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The Matrix – introduced by CMS in November 2017
The Matrix (as of now still not given a form number) is the new form that Survey will be using as of November 2017 to replace the roster/matrix CMS-802.

Please be sure that you obtain a copy of their instructions and read them thoroughly. You will notice that the official instructions contain no links to questions on the MDS. Per information we have read, this is to encourage you to evaluate the resident based upon ALL sources of information available to you. As with the CMS-802, your responses should reflect each of the residents as of the day of survey.

Logic of the System
You must be familiar with the CMS instructions for both of these forms. Even though the official CMS instructions give no links to the MDS, where questions match the language of the Matrix, we have created links for informational purposes only. These are suggestions only and meant to give you a starting point for your evaluation. You MUST update this information using whatever other sources are available to you on the day of survey.

As you complete MDS assessments, the system will prompt you to decide whether or not the MDS data should be used to update the 672 and/or Matrix or neither. The decision should be based on the current frequency with which the 672 and/or Matrix are being manually adjusted.

If these forms are being manually updated weekly, it is possible that the data in the MDS is older and less current than the manually updated information entered recently into either form (i.e. the data that you entered manually into the form yesterday will be more current than the MDS that you closed today with an ARD from days/weeks ago.). In this case, the user may answer “NEITHER” when prompted by the question,

On the other hand, if the 672 and/or Matrix are being updated monthly or less frequently, you may select 672, Matrix, or Both at which point the information from the assessment will be brought into the forms.

Remember, it is the responsibility of the facility to provide correct information regardless of the values in the MDS 3.0. And, all answers must be reflective of the status for each resident as of the date of survey. A completed MDS does not contain information from today and so may no longer be reflective of the resident. The UTI shown on a quarterly done 10 weeks ago may no longer be relevant today and the pneumonia that the resident now has will not have been on that “old” MDS that is reflected on the CMS form. You will have to
answer many questions manually and check ALL responses brought over for accuracy before providing the State with this data. Fields indicated in the 672 as “manual” in the HCFA instructions must be entered by the user as there is no crosswalk for these items.

Links to MDS Questions

CMS-672

The CMS-672 form dictates exactly which MDS information correlates to which fields on the form. Our forms follow these same guidelines when you elect to link to the CMS-672 at the close of the MDS assessment. You will need to update to reflect the resident’s status as of the date of survey.

The MATRIX

The Matrix instructions do not list any MDS questions as they want you to review ALL sources of information available to you. We provide this information to you simply as a starting point for your analysis. You MUST review the entire medical record for each resident and update as appropriate.

These are NOT official CMS instructions. We have created the link with the MDS using the questions listed below. Use the information we present to you on the Matrix form only as a starting point and review with other sources/documentation to finalize your answers. If you do not wish to use this MDS data for the MATRIX, answer the question shown above either “CMS-672” or “neither”.

- **F1, Residents Admitted within the Past 30 days**
  Resident(s) who was admitted to the facility within the past 30 days and currently resides in the facility

- **F2, Alzheimer’s/Dementia**
  Resident(s) who have a diagnosis of Alzheimer’s disease or dementia of any type.
  Trigger:  I4200 or I4800 marked
  No Change:  I4200 and I4800 not marked
  No change:  I4200 and I4800 dashed or skipped

- **F3, MD, ID or RC and no PASARR Level II**
  Resident(s) who have a serious mental disorder, intellectual disability or a related condition by does not have a PASARR level II evaluation and determination.
  Triggers:  A1500=1 and A1510a marked
  A1500=1 and A1510b marked
  A1500=1 and A1510c marked (added because of ambiguous directions)
  I5700 or I5800 or I5900 or I5950 or I6000 or I6100 marked
  A1550a or A1550b or A1550c or A1550d or A1550e marked
  No Change:  A1510b dashed or skipped
  A1510b or A1510b or A1550b or A1550c or A1550d or A1550e dashed or skipped
  A1500 or A1510a or I5700 or I5800 or I5900 or I5950 or I6000 or I6100 dash/skip
  Removed:  All unmarked

- **F4, Medications**
Resident(s) receiving any of the following medications:  (I)=Insulin; (AC)=Anticoagulant (e.g. Direct thrombin inhibitors and low weight molecular weight heparin [e.g., Pradaxa, Xarelto, Coumadin, Fragmin]. Do not include Aspirin or Plavix),  (ABX)=Antibiotic, (D)=Diuretic, (O)=Opioid, (H)=Hypnotic, (AA)=Antianxiety, (AP)=Antipsychotic,  (AD)=Antidepressant, (RESP)=Respiratory (e.g., inhaler, nebulizer)

(I)=Insulin  N0350a (number of insulin shots)
(AC)=Anticoagulant N0410e (number of days receiving Anticoagulants)
(ABX)=Antibiotic N0410f (number of days receiving Antibiotics)
(D)=Diuretic  N0410g (number of days receiving Diuretics)
(O)=Opioid  N0410h (number of days receiving Opioids)
(H)=Hypnotic  N0410d (number of days receiving Hypnotics)
(AA)=Antianxiety N0410b (number of days receiving Antianxiety meds)
(AP)=Antipsychotic N0410a (number of days receiving Antipsychotics)
(AD)=Antidepressant N0410c (number of days receiving Antidepressants)
(RESP)=Respiratory not linked

All done in this manner:
Triggered:  N0350a > 0
Removed:  N0350a = 0
No Change:  N0350a blank, dashed or skipped

•  **F5, Facility Acquired Pressure Ulcers(s) (any stage)**
  Resident(s) who have a pressure Ulcers at any stage, including suspected deep tissue injury (e.g., I, II, III, IV, unstageable, SDTI)  Note: Not enough information in the MDS to do Stage 1, in house only.
  Triggered:  (M0300b1 - M0300b2 > 0) or (M0300c1 - M0300c2 > 0) or (M0300d1 - M0300d2 > 0) or (M0300e1 - M0300e2 > 0) or (M0300f1 - M0300f2 > 0) or (M0300g1 - M0300g2 > 0)
  No Change:  M0300b1 or M0300c1 or M0300d1 or M0300e1 or M0300f1 or M0300g1 are blank, dash or skip
  Removed:  All above equations = 0

•  **F6, Worsened Pressure Ulcers at any stage**
  Resident(s) with a Pressure ulcer at any stage that have worsened.
  Triggered:  M0800a > 0 or M0800b > 0 or M0800c > 0
  No change:  M0800a or M0800b or M0800c blank, dashed or skipped
  Removed:  All above = 0

•  **F7, Excessive Weight Loss without Prescribed Weight Loss Program**
  Resident(s) with an unintended (not prescribed weight loss program) weight loss>5% within the past 30 days or >10% within the past 180 days. Excluded residents receiving hospice services.
  Triggered:  K0300 = 2 and O0100k2 not marked
  Removed:  (K0300 = 0 or 1) or (K0300 = 2 and O0100k2 marked)
  No change:  K0300 or O0100k2 blank, dashed or skipped

•  **F8, Tube Feeding**
  Resident(s) who receive enteral or parenteral feedings.
  Triggered:  K0510a2 or K0510b2 marked
  Removed:  K0510a2 and K0510b2 not marked
No Change: K0510a2 or K0510b2 dashed or skipped

• **F9, Dehydration**
  Resident(s) identified with actual hydration concerns (e.g., receives enteral, parenteral and/or IV feeding/fluids, or is dehydrated) takes in less than the recommended 1500ml of fluids daily (water or liquids in beverages and water in foods with high fluid content, such as gelatin and soups).
  Triggered: K0510a2 or K0510b2 or J1550c marked
  Removed: K0510a2 and K0510b2 and J1550c not marked
  No change: K0510a2 or K0510b2 or J1550c dashed or skipped

  Note: MDS question K0710B deals with the average fluid intake by IV or tube feeding. It looks at amounts below or above 501cc/day. This field on the CMS form is looking at 1500ml. You will have to evaluate your Resident Observation documentation or Notes to make a final determination.

• **F10, Physical Restraints**
  Resident(s) who have a physical restraint in use. A restraint is defined as the use of any manual method, physical or mechanical device, material or equipment attached or adjacent to the resident’s body that the individual cannot remove easily which restricts freedom of movement or normal access to one’s body (e.g., bed rail, trunk restraint, limb restraint, chair prevents rising, mitts on hands, confined to room, etc.). Do not code wander guards as a restraint.
  Triggered: P0100a or P0100b or P0100c or P0100d or P0100e or P0100f or P0100g or P0100h = 1 or 2
  No Change: P0100a or P0100b or P0100c or P0100d or P0100e or P0100f or P0100g or P0100h = blank, dashed, or skipped
  Removed: All = 0

• **F11, Fall(s) (F) or Fall(s) with injury (FI) or major injury (FMI)**
  Resident(s) who have fallen since admission or within the past 90 days and have incurred an injury or not. A major injury includes bone fractures, joint dislocation, closed head injury with altered consciousness, subdural hematoma. Use (F) to identify residents with a fall(s), (FI) to identify a resident who has sustained an injury excluding major injury, and (FMI) to identify a resident who has sustained a fall(S) with major injury

  (F) Falls   J1900a = 1 or 2
  (FI) with injury J1900b = 1 or 2
  (FMI) with major injury J1900c = 1 or 2

  All done as follows:
  Triggered: J1900a = 1 or 2
  Removed: J1900a = 0
  No Change: J1900a = blank, dash or skipped

• **F12, Indwelling Urinary Catheter**
  Resident(s) with an indwelling Catheter (including suprapubic catheter and nephrostomy tube.
  Triggered: H0100a marked
  No Change: H0100a marked
  Removed: H0100a dashed or skipped
• **F13, Dialysis**
  Residents(s) who are receiving (H) hemodialysis or (P) peritoneal dialysis either within the facility (F) or offsite (O)
  Note: O0100j2 = X only says has dialysis
  Triggered: O0100j2 marked (only marks that dialysis is being given)
  No Change: O0100j2 dashed or skipped
  Removed: O0100j2 blank (removes dialysis mark, as well as, what type and location marks)

• **F14, Hospice**
  Resident(s) who have elected or are currently receiving hospice services.
  Triggered: O0100K2 marked or A1800='07' or A2100='07'
  Removed: O0100K2 not marked and A1800<>'07' and A2100<>'07'
  No Change: Either above not met

• **F15, End of Life/Comfort Care/Palliative Care**
  No link

• **F16, Tracheostomy**
  Resident(s) who have a Tracheostomy
  Triggered: O0100e2 marked
  Removed: O0100e2 not marked
  No Change: O0100e2 dashed or skipped

• **F17, Ventilator**
  Resident(s) who are receiving invasive mechanical ventilation.
  Triggered: O0100f2 marked
  Removed: O0100f2 not marked
  No Change: O0100f2 dashed or skipped

• **F18, Transmission-Based Precautions**
  Resident(s) who are currently on Transmission-based Precautions.
  no link

• **F19, Intravenous therapy**
  Resident(s) who are receiving intravenous therapy through a central line, peripherally inserted central catheter, or other intravenous catheter.
  No link

• **F20, Infections**
  Resident(s) who has a communicable disease/contagious Infection (e.g., MDRO-M, pneumonia-P, tuberculosis-TB or viral hepatitis-VH, or c-diff-C) OR has a healthcare-associated infection (e.g., wound infections-WI or UTI)

  "M" MDRO        I1700
  "P" Pneumonia   I2000
  "TB" Tuberculosis I2200
  "WI" Wound Infection I2500
  "UTI" UTI       I2300
"VH" Viral hepatitis  I2400
"C" c-diff – no link

All done as follows:
Triggered:  I1700 marked
Removed:  I1700 not marked
No Change:  I1700 dashed or skipped

Maintain Data
Every time the user selects the option MAINTAIN CMS 672 DATA or MAINTAIN MATRIX DATA under CMS FORMS, the system will update the resident list from the current census and will bring in all new residents, new rooms and units, etc. The data entered in the fields will not be affected by the census update.

CMS-672
Select MAINTAIN CMS-672 DATA from the menu and indicate a unit for processing. Pressing F2 on the unit field will display a pick-list of defined units for selection. A screen showing the names of all residents on that unit will then appear. You will need to do this for each unit in the facility that will be under survey.

RESIDENT LIST WINDOW
After the unit has been identified, a screen will appear listing the residents residing on that unit.

To select a resident, click on the resident’s name to highlight it light blue. If the resident’s name is not visible, use the scroll bar down the right side to scroll the list. The tabs along the top of the window contain the fields on the CMS-672 form.
ENTERING DATA
When the correct resident is chosen, click on one of the tabs of the form to fill in the correct information. For example, the A-B tab of the 672 contains the following:

![CMS-672 Resident Census and Conditions Maintenance](image)

To enter values for the resident, simply click on the box to indicate that a condition exists for that resident and a checkmark will appear. To remove a checkmark, click on the field again and the checkmark will disappear. Check all conditions on the current tab and then click on the next tab to respond to those questions.

SAVING THE DATA
When you have completed entering the CMS-672 data for the resident, click on the LIST tab to return to the resident list. Either select another resident for editing or click on the FINISH button to save all the data and exit the option.

The MATRIX
Select MAINTAIN MATRIX DATA from the menu. You have the choice of seeing only new admissions within the past 30 days, seeing residents with admission dates more than 30 days prior to today, all residents, or all residents on a specific unit. Make a selection. Pressing F2 on the unit field will display a pick-list of defined units for selection. A screen showing the names of all residents on that unit will then appear.

RESIDENT LIST WINDOW
After you make your selection, a screen will appear listing the residents that match. Below is a list of residents admitted to our demo facility in the last 30 days.
To select an individual resident from this list, click on the resident’s name to highlight it blue. If the resident’s name is not visible, use the scroll bar down the right side to scroll the list. The tabs along the top of the window contain the portions of the Matrix form.

ENTERING DATA
When the correct resident is chosen, click on one of the tabs of the form to fill in the correct information. For example, the **Fields 1-6** tab of the Matrix contains the following:
To enter values for the resident, simply click on the box to indicate that a condition exists for that resident and a checkmark will appear. To remove a checkmark, click on the field again and the checkmark will disappear. Check all conditions on the current tab and then click on the next tab to respond to those questions.

**Coming soon!**

On this Matrix option, you will see buttons on the right side of the window. These buttons will take you to other parts of the system so that you can review your data. Currently, the NOTES button works. The other buttons will be made active soon. Remember, if you are using the option to pull information from the MDS, you must still review all of your sources/documents and update this form to reflect the condition of each resident on the day of survey. You are expected to use all sources of information available to you, not just the last MDS assessment.

**SAVING THE DATA**

When you have completed entering the Matrix data for the resident, click on the **LIST** tab to return to the resident list. Either select another resident for editing or click on the **FINISH** button to save all the data and exit the option.

**Printing and Locking Either Option**

**Printing from the Maintain Data Screen**

When ready to print the CMS-672 or Matrix data, simply return to the **LIST** tab and click the **PRINT** button. The report will display on the screen and can be printed or saved as an Adobe pdf. The printed report will provide the correct characters, such as F, N, IT, C, etc. in the printed report. Printing of prior locked data can be done through Reports, see below.

**Lock the Data for Survey**

At any time, the values which exist in the fields under **MAINTAIN CMS -672 DATA** or **MAINTAIN MATRIX DATA** can be “locked” or frozen. You will probably wish to “lock” only once a year at the time of survey. Then, at any future date you will be able to print a report showing the data on that “locked” date.

Be sure that you have done the MAINTAIN option for the CMS-672 for ALL units or the MATRIX for ALL residents. This will update and give you a current census to work with.

Select either the **LOCK CMS-672 DATA FOR SURVEY** or **LOCK MATRIX DATA FOR SURVEY** menu option. You will then need to supply the date to be associated with the “locked” data.

**Maintain CMS Locked Data**

Once data has been “locked”, it is no longer automatically updated with the current census nor is it updated with information from the MDS. Instead, it is locked with the census on that lock date and only available for manual manipulation. This allows you to make the last-minute updates to the forms for survey without worrying about someone inadvertently updating from the MDS.
Select either the **MAINTAIN LOCKED CMS-672 DATA** or the **MAINTAIN LOCKED MATRIX DATA** from the menu. Enter a unit for processing on the 672 or leave blank to look at all units. Select a resident option (only those admitted in the last 30 days, only those admitted prior to the past 30 days, all residents, or per unit) for the Matrix. Pressing **F2** on the UNIT field will display a pick-list of defined units for selection.

Next enter the date of the locked data to view. Pressing **F2** while positioned in the date field will bring up a pick-list of all “lock” dates. Select the correct data to view.

A screen showing the names of all residents on that unit or all units will then appear. View data in the same manner as maintaining the current data.

### Correcting for Census Discrepancies

At the bottom of the window you will see **INSERT** and **DELETE** buttons. Use these buttons to add or delete residents if your census is not correct. For example, a resident may be entering or discharging as survey walks in the door. Medical Records may not have had the opportunity to update the census with that information before you need to lock the data. Press the INSERT button and then select the resident to add from the pop-up list. To delete a resident, highlight them in the CMS-672 or Matrix list and then press the DELETE button.

### Reports

Printing of the 672 and Matrix data for both the current maintained or any locked data can be accomplished. In addition to printing from within the Maintain functions, you also have a PRINT menu option for these forms.

#### Print CMS-672 (Resident Census/Conditions)

Select the **PRINT CMS-672 DATA** menu option. A report configuration screen will appear.

- Report on what Survey Date? Leave this field blank to report on data for the current census or type in a survey date to print locked data. Press the **F2** key to view and select a survey date.
- Report on individual data collected? Default is No. Answering Yes will result in a second report being generated that will detail the data for each resident included in the report.
- Report on data for a specific unit? Leave blank to combine all units on one report or enter a valid unit number. Press the **F2** key to display a pick-list of unit numbers.

Click on OK to produce the report. Please be patient. Due to the large number of calculations and print formatting the report may take a few minutes to display.

#### Print CMS-MATRIX

Select the **PRINT MAINTAINED MATRIX DATA** or the **PRINT LOCKED CMS-MATRIX DATA** menu option. A report configuration screen will appear.

- You have the same sort options as you do with Maintain – only those newly admitted within the past 30 days, only those with admission dates prior to the past 30 days, all residents, or only those specific to a unit.
- Report on a specific unit? Press the **F2** key to display a pick-list of unit numbers or you may leave it blank to capture all units.
- For survey date? (Will appear only when printing LOCKED data.) Press the F2 key to display a list of all locked dates.

**Reminder**
The word “triggers” is sometimes applied to the MDS/Care Plan, Quality Measures, and to the CMS forms. The forms look at the data differently and are not calculated in the same way. Please refer to the CMS instructions for the specific forms to see what is included for each of the items.

The CMS-672 is not designed to pull every field from the MDS so you will have to manually complete it. The Matrix is to use all sources of information, not just the MDS. It is up to you to review ALL fields to be sure they have current data. Even if they were updated from the MDS yesterday, that information may be “old” for any given resident.

**Anticipating Survey – an option**
This is just one of many options you can create when preparing for survey. Please set your policy according to the needs of your facility.

1. If you are within your survey window, when closing the MDS do NOT have the data flow through to the CMS forms – answer NEITHER. From now until survey, you will be updating manually.
2. Use the MAINTAIN function (first option) to manually update the information. This can be done once a week for fairly stable residents or more often (daily) if you have residents who are changing rapidly. If you have assigned responsibility per unit, each unit may have their own schedule.
3. Make sure the census is current for the facility. Have all admissions, discharges, and room changes been completed? Try to update quickly during this period. When survey walks in, you do not want to spend a great deal of time making sure the census is correct. Remember, you only have one hour to produce a Matrix report for all current residents who are new admits within the last 30 days.
4. When the survey team arrives, use the Maintain (first option) in order to pull in the current census. For the 672, be sure to run for each unit. For the Matrix, be sure to include all residents.
5. Lock the data using today’s date, the date of survey. Once the data is locked then the MDS data can once again be directed to flow through to the forms upon assessment completion.
6. Maintain the Locked Data. Be sure all of your residents are in the list (was the census current when you locked it?). Now carefully review each resident, evaluate all sources of information, and update the fields so they reflect the current status of each person. If you have been trying to keep this current in the weeks leading up to survey, the job will be easier.
7. Print the form through the PRINT option by specifying the locked date (and whether you need within 30 day admits or all residents for the matrix) and present to survey.

**For More Information**

**CMS-672**
The MATRIX