This table summarizes suggested changes to the HRA form Version I

Changes made were highlighted in yellow

<table>
<thead>
<tr>
<th>Items in HRA Form</th>
<th>Description of Changes in HRA Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Troponin I questions including Q45m, Q45n, Q46m, Q46n, Q47m, Q47n, Q49m, Q49n, Q50m, Q50n, Q52m, Q52n, Q53m, Q53n, Q55m, Q55n, Q56m and Q56n</td>
<td>• Skip instructions updated on page 10-13</td>
</tr>
<tr>
<td>Troponin T questions including Q45o, Q45p, Q46o, Q46p, Q47o, Q47p, Q49o, Q49p, Q50o and Q50p, Q52o, Q52p, Q53o, Q53p, Q55o, Q55p, Q56o, and Q56p</td>
<td>• Skip instructions updated on page 10-13</td>
</tr>
</tbody>
</table>
INSTRUCTIONS: The Hospital Record Abstraction Form is completed for all eligible Cohort hospitalizations as determined by the Cohort Eligibility Form. Event ID, Name (or Soundex code) must be entered above. Refer to this form’s Q by Q instructions for information on entering numerical responses. For multiple choice and "yes/no” questions, record the letter corresponding to the most appropriate response.

0.a. Hospital code number: 

0.b. Medical Record Number: 

0.c. Date of discharge (for nonfatal case) or death: 

Month       Day       Year

17. What was the disposition of the patient on discharge? 

Deceased D 

Discharged alive A —— Go to item 20

18. *Item deleted*
19.a. Was the patient either dead on arrival or did he/she die in the emergency room? ........... 
   Yes Y 
   No N 
   Go to Item 19e.

19.b. First recorded Systolic BP: □ □ □ mmHg

If zero or not recorded, and patient died within 24 hours, record 000 and go to item 19e. If zero or not recorded and patient lived at least 24 hours, enter 001.

19.c. First recorded Diastolic BP: □ □ □ mmHg

d. First recorded Pulse Rate: □ □ □ bpm

If pulse rate is greater than 0, go to Item 23a. If 0 or not recorded, and patient lived at least 24 hours, enter 001 and go to Item 23a. If 0 or not recorded and patient died within 24 hours, enter 000 and continue with Item 19e.

e. Was there (an) acute episode(s) of pain or discomfort anywhere in the chest, left arm or shoulder or jaw either just before death or within 72 hours of death? .................. Yes Y 
   No N 
   Unknown U
19.f. Is there a history of myocardial infarction prior to onset of this event? ......................... Yes Y
         No N
         Unknown U

  Go to Item 19h.

19.g. Did a myocardial infarction occur within four weeks of this event? ................. Yes Y
         No N
         Unknown U

19.h. Is there any history of angina pectoris or coronary insufficiency? ................. Yes Y
         No N
         Unknown U

Skip to Item 19i, and treat as an out-of-hospital death.

19.i. Is there any history of any other chronic ischemic heart disease? .................. Yes Y
         No N
         Unknown U

20. Answer the following:

a. Do the Discharge Diagnoses include any of these codes? 410, 411, I20.x, I21.x, I22.x, or I24.x codes.
   Yes Y  Go to Item 23a
   No N

b. *Item deleted*

c. *Item deleted*

d. Is there mention of acute MI in the discharge summary? .... Yes Y
   Go to Item 23a
   No N
20.e. The following apply to this chart:
(DMS will auto fill with a “Y”)
1. Is this person a cohort participant? .................. Yes Y

2. Is there more than one ECG? .... Yes Y

Go to Item 23a.

3. Is any Cardiac Enzyme above the normal limit? ........ Yes Y

Go to Item 23a.

4. Was there a transfer (in or out)? .................. Yes Y

No N

If 20e2-20e4=N, go to item 97

21.a.-21.d. *Items deleted*

22. *Item deleted*

23.b. Estimated time from onset of acute cardiac symptoms to arrival at this hospital.

<1 hour ......................... A

≥1 hour and <2 hours ...... B

≥2 hours and <4 hours ....... C

≥4 hours and <6 hours ...... D

≥6 hours and <12 hours ..... E

≥12 hours and <24 hours ..... F

≥1 day and <3 days .......... G

≥3 days ......................... H

Not recorded ..................... U

Go to Item 24b.

23.a. Did acute cardiac symptoms begin prior to arrival at this hospital?

Yes ........................................... Y

No, after arrival ......................... N

No acute cardiac symptoms .... A

Unknown ................................. U

Go to Item 24a.

24.a. What was the primary diagnosis or reason for admission to this hospital?

Elective cardiac catheterization ............... A

Elective coronary bypass surgery ............... B

Other non-acute CHD evaluation ............... C

Cancer ..................................... D

Diabetes mellitus ....................... E

Stroke ..................................... F

Chronic obstructive pulmonary disease ........ G

Peripheral vascular disease .... H

Gallbladder disease ................ I

Other ................................. O
24.b. Was there mention of an acute CHD event with onset after arrival at this hospital? ........................ Yes   Y  
                                      Go to Item 25.a.  No   N  

c. Date of in-hospital CHD event:  
                                   
Month       Day       Year  

[NOTE: If patient had both CHD event present on admission (Item 23=Y) and after admission (Item 24b=Y), you must decide which event is more important (see Instructions). Answer subsequent questions for the more important event.]  

25.a. Was there an acute episode(s) of pain or discomfort anywhere in the chest, left arm or shoulder or jaw, either within 72 hours prior to arrival to this hospital, or in conjunction with the in-hospital CHD event defined in Item 24b? ........................ Yes   Y  
                                      Go to Item 26.a.  No   N  
                                      Unknown   U  

b. Date of onset of pain:  
                           
Month       Day       Year  

25.c. Did this pain or discomfort specifically involve the chest? ........................ Yes   Y  
                                      No   N  
                                      Unknown   U  

25.d. Was the discomfort or pain diagnosed as having a non-cardiac origin? ........................ Yes   Y  
                                      No   N  
                                      Unknown   U  

25.e. If Yes, specify:  
                           
25.f. Did the patient die? ........................ Yes   Y  
                                      No   N  

25.g. Approximately how long was it from the onset of this event to death?  
                                    <1 hour  .................   A  
                               ≥1 hour and <6 hours  ....   B  
                               ≥6 hours and <24 hours  ...   C  
                                    24 hrs or more  ..........   D  
                                    Unknown  .................   U  

26.a. Was coronary reperfusion (coronary angioplasty, coronary atherectomy, bypass, intravenous or intracoronary thrombolysis) attempted in the first 24 hours after onset of this event? ........................ Yes   Y  
                                    No   N  

26.b. *Item deleted*  

26.c. *Item deleted*  

27. *Item deleted*
28. Were any of the following mentioned as being present during this hospital stay?

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Shock or cardiogenic shock (pump failure)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Go to Item 28b. No N

1. Did shock occur within the first 24 hours after onset of this event? Yes Y
   No N
   Unknown U

b. Congestive heart failure or pulmonary edema | Yes Y

Go to Item 29c. No N

1. Did CHF or pulmonary edema occur within the first 24 hours after onset of this event? Yes Y
   No N
   Unknown U

* Items 28.c., 28.d., 28.e., 28.e.1., 28.f.-28.h. deleted*

29. Were the following special procedures or operations performed during this hospital stay?

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Coronary angioplasty</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>c.2. Coronary atherectomy</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>f. Coronary bypass surgery</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>g. Intracoronary streptokinase, urokinase, anistreplase, APSAC, or TPA reperfusion</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>h. Intravenous streptokinase, urokinase, anistreplase APSAC, or TPA reperfusion</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>p.1. Coronary stent</td>
<td>Yes Y</td>
</tr>
</tbody>
</table>
   No N

30a. Was closed chest massage (CPR) and/or cardioversion attempted within 24 hours prior to arrival at this hospital or anytime during this hospitalization? ..... Yes Y No N Go to Item 32

b. Date of first onset of attempted CPR and/or cardioversion:

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

30c. *Item deleted*

31a.-31l. *Items deleted*

32. Is there a history of myocardial infarction prior to the onset of this event? ......................... Yes Y No N Unknown U

[If U, also review previous discharge diagnoses.]

33. Is there any history of angina pectoris or coronary insufficiency? ......................... Yes Y No N Unknown U

If Item 32 or Item 33 is answered "Yes", Go to Item 35.

34a. Is there a history of any other chronic ischemic heart disease? ..... Yes Y No N

Go to Item 35.

b. Specify: ________________________________

35. Is there a history of valvular disease or cardiomyopathy? .......... Yes Y No N

36. Is there a history of coronary bypass surgery prior to this event? .... Yes Y No N

37. Is there a history of coronary angioplasty prior to this event? ...... Yes Y No N

38a. Is there a history of hypertension (high blood pressure) prior to this event? ......................... Yes Y No N Unknown U

b. Does this patient have diabetes (high blood sugar), either history or diagnosed this hospitalization?................. Yes Y No N Unknown U

39. *Item deleted*

40. *Item deleted*
41. Were any cardiac enzymes reported within days 1-4 after arrival at the hospital or after in-hospital CHD event? .... Yes Y No N

Go to Item 43cc.

42. a. Is there mention of the patient having either trauma, a surgical procedure, or rhabdomyolysis, within one week prior to measurement of enzymes? .... Yes Y No N

Go to Item 42d.

b. Indicate type of procedure or trauma: Yes No

1. Cardiac procedure………………… Y N
2. CPR or cardioversion…………….. Y N
3. Other cardiac trauma……………… Y N

4. Specify:____________________

5. Rhabdomyolysis………………… Y N
6. Intramuscular injection……………. Y N
7. Non-cardiac procedure…………….. Y N

8. Specify:____________________

9. Non-cardiac trauma………………… Y N

42.c. Enter the item number from the biomarkers section of this form corresponding to the first biomarker measurement performed after the trauma, cardiac procedure or rhabdomyolysis:

42.d. Is there any evidence of hemolytic disease during the hospitalization? ........................ Yes Y No N
### B. BIOMARKERS

#### 43. LABORATORY STANDARDS

<table>
<thead>
<tr>
<th>Range Set 1</th>
<th>Upper Limit of Normal</th>
<th>Special** Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CK (CPK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CK-MB (hrt frac)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Troponin I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Troponin T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BNP (brain natriuretic peptide):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serum Creatinine:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pro- BNP:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Range Set 2</th>
<th>Upper Limit of Normal</th>
<th>Special** Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CK (CPK)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CK-MB (hrt frac)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Troponin I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Troponin T</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Special Units:**
- CK-MB, Troponin I, Troponin T
  1 = (Negative/Positive) or (Absent/Present) or (Normal/Abnormal)
  2 = (Negative/Weak Positive/Positive) or (Absent/Trace/Present) or (Normal/High Normal/Abnormal)
- CK-MB
  3 = Expressed as % of total enzyme
  4 = Expressed as proportion (decimal units) of total enzyme

If Q41=N, then answer only Q43cc, Q43dd and Q43ee. Then skip to Q56aa.
### BIOMARKERS: DAY ONE

<table>
<thead>
<tr>
<th>Item</th>
<th>Value (See Footnote next page)*</th>
<th>Range Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>44.a</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td>44.b</td>
<td>Were enzyme measurements taken on this date?</td>
<td>Yes Y No N</td>
</tr>
<tr>
<td>45.</td>
<td>Total CK (CPK)</td>
<td>a.</td>
</tr>
<tr>
<td>45.c</td>
<td>CK-MB (hrt frac)</td>
<td>c.</td>
</tr>
<tr>
<td>45.e-45.l.</td>
<td><em>Items deleted</em></td>
<td></td>
</tr>
<tr>
<td>45.</td>
<td>Troponin I</td>
<td>m.</td>
</tr>
<tr>
<td>45.</td>
<td>Troponin T</td>
<td>o.</td>
</tr>
<tr>
<td>46.</td>
<td>Total CK (CPK)</td>
<td>a.</td>
</tr>
<tr>
<td>46.c</td>
<td>CK-MB (hrt frac)</td>
<td>c.</td>
</tr>
<tr>
<td>46.e-46.l.</td>
<td><em>Items deleted</em></td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>Troponin I</td>
<td>m.</td>
</tr>
<tr>
<td>46.</td>
<td>Troponin T</td>
<td>o.</td>
</tr>
<tr>
<td>47.</td>
<td>Total CK (CPK)</td>
<td>a.</td>
</tr>
<tr>
<td>47.c</td>
<td>CK-MB (hrt frac)</td>
<td>c.</td>
</tr>
<tr>
<td>47.e-47.l.</td>
<td><em>Items deleted</em></td>
<td></td>
</tr>
</tbody>
</table>

**Footnote:**
- If Q43u, Q43v, Q43y and Q43z are all blank, Q45m and Q45n are skipped.
- If Q43w, Q43x, Q43aa and Q43bb are all blank, Q45o and Q45p are skipped.
- If Q43u, Q43v, Q43y and Q43z are all blank, Q47m and Q47n are skipped.
- If Q43w, Q43x, Q43aa and Q43bb are all blank, Q47o and Q47p are skipped.
- If Q43u, Q43v, Q43y and Q43z are all blank, Q47m and Q47n are skipped.
- If Q43w, Q43x, Q43aa and Q43bb are all blank, Q47o and Q47p are skipped.
BIOMARKERS: DAY TWO

48.a. Date

b. Were enzyme measurements taken on this date? ....... Yes Y No N

Go to Item 51.a.

Record values in chronologic order for the two highest reports for each enzyme on Day Two following arrival or in-hospital CHD event.

49. Total CK (CPK) 
   a. 
   b. 
   CK-MB (hrt frac)
   c. 
   d. 

49.e.-49.l. *Items deleted*

   Troponin I
   m. 
   n. 
   Troponin T
   o. 
   p. 

Value* Range Set

50. Total CK (CPK) 
   a. 
   b. 
   CK-MB (hrt frac)
   c. 
   d. 

50.e.-50.l. *Items deleted*

   Troponin I
   m. 
   n. 
   Troponin T
   o. 
   p. 

*Special Values:
   CK-MB, Troponin I, Troponin T
   A = Negative or absent or normal
   B = Weak positive or weak present or trace or high-normal or small
   C = Present or positive or abnormal or medium or large

If Q43u, Q43v, Q43y and Q43z are all blank, Q49m and Q49n are skipped.
If Q43w, Q43x, Q43aa and Q43bb are all blank, Q49o and Q49p are skipped.
If Q43u, Q43v, Q43y and Q43z are all blank, Q50m and Q50n are skipped.
If Q43w, Q43x, Q43aa and Q43bb are all blank, Q50o and Q50p are skipped.
BIOMARKERS: DAY THREE

51.a. Date

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Year</th>
</tr>
</thead>
</table>

b. Were enzyme measurements taken on this date?  

Yes Y  

No N

Go to Item 54.a.

Record values in chronologic order for the two highest reports for each enzyme on Day Three following arrival or in-hospital CHD event.

<table>
<thead>
<tr>
<th>Value*</th>
<th>Range Set</th>
</tr>
</thead>
</table>

52. Total CK (CPK)
   a.  
   b.  
   CK-MB (hrt frac)
   c.  
   d.  

52.e.-52.l. *Items deleted*
   Troponin I
   m.  
   n.  
   Troponin T
   o.  
   p.  

53. Total CK (CPK)
   a.  
   b.  
   CK-MB (hrt frac)
   c.  
   d.  

53.e.-53.l. *Items deleted*
   Troponin I
   m.  
   n.  
   Troponin T
   o.  
   p.  

*Special Values:
CK-MB, Troponin I, Troponin T
A = Negative or absent or normal
B = Weak positive or weak present or trace or high-normal or small
C = Present or positive or abnormal or medium or large

If Q43u, Q43v, Q43y and Q43z are all blank, Q52m and Q52n are skipped.
If Q43w, Q43x, Q43aa and Q43bb are all blank, Q52o and Q52p are skipped.
If Q43u, Q43v, Q43y and Q43z are all blank, Q53m and Q53n are skipped.
If Q43w, Q43x, Q43aa and Q43bb are all blank, Q53o and Q53p are skipped.
BIOMARKERS: DAY FOUR

<table>
<thead>
<tr>
<th>54.a. Date</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>b. Were enzyme measurements taken on this date? Y N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>Day</td>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

Go to Item 56aa.

Record values in chronologic order for the two highest reports for each enzyme on Day Four following arrival or in-hospital CHD event.

<table>
<thead>
<tr>
<th>Value*</th>
<th>Range Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>55. Total CK (CPK)</td>
<td>a.</td>
</tr>
<tr>
<td>CK-MB (hrt frac)</td>
<td>c.</td>
</tr>
<tr>
<td>55.e.-55.l. Items deleted*</td>
<td>m.</td>
</tr>
<tr>
<td>Troponin I</td>
<td>o.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Value*</th>
<th>Range Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>56. Total CK (CPK)</td>
<td>a.</td>
</tr>
<tr>
<td>CK-MB (hrt frac)</td>
<td>c.</td>
</tr>
<tr>
<td>56.e.-56.l. Items deleted*</td>
<td>m.</td>
</tr>
<tr>
<td>Troponin I</td>
<td>o.</td>
</tr>
</tbody>
</table>

*Special Values:
CK-MB, Troponin I, Troponin T
A = Negative or absent or normal
B = Weak positive or weak present or trace or high-normal or small
C = Present or positive or abnormal or medium or large

If Q43u, Q43v, Q43y, and Q43z are all blank, Q55m and Q55n are skipped.
If Q43w, Q43x, Q43aa, and Q43bb are all blank, Q55o and Q55p are skipped.
If Q43u, Q43v, Q43y, and Q43z are all blank, Q56m and Q56n are skipped.
If Q43w, Q43x, Q43aa, and Q43bb are all blank, Q56o and Q56p are skipped.
56.aa Was BNP measured?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Go to Q56af.

56.ab. Record the value of the first, last, and highest measurements of BNP (pg/ml):

1. First: 
2. date: (mm/dd/yyyy)
3. Last (if more than one): 
4. date: (mm/dd/yyyy)
5. Highest of remaining values (if more than two): 
6. date: (mm/dd/yyyy)

56.af Was pro-BNP measured?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Go to Q56ae.

56.ag. Record the value of the first, last, and highest measurements of pro-BNP (pg/ml):

1. First: 
2. date: (mm/dd/yyyy)
3. Last (if more than one): 
4. date: (mm/dd/yyyy)
5. Highest of remaining values (if more than two): 
6. date: (mm/dd/yyyy)

*Items 56.ac., 56.ad.1., 56.ad.2., 56.ad.5., 56.ad.6., 56.ad.7. 56.ad.8. deleted and captured on the CEL form*

56.ae. Is this patient currently on kidney dialysis (anytime in the last four weeks)?  

<table>
<thead>
<tr>
<th>YES</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>N</td>
</tr>
</tbody>
</table>
### C. ECG Coding

57. Were any 12 lead ECGs taken during this admission? .......... Yes Y  
   No N  
   Go to Item 97.

58. Are any of the ECGs codable: .......... Yes Y  
   No N  
   Go to Item 97.

### First Codable ECG After Arrival at Hospital (ECGF)

59. Date of ECGF: [Check calibration mark]  
   Month Day Year  
   a. Time of ECGF: H H M M  

70. Are there other codable ECGs? .......... Yes Y  
   No N  
   Go to Item 94.

### Last Codable ECG on This Admission (ECGL)

71. Date of ECGL:  
   Month Day Year  
   a. Time of ECGL: H H M M  

82. Are there other codable ECGs taken on or after day 3 after admission, or on or after day 3 following an in-hospital event? .......... Yes Y  
   No N  
   Go to Item 94.

Find the last codable ECG on day 3 after admission, or on day 3 after an in-hospital event (ECGT). [If day 3 ECG is not available, use first available ECG thereafter.]

### Third Day ECG (ECGT)

83. Date of ECGT:  
   Month Day Year  
   a. Time of ECGT: H H M M  

### D. Administrative Information

94. Were ECGs sent to ECG Reading Center? .......... Yes Y  
   No N  
   Go to Item 97.

97. Abstractor number:  

98. Date abstract completed:  
   Month Day Year