Confirming Data Reviews

TRACKING CTR REVIEWS AT THE FIELD, SECTION, AND CASE LEVEL

Confirming a Data Review

"Confirming a data review" is asking the CTR to directly acknowledge that they read the medical record and that they confirm the current value of a field or set of fields.

When is a CTR required to confirm a review?

Field
- An unusual value for a single field.
- Or an unusual combination of values for 2 or more fields.

Section
- Requiring a CTR to check a box confirming that a set of fields (e.g., the Staging fields) were reviewed during a visual editing or consolidation task

Source Data
- Asking the CTR to review the consolidated (CTC) data because of something identified in the source record fields or text (e.g., PSA review)

Case
- Requiring a CTR to check a box confirming that the CTC or case was visually edited or that consolidation was completed

Field Level Confirmation:

Over-ride Flags

NAACCR Data Standards, Vol II

This is the field description for an over-ride flag that is required for an unusual combination of age, site, and morphology.

OVER-RIDE AGE/SITE/MORPH

Revised

Item #	Length	Source of Standard	Year Implemented	Version Implemented	Year Retired	Version Retired	Column #
1990	1	SEER					2579 - 2579

Alternate Name:	Age/Site/Histology Interfield Review (Interfield Edit 15) (SEER #3)
XML NAACCR ID:	overRideAgeSiteMorph
PARENT XML ELEMENT:	Tumor

Description

Some computer edits identify errors. Others indicate possible errors that require manual review for resolution. To eliminate the need to review the same cases repeatedly, over-ride flags have been developed to indicate that data in a record (or records) have been reviewed and, while unusual, are correct.

This over-ride is used with the following edits in the NAACCR Metafile of the EDITS software:

Age, Primary Site, Morphology ICDO2 (SEER IF15)
Age, Primary Site, Morphology ICDO3 (SEER IF15)
Age, Primary Site, Morph ICDO3--Adult (SEER)
Age, Primary Site, Morph ICDO3--Pediatric (NPCR)

Rationale

Some edits check for code combinations that are possible, but quite rare. If the code combination generates an error message and review of the case indicates that the codes are correct for the case, then the over-ride flag is used to skip the edit in the future. See Chapter IV, Recommended Data Edits and Software Coordination of Standards.

Over-ride Flag as Used in the EDITS Software Package

Some cancers occur almost exclusively in certain age groups.

Edits of the type Age, Primary Site, Morphology require review if a site/morphology combination occurs in an age group for which it is extremely rare. The edit Age, Primary Site, Morph ICDO3--Adult (SEER) edits cases with an Age at Diagnosis of 15 and older. The edit Age, Primary Site, Morph ICDO3--Pediatric (NPCR) edits cases with an Age at Diagnosis of less than 15. The edits Age, Primary Site, Morphology ICDO2 (SEER IF15) and Age, Primary Site, Morphology ICDO3 (SEER IF15) contain logic for all ages.

Instructions for Coding

1. Leave blank if the program does not generate an error message (and if the case was not diagnosed *in utero*) for the edits of the type Age, Primary Site, Morphology.

2. Correct any errors for the case if an item is discovered to be incorrect.

3. Code 1 or 3 as indicated if review of items in the error or warning message confirms that all are correct.

Codes

1	Reviewed and confirmed that age/site/histology combination is correct as reported
2	Reviewed and confirmed that case was diagnosed *in utero*
3	Reviewed and confirmed that conditions 1 and 2 both apply
Blank	Not reviewed or reviewed and corrected.

Field Level Confirmation:

Unknown SSN
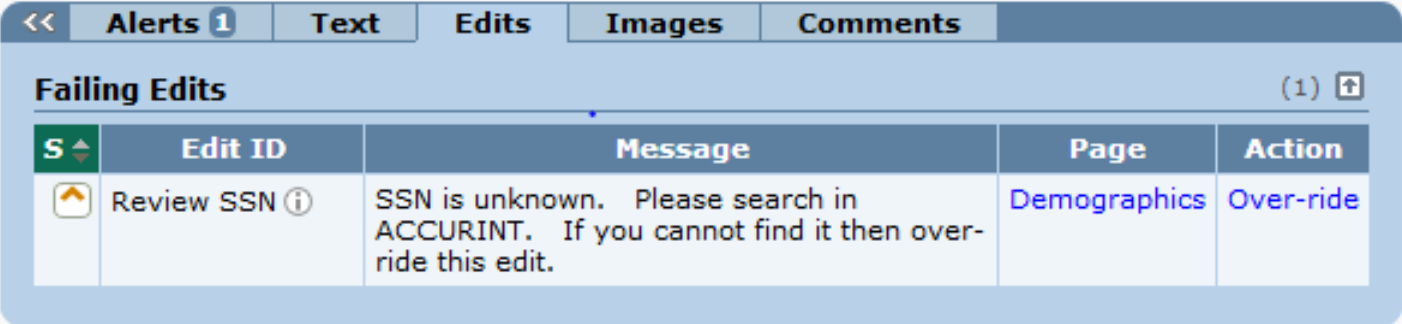
Registry-defined Edit in SEER*DMS

This mechanism is extremely flexible. There is no need to add a field for the over-ride.

A query can be executed to determine the number of over-rides for each edit.

This is an example of using a **field level confirmation** to enforce a procedure required by the registry.   An edit is used to:

❑ Ensure that a procedure was done (try to determine patient's SSN)
❑ And, more importantly, to avoid repeating that procedure

This is a registry-defined edit in SEER*DMS that fails if SSN is unknown (999-99-9999).   The user is instructed to follow registry procedures to find a value. If SSN cannot be found then the edit is over-ridden.

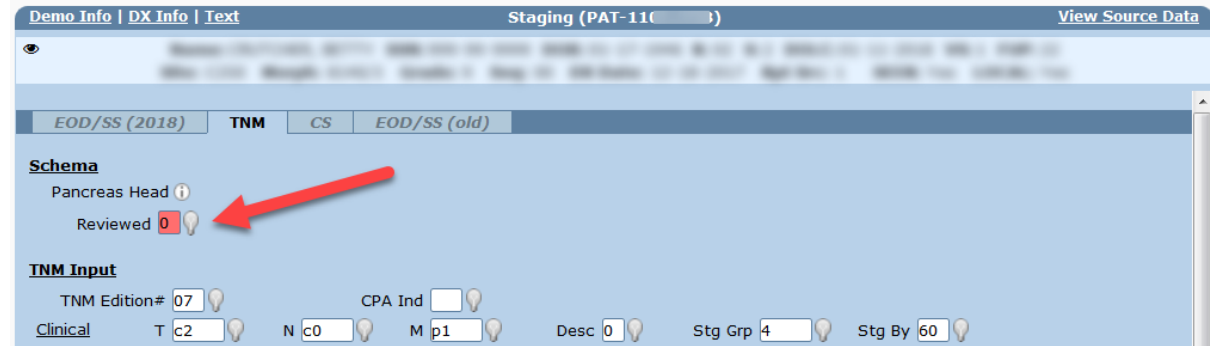| <<	Alerts 1	Text	Edits	Images	Comments	
Failing Edits						(1)
S	**Edit ID**		**Message**		**Page**	**Action**
⌃	Review SSN ⓘ		SSN is unknown. Please search in ACCURINT. If you cannot find it then over-ride this edit.		Demographics	Over-ride

Section Confirmation:

Staging

Review Flags in SEER*DMS

There are several fields that can be used to trigger a review of a section of data. These can be set to "Needs Review" conditionally; or set to "Needs Review" for all cases.

Each registry manager sets the rules for their registry.

SEER*DMS registries use a review field to ensure that the CTR visually edits Staging data items.

Registries use this field in different ways:

To enforce a "section" review for all staging fields:
1. Some registries set the flag to "needs review" each time a CTC is built from an abstract
2. Some registries also set the flag to "needs review" when a new abstract is linked to the CTC
3. Other registries only set it to needs reviewed when a CTC is built from an HL7 record

Other registries do not require the CTR to check this review flag for every case. It is sometimes been used to over-ride warnings that are implemented as edits:

Source Data Confirmation:

PSA

IMS staff created an edit in SEER*DMS to support the Data Quality Project related to PSA.

The edit was retained to force a review of PSA values that may be inconsistent with text in source abstracts.

The PSA Data Quality Project (July 2015) was an audit of SEER cases diagnosed in 2012 for recorded PSA and PSA interpretation values.

Audit Goals:

- Identify and describe the magnitude of the PSA coding errors in SEER cases diagnosed in 2012 for the recorded PSA values and PSA interpretation values.

- Based on the study results, determine a strategy to correct PSA errors in SEER data for all years of diagnosis from 2004 to 2013 (a combination of automated and manual processes).

- Develop new processes and procedures to help reduce PSA errors in the future.
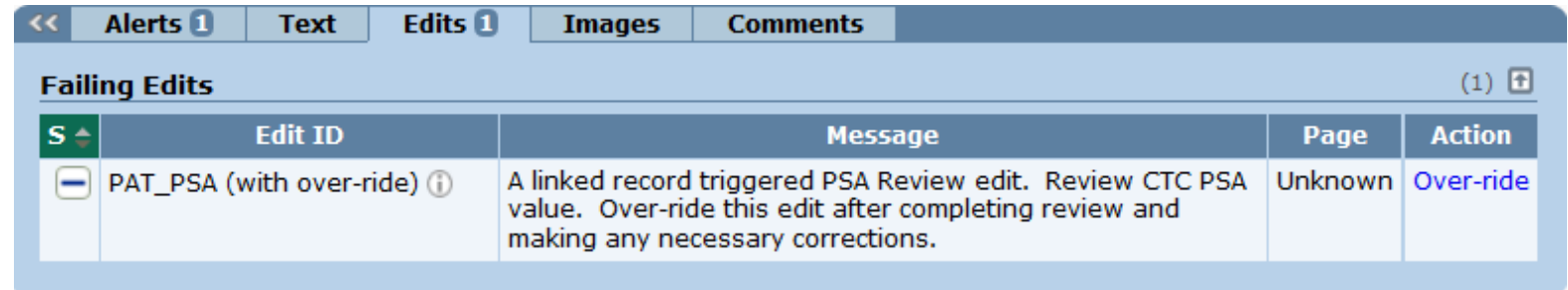
Source Data Confirmation:

PSA

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To support the PSA Data Quality Project, a new feature was implemented for edits. This allows SEER*DMS edits to validate CTC (consolidated) data based on information in the linked **source records**.

- The mechanism is similar to what was shown on previous slides.
- To the user, it is simply an edit with instructions and an over-ride.
- But the edit isn't based solely on CTC data items.
- There is separate logic that is executed on each source abstract. It uses NLP techniques to compare the PSA value on the abstract to source text in that abstract.
- The CTC edit fails if:
  - There is no source abstract to support the CTC value.
  - Or there is an abstract that has a value that is not supported by its own text.
  - Or there is an abstract with multiple values in the text.
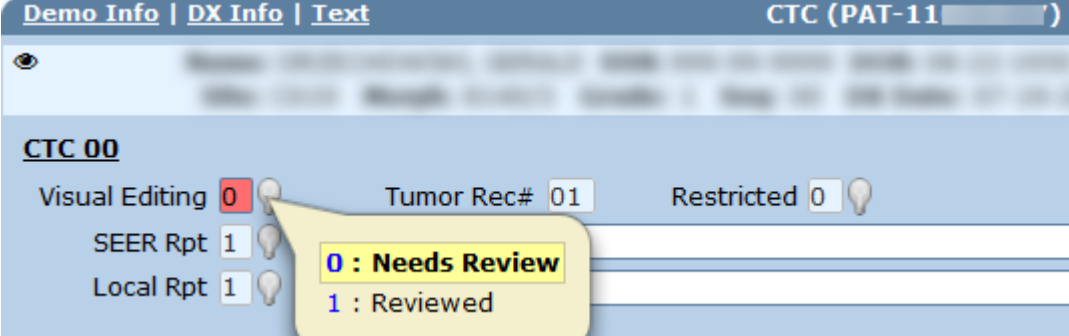
Case Level Confirmation:

Visual Editing

A CTR uses the VE flag to indicate that they visually edited the CTC.

Visual Editing is a manual review to confirm coded data items based on all available text. The proportion of cases visually edited is controlled by the registry. Cases may be selected for visual editing based on any criteria, for example:

- All new incident cases.

- Edit failures. If any edit fails then the case is visually edited when the edit is resolved.

- Logic that includes the experience level of the abstractor; reporting facility; or the primary site or morphology

A field in SEER*DMS is used to identify cases for visual editing and to track the % of cases that have been reviewed.

The Visual Editing Flag in SEER*DMS has 3 states:

- Blank = visual editing is not required

- 0 = needs to be visually edited

- 1 = visual editing was completed and acknowledged by a CTR

Case Level Confirmation:

Linkage & Consolidation

Confirming that a source record's data were incorporated into the CTC consolidated data.

We faced two problems in the manual Consolidate task:
- As the CTR completed the task, how could DMS know whether they had completed the task or they wanted to save their work? If it was a complicated case or they were interrupted then they may choose to save & finish later.
- And a registry manager submitted a request to force the CTR to sign-off on each record.

To solve both issues – confirmation boxes were added for the source records.
- The CTR can check the box at the top to "check all". Or they can check some records; and continue working on others at a later time.
- It also allows them to save after evaluating multiple primary rules; and come back to the task later to complete the consolidation.

Case Level Confirmation:

QC Tasks

Quality Control tasks are used for add hoc data quality projects.

Quality Control (QC) Tasks are created for ad hoc projects. This example shows the page displayed when exiting the QC Task for the Claims Analysis project.

The user may have worked on the task and made changes, but not completed the task. They must check the box when the task is complete.

This is an example of a simple QC task. A more complex version would require the CTR to answer a set of questions with lookups as they complete the task.

Considerations

❑ "Confirming a data review" is asking the CTR to directly acknowledge that they read the medical record and that they confirm the current value of a field or set of fields.

❑ It is a perfect time for this discussion because it intersects with current efforts related to:

  ❑ Data quality
  ❑ Usability
  ❑ Automation

Discussion Topics: Data Quality

A devil's advocate point of view…

❑ Is there any risk that asking a CTR to review a data item would make them suspicious of a value that is actually correct?

   ❑ It would be difficult to assess, but interesting to know if some registrars change the site or morphology because of the edit. While other, more confident, registrars set the over-ride flag.

❑ Is there any risk that asking a CTR to review *this* data item reduces their review of *that* data item?

❑ Is there a risk of encouraging a CTR to code to the edits?

❑ My examples were based on SEER*DMS – should we actually be implementing some of these rules in SEER*Abs instead?

Discussion Topics: Usability

❑ Do the reviews help by providing structure to a CTR's process or are they an annoyance?

❑ Do registrars' review the data and then check-off the boxes or check all boxes first?

Discussion Topics: Automation

And for consideration as we discuss automation during this week's meetings:

❑ What types of reviews will be needed when we ask CTRs to confirm data extracted via automated tasks?

   ❑ Auto-coding of site, histology, behavior in path reports
   ❑ Auto-creating treatment data from claims and pharmacy data
   ❑ Auto-processing of Electronic Health Records in CDA format

Critical Data Items & Registry Operations

SEPTEMBER 25, 2018

Critical Data Items & Registry Operations
Discussion Topics

❖ Does your registry have a list of critical data items?

❖ How is the list used in operations?

❖ Are there different lists for different purposes?

❖ Should the SEER Program develop a standard list of critical data items?

Critical Data Items

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Consolidation

This is an example of using a list of critical data items to determine whether a new abstract from the same facility needs to be reviewed.

❖ Patient level: SSN, Last Name, First Name, DOB, Sex, Race, SSN, Vital Status.
❖ CTC level: Sequence Number, Date of Diagnosis, Site, Histology, Behavior, Laterality, County, Dx Confirmation, Nodes examined, Nodes Positive, Derived AJCC7 Stage Group, Derived EOD Stage Group and Grade Pathological (for 2018 cases and later)

Rules:

❖ New record from same facility.   If changed fields are not in the critical list then update the "non-critical" fields.

❖ New record from same facility. If a critical field was changed then create a consolidation task.

❖ New record for a new facility - create a consolidation task.

Critical Data Items

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Abstracting

What would you consider to be a critical data item for **abstracting**? How would that differ from what is considered critical for consolidation or critical to SEER?   For example, fields related to registry operations may be considered "critical":

- ❖ Text, text, text
- ❖ Physician information
- ❖ Facility identifiers for the patient or case
- ❖ And all of the fields that are critical for research, data submissions, etc.
- ❖ But excluding fields that can be calculated (county at dx) or derived

Critical Data Items

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Audits

Are there data items that are needed for QIE projects?   For example, do we need to track whether a case was included in an audit and/or fields that indicate a result of the audit?

SEER Quality Assessment & Control (QA&C) Activities

Critical Data Items

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SEER Data Submissions

The central cancer registry may consider all data items required for the current reporting year to be critical.

NAACCR Data Item Name	Item Number	NAACCR 16 Column	February 2018	November 2018	Notes
Age at Diagnosis	230	193-195	Y	Y	
Birth Date - year	240	196-199	Y	Y	
Birth Date - month	240	200-201	Y	Y	
Birth Date - day (blank for SEER)	240	202-203	Y	Y	
Date of birth flag	241	204-205	Y	Y	
NHIA Derived Hisp Origin	191	418-418	Y	Y	
Race-NAPIIA	193	419-420	Y	Y	
IHS Link	192	421-421	Y	Y	
Census Tract 2010	135	428-433	2006+	2006+	
Census Tr Certainty 2010	367	435-435	2006+	2006+	
Birthplace State	252	442-443	Y	Y	
Birthplace Country	254	444-446	Y	Y	
Place of Death--State	1942^	450-451^	2016+^	2016+^	if available
Place of Death--Country	1944^	452-454^	2016+^	2016+^	if available
Census Tr Poverty Indictr	145	463-463	Y	Y	
County at DX Geocode1990	94	464-466	Y	Y	if available
County at DX Geocode2000	95	467-469	Y	Y	if available
County at DX Geocode2010	96	470-472	Y	Y	if available
RuralUrban Continuum 2013	3312	476-477	Y	Y	
Sequence Number--Central	380	528-529	Y	Y	
Date of Diagnosis - year	390	530-533	Y	Y	
Date of Diagnosis - month	390	534-535	Y	Y	
Date of Diagnosis - day	390	536-537		Y	required, depending on method
Date of Diagnosis Flag	391	538-539	Y	Y	
Primary Site	400	540-543	Y	Y	
Laterality	410	544-544	Y	Y	
Histology (92-00) ICD-O-2	420	545-548	1973-2000	1973-2000	
Behavior (92-00) ICD-O-2	430	549-549	1973-2000	1973-2000	
Histologic Type ICD-O-3	522	550-553	1973+	1973+	
Behavior Code ICD-O-3	523	554-554	1973+	1973+	
Grade	440	555-555	Y	Y	

Critical Data Items

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SEER Cancer Statistics Review

A researcher looking at registry data from an analytic viewpoint would consider some fields to be critical that are not considered critical for registry operations.

Fields considered critical to research and operations:

- ❖ Primary Site
- ❖ Histology
- ❖ Behavior
- ❖ Year of Diagnosis
- ❖ Age
- ❖ Sex
- ❖ Race
- ❖ Etc.

Fields that may only be considered critical for analytics, but less so for operations:

- ❖ SEER Site Recode
- ❖ Calculated Survival Variables
- ❖ Cause of Death Classification

Critical Data Items & Registry Operations
Discussion Topics

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❖ How is the list used in operations?

❖ Are there different lists for different purposes?

❖ Should the SEER Program develop a standard list of critical data items?