GRACE™

GLOBAL REGISTRY OF ACUTE CORONARY EVENTS

DO NOT SUBMIT OR FAX THIS PAGE TO COR

Patient #	**Patient Initials**	**Date of Birth**	**Medical Record Number**
_____	___ ___ ___	___ ___ ___	_____
	F M L	DD MM YY	

Patient:

Name: _____

Address: _____

_____

Telephone (home): _____ Telephone (work): _____

Expected 6-month Follow-up Date: _____

Family Physician:

Name: _____

Address: _____

_____

Telephone: _____

Cardiologist/Internist:

Name: _____

Address: _____

_____

Telephone: _____

Date CRF Submitted to COR: ____ ____ ____

Date Corrections Returned: ____ ____ ____
(in response to QC Report)

Date Corrections Returned: ____ ____ ____
(in response to QC Report)

Summary of GRACE Eligibility Criteria

Basic GRACE Eligibility Criteria:
- Must have one of the Acute Coronary Syndromes as a presumptive diagnosis.
- Must be 18 years of age or over.
- The **qualifying** acute coronary syndrome must **not** have been precipitated or accompanied by a significant co-morbidity such as a motor vehicle accident, trauma, severe gastrointestinal bleeding, operation or procedure.
- Patients who are already hospitalized when they develop qualifying ACS symptoms are not eligible for enrollment in ***GRACE***.

Early Deaths:
- Must be alive at the time of hospital presentation.
- Patients hospitalized for less than 1 day who die may be enrolled provided that the cause of death is confirmed to be due to ACS.

Transfer Patients:
- Patients transferred into or out of a registry hospital can be enrolled regardless of the time spent at the transferring hospital.
- For patients transferred out of a registry hospital, data collection for the Initial CRF will end with the transfer and indication of purpose of transfer.

Patients can be enrolled more than once:
- Patients may be re-enrolled provided that at least 6 months have passed since their prior enrollment. When a patient is re-enrolled, a new ***GRACE*** patient identification number must be assigned.

Confirmation of Eligibility

Symptoms felt to be consistent with acute cardiac ischemia within 24 hours of hospital presentation.

Plus, a minimum of 1 of the definitions for 1 (or more) of the following 4 criteria:

History of CAD
- History of MI, angina, CHF felt to be due to ischemia or resuscitated sudden cardiac death.
- History of positive stress test with/without imaging.
- History of cardiac catheterization documenting CAD.
- History of PCI or CABG.

New Documentation of CAD
- New positive stress test with/without imaging.
- New cardiac catheterization documenting CAD.
- New PCI or CABG.

ECG Changes
- Transient ST segment elevations of ≥ 1 mm.
- ST segment depressions of ≥ 1 mm.
- New T wave inversions of ≥ 1 mm.
- Pseudo-normalization of previously inverted T waves.
- New Q waves (1/3 the height of the R wave or ≥ 0.04 secs.).
- New R wave >S wave in lead V_1 (posterior MI).
- New LBBB.

Increase in Cardiac Enzymes
- CKMB 2x upper limit of the hospital's normal range, OR if no CKMB available, then total CPK >2 x upper limit of the hospital's normal range.
- Positive troponin I.
- Positive troponin T.

A. ENROLLMENT

2. Where Identified
1 = CCU/ICU
2 = Cath Lab
3 = ER / ED
4 = Cardiac Unit
5 = General Unit
6 = Admit List
7 = Other

C. MEDICAL HISTORY

15. Smoker
1 = Former smoker
2 = Current smoker
9 = Status not recorded

16. Diabetes
1 = Diet controlled
2 = Oral hypoglycemics
3 = Insulin-dependent
4 = No treatment used
9 = Type not recorded

17. Renal Insufficiency
1 = No Dialysis
2 = Dialysis

9519

GRACE Initial Form v3.5

Site ID (Required) ☐☐☐☐☐ **Patient ID (Required)** ☐☐☐☐

General Information

Pt. Initials ☐☐☐ (F M L) **Date of Birth (Required)** ☐☐ (day) ☐☐☐ (month) 19☐☐ (year)

A. Enrollment

1. Confirmation of Eligibility per *GRACE* Protocol: (Fill in all that apply)

- ○ Symptoms of Ischemia ***and***
- ○ History of CAD
- ○ New Documentation of CAD
- ○ Qualifying ECG Changes
- ○ Positive Cardiac Enzymes

2. Pursuit Type: (Fill in one) ○ Cold ○ Warm **If warm, where identified?*** ☐

B. Demographics

1. Postal Code (Patient Residence) ☐☐☐☐☐☐☐☐☐☐

2. Gender (Required) ○ Male ○ Female

3. Admission Weight ☐☐☐ ○ lb ○ kg

4. Height ☐☐☐ ○ in ○ cm

C. Medical History (If Yes to 15 - 17, please provide code.*)

	No	Yes
1. Angina	○	○
2. MI	○	○
3. CHF	○	○
4. Coronary Angiogram Diagnostic for CAD	○	○
5. PCI	○	○
6. CABG	○	○
7. Valve Repair/ Replacement	○	○
8. Family History of CAD	○	○
9. Positive Stress Test	○	○
10. Hypertension	○	○
11. Dyslipidemia	○	○
12. Peripheral Arterial Disease	○	○
13. Atrial Fib	○	○
14. TIA/Stroke	○	○
15. Smoker*	○	○ → ☐
16. Diabetes*	○	○ → ☐
17. Renal Insufficiency*	○	○ → ☐
18. Major Surgery	○	○
19. Major Bleeding	○	○
20. Internal Cardiac Defibrillator (ICD)	○	○
21. History of Venous Thromboembolism	○	○

D. Presentation

1. Symptom Onset (Prompting Presentation to Hospital) Date: ☐☐ (day) ☐☐☐ (month) ☐☐ (year) Time: ☐☐ : ☐☐ (24 hour clock)

2. Hospital #1 Arrival (Required if not transferred) Date: ☐☐ (day) ☐☐☐ (month) ☐☐ (year) Time: ☐☐ : ☐☐ (24 hour clock)

3. BP ☐☐☐ (systolic) / ☐☐☐ (diastolic)

4. Pulse ☐☐☐ bpm

D. PRESENTATION

6. Killip Class
1 = I (No CHF)
2 = II (Rales)
3 = III (Pulmonary Edema)
4 = IV (Cardiogenic Shock)

7. Presumptive Admission Diagnosis
1 = MI
2 = Unstable Angina
3 = Rule out MI or suspected ACE/ACS
4 = Chest Pain
5 = Other Cardiac
6 = Other

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Site ID (Required) ☐☐☐☐☐ **Patient ID (Required)** ☐☐☐☐

D. Presentation (continued)

5. Cardiac arrest at presentation? ○ No ○ Yes **6. Killip Class*** ☐

7. Presumptive Admission Diagnosis* ☐

8. Was patient transferred from another hospital? ○ No ○ Yes

9. If Yes, Hospital #2 Arrival (Required if transferred)

Date			Time	
☐☐	☐☐☐	☐☐	☐☐ :	☐☐
day	*month*	*year*	*(24 hour clock)*	

10. Reason for transfer: (Fill in all that apply)

- ○ Acute Care
- ○ Cardiac Cath
- ○ PCI
- ○ CABG
- ○ Other

E. ECG Findings

1a. Index ECG (Prompted by ACS symptoms)

Date			Time	
☐☐	☐☐☐	☐☐	☐☐ :	☐☐
day	*month*	*year*	*(24 hour clock)*	

Was Index ECG done in pre-hospital setting? ○ No ○ Yes

1b. Was Index ECG abnormal for Ischemia? (Required)

○ No ○ Yes → *If Yes, note abnormalities below.*

	Anterior	Inferior	Lateral
ST ↑ (≥1mm)	○	○	○
ST ↓ (≥1mm)	○	○	○
Significant Q Waves	○	○	○
T Wave Inversions	○	○	○

○ Left Bundle Branch Block

1c. Other abnormalities? (Fill in all that apply)

- ○ AV Block (Mobitz II, 3°)
- ○ Atrial Fib/Flutter
- ○ Nonspecific ST/T Change
- ○ Vtach
- ○ Paced Rhythm
- ○ Posterior Infarction
- ○ Left Ventricular Hypertrophy
- ○ RBBB

1d. Were any of the ischemic abnormalities on the index ECG new or presumed new?

- ○ Not Applicable (index ECG had no ischemic abnormalities)
- ○ Unknown
- ○ No
- ○ Yes → *If Yes, note new and presumed new abnormalities below.*

	Anterior	Inferior	Lateral
ST ↑ (≥1mm)	○	○	○
ST ↓ (≥1mm)	○	○	○
Significant Q Waves	○	○	○
T Wave Inversions	○	○	○

○ Left Bundle Branch Block

1e. Other new abnormalities? (Fill in all that apply)

- ○ AV Block (Mobitz II, 3°)
- ○ Atrial Fib/Flutter
- ○ Nonspecific ST/T Change
- ○ Vtach
- ○ Paced Rhythm
- ○ Posterior Infarction
- ○ Left Ventricular Hypertrophy
- ○ RBBB

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Site ID (Required) | | | | | | **Patient ID (Required)** | | | | |

E. ECG Findings (continued)

2a. Did the patient develop ST↑ or LBBB after the index ECG?

○ No ○ Yes

↓

If Yes, specify date and time:

Date *day* *month* *year* **Time** *(24 hour clock)*

2b. Did the patient develop any of the following after the index ECG? (Fill in all that apply)

○ **Significant Q Waves or R>S in V1**

↓

If Yes, specify date and time:

Date *day* *month* *year* **Time** *(24 hour clock)*

○ **ST Depressions** (≥1mm)

↓

If Yes, specify date and time:

day *month* *year* *(24 hour clock)*

○ **T Wave Inversions**

↓

If Yes, specify date and time:

day *month* *year* *(24 hour clock)*

F. Laboratory

1. Initial Creatinine | | | . | | ○ umol/liter ○ mg/dl

2. Peak Creatinine | | | . | | ○ umol/liter ○ mg/dl

3. Initial WBC | | | . | | ○ 10^3/cc ○ 10^9/L

			Prior to hospital presentation	<24 hrs after hospital presentation	≥24 hrs after hospital presentation
4. Serum Cholesterol		○ mmol/liter ○ mg/dl	○	○	○
LDL		○ mmol/liter ○ mg/dl	○	○	○
HDL		○ mmol/liter ○ mg/dl	○	○	○
Triglycerides		○ mmol/liter ○ mg/dl	○	○	○

5. Initial Glucose | | | . | | ○ mmol/liter ○ mg/dl

Fasting Glucose | | | . | | ○ mmol/liter ○ mg/dl

H1. CARDIAC CATH / INTERVENTIONS

Culprit Lesion Territory

1 = LM
2 = LAD
3 = LCX
4 = RCA
5 = Vein Bypass Graft
6 = Arterial Bypass Graft
7 = Unknown

Culprit Artery TIMI Flow

1 = Occluded (TIMI 0/1)
2 = Slow (TIMI 2)
3 = Normal (TIMI 3)
4 = Unknown

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Site ID (Required) _____ **Patient ID (Required)** _____

F. Laboratory (continued)

6. Cardiac Markers - Initial Values

CPK _____ CK-MB _____.

CPK ULN _____ CK-MB ULN _____.

Date and Time

_____ _____ _____ _____:_____

day *month* *year* *(24 hour clock)*

Troponin ○ I **OR** ○ T Value _____.

ULN _____.

Date and Time

_____ _____ _____ _____:_____

day *month* *year* *(24 hour clock)*

7. Cardiac Markers - Maximum Values in 1st 24 hrs

CPK _____ CK-MB _____.

CPK ULN _____ CK-MB ULN _____.

Date and Time

_____ _____ _____ _____:_____

day *month* *year* *(24 hour clock)*

Troponin ○ I **OR** ○ T Value _____.

ULN _____.

Date and Time

_____ _____ _____ _____:_____

day *month* *year* *(24 hour clock)*

8. Biomarkers

CRP _____. ○ mg/dl ○ mg/l

BNP _____ ○ pcg/ml ○ pg/ml

Homocysteine _____ µmol/liter

G. Procedures

	No	Yes	
1. Pacemaker	○	○	→ **Type:** (Fill in all that apply) ○ Temporary ○ Permanent ○ ICD
2. Echocardiography	○	○	
3. PA Catheter	○	○	
4. Ventilator	○	○	
5. IABP	○	○	
6. Stress Test	○	○	→ ○ Pos ○ Neg

H. Cardiac Cath/Interventions

Patient/Family Refused Procedure (Fill in all that apply)

○ **Cardiac Cath** ○ **PCI** ○ **CABG**

1. Cardiac Cath ○ No ○ Yes

Date _____ _____ _____ (*day* *month* *year*)

Time _____:_____ (*24 hour clock*)

Total # of Cath Procedures _____ (during hospitalization)

Stenosis ≥ 50% in territories (Fill in all that apply)

○ LM ○ LAD ○ LCX ○ RCA ○ Bypass Graft(s)

Culprit Lesion Stenosis: _____ % Culprit Lesion Territory:* _____ Culprit Artery TIMI Flow:* _____

H. CARDIAC CATH / INTERVENTIONS

2. PCI Type

1 = Primary/direct (immediate mode of reperfusion in AMI)
2 = Rescue (after failed thrombolysis, where failed refers to ongoing/recurrent ischemic discomfort and/or lack of ST segment elevation resolution or recurrent ST elevation)
3 = Early PCI for cardiogenic shock
4 = PCI for treatment of unstable angina
5 = PCI for treatment of post AMI ischemia
6 = Facilitated PCI (immediate PCI following successful thrombolysis, or in conjunction with thrombolysis)
7 = Non-emergent adjunctive PCI of non-culprit lesion (stayed)
8 = Other (including non-emergent elective PCI of suspected culprit lesion)

3. Type of Graft(s)

1 = Vein graft(s)
2 = Arterial graft(s)
3 = Both Vein and Arterial graft(s)

I. LVEF

LVEF Grade

1 = Normal
2 = Mildly Diminished
3 = Moderately Diminished
4 = Severely Diminished

LVEF How Obtained

1 = Ventriculogram (angiogram)
2 = Nuclear Imaging
3 = Echo

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Site ID (Required) ☐☐☐☐☐ **Patient ID (Required)** ☐☐☐☐

H. Cardiac Cath/Interventions (continued)

2. PCI ○ No ○ Yes **Date** ☐☐ *day* ☐☐☐ *month* ☐☐ *year* **Time** ☐☐ : ☐☐ *(24 hour clock)* **Total # of PCI Procedures** ☐ *(during hospitalization)*

Indicate for 1st PCI: # of Dilated Vessels ☐ # of Stents ☐ PCI Type* ☐

○ Done with Brachytherapy ○ Drug Coated Stent(s) → If Yes, Number of Coated Stents ☐ ○ Failed Procedure

3. CABG ○ No ○ Yes **Date** ☐☐ *day* ☐☐☐ *month* ☐☐ *year* # of Distal Graft(s) ☐ Type of Graft(s)* ☐

I. LVEF

LVEF ○ No ○ Yes ☐☐ % **OR** **Grade*** ☐ **How obtained*:** ☐

J. Thrombolytics

Thrombolytics ○ No ○ Yes → **If Yes, # of treatments** ☐

Date of first ☐☐ *day* ☐☐☐ *month* ☐☐ *year* **Time** ☐☐ : ☐☐ *(24 hour clock)*

○ **Thrombolytics contraindicated**

1. Name of First Thrombolytic Drug: (Fill in one from below)

○ Streptokinase ○ t-PA ○ r-PA ○ TNK-tPA ○ Other ○ Blinded Study Drug

Dose (Fill in one) ○ half ○ full

2. Thrombolytic Initiation Site (Fill in one) ○ Pre-hospital ○ In-hospital

3. Drugs administered simultaneously with thrombolytic (Fill in all that apply)

○ GP IIb/IIIa ○ LMWH ○ Unfractionated Heparin ○ Blinded Study Drug

K. ANTIPLATELETS / ANTITHROMBINS / ANTICOAGULANTS

14. IV GP IIIb/IIIa: Reason for Administration

1 = With PCI (started before PCI)
2 = Without PCI (medical treatment)
3 = Rescue (instituted after start of PCI. Sometimes referred to as bail-out use)

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Site ID (Required) ☐☐☐☐☐ **Patient ID (Required)** ☐☐☐☐

K. Antiplatelets/Antithrombins/Anticoagulants (Fill in all that apply for each medication)

	Blinded Study Drug	Chronic Use	Pre-Hospital Acute	Within 1st 24 hrs Hospital	After 1st 24 hrs Hospital	Peri-PCI	Prescribed at Discharge	Not Prescribed
1. Aspirin (Required)	○	○ ↓ dosage ☐☐☐☐ mg/day	○	○	○		○ ↓ dosage ☐☐☐☐ mg/day	○
2. Warfarin or other Vitamin K Antagonist	○	○	○	○	○		○	○
3. Ticlopidine	○	○	○	○	○	○	○	○
4. Clopidogrel (Required)	○	○	○	○	○	○	○	○
5. Unfractionated Heparin	○		○	○	○	○		○
6. IV Enoxaparin	○		○	○	○	○		○
7. SQ Enoxaparin (Required)	○	○	○	○	○	○	○	○
8. Bivalirudin	○	○	○	○	○	○	○	○
9. Fondaparinux	○	○	○	○	○	○	○	○
10. Other Direct Thrombin Inhibitors	○	○	○	○	○	○	○	○
11. Other LMW Heparin	○	○	○	○	○	○	○	○
12. Other Antiplatelet	○	○	○	○	○	○	○	○
13. Other Antithrombin	○	○	○	○	○	○	○	○
14. IV GP IIb/IIIa	○		○	○	○	○		○

↓ Reason for Administration:* ☐

GP IIb/IIIa simultaneous drug administration with: (Fill in all that apply)

○ Unfractionated Heparin ○ LMWH

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Site ID (Required) | | | | | | **Patient ID (Required)** | | | | |

L. Other Medications (Fill in all that apply for each medication)

	Blinded Study Drug	Chronic Use	Pre-Hospital Acute **OR** Within 1st 24 hrs Hospital	After 1st 24 hrs Hospital	Prescribed at Discharge/ Transfer	Not Prescribed
1. ACE Inhibitor	○	○	○	○	○	○
2. Amiodarone	○	○	○	○	○	○
3. Angiotensin II Receptor Blocker (ARB)	○	○	○	○	○	○
4. Beta Blocker (IV)	○		○	○		○
5. Beta Blocker (Oral)	○	○	○	○	○	○
6. Calcium Channel Blocker	○	○	○	○	○	○
7. Digoxin	○	○	○	○	○	○
8. Diuretic	○	○	○	○	○	○
9. Glucose/Insulin/Potassium (GIK)	○		○	○		○
10. Inotropic Agent (IV)	○		○	○	○	○
11. Insulin	○	○	○	○	○	○
12. Insulin Provider	○	○	○	○	○	○
13. Insulin Sensitizer	○	○	○	○	○	○
14. Magnesium (IV)	○		○	○		○
15. Nitrate (IV)	○		○	○		○
16. Nitrate (Oral/Topical)	○	○	○	○	○	○
17. Nicorandil	○	○	○	○	○	○
18. Omega-3 Fatty Acids	○	○	○	○	○	○
19. Statin	○	○	○	○	○	○
20. Other Lipid Lowering Agent	○	○	○	○	○	○

M. Medication Contraindications (Fill in all that apply)

○ ASA ○ Beta Blockers ○ ACE Inhibitors ○ ARB ○ Statins ○ LMWH ○ UFH

N. Lifestyle Interventions

1. If current cigarette smoker, was patient counseled to quit smoking by a health care professional?

○ No/Unknown ○ Yes ○ Does Not Apply

2. Was patient referred to a cardiac rehab program? ○ No/Unknown ○ Yes

O. IN-HOSPITAL EVENTS

12. Mechanical Complications

1 = Ventricular Septal Defect
2 = Mitral Regurgitation
3 = Free wall rupture

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Site ID (Required) ☐☐☐☐☐ **Patient ID (Required)** ☐☐☐☐

O. In-hospital Events: After Presentation

	No	Yes
1. Recurrent Ischemic Symptoms	○	○
2. CHF/Pulmonary Edema	○	○
3. Cardiogenic Shock	○	○
4. Cardiac Arrest/VF*	○	○
5. Atrial Fib/Flutter	○	○
6. Sustained VT	○	○
7. Thrombocytopenia	○	○
8. HIT	○	○
9. Venous Thromboembolism	○	○
10. Acute Renal Failure	○	○
11. AV Block (Mobitz II, 3°)	○	○
12. Mechanical* Complication	○	○

If yes*, specify date: ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*)

If yes*, enter Code: ☐

13. MI > 24 hrs after hospital presentation/Re-infarction ○ No ○ Yes **Date** ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*)

Confirmed by: (Fill in all that apply) ○ Cardiac Markers ○ ECG ○ Peri-procedural

14. Stroke ○ No ○ Yes **Date** ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*) **CT/MRI Confirmed?** ○ No ○ Yes

Type: (Fill in one)
○ Embolic/Ischemic ○ Embolic w/ Hemorrhagic Conversion ○ Hemorrhagic/Subdural Hematoma ○ Other

15. Major Bleeding (except hemorrhagic stroke) ○ No ○ Yes **Date** ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*)

Site(s): (Fill in all that apply) ○ Vascular Access ○ Other Site

Treatment: (Fill in one) ○ Surgery ○ Transfusion ○ Both Surgery and Transfusion ○ None

P. Discharge Status

1. Was patient treated as part of a research protocol? ○ No ○ Yes

2. Discharge Status (Required) ○ Death ○ Home ○ Transfer to Another Acute Facility ○ AMA/Self-Discharge ○ Other
↓
For Specific Procedure? (Fill in all that apply): ○ Cath ○ PCI ○ CABG

3. Date of Discharge or Death (Required) ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*)

4. Time of Death if Died (Required) ☐☐ : ☐☐ (*24 hour clock*)

5. Primary Discharge Diagnosis - Fill in one (Required)
○ ACS ○ Other Cardiac ○ Other

Specify Other/Other Cardiac Diagnosis: _____

6. Who was the primary physician who cared for the patient while in the hospital? (Fill in one)
○ Cardiologist ○ Non-cardiologist → If so, then Cardiology Consult? ○

Forms Completed by: _____ Date ☐☐ ☐☐☐ ☐☐ (*day* / *month* / *year*)