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## Revisions to Existing Definitions

The following list contains the data fields where a revision to the definition was made and the data dictionary where the definition is located.

Data Dictionary	Data Field
CEA Follow-up	Smoking
Discharge	HTN
Discharge	Previous MI
PVI Follow-up	Smoking

## Discharge Form

### Discharge Status

Homeless will be added as an option to Discharge Status.

#### Data Abstraction Instructions:

Enter the location to which the patient was discharged.

#### Selections:

- Home
- Rehabilitation
- Other acute care hospital
- Nursing home/Extended care
- Hospice/Comfort care
- Left against medical advice
- Death
- Assisted Living
- Homeless
- Other

**Home** = The patient was discharged to the place they lived before being admitted to the hospital. If the patient was admitted from a nursing home or prison and released back to the nursing home or prison, enter Home for Discharge Status.

**Rehabilitation** = The patient was discharged to an inpatient rehab floor or an external rehab facility.

**Other acute care hospital** = The patient is discharged to a facility where they need immediate but short-term care.

**Nursing home** = The patient was discharged to a nursing home for long-term care or because they needed nursing care beyond rehabilitation. If the patient was discharged to a nursing home for physical rehabilitation, enter Rehabilitation for Discharge Status.

**Left against medical advice** = The patient was discharged or left (eloped) the hospital against medical advice.

**Death** = The patient died at any time during the hospital encounter.

**Assisted Living** = The patient was discharged to an assisted living facility, or the patient was discharged to home with home health care. Home care and home health care are not the same. Home care provides the patient with non-clinical help. Home health care provides professional medical assistance.

**Homeless** = The patient has no physical home or lives in a homeless shelter.

**Other** = The patient was discharged to a facility not on the list.

### Previous Myocardial Infarction

We have revised this definition. The new language is highlighted in yellow.

**Revised definition:** Indicate if the patient has had at least one documented previous myocardial infarction. This includes any occurrence between birth and the current procedure.

Enter Previous MI if the patient is diagnosed with Type 2 Myocardial Infarction, Type 1 NSTEMI, or STEMI. If no diagnosis is documented, enter MI if the patient has an elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL (upper reference limit) with a rise and/or fall in troponin and at least one of the following:

- Chest pain
- Nausea
- Shortness of breath
- new ischemic EKG changes (S-T elevations, S-T depression, pathological Q waves)
- An Echo/MRI/Stress test that is positive for ischemia
- Thrombus seen on angiogram or autopsy

Reference: Thygesen, K., Alpert, J. S., Jaffe, A. S., Chaitman, B. R., Bax, J. J., Morrow, D. A., White, H. D., & The Executive Group on behalf of the Joint European Society of Cardiology (ESC)/American College of Cardiology (ACC)/American Heart Association (AHA)/World Heart Federation (WHF) Task Force for the Universal Definition of Myocardial Infarction. (2018, November 13). *Fourth Universal Definition of Myocardial Infarction (2018)*. Fourth universal definition of myocardial infarction (2018). Retrieved August 22, 2022, from <https://www.ahajournals.org/doi/epub/10.1161/CIR.0000000000000617>

### Total Cholesterol

This field will be archived for PVI procedures.

### Opioid Education

The current Opioid Education data definition is too restrictive. We revised the definition. The new language is highlighted in yellow.

**Revised definition:** Indicate if the patient received pain management instructions and/or education on the correct use of opioid medication for this procedure. This education may have been provided pre- or post-procedure and may include alternative pain management modalities, proper use of opioid medications, and expectations surrounding pain level.

An actual note referencing the education needs to be in the patient record. This note can be written by a physician, advanced practice provider, or nurse. Pre-populated discharge template instructions do not qualify. If the provider used the "Opioid Start Talking Form," this form must be scanned into the EMR with the patient's signature, and the provider does not need to write a note.

Please click the following link for more information about Michigan Opioid Laws regarding Opioid Education and Opioid Start Talking form: [https://www.michigan.gov/opioids/0,9238,7-377-88141\\_88294---,00.html](https://www.michigan.gov/opioids/0,9238,7-377-88141_88294---,00.html)."

Enter the Air kerma for the EVAR procedure. Air kerma is used to characterize the intensity of the x-ray beam<sup>2</sup>.

Reference: Dixon, R.G., FSIR, & Ogden, K.M. (2016, August). A field guide to radiation safety terminology: An overview of key radiation dosimetric quantities and terms. Endovascular Today,15(8), 48-52. <https://evtoday.com/articles/2016-aug/a-field-guide-to-radiation-safety-terminology>

## Outcomes Post Procedure

### Myocardial Injury Post Procedure

We revised the definition of Myocardial Injury post procedure for VS and carotid procedures per Dr. Davy Hamilton's presentation on our YouTube page <https://youtu.be/VxInwYUXOrM>.

Definition: Indicate if the patient suffered a myocardial injury post procedure, including an ~~troponin leak~~ **Acute Myocardial Injury**, ~~demand ischemia~~ **Type 2 Myocardial Infarction**, ~~NSTEMI~~ **Type 1 NSTEMI**, or STEMI. If Yes is entered, indicate the date of the first elevated troponin value and the peak troponin value. The peak troponin value should be obtained within 30 days of the procedure.

- Yes
  - Enter date of first occurrence post procedure \_\_\_\_\_
  - Enter type of injury:
    - ~~Troponin leak~~ **Acute Myocardial Injury**
    - ~~Demand ischemia~~ **Type 2 Myocardial Infarction**
    - ~~NSTEMI~~ **Type 1 NSTEMI**
    - STEMI
    - Not documented
- No

Myocardial ischemia = The patient has one or more of the following:

- Chest pain
- Nausea
- Shortness of breath
- new ischemic EKG changes (S-T elevations, S-T depression, pathological Q waves)
- An Echo/MRI/Stress test that is positive for ischemia
- Thrombus seen on angiogram or autopsy

**Acute Myocardial Injury** = Elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL (upper reference limit) with a rise and/or fall in troponin **without** myocardial ischemia. Some causes of an Acute Myocardial Injury are hypertension, acute heart failure, or myocarditis.

**Type 2 Myocardial Infarction** = Elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL (upper reference limit) with a rise and/or fall in troponin **with** myocardial ischemia. With Type 2 Myocardial Infarction, a supply and demand imbalance is causing a stressor to the heart. Some causes of Type 2 Myocardial Infarction are severe hypertension, sustained tachyarrhythmias, hemorrhagic shock/anemia, sepsis, pulmonary embolism, hypoxia, respiratory failure, or heart failure.

**Type 1 NSTEMI (Non-ST Elevation Myocardial Infarction)** = Elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL with a rise and/or fall in troponin **with** myocardial ischemia related to atherosclerotic plaque disruption, which causes a complete or partial blockage in the coronary artery. The EKG during an NSTEMI will not show ST elevations.

**STEMI (ST Elevation Myocardial Infarction)** = Elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL with a rise and/or fall in troponin **with** myocardial ischemia related to atherosclerotic plaque disruption, which causes a complete or partial blockage in the coronary artery. The patient having a STEMI will develop new ST-segment elevations in 2 contiguous leads or new bundle branch blocks with ischemic repolarization patterns.

**Not documented** = The type of injury is not documented, or there is not sufficient information recorded to determine what type of injury the patient suffered.

**No** =

- A single abnormal troponin value was found without other criteria for myocardial injury.
- Troponins are elevated but stable (no rise and/or fall).
- The patient did not suffer a myocardial injury post procedure.

Reference: Thygesen, K., Alpert, J. S., Jaffe, A. S., Chaitman, B. R., Bax, J. J., Morrow, D. A., White, H. D., & The Executive Group on behalf of the Joint European Society of Cardiology (ESC)/American College of Cardiology (ACC)/American Heart Association (AHA)/World Heart Federation (WHF) Task Force for the Universal Definition of Myocardial Infarction. (2018, November 13). *Fourth Universal Definition of Myocardial Infarction (2018)*. Fourth universal definition of myocardial infarction (2018). Retrieved August 22, 2022, from <https://www.ahajournals.org/doi/epub/10.1161/CIR.0000000000000617>

## 30-Day and 6-Month Follow-up Forms

### MI

We collect MI for carotid and VS procedures at the 30-Day and 6-Month follow-up. The definition will be revised. The new language is highlighted in yellow.

**Revised definition:** Indicate if the patient was readmitted to the hospital for a myocardial infarction post procedure. This information should be gathered from a patient's medical record, not from interviewing the patient.

Enter MI if the patient is diagnosed with Type 2 Myocardial Infarction, Type 1 NSTEMI, or STEMI. If no diagnosis is documented, enter MI if the patient has an elevated cardiac troponin value(s) greater than the 99<sup>th</sup> percentile URL (upper reference limit) with a rise and/or fall in troponin and at least one of the following:

- Chest pain
- Nausea
- Shortness of breath
- new ischemic EKG changes (S-T elevations, S-T depression, pathological Q waves)
- An Echo/MRI/Stress test that is positive for ischemia
- Thrombus seen on angiogram or autopsy

Reference: Thygesen, K., Alpert, J. S., Jaffe, A. S., Chaitman, B. R., Bax, J. J., Morrow, D. A., White, H. D., & The Executive Group on behalf of the Joint European Society of Cardiology (ESC)/American College of Cardiology (ACC)/American Heart Association (AHA)/World Heart Federation (WHF) Task Force for the Universal Definition of Myocardial Infarction. (2018, November 13). *Fourth Universal Definition of Myocardial Infarction (2018)*. Fourth universal definition of myocardial infarction (2018). Retrieved August 22, 2022, from <https://www.ahajournals.org/doi/epub/10.1161/CIR.0000000000000617>