ARIC

| HOSPITAL ABSTRACTION FORM |

ID NUMBER: ☐☐☐☐☐☐☐ FORM CODE: | H | R | A | VERSION: E DATE: 01/25/2005

LAST NAME: ☐☐☐☐☐☐☐☐☐☐ INITIALS: ☐☐

INSTRUCTIONS: The Hospital Record Abstraction Form is completed for each eligible hospitalized event as determined by the Surveillance Event Eligibility Form, and 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, circle the letter corresponding to the most appropriate response. If a letter is circled incorrectly, mark through it with an "X" and circle the correct response.

Hospital Record Abstraction Form (HRAE Screen 1 of 33)

A. MEDICAL ABSTRACTION

1.a. Hospital code number: ☐☐

[If code 96-99, name and location]:

_____

_____

b. Medical Record Number:

☐☐☐☐☐☐☐☐☐☐☐☐☐

c. Primary admission diagnosis:

☐☐☐☐ ☐☐

[Specify if diagnosis is not ICD coded]

_____

2. Record the ICD9-CM diagnoses and procedure codes from the hospital discharge index (or Eligibility Form):

a. ☐☐☐☐ ☐☐

b. ☐☐☐☐ . ☐☐

c. ☐☐☐☐ . ☐☐

d. ☐☐☐☐ . ☐☐

e. ☐☐☐☐ . ☐☐

f. ☐☐☐☐ . ☐☐

g. ☐☐☐☐ . ☐☐

h. ☐☐☐☐ . ☐☐

i. ☐☐☐☐ . ☐☐

j. ☐☐☐☐ . ☐☐

k. ☐☐☐☐ . ☐☐

l. ☐☐☐☐ . ☐☐

m. ☐☐☐☐ . ☐☐

n. ☐☐☐☐ . ☐☐

o. ☐☐☐☐ . ☐☐

p. ☐☐☐☐ . ☐☐

q. ☐☐☐☐ . ☐☐

r. ☐☐☐☐ . ☐☐

s. ☐☐☐☐ . ☐☐

t. ☐☐☐☐ . ☐☐

u. ☐☐☐☐ . ☐☐

v. ☐☐☐☐ . ☐☐

w. ☐☐☐☐ . ☐☐

x. ☐☐☐☐ . ☐☐

y. ☐☐☐☐ . ☐☐

z. ☐☐☐☐ . ☐☐

3a. Abstracting for:

ARIC Cohort.............................. C (go to question 3b)
Community................................ S (go to question 4)
JHS Cohort-not ARIC Cohort...... J (go to question 4)

3b. Is the patient's address in the ARIC
community surveillance catchment area?

Yes................... Y
No.................... N
Not determined.....U

4. Has the hospital chart for
this event been located? .... Yes   Y

Go to Item 97,
Screen 33.   No   N

5. **ENTER ON CFDB FORM**
a. Last name: _____

b. Initials: _____

6. **ENTER ON CFDB FORM**
Social Security/Medicare Number:

| | | | — | | — | | | | — | |

7. **ENTER ON CFDB FORM**
Do you know the Patient's address?

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

No ....N

Address: _____

_____

City   County   State

7.b. Zip Code:

| | | | | |

8. Sex: .... Male   M

Female   F

9. Race or ethnic group:

White/Caucasian ....   W

Black/Negro .... B

Asian/Pacific Islander ...... A

American Indian/
Native Alaskan I

Other .... O

Unknown/not recorded ..... U

a. Does this person
have health insurance? .... Yes   Y

Go to Item 10,
Screen 4.   No   N

Unknown   U

9.b. Indicate type of insurance recorded:

	Yes	No	Unknown
1. Prepaid insurance or health plan, such as BC/BS or HMO	Y	N	U
2. Medicare	Y	N	U
3. Medicaid	Y	N	U
4. Other	Y	N	U

10. ENTER ON CFDB FORM

Birthdate:

| | | — | | | — | | | | |

Month   Day   Year

11.a. Date of arrival
      at this hospital:

| | | — | | | — | | | | |

Month   Day   Year

b. Arrival time at this
    hospital (24 hr clock):

| | | : | | |

H   H   M   M

12. Did an emergency medical service
unit transport the patient to
this hospital? .... Yes   Y

                                No   N

                        Unknown   U

13.a. Was the patient transferred from or
to another acute care hospital? .... Yes   Y

| Go to Item 14, Screen 5. | ──── No   N |

FIRST TRANSFER:

13.b. Was this an in-catchment hospital? ... Yes   Y

                                          No   N

b.1. Hospital Code: _____

   If 96 - 99, specify:

     Hospital Name _____

     City _____

     State _____

c. Date of admission to that hospital:

| | | — | | | — | | | | |

Month   Day   Year

c.1.Was the patient transferred
     a second time?..................... Yes   Y

                               No   N

| Go to Item 14. | ──── |

SECOND TRANSFER:

13.d. Was this an in-catchment hospital? ... Yes   Y

                                          No   N

d.1. Hospital Code: _____

   If 96 - 99, specify:

     Hospital name _____

     City _____

     State _____

e. Date of admission to that hospital:

| | | — | | | — | | | | |

Month   Day   Year

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

| | | — | | | — | | | | |

Month   Day   Year

15. List the hospital discharge diagnosis and
    procedure codes exactly as they appear on
    the front sheet of the medical record and/or
    on the discharge summary:

a. ☐☐☐☐.☐☐

b. ☐☐☐☐.☐☐

c. ☐☐☐☐.☐☐

d. ☐☐☐☐.☐☐

e. ☐☐☐☐.☐☐

f. ☐☐☐☐.☐☐

g. ☐☐☐☐.☐☐

h. ☐☐☐☐.☐☐

i. ☐☐☐☐.☐☐

j. ☐☐☐☐.☐☐

15.k. ☐☐☐☐.☐☐

l. ☐☐☐☐.☐☐

m. ☐☐☐☐.☐☐

n. ☐☐☐☐.☐☐

o. ☐☐☐☐.☐☐

p. ☐☐☐☐.☐☐

q. ☐☐☐☐.☐☐

r. ☐☐☐☐.☐☐

s. ☐☐☐☐.☐☐

t. ☐☐☐☐.☐☐

u. ☐☐☐☐.☐☐

v. ☐☐☐☐.☐☐

w. ☐☐☐☐.☐☐

x. ☐☐☐☐.☐☐

y. ☐☐☐☐.☐☐

z. ☐☐☐☐.☐☐

16. Discharge diagnoses Transcribed (as they
    appear on front sheet of medical record
    and/or discharge summary)?
                  Yes (Y)* or No (N)
                  [If Yes, specify on notelog]

ID Label

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

    Discharged alive   A

| Go to item 20 |
| Screen 9. |

18. Was an autopsy performed? .... Yes   Y

    No   N

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. |

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 21d,
Screen 10. If 0 or not recorded, and patient
lived at least 24 hours, enter 001 and go to
Item 21d, Screen 10. 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

Go to Item 19h.

Unknown   U

g. Did a myocardial infarction
occur within four weeks of
this event? .... Yes   Y

No   N

Unknown U

h. Is there any history of
angina pectoris or coronary
insufficiency? .... Yes   Y

No   N

Unknown   U

19.i. Is there any history of
any other chronic ischemic
heart disease? .... Yes   Y

No   N

Unknown   U

Skip to Item 97, Screen 33 and
treat as an out-of-hospital death.

20. Answer the following:

a. Do the Discharge Diagnoses
include any 410 or 411 codes? ...   Yes   Y

Go to Item 21a,
Screen 10.

No   N

b. *Item deleted*

c. *Item deleted*

d. Is there mention of acute
MI in the discharge summary? ....   Yes   Y

Go to Item 21a,
Screen 10.

No   N

20.e. The following apply to this chart:

1. Is this person a
   cohort participant? .... Yes   Y

   No   N

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

   | Go to Item 21a. | No   N

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

   | Go to Item 21a. | No   N

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

   No   N

   If **all** of Items 20.e.2 - 20.e.4 are
   answered No, go to Item 97, Screen 33.

21. First recorded blood pressure
    and pulse rate (not during CPR).

a. Systolic BP: .... [| |]
         mmHg

b. Diastolic BP: .... [| |]
         mmHg

c. Pulse Rate: .... [| |]
         bpm

d. Smoking Status: ....Current smoker   C

                                   Past smoker   P

                                   Smoker NOS   S

                                   Never smoker   N

                                   Unknown   U

22. Has the Discharge Summary been transcribed or attached
    (include symptom onset, timing, hospital course, etc.)?

                Yes (Y)* or No (N)
                [If Yes, specify on notelog]

ID LABEL

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, Screen 13.]	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, Screen 13.]

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, Screen 14.]──── 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

    ┌─────────────────┐   ── No   N
    │ Go to Item 26.a, │────┤
    │ Screen 15.   │   ── 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

d. Was the discomfort or pain
    diagnosed as having a
    non-cardiac origin? .... Yes   Y

    ┌────────────────┐   ── No   N
    │ Go to Item 25f. │────┤
    └────────────────┘   ── Unknown   U

e. If Yes, specify:

    _____

f. Did the patient die? .... Yes   Y

                                    ┌──────── No   N
    ┌─────────────────┐   │
    │ Go to Item 26.a, │───────┘
    │ Screen 15.   │
    └─────────────────┘

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
    │ Go to Item 27. │───┤
    └────────────────┘

26.b. Approximately how long was it between
    event onset and attempt at reperfusion?

        < 1 hour .... A

        ≥ 1 hour and <2 hours ... B

        ≥2 hours and <4 hours ... C

        ≥4 hours and <6 hours ... D

        ≥6 hours and <8 hours ... E

        ≥8 hours .... F

        Unknown .... U

27. Was the patient ever in a
    CCU/ICU or telemetry bed
    during this hospitalization? ......Yes   Y

                                    No   N

                                    Unknown   U

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

a. Shock or cardiogenic shock
(pump failure) ....……….. Yes   Y

| 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 28c. |———————— 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

c. S3 Gallop (third heart sound) .... Yes   Y

No   N

28.d. Rales (not just basilar) .... Yes   Y

No   N

e. Ventricular fibrillation or
cardiac arrest or asystole .... Yes   Y

| Go to Item 28f. |———————— No   N

1. Did ventricular fibrillation
or cardiac arrest occur
within the first 24 hours
after onset of this event? ... Yes   Y

No   N

Unknown   U

f. Pulmonary embolus .... Yes   Y

No   N

g. Stroke ....……. Yes   Y

No   N

h. Pneumonia ....…...... Yes   Y

No   N

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

	Yes	No
a. Cardiac catheterization	Y	N
b. Coronary angiography	Y	N
c. Coronary angioplasty	Y	N

| Go to Item 29c2,
Screen 18. |

29.c.1. Approximately how long after the
onset of this event was the
performance of the coronary
angioplasty?

Before onset ....…..... A

< 1 hour ....…..... B

≥ 1 hour and <2 hours C

≥2 hours and <4 hours .... D

≥4 hours and <6 hours .... E

≥6 hours and <8 hours .... F

≥8 hours and <24 hours ... G

≥24 hours ....…..... H

Unknown ....…..... U

29.c.2 Coronary atherectomy ....Yes Y

| Go to Item 29.d.|———————— No N

c.3. Approximately how long after the
onset of this event was the
performance of the coronary
atherectomy?

       Before onset .... A

       < 1 hour .... B

       ≥ 1 hour and <2 hours C

       ≥2 hours and <4 hours ...... D

       ≥4 hours and <6 hours ...... E

       ≥6 hours and <8 hours ...... F

       ≥8 hours and <24 hours ..... G

       ≥24 hours .... H

       Unknown .... U

	Yes	No
29.d. Swan-Ganz catheterization	Y	N
e. Echocardiography	Y	N
f. Coronary bypass surgery	Y	N

| Go to Item 29g,
| Screen 19. |

f.1. Approximately how long after the onset
of this event was the performance
of the coronary bypass surgery?

       Before onset .... A

       < 1 hour .... B

       ≥ 1 hour and <2 hours C

       ≥2 hours and <4 hours .... D

       ≥4 hours and <6 hours .... E

       ≥6 hours and <8 hours .... F

       ≥8 hours and <24 hours.. ... G

       ≥24 hours .... H

       Unknown .... U

29.g. Intracoronary streptokinase,
urokinase, anistreplase,
APSAC, or TPA reperfusion .... Yes Y

                          No N

h. Intravenous streptokinase,
urokinase, anistreplase
APSAC, or TPA reperfusion .... Yes Y

                          No N

| If 29g and 29h were answered "No",
| Go to Item 29i, Screen 20. |

29.h.1. Approximately how long after the onset
of this event was the performance of the
intracoronary or intravenous reperfusion?

       Before onset .... A

       < 1 hour .... B

       ≥ 1 hour and <2 hours C

       ≥2 hours and <4 hours ..... D

       ≥4 hours and <6 hours ..... E

       ≥6 hours and <8 hours ..... F

       ≥8 hours and <24 hours .... G

       ≥24 hours .... H

       Unknown .... U

	Yes	No
29.i. Aortic balloon pump	Y	N
j. Radionucleide scan of heart	Y	N

Go to Item 29m.

k. If yes, specify type:

_____

l. *Item deleted*

m. MRI scan of heart	Y	N
n. Exercise stress test	Y	N

	Yes	No
29.o. Holter monitoring	Y	N
p. Pacemaker (temporary, wires)	Y	N
1. Coronary stent	Y	N

Go to Item 29p2,
Screen 21.

a. Approximately how long after
the onset of this event was
the placement of the coronary
stent?

Before onset	....	A
< 1 hour	....	B
≥ 1 hour and <2 hours	.....	C
≥2 hours and <4 hours	.....	D
≥4 hours and <6 hours	.....	E
≥6 hours and <8 hours	.....	F
≥8 hours and <24 hours	....	G
≥24 hours	....	H
Unknown	....	U

	Yes	No
29.p.2. Implanted defibrillator	Y	N

Go to Item 29p2b.

a. Approximately how long after the
onset of this event was the
defibrillator implanted?

Before onset	....	A
< 1 hour	....	B
≥ 1 hour and <2 hours	......	C
≥2 hours and <4 hours	......	D
≥4 hours and <6 hours	.....	E
≥6 hours and <8 hours	.....	F
≥8 hours and <24 hours	...	G
≥24 hours	....	H
Unknown	....	U

	Yes	No
29.p.2. b. Cardiac MRI	Y	N
c. Coronary CT	Y	N
d. MRI Stress Test	Y	N

29.q. Other (specify):

1._____

_____

2._____

_____

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 31.a,│ ─┐  ┌─┘
│ Screen 23.      │  └──┘
└─────────────────┘
```

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

```
┌──┬──┬──┬──┬──┬──┬──┬──┐
│  │  │─ │  │─ │  │  │  │
└──┴──┴──┴──┴──┴──┴──┴──┘
  Month    Day    Year
```

30.c. Where was first CPR and/or cardioversion started?

(Circle one)

Private residence .... R

Work ....….. W

Public place ….......…. P

Emergency vehicle V

Emergency room ....E

Hospital ....…..... H

Other ....…........ O

Not recorded ....… U

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31. Were any of the following drugs given during
this hospitalization or at discharge?

	Yes	No
a. Nitrates	Y	N
b. Calcium channel blockers	Y	N
c. Beta-blockers	Y	N
d. Digitalis	Y	N
e. Lidocaine (xylocaine) I.V. or I.M. only	Y	N
f. Coumadin (Warfarin, Panwarfin, Dicumarol)	Y	N

	Yes	No
g. Aspirin - on regular basis (not PRN)	Y	N
h. ACE or Angiotensin II inhibitors	Y	N
i. Intravenous heparin infusion	Y	N
j. Antiplatelet agents (non-aspirin)	Y	N
k. Glucose, insulin, potassium infusion (GIK)	Y	N
l. Lipid lowering medications (Statins, Niacin, Other)	Y	N

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.

34.a. 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

38.a. 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. Is there a history of
stroke prior to this event? ..... Yes   Y

                    No   N

  | Go to Item 41. |

                Unknown   U

40. Did a stroke occur within 4
weeks prior to this event? .... Yes   Y

                          No   N

                   Unknown   U

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 57,
Screen 32. |

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:

d. Is there any evidence of
hemolytic disease during
the hospitalization? .... Yes   Y

                                 No   N

B. BIOMARKERS

43. <u>LABORATORY STANDARDS</u>

<u>Range Set 1</u>   Upper Limit <u>of Normal</u>   Special** <u>Units</u>

		Upper Limit of Normal	Special** Units
Total CK (CPK)	a.	☐☐☐☐☐	
CK-MB (hrt frac)	b.	☐☐☐☐.☐☐	c. ☐
Total LDH	d.	☐☐☐	
LDH1	e	☐☐☐☐.☐☐	f. ☐
LDH2	g.	☐☐☐☐.☐☐	h. ☐
LDH1/LDH2	i.	☐☐☐.☐☐	j. ☐
Troponin I	u.	☐☐☐.☐☐	v. ☐
Troponin T	w.	☐☐☐.☐☐	x. ☐
BNP (brain natriuretic peptide):	cc.	☐☐☐.☐ pg/ml	
Serum Creatinine:	dd.	☐☐.☐ mg/dl	

<u>Range Set 2</u>   Upper Limit <u>of Normal</u>   Special** <u>Units</u>

		Upper Limit of Normal	Special** Units
Total CK (CPK)	k.	☐☐☐☐☐	
CK-MB (hrt frac)	l.	☐☐☐☐.☐☐	m. ☐
Total LDH	n.	☐☐☐	
LDH1	o.	☐☐☐☐.☐☐	p. ☐
LDH2	q.	☐☐☐☐.☐☐	r. ☐
LDH1/LDH2	s.	☐☐☐.☐☐	t. ☐
Troponin I	y.	☐☐☐.☐☐	z. ☐
Troponin T	aa.	☐☐☐.☐☐	bb. ☐

**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, LDH1, LDH2
   3 = Expressed as % of total enzyme
   4 = Expressed as proportion (decimal units) of total enzyme
  LDH1/LDH2
   5 = %
   6 = Proportion (decimal)
   7 = (Negative/Positive) or (LDH1 ≤ LDH2 / LDH1 > LDH2)

BIOMARKERS: DAY ONE

44.a. Date ☐☐ — ☐☐ — ☐☐☐☐

      Month   Day   Year

b. Were enzyme measurements taken on this date?..... Yes Y

| Go To Item 48.a, Screen 29. | No N

Record values in chronologic order for the three highest reports for each enzyme on Day One of arrival or in-hospital CHD event. (LDH1 and LDH2 must be on same specimen.)

                        Value (See Footnote next page)*   Range Set

45.	Total CK (CPK)	a.	☐☐☐☐☐		b. ☐
	CK-MB (hrt frac)	c.	☐☐☐☐ . ☐☐		d. ☐
	Total LDH	e.	☐☐☐☐		f. ☐
	LDH1	g.	☐☐☐ . ☐☐		h. ☐
	LDH2	i.	☐☐☐ . ☐☐		j. ☐
	LDH1/LDH2	k.	☐☐ . ☐☐		l. ☐
	Troponin I	m.	☐☐ . ☐☐		n. ☐
	Troponin T	o.	☐☐ . ☐☐		p. ☐
46.	Total CK (CPK)	a.	☐☐☐☐☐		b. ☐
	CK-MB (hrt frac)	c.	☐☐☐☐ . ☐☐		d. ☐
	Total LDH	e.	☐☐☐☐		f. ☐
	LDH1	g.	☐☐☐ . ☐☐		h. ☐
	LDH2	i.	☐☐☐ . ☐☐		j. ☐
	LDH1/LDH2	k.	☐☐ . ☐☐		l. ☐
	Troponin I	m.	☐☐ . ☐☐		n. ☐
	Troponin T	o.	☐☐ . ☐☐		p. ☐
47.	Total CK (CPK)	a.	☐☐☐☐☐		b. ☐
	CK-MB (hrt frac)	c.	☐☐☐☐ . ☐☐		d. ☐
	Total LDH	e.	☐☐☐☐		f. ☐
	LDH1	g.	☐☐☐ . ☐☐		h. ☐
	LDH2	i.	☐☐☐ . ☐☐		j. ☐
	LDH1/LDH2	k.	☐☐ . ☐☐		l. ☐
	Troponin I	m.	☐☐ . ☐☐		n. ☐
	Troponin T	o.	☐☐ . ☐☐		p. ☐

BIOMARKERS: DAY TWO

48.a. Date ☐☐—☐☐—☐☐☐☐
Month   Day   Year

b. Were enzyme measurements taken on this date? .... Yes   Y

No   N

| Go to Item 51.a, Screen 30. |

Record values in chronologic order for the two highest reports for each enzyme on Day Two following arrival or in-hospital CHD event. (LDH1 and LDH2 must be on same specimen.)

			Value*		Range Set
49.	Total CK (CPK)	a.	☐☐☐☐☐	b.	☐
	CK-MB (hrt frac)	c.	☐☐☐☐.☐☐	d.	☐
	Total LDH	e.	☐☐☐☐	f.	☐
	LDH1	g.	☐☐☐☐.☐☐	h.	☐
	LDH2	i.	☐☐☐☐.☐☐	j.	☐
	LDH1/LDH2	k.	☐☐☐.☐☐	l.	☐
	Troponin I	m.	☐☐☐.☐☐	n.	☐
	Troponin T	o.	☐☐☐.☐☐	p.	☐

			Value*		Range Set
50.	Total CK (CPK)	a.	☐☐☐☐☐	b.	☐
	CK-MB (hrt frac)	c.	☐☐☐☐.☐☐	d.	☐
	Total LDH	e.	☐☐☐☐	f.	☐
	LDH1	g.	☐☐☐☐.☐☐	h.	☐
	LDH2	i.	☐☐☐☐.☐☐	j.	☐
	LDH1/LDH2	k.	☐☐☐.☐☐	l.	☐
	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
LDH1/LDH2
    D = LDH1/LDH2 reported only as $\geq$ upper limit or positive or LDH1 > LDH2 (or "flipped")
    E = LDH1/LDH2 reported only as < upper limit or negative or LDH1 $\leq$ LDH2 (or "non-flipped)

BIOMARKERS: DAY THREE

51.a. Date ☐☐ — ☐☐ — ☐☐☐☐
      Month   Day   Year

b. Were enzyme measurements taken on this date? .... Yes Y

Go to Item 54.a, Screen 31. ————— No N

Record values in chronologic order for the two highest reports for each enzyme on Day Three following arrival or in-hospital CHD event. (LDH1 and LDH2 must be on same specimen.)

		Value*	Range Set
52.	Total CK (CPK)	a. ☐☐☐☐☐	b. ☐
	CK-MB (hrt frac)	c. ☐☐☐☐ . ☐☐	d. ☐
	Total LDH	e. ☐☐☐☐	f. ☐
	LDH1	g. ☐☐☐☐ ☐☐	h. ☐
	LDH2	i. ☐☐☐☐ ☐☐	j. ☐
	LDH1/LDH2	k. ☐☐☐ ☐☐	l. ☐
	Troponin I	m. ☐☐☐ ☐☐	n. ☐
	Troponin T	o. ☐☐☐ ☐☐	p. ☐

		Value*	Range Set
53.	Total CK (CPK)	a. ☐☐☐☐☐	b. ☐
	CK-MB (hrt frac)	c. ☐☐☐☐ . ☐☐	d. ☐
	Total LDH	e. ☐☐☐☐	f. ☐
	LDH1	g. ☐☐☐☐ . ☐☐ .	h. ☐
	LDH2	i. ☐☐☐☐ . ☐☐ .	j. ☐
	LDH1/LDH2	k. ☐☐☐ . ☐☐ .	l. ☐
	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
LDH1/LDH2
    D = LDH1/LDH2 reported only as ≥ upper limit or positive or LDH1 > LDH2 (or "flipped")
    E = LDH1/LDH2 reported only as < upper limit or negative or LDH1 ≤ LDH2 (or "non-flipped")

BIOMARKERS: DAY FOUR

54.a. Date ☐☐–☐☐–☐☐☐☐
       Month   Day   Year

b. Were enzyme measurements taken on this date? .... Yes   Y

No   N

| Go to Item 57, Screen 32. |

Record values in chronologic order for the two highest reports for each enzyme on Day Four following arrival or in-hospital CHD event. (LDH1 and LDH2 must be on same specimen.)

			Value*		Range Set
55.	Total CK (CPK)	a.	☐☐☐☐☐		b. ☐
	CK-MB (hrt frac)	c.	☐☐☐☐.☐☐		d. ☐
	Total LDH	e.	☐☐☐☐		f. ☐
	LDH1	g.	☐☐☐☐.☐☐.		h. ☐
	LDH2	i.	☐☐☐☐.☐☐.		j. ☐
	LDH1/LDH2	k.	☐☐☐.☐☐.		l. ☐
	Troponin I	m.	☐☐☐.☐☐.		n. ☐
	Troponin T	o.	☐☐☐.☐☐.		p. ☐

			Value*		Range Set
56.	Total CK (CPK)	a.	☐☐☐☐☐ ←		b. ☐
	CK-MB (hrt frac)	c.	☐☐☐☐.☐☐		d. ☐
	Total LDH	e.	☐☐☐☐		f. ☐
	LDH1	g.	☐☐☐☐.☐☐.		h. ☐
	LDH2	i.	☐☐☐☐.☐☐.		j. ☐
	LDH1/LDH2	k.	☐☐☐.☐☐.		l. ☐
	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

LDH1/LDH2
      D = LDH1/LDH2 reported only as $\geq$ upper limit or positive or LDH1 > LDH2 (or "flipped")
      E = LDH1/LDH2 reported only as < upper limit or negative or LDH1 $\leq$ LDH2 (or "non-flipped)

56.aa Was BNP measured?   Yes   No
                                                           Y   N.

                          ┌─────────────────────────┐
                          │ Go to question 56.ac.   │──┐
                          └─────────────────────────┘ ┘

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: ⬚⬚ . ⬚   6. date: ⬚⬚—⬚⬚—⬚⬚⬚⬚   (mm/dd/yyyy)
      (if more than two)

56.ac. Was serum creatinine measured?   Yes   No
                                                           Y   N.

                          ┌─────────────────────────┐
                          │ Go to question 56.ae.   │──┐
                          └─────────────────────────┘ ┘

56.ad. Record the value of the first, second, and last measurements of serum creatinine (mg/dl):

   1: First: ⬚⬚⬚ . ⬚   2. date: ⬚⬚—⬚⬚—⬚⬚⬚⬚   (mm/dd/yyyy)

   3: Second: ⬚⬚⬚ . ⬚   4. date: ⬚⬚—⬚⬚—⬚⬚⬚⬚   (mm/dd/yyyy)

   5: Last: ⬚⬚⬚ . ⬚   6. date: ⬚⬚—⬚⬚—⬚⬚⬚⬚   (mm/dd/yyyy)

56.ae.   Is this patient currently on kidney dialysis (anytime in the last four weeks)?   YES   Y
                                                                                            NO   N

C. ECG CODING

57. Were any 12 lead ECGs taken
    during this admission? .... Yes   Y

    ── No   N

    Go to Item 97,
    Screen 33.

58. Are any of the ECGs codable: .... Yes   Y

    ── No   N

    Go to Item 97,
    Screen 33.

FIRST CODABLE ECG AFTER ARRIVAL AT HOSPITAL (ECGF)

59. Date of ECGF ☐ ☐ — ☐ ☐ — ☐ ☐ ☐ ☐
    Month   Day   Year
    [Check calibration mark]

    a. Time of ECGF: ☐ ☐ : ☐ ☐
       H H   M M

70. Are there other codable ECGs? .... Yes   Y

    ── No   N

    Go to Item 94,
    Screen 33.

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,
    Screen 33.

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

---

94. Were ECGs sent to
    Minnesota ECG Reading Center? ..... Yes   Y

    Go to Item 97 ── No   N

	Yes	No
a. ECGF sent?	Y	N
b. ECGL sent?	Y	N
c. ECGT sent?	Y	N

D. ADMINISTRATIVE INFORMATION

97. Abstractor number: ☐ ☐ ☐

98. Date abstract
    completed: ☐ ☐ — ☐ ☐ — ☐ ☐ ☐ ☐
    Month   Day   Year

99. Method of data collection: .... Computer   C

    Paper   P