HCHS/SOL MYOCARDIAL INFARCTION ABSTRACTION FORM (MIF)

ID NUMBER:									FORM CODE: MIF VERSION: 2/20/13	Contact Occasion			SEQ #		

ADMINISTRATIVE INFORMATION

0A. Completion Date: ☐☐/☐☐/☐☐☐☐ (Month/Day/Year) 0B. Staff ID: ☐☐☐

Event ID: ☐☐☐☐☐☐☐☐☐☐☐☐ Event Date: ☐☐/☐☐/☐☐☐☐

Instructions: Answers are derived from the medical records received. Do not complete this form until all records are received (or classified as unobtainable) as indicated on the Verification of ICD Discharge Codes Form

A. GENERAL INFORMATION

1. Was the event (choose one): ☐
   1= In hospital only 2= Emergency Dept. visit only(ED) 3= Both ED and in hospital

2. Date of arrival: (mm/dd/yyyy) ☐☐/☐☐/☐☐☐☐

   a. Time of arrival ☐☐:☐☐ *1= A.M., 2 = P.M.* ☐

   b. Date of admission ☐☐/☐☐/☐☐☐☐

3. Date of discharge: (mm/dd/yyyy) ☐☐/☐☐/☐☐☐☐

   a. Time of discharge ☐☐:☐☐ *1= A.M., 2 = P.M.* ☐

4. What was the primary admitting diagnosis code? ☐☐☐☐☐.☐☐

5. What was the primary discharge diagnosis code? ☐☐☐☐☐.☐☐

	No/NR	Yes
6. Did an emergency medical service unit transport the patient to this hospital?	0☐	1☐
7. Was the patient transferred to this hospital from another hospital?	0☐	1☐
8. Was the patient's code status ever "no-code" or "DNR" (do not resuscitate)?	0☐	1☐
9. Was the patient alive at discharge? ***If Yes, go to Item 10***	0☐	1☐

9.a. Was the patient dead on arrival? No 0☐ Yes 1☐

9.b. Did the patient die in the Emergency Department? No 0☐ Yes 1☐

9.c. Was an autopsy performed? No 0☐ Yes 1☐

B. PRESENTING SIGNS AND SYMPTOMS

	No	Yes	NR (Not recorded)
10. Did the onset of the acute episode occur prior to admission?	0☐	1☐	9☐

a. If YES, estimate the time from onset of symptoms of acute condition to arrival at the hospital

< 1hr☐ ≥ 1- < 3 hrs☐ ≥ 3 - < 6 hrs☐ Unsure ☐

≥ 6 - < 12 hrs☐ ≥ 12 - < 24 hrs☐ ≥ 24 hrs. ☐

	No	Yes	NR
11. Was there mention of an acute CHD event with onset <u>after</u> arrival at the hospital?	0☐	1☐	9☐
12. Was there an acute episode(s) of pain or discomfort (eg: tightness) anywhere in the chest, arm, shoulder throat or jaw, either within 72 hours prior to arrival to the hospital, or in conjunction with the in-hospital CHD event? **(If No or NR, go to Item 13)**	0☐	1☐	9☐
a. Did this pain or discomfort specifically involve the chest?	0☐	1☐	9☐
b. Did the pain get worse (crescendo) over time?	0☐	1☐	9☐
c. Was the pain or discomfort diagnosed as having a non-cardiac origin?	0☐	1☐	9☐
13. Was there nausea or vomiting associated with this event?	0☐	1☐	9☐
14. Was there diaphoresis associated with this event?	0☐	1☐	9☐
15. Was there fatigue or malaise associated with this event?	0☐	1☐	9☐

16. Vital Signs at arrival (or event onset) and not during CPR

a. Blood pressure ☐☐☐/☐☐☐mmHg

b. Heart rate ☐☐☐bpm

C. MEDICAL HISTORY

17. Prior to this event was there history of any of the following:	No/NR	Yes
17.a. Myocardial infarction ***If No or NR, skip to 17.b.***	0☐	1☐
1. If history of MI, then MI within 4 weeks of this event?	0☐	1☐
17.b. Angina	0☐	1☐
17.c. Percutaneous coronary intervention (PCI)	0☐	1☐
17.d. CABG	0☐	1☐
17.e. Coronary artery disease (CAD)	0☐	1☐
17.f. Heart failure	0☐	1☐
17.g. Arrhythmia	0☐	1☐

<u>IF YES</u>, specify type of arrhythmia

17.g.1 Arial Fibrillation/Flutter 0☐ 1☐

17.g.2 Ventricular Fibrillation/Tachycardia 0☐ 1☐

17.g.3 Other arrhythmia 0☐ 1☐

D. ACTIVE OR CURRENT MEDICAL PROBLEMS (DURING THIS HOSPITALIZATION)

18. Did a physician indicate any of these as being present during the hospitalization? Exclude old episodes; include only current conditions.

	No/NR	Yes
18.a. Angina	0☐	1☐
18.b. Acute myocardial Infarction	0☐	1☐
18.c. ST elevation > 1mm with pain that is not present on ECG without pain	0☐	1☐
18.d. Congestive heart failure exacerbation or pulmonary edema	0☐	1☐
1. IF YES, Did heart failure/pulmonary edema occur within 24 hours of event onset?	0☐	1☐
18.e. Shock or cardiogenic shock	0☐	1☐
1. IF YES, Did shock occur within 24 hours of event onset?	0☐	1☐
18.f. Ventricular fibrillation, cardiac arrest or asystole	0☐	1☐
1. IF YES, Did the arrest occur within 24 hours of event onset?	0☐	1☐
18.g. Ventricular Tachycardia	0☐	1☐
18.h. Atrial fibrillation or atrial flutter	0☐	1☐

E. BIOMARKERS

	No/NR	Yes
19. Were cardiac enzymes reported within days 1-4 after arrival at the hospital or after the in-hospital CHD event? **If No/NR skip to 32**	0☐	1☐
a. Were cardiac enzymes reported the day of arrival at the hospital or the first day of the in-hospital CHD event? **If No/NR go to item 24.**	0☐	1☐
b. Were cardiac enzymes reported the day after arrival at the hospital or the second day of the in-hospital CHD event? **If No/NR go to item 26.**	0☐	1☐
c. Were cardiac enzymes reported the third day of the CHD event? **If No/NR go to item 28.**	0☐	1☐
d. Were cardiac enzymes reported the fourth day of the CHD event? **If No/NR go to item 30.**	0☐	1☐

Biomarker Laboratory Standards:

Units: 1= ng/mL 2 = Units/L 3 = µg/L

20. Range Set 1		Upper limit of normal (only)	Units*
a. Total CK (CPK)		a1.☐☐☐☐☐	a2.☐
b. CK-MB		b1.☐☐☐☐.☐☐	b2.☐
c. Total LDH		c1.☐☐☐☐	c2.☐
d. LDH – 1		d1.☐☐☐☐.☐☐	d2.☐
e. LDH – 2		e1.☐☐☐☐.☐☐	e2.☐
f. Troponin	☐ <	f1.☐☐☐☐.☐☐	f2.☐

f.3. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

g. Was there a second set of upper limit of normal values? **If No/NR skip to first day of reported enzymes.** No/NR 0☐ Yes 1☐

21. Range Set 2		Upper limit of normal (only)	Units*
a. Total CK (CPK)		a1.☐☐☐☐☐	a2.☐
b. CK-MB		b1.☐☐☐☐.☐☐	b2.☐
c. Total LDH		c1.☐☐☐☐	c2.☐
d. LDH – 1		d1.☐☐☐☐.☐☐	d2.☐
e. LDH – 2		e1.☐☐☐☐.☐☐	e2.☐
f. Troponin	☐ <	f1.☐☐☐☐.☐☐	f2.☐

f.3. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

Daily Biomarkers Measurements:

Note: *When a value is recorded using words rather than numerals, use the following codes to record the value:* ***absent/negative/normal = 1, trace/weak positive = 2, present/positive/abnormal = 3***

Note: *If more than two sets pick the two with the highest values of Troponin*

22. Day 1/Set 1	Date: __ __/__ __/__ __ __ __	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)		a1.	a2.	a3.
b. CK-MB	.	b1.	b2.	b3.
c. Total LDH		c1.	c2.	c3.
d. LDH-1	.	d1.	d2.	d3.
e. LDH-2	.	e1.	e2.	e3.
f. Troponin	< .	f1.	f2.	f3.

f4. What type of Troponin was this?

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

g. Was a second set of enzymes reported the first day of the CHD event? **If No/NR go to item 24.** No/NR 0 Yes 1

23. Day 1/Set 2	Date: __ __/__ __/__ __ __ __	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)		a1.	a2.	a3.
b. CK-MB	.	b1.	b2.	b3.
c. Total LDH		c1.	c2.	c3.
d. LDH-1	.	d1.	d2.	d3.
e. LDH-2	.	e1.	e2.	e3.
f. Troponin	< .	f1.	f2.	f3.

f.4. What type of Troponin was this?

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

24. Day 2/Set 1 Date: __/__/____

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)		a1.	a2.	a3.
b. CK-MB	.	b1.	b2.	b3.
c. Total LDH		c1.	c2.	c3.
d. LDH-1	.	d1.	d2.	d3.
e. LDH-2	.	e1.	e2.	e3.
f. Troponin	< .	f1.	f2.	f3.

f.4. What type of Troponin was this?

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

g. Was a second set of enzymes reported the second day of the CHD event? **If No/NR go to item 26.** No/NR 0 Yes 1

25. Day 2/Set 2 Date: __/__/____

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)		a1.	a2.	a3.
b. CK-MB	.	b1.	b2.	b3.
c. Total LDH		c1.	c2.	c3.
d. LDH-1	.	d1.	d2.	d3.
e. LDH-2	.	e1.	e2.	e3.
f. Troponin	< .	f1.	f2.	f3.

f.4. What type of Troponin was this?

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

26. Day 3/Set 1 Date: __/__/____

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)		a1.	a2.	a3.
b. CK-MB	.	b1.	b2.	b3.
c. Total LDH		c1.	c2.	c3.
d. LDH-1	.	d1.	d2.	d3.
e. LDH-2	.	e1.	e2.	e3.
f. Troponin	< .	f1.	f2.	f3.

f.4. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

g. Was a second set of enzymes reported the third day of the CHD event? **If No/NR go to item 28.** No/NR 0☐ Yes 1☐

27. Day 3/Set 2 Date: ☐☐/☐☐/☐☐☐☐

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)	☐☐☐☐☐	a1. ☐	a2. ☐	a3. ☐
b. CK-MB	☐☐☐☐.☐☐	b1. ☐	b2. ☐	b3. ☐
c. Total LDH	☐☐☐☐	c1. ☐	c2. ☐	c3. ☐
d. LDH-1	☐☐☐☐.☐☐	d1. ☐	d2. ☐	d3. ☐
e. LDH-2	☐☐☐☐.☐☐	e1. ☐	e2. ☐	e3. ☐
f. Troponin	☐ < ☐☐☐☐.☐☐	f1. ☐	f2. ☐	f3. ☐

f.4. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

28. Day 4/Set 1 Date: ☐☐/☐☐/☐☐☐☐

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)	☐☐☐☐☐	a1. ☐	a2. ☐	a3. ☐
b. CK-MB	☐☐☐☐.☐☐	b1. ☐	b2. ☐	b3. ☐
c. Total LDH	☐☐☐☐	c1. ☐	c2. ☐	c3. ☐
d. LDH-1	☐☐☐☐.☐☐	d1. ☐	d2. ☐	d3. ☐
e. LDH-2	☐☐☐☐.☐☐	e1. ☐	e2. ☐	e3. ☐
f. Troponin	☐ < ☐☐☐☐.☐☐	f1. ☐	f2. ☐	f3. ☐

f.4. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

g. Was a second set of enzymes reported the fourth day of the CHD event? **If No/NR go to item 30.** No/NR 0☐ Yes 1☐

29. Day 4/Set 2 Date: ☐☐/☐☐/☐☐☐☐

	Value	Units* (see pg. 3)	Range Set* (1or 2)	Words Code*
a. Total CK (CPK)	☐☐☐☐☐	a1. ☐	a2. ☐	a3. ☐
b. CK-MB	☐☐☐☐.☐☐	b1. ☐	b2. ☐	b3. ☐
c. Total LDH	☐☐☐☐	c1. ☐	c2. ☐	c3. ☐
d. LDH-1	☐☐☐☐.☐☐	d1. ☐	d2. ☐	d3. ☐
e. LDH-2	☐☐☐☐.☐☐	e1. ☐	e2. ☐	e3. ☐
f. Troponin	☐ < ☐☐☐☐.☐☐	f1. ☐	f2. ☐	f3. ☐

f.4. What type of Troponin was this? ☐

1= Troponin, type not specified
2= Troponin I
3= Troponin T
4= High Sensitivity Troponin (HS)
5= Unsure

30. Is there mention of the patient having either trauma, a surgical procedure, or rhabdomyolysis, within one week prior to measurement of biomarkers? 0☐No/NR 1☐Yes
If No/NR *skip to 32*

If yes, Indicate the type of procedure or trauma:

	No	Yes	Date	
a. Cardiac procedure	0☐	1☐	☐☐/☐☐/☐☐☐☐	
b. CPR or cardioversion	0☐	1☐	☐☐/☐☐/☐☐☐☐	
c. Other cardiac trauma	0☐	1☐	☐☐/☐☐/☐☐☐☐	c2. Specify:______________
d. Rhabdomyolysis	0☐	1☐	☐☐/☐☐/☐☐☐☐	
e. Intramuscular Injection	0☐	1☐	☐☐/☐☐/☐☐☐☐	
f. Non-cardiac procedure	0☐	1☐	☐☐/☐☐/☐☐☐☐	f2. Specify:______________
g. Non-cardiac trauma	0☐	1☐	☐☐/☐☐/☐☐☐☐	

31. Enter the item number from the biomarkers section (items 22-29) of this form which corresponds to the first biomarker measurement performed after the trauma, cardiac procedure or rhabdomyolysis: ☐☐

32. Is there evidence of hemolytic disease during the hospitalization? 0☐No/NR 1☐Yes

33. Did the participant have any active liver disease (cirrhosis, hepatitis, liver cancer, etc.)? 0☐No/NR 1☐Yes

F. Electrocardiography

34. Were any 12 lead ECGs taken during this admission? 0☐No 1☐Yes 9☐NR
(If this is an in-hospital event, then first ECG is at time of event)

a. First ECG Date: ☐☐/☐☐ ☐☐☐☐ b. Copy of ECG enclosed? No 0☐ Yes 1☐

c. Second ECG Date: ☐☐/☐☐ ☐☐☐☐ d. Copy of ECG enclosed? No 0☐ Yes 1☐

e. Third ECG Date: ☐☐/☐☐ ☐☐☐☐ f. Copy of ECG enclosed? No 0☐ Yes 1☐

g. Last ECG Date: ☐☐/☐☐ ☐☐☐☐ h. Copy of ECG enclosed? No 0☐ Yes 1☐

G. Procedures and Diagnostics

Were any of the following special procedures or operations performed during this hospitalization?
(Mark all that apply)

	No/NR	Yes
35. Transthoracic echocardiogram (TTE) performed? **If No/NR, *skip to 36***	0☐	1☐
a. LV Ejection fraction: ☐☐%		
36. Was a Nuclear Medicare Scan (MUGA, SPECT or radionuclide ventriculogram (RVG)) performed? **If No/NR, *skip to 37***	0☐	1☐
a. Ejection fraction: LV: ☐☐% b. RV: ☐☐%		
c. Stress test positive for ischemia	0☐	1☐
37. Was any stress test (treadmill, pharmacologic, or nuclear medicine) performed during this admission: **If No/NR, *skip to 38***	0☐	1☐
a. Ejection fraction: LV: ☐☐%		
b. Stress test positive for ischemia)	0☐	1☐
c. Greater than or equal to 1mm ST depression or elevation	0☐	1☐
d. Ischemic pain or equivalent occurred	0☐	1☐
38. Was a coronary angiography performed? **If No/NR, *skip to 39***	0☐	1☐

a. Date: (mm/dd/yyyy) ☐☐/☐☐/☐☐☐☐

b. Ejection fraction: LV: ☐☐%	No	Yes	NR
c. 70% or greater obstruction of any coronary artery	0☐	1☐	9☐
d. Were coronary bypass grafts present?	0☐	1☐	9☐

d1. If yes, number of occluded grafts: ☐☐

H. Treatment

	No/NR	Yes
39. Was coronary reperfusion (CABG, PCI, thrombolysis) attempted? **If No/NR, *Skip to 40***	0☐	1☐

39.a. If yes, what was the approximate time from event onset to reperfusion?

☐ < 2 hours ☐ 2 - <4 hours ☐ 4 - <6 hours ☐ 6 - <12 hours

☐ 12 - <24 hours ☐ 24+ hours ☐ not sure

40. Where any of the following treatments given during this hospitalization?

a. Coronary artery bypass graft surgery (CABG) 0☐ 1☐

a1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ a2. Time ☐☐:☐☐ a3. ☐ 1= am, 2 = pm

b. Coronary atherectomy 0☐ 1☐

b1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ b2. Time ☐☐:☐☐ b3. ☐ 1= am, 2 = pm

c. Intra-arterial or intravenous thrombolytic 0☐ 1☐

c1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ c2. Time ☐☐:☐☐ c3. ☐ 1= am, 2 = pm

d. Coronary angioplasty without stent 0☐ 1☐

d1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ d2. Time ☐☐:☐☐ d3. ☐ 1= am, 2 = pm

e. Coronary angioplasty with stent placement 0☐ 1☐

e1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ e2. Time ☐☐:☐☐ e3. ☐ 1= am, 2 = pm

	No/NR	Yes
f. Valve surgery	0☐	1☐
g. Non-cardiac surgery	0☐	1☐
h. Aortic balloon pump	0☐	1☐
i. Pacemaker placement (temporary or permanent)	0☐	1☐
j. Cardioversion or defibrillation	0☐	1☐

j1. If yes, Date: ☐☐/☐☐ ☐☐☐☐ j2. Time ☐☐:☐☐ j3. ☐ 1= am, 2 = pm

4. If cardioversion took place after arrival at the hospital, what rhythm(s) were present prior to cardioversion?

		No/NR	Yes
a.	Ventricular Fibrillation/Flutter	0☐	1☐
b.	Ventricular Tachycardia (VT)	0☐	1☐
c.	Asystole	0☐	1☐
d.	Complete AV Block (3 HB)	0☐	1☐
e.	Atrial Fibrillation/Flutter	0☐	1☐
f.	Pulseless Electrical Activity (PEA)	0☐	1☐

41. During the hospitalization or at discharge, did the participant receive any of the following medications?

	Admission Meds		Discharge Meds	
	No/NR	Yes	No/NR	Yes
a. Nitroglycerin	0☐	1☐	0☐	1☐
b. Beta Blockers	0☐	1☐	0☐	1☐
c. Calcium Channel Blockers	0☐	1☐	0☐	1☐
d. ACE Inhibitor or ARB	0☐	1☐	0☐	1☐
e. Scheduled aspirin (not PRN)	0☐	1☐	0☐	1☐
f. Heparin or Enoxaparin	0☐	1☐	0☐	1☐
g. Coumadin, warafin, panwafarin, dicumarol	0☐	1☐	0☐	1☐
h. Anti-platelet agents (non-aspirin)	0☐	1☐	0☐	1☐
i. Statin	0☐	1☐	0☐	1☐

42. During this hospitalization was this patient treated with:

	No/NR	Yes
a. IV pressors	0☐	1☐
b. IV nitroglycerin	0☐	1☐
c. IIb / IIIa inhibitors or thrombin inhibitors	0☐	1☐