	DATE_OF_DATA_ENTRY2 (system capture)	No	Yes	mmddyyyy	The date the DATE_ORDER_RENDERED was entered into DSS
BC	RENDERED_IMAGE_DESC	Yes	Optional search function	Character	Procedure name
BD	RENDERED_IMAGE_CPT	Yes	Yes	Character	CPT code of the actual service delivered

Column	Indicator Name	Required Field	System Generated	Format Type	Notes about the Indicator
BE	TEST_RESULT	Yes	No	Numeric	1 = positive, 2 = negative, 3 = indeterminate
BF	RECORD_COMPLETE	Yes	No	YES / NO	Convener certifies that the record is complete. A record is complete if the IMAGE_ORDER_CANCELLED (AZ = Yes) or the RENDERED_IMAGE_CPT (BD) and TEST_RESULT (BE) are entered in the DSS.
BG	CONVENER_ID	Yes	Yes	Character	Lewin issued convener ID

Example Scenarios

Example 1: Adjacent body parts

Two separate DSS records are created for the two images ordered on adjacent body parts.

Example 2: Image order changed

Physician orders CT Thorax w/ and w/o contrast and the radiologist indicates that w/o contrast is sufficient. Guideline supports use of one or the other rather than combined studies. Enter change under the following variables and complete remainder of record:

AT   RAD_ALT_IMAGE_ORDER: "Yes" - Alternate image order recommended by Radiologist

AU   RAD_ALT_IMAGE_ORDER_DESC: Procedure(s) name

AV   RAD_ALT_IMAGE_ORDER_CPT: If alternate image recommended and accepted, enter CPT here

AW   IMAGE_ORDER_CANCELLED: Enter "No" because an image service was rendered

Example 3: Image order changed

Physician orders CT Lumbar spine and radiologist indicates that MRI of Lumbar Spine is sufficient. Follow same steps as Example 1.

Example 4: Image order changed

Physician enters two orders for adjacent body parts for Brain and Sinus CT each with its own DSS record. Radiologist indicates that both images are not needed. One of the two orders gets cancelled (e.g., CT Sinus) and the other image order is rendered (CT Brain). For the cancelled order (e.g., CT Sinus) complete:

> AT   RAD_ALT_IMAGE_ORDER: "Yes" - Alternate image order recommended by Radiologist
>
> AU   RAD_ALT_IMAGE_ORDER_DESC: Leave blank
>
> AV   RAD_ALT_IMAGE_ORDER_CPT: Leave blank
>
> AW   IMAGE_ORDER_CANCELLED: Enter "Yes" since the order (e.g., CT Sinus is cancelled)

For the image service (e.g., CT Brain) that is rendered complete the existing DSS record.

Example 5: Add-On / Follow-up studies

Physician orders image w/o contrast. After the image is rendered, radiologist indicates that w/contrast is needed. Create new DSS record.

Example 6: Add-On / Follow-up studies

Physician orders CT Thorax. After the image is rendered, radiologist indicates that adjacent body part for abdomen is needed. Create a new DSS record.

CMS Imaging Demonstration: DSS Flow Chart