Wimmera Health Care Group	ID Label

ST-ELEVATION ACUTE MYOCARDIAL INFARCTION CLINICAL PATHWAY

Issued October 2000 (Revised: June 2008)

Expected Length of Stay for A.M.I. is 5 days.

Information/ Instructions for Use

- This Clinical Pathway is intended as a guide only and does not replace clinical judgment.
- This is a multidisciplinary pathway developed using evidence of current best practice.
- The signature register is to be completed once only by all staff who provide care to allow identification of initialisation. Each discipline initials after the intervention is completed.
- The pathway includes an ACS Algorithm and medical plan with criteria for thrombolysis, investigations and management, education and discharge plan and patient assessment forms.
- **If tasks are not applicable to the patient, document with X. If outcomes are not achieved, a variance is marked with a circled black 'V' and recorded in space provided i.e.** Ⓥ Progress notes are to be included in the variance section.
- A Generic form may be used beyond Day 4 if required.
  Do not use Discharge day until actual expected discharge day.

KEY:

Initial	**if attended (ensure signature register is completed)**
X	**if not applicable**
Black Ⓥ	**if variance**

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Acute Myocardial Infarction
Clinical Pathway
Wimmera Health Care Group

Patient ID

Signature Register

To be completed once only by all staff who have been involved in care of patient

Print Name	Designation	Initial	Signature

References:

ACEP, 'Clinical Policy: Critical issues in suspected AMI or UAP' *Ann Emerg Med* May 2000;35:521-544.

Australian Medicines Handbook 2005 p 372

Brener SJ, Unfractionated and LMWH in ACS: Current recommendations *Cleveland Clinic J of Med* 2000 67:1;59-65.

Cheitlin MD, Hutter AM, Brindis RG, et al. Use of sildenafil (Viagra®) in patients with cardiovascular disease. *Circulation* 1999; 99:168-177 Australian Medicines Handbook, 2004.

Eikelboom et al. 'Unfractionated Heparin and LMWH in ACS without ST elevation: A meta-analysis' *Lancet2000;* **355**: 1936-42.

EUROPA study: 'Efficacy of perindopril in reduction of cardiovascular events among patients with stable coronary artery disease,…'*The Lancet.* 2003 Sep 6;362(9386):782-8

HOPE study: Effects of an Angiotensin-Converting –Enzyme Inhibitor, Ramipril, on Cardiovascular Events in High-Risk Patients.' NEJM 2000, Jan 20, 342:145-153

Natarajan MK, 'Unstable Angina ' in *Clinical Evidence* BMJ Publishing Group June 2000. Therapeutic Guidelines: Cardiovascular 4th edition, 2003, TGA approved product information.

Tonkin AM & Aroney CN 'Guidelines for managing patients with unstable angina' *MJA* 1997 June 644-647.

ACUTE CORONARY SYNDROME

CHEST PAIN
O_2 therapy/ Cardiac monitor/ Vital signs

ECG

ST- Elevation AMI / New LBBB
Notify Registrar
AMI Pathway

S/L Anginine / Aspirin
IV Access X 2
GTN / Morphine
Pathology

Consider Thrombolysis
If <12hrs since symptom onset
Tenecteplase®
If LBBB, &/or relative contraindications discuss with Physician

YES

Tenecteplase®
Aim: < 60 minutes Door to needle time
and
Heparin Infusion.

NO

Enoxaparin
(unless contraindicated)

Unstable Angina &/or Suspected AMI
Notify Registrar
ACS Pathway

S/L Anginine / Aspirin
IV Access
GTN / Morphine
Pathology

Repeat ECG 30 mins

Acute ECG changes

Follow AMI Management if:
ST elevation
greater than or equal to 1mm
in any 2 of **Leads 1, AVL ,11, 111 or AVF**
or
ST elevation
greater than or equal to 2mm
in 2 or more of **Leads V2-V6**
or
New LBBB
or
True Posterior (Tall R waves & ST depression V1-V3, do posterior leads)
or
RV Infarction (ST elevation V4R)
(If ST elevation II, III, AVF, do Right sided ECG)

Admit to ICU (unless > 80 years)
ST segment monitoring.
Troponin 6/24 for 12 hours
Consider discharge if Troponin negative.
Anticoagulant therapy - Enoxaparin.
(unless has heparin infusion)
+/-
Beta blocker
Ace inhibitors
anti platelet therapy

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Risk Factors for AMI

☐ Known IHD/Angina ☐ Family History ☐ Smoking ☐ Hyperlipidaemia
☐ Hypertension ☐ Diabetes ☐ Obesity ☐ Metabolic eg. Apo(a)……
☐ Other

Education Program

STAGE 1 - Admission to ICU	Date	Initial	Comments
1. Monitor, ECG, O_2 & IV therapy			
2. Blood tests, X-ray, Vital signs			
3. Length of stay in ICU			
4. Thrombolytic card			
STAGE 2 (Day 1)			
1. Education package provided. *'Take Heart'* book			
2. Anatomy & Physiology of heart and coronary arteries			
3. Pathophysiology & healing of AMI			
4. Risk factors			
5. Video Education			
6. Nicotine Replacement Therapy offered to smokers			
STAGE 3			
1. Reinforce Stage 1			
2. Specific risk factors eg. Smoking-how to Quit			
3. Cardiac rehabilitation			
- Graduated activity, hospital and home			
4. Cancellation of surgery / procedures			
5. Diabetic education *(Novapen use)*			
STAGE 4			
1. Reinforce previous sessions			
2. Angina - what, when and why? Treatment & prevention			
3. Anginine - administration and care			
4. Given WHCG Anginine / Nitrolingual spray prompt card			
5. 'How to use Anginine' information sheet			
6. Warn patient of use of Viagra®/Cialis®/Levitra® & nitrates			
7. Aspirin / Clopidogrel			
8. Medications (Pharmacist) β blockers, ACE, and Statins			
9. Warfarin (anticoagulation nurse)			
10.Healthy Eating (Dietitian) - low saturated fat, and a			
No Added Salt (NAS) diet			
STAGE 5			
1. Reinforce previous sessions			
2. Diabetes post discharge management plan			
3. Management of chest pain			
- medication & rest			
- when to seek help			
- ambulance 000 brochure *(note map reference)*			

ALL STAFF: Please ensure signature register is completed

MEDICATION FOR IMMEDIATE AND POST STEMI MANAGEMENT.

The usual contraindications, precautions and drug interactions apply to all medications listed below. Intravenous drugs have specific administration procedures outlined in the Hospital Drug Protocol Manual.

ANTIPLATELET THERAPY

- Administer 300mg of **Aspirin** immediately* follow with low dose aspirin 150mg daily, PLUS Cloidogrel 300mg initially then 75mg daily for <75 years of age, OR Clopidogrel 75mg daily ≥ 75 years of age.
- **Tirofiban (Aggrastat®)** is an IV antiplatelet agent. The safety of Tirofiban when used in combination with thrombolytics in STEMI has not been established. Use in this group of patients is under the direction of a physician (or specialist at receiving hospital).

* If aspirin is contraindicated give Clopidogrel.

THROMBOLYTICS

- Thrombolysis should commence within 12 hours of **symptom** onset. Aim for less than 60 minutes Door to Needle Time. Treatment between 12 and 24 hours is at the discretion of the clinician in charge.
- **Tenecteplase (Metalyse®)** is the preferred thrombolytic agent at Wimmera Health Care Group. It should be given in combination with unfractionated heparin. There is emerging evidence on use of low molecular weight heparins with thrombolytics, but the combination is not recommended at this stage.
- In all cases seek advice from a Physician/Cardiologist if unclear on Thrombolysis.

NITRATES

- **Transdermal Glyceryl Trinitrate patches are preferable as they are easily removed.**
- Administer **Glyceryl Trinitrate** S/L or IV according to pain and haemodynamic stability.
- **Use with caution in patients who have recently taken Sildenafil (Viagra®), Tadalafil (Cialis®) or Valdenafil (Levitra®). Coadministration of a nitrate within the first 24 hours post Sildenafil and Valdenafil or up to 5 days post Tadalafil can produce an exaggerated hypotensive response and thus GTN is contraindicated unless the benefits of administration far outweigh the risks. After this period, administration of a nitrate may be considered, but BP must be monitored carefully.** In patients in whom the half life of sildenafil, tadalafil or valdenafil may be prolonged (eg. Patients > 65 years or with hepatic impairment or severe renal insufficiency) a more extended period of time may be required to nitrate administration.
- For ongoing angina after GTN infusion use: **Transdermal patches** 5mg to 15mg, apply for a maximum of 16 hrs in a 24 hr period, or **Isosorbide Mononitrate** (sustained release) 30mg to 120mg orally daily.
- Patients who take nitrates should be advised not to take Sildenafil (Viagra®), Tadalafil (Cialis®) or Valdenafil (Levitra®).

ANTICOAGULANT THERAPY

- Intravenous infusion of **unfractionated Heparin** (heparin sodium) should be given to all patients who receive Tenecteplase (Metalyse®). Adjust to APTT. Continue for 48 hours, or longer if there is ongoing or recurrent angina or transfer to a receiving hospital is organised.
- If the patient is stable and there is no requirement for an urgent angiogram, treatment with Clexane® twice daily may be acceptable for five days.
- Use with caution in the elderly and patients with renal impairment. Patients with severe renal impairment (Creatinine-Clearance < 30mL/min) should be prescribed 1mg/kg once daily. The formula of Cockcroft and Gault 1976 is: For females, the value should be multiplied by 0.85.Cl_{cr} ml/minute (males) $= \frac{(140 - \text{age}_{(yrs)}) \times (\text{weight}_{(kgs)})}{815 \times Se_{cr}}$

  where Cl_{cr} is creatinine clearance, Se_{cr} is serum creatinine and bodyweight is ideal or actual (the lower value).

ABSOLUTE CONTRAINDICATIONS OF HEPARIN AND LOW MOLECULAR WEIGHT HEPARIN (LMWHs)

- Previous hypersensitivity and/or severe thrombocytopenia with heparin or LMWH
- Actual or potential haemorrhagic states, such as haemophilia, ascorbic acid deficiency or increased capillary fragility
- Threatened abortion
- Severe uncontrolled hypertension
- Sub-acute bacterial endocarditis
- Gastric or duodenal ulcers
- Advanced renal or hepatic disease, including oesophageal varices
- During and immediately after major trauma or recent surgery (particularly at sites where bleeding would pose a serious risk) for example, the brain, eye or spinal cord.

PRECAUTIONS OF HEPARIN AND LOW MOLECULAR WEIGHT HEPARIN (LMWHs)

- Use with caution in patients who have an increased risk of haemorrhage and elderly patients (particularly women)
- Avoid concurrent use of intramuscular injections to decrease risk of haematoma formation.\
- Dosage to be decreased slowly before ceasing an infusion as abrupt withdrawal may precipitate increased coagulability.
- If Streptokinase has been given (eg. at another facility), no anticoagulant therapy is required for the first 24 hours.
- Those patients with a STEMI who are ineligible for thrombolytic therapy, would benefit from unfractionated heparin for 24 –48 hours unless contraindicated. Continue for up to five days if there is ongoing or recurrent angina or transfer to a receiving hospital is organised.

β-BLOCKERS

- Treatment with a β-blocker should commence within hours of an AMI. Patients with persistent pain, those with tachycardia not related to heart failure, those with hypertension and/or a large AMI will benefit most in the long term.
- Not to be given in acute cardiac failure.
- Commence treatment with **Atenolol** 25mg to 100mg orally daily or **Metoprolol** 25mg to 100mg orally twice a day.
- IV preparations such as esmolol and metoprolol are available. The half life of esmolol is approximately nine minutes.
- **Carvedilol (Dilatrend®)** (starting dose 3.125mg orally b.d.) is indicated for patients with symptomatic heart failure.
- Other alternatives in heart failure are **Bisoprolol (Bicor®)** and **Slow Release Metoprolol (Toprol-XL®)**.

ACE INHIBITORS

- Commence an ACE-Inhibitor within 24 to 48 hrs post AMI for all patients who are haemodynamically stable. Those with a previous MI, diabetes, hypertension, or evidence of LVF should benefit most from long term treatment.
- Longer acting agents include e.g **Perindopril** 2mg to 8mg once daily (2mg starting dose), **Ramipril** 1.25mg to 10mg daily (use with Diabetes Mellitus).
- **Monitor renal function and electrolytes pre and post therapy.**

CHOLESTEROL LOWERING AGENTS

- For primarily elevated LDL cholesterol, or a mixed hyperlipidaemia of high fasting TG with high LDL cholesterol, use a **'statin'** e.g. Simvastatin 10mg to 80mg, Atorvastatin 10-80mg or Pravastatin 40mg nocte. Baseline AST/ALT/CK required prior to treatment.

ANGIOGRAPHY PRECAUTIONS:

Guidelines for prevention of acute renal failure secondary to contrast agent - nephrotoxicity in coronary angiography.

The radiographic contrast agents used in coronary angiography are nephrotoxic and are known to cause acute renal failure.

Risk Factors

1. Diabetes Mellitus
2. Multiple Myeloma
3. Pre-existing renal insufficiency

The following **guidelines** should be considered for patients in the following categories

1. All diabetic or myeloma patients, or patients who are ≥ 65 years old with a serum creatinine of ≥ 150μ mol/L.
2. People < 65 years of age, with a serum creatinine level of ≥ 200μ mol/L.
3. Adult patients with body weight of 50kg or less with a serum creatinine level of ≥150μ mol/L.

Guidelines

1. Acetylcysteine (Mucomyst®) orally 600mg twice a day, on the day prior to the coronary angiogram, and on the day of the coronary angiogram.
2. Intravenous sodium chloride 0.9%, at a rate of 1mL per kg of body weight per hour for twelve hours prior, and for twelve hours following the coronary angiogram.
3. Oral fluids to be encouraged if patient is thirsty.
4. **Metformin** – use of iodinated contrast media increases the risk of lactic acidosis; stop metformin 2 days before, during, and for 2 days after administration of contrast media. (Australian Medicines Handbook 2005, p 372)Patients who do not meet the specified criteria of acetylcysteine, but have an abnormal creatinine level should have normal saline pre-hydration, (which might have to be adjusted for patients with depressed left ventricular function). On the day of the procedure, diuretics, ACE inhibitors and non-steroidal anti-inflammatory drugs should be withheld.

REFERENCES

Guidelines for the management of acute coronary syndromes 2006 MJA supplement 17 April 2006 Vol 184 No 8
Ryan, TJ & Reeder, GS "Management of suspected acute coronary syndrome in the emergency department" from www.uptodate.com accessed 16/6/2008
Simons, Michael "Antiplatelet agents in unstable angina and acute non-ST elevation (non-Q wave) myocardial infarction" from www.uptodate.com accessed 16/6/2008

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Date: _____ Emergency Department

Date/Time	Progress Notes / Variance please include action, treatment and outcome
Admission	

ALL STAFF: **Please ensure Signature Register is completed**

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Initial	*Date:_____Emergency Department*
RMO Assessment		Patient admission history taken
		Reviewed ECG. Request Posterior or Right sided ECG if indicated
		Registrar called immediately if ST Elevation
		Chest pain duration_____
		FBE, U&E, Mg, APTT / INR, Troponin to pathology
		Aspirin and / *or Clopidogrel* ordered stat and daily. Refer to medication management guide
		If pain > 30 min, ECG changes, consider eligibility for thrombolytic therapy
		If eligible, **thrombolytic therapy given within 60 minutes** *(see below)*
		Door to needle time:_____
		Enoxaparin commenced if no thrombolytic therapy initiated *(if not contraindicated)*
		Chest X-Ray ordered and attended in Emergency Department if urgent
		Order **6/24** troponins, fasting Chol, Trigs, LFTs, HDL & Gluc - Day 1
		Morphine, Maxalon and Anginine ordered PRN section MR10
		Order statin (if not contraindicated)
Physician/VMO		VMO notified of patient's admission
		Discussed plan of care and transfer with receiving hospital Cardiologist Registrar
		Discuss diagnosis and treatment plan with patient / family
Type of ECG change		ST seg elevation ≥ 1mm in ≥ 2 limb leads
		ST seg elevation ≥ 2mm in ≥ 2 continuous chest leads
		Significant Q waves
		Bundle branch block
		Location of ECG changes:_____
Thrombolytic Therapy Indications		Chest pain > 30 minutes
		<12hrs since onset of symptoms
		ST seg elevation ≥ 1mm in ≥ 2 continuous limb leads
		ST seg elevation ≥ 2mm in ≥ 2 continuous chest leads
		New LBBB
Thrombolytic Therapy Contra-indications		Previous haemorrhagic stroke at any time, other cerebrovascular events within last 12 months
		Known Intracranial neoplasm, arteriovenous malformations or aneursyms
		Active internal bleeding, *(does not include menses)*
		Surgery / organ biopsy / trauma within 2 weeks
		Acute pericarditis
		Suspected aortic dissection
Thrombolytic Relative Contra-indications		Age > 75 years
		Severe uncontrolled hypertension, *(BP > 180/110 - reduce with IV GTN prior)*
		Current use of anticoagulants in therapeutic doses (INR ≥ 2)
		Traumatic or prolonged CPR > 10 minutes
		Recent trauma *(within 2-4 wks),* including head trauma, or major surgery, organ biopsy *(< 3 wks)*
		Known bleeding diathesis
		Peptic ulcer within last 3 months
		Non compressible vascular punctures
		Pregnancy or recent obstetric delivery
Date/Time		ProgNotes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome, sign entry
ALL STAFF:	**Please ensure Signature Register is completed**	

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Nurse	Initial	**Emergency Care. Date:**_____
		Patient seen by RMO / Registrar within 10 mins of arrival
		Assist / guide RMO with emergency management
CNS/Psych		Nursing history taken
		Reassure patient / family
		Education given if required by patient / family
Pain Management		Pain relief given: SL GTN, Morphine, IV GTN *(circle)* *Assess recent Viagra® / Cialis® /Levitra® use*
		Visual Analogue Scale (VAS) pain assessment explained
		Patient comfortable. Pain score 0 - 3 on transfer to ICU
CVS		Continuous cardiac monitoring and documented cardiac rhythm
		ECG stat. TPR and, BP 1/2 hourly
		Bilateral BP
		Right sided ECG if ST elevation in Leads II / III / AVF
		Posterior ECG taken if ST depression V1 - V3
		ECG repeated at 30 minutes, post thrombolytic & / or with pain
		Patient haemodynamically stable on transfer to ICU
		No arrhythmias requiring treatment
Medications		Aspirin given stat *(or prior to admission)*
		Aspirin and/or Clopidogrel ordered daily (refer to medication management guide)
		Medications given as per MR10
Respiratory		O_2 therapy given at _____L / min
		SaO_2 > 95%
G.I.T./ Hydration		IV access obtained *(18g+ if possible)*
		2nd IV site obtained if diabetic & / or for thrombolytic therapy
		Nausea controlled
		FBC commenced
Renal/Urinary		Urinalysis if voided
Endocrine		BGL taken
		ICU staff notified if patient is diabetic
Mobility		Nursing Risk Assessment form completed
CNS/Psych		Nursing history taken
		Reassure patient / family
		Education given if required by patient / family
Discharge P.		Inform patient / family of admission and transfer to ICU
		Transfer to ICU with documentation within 2 hours - please document delays
Date/Time		Prog Notes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome sign entry
ALL STAFF:		**Please ensure Signature Register is completed**

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Date:_____Admission Day

RMO	***Initial***	
Assessment		Chest clear:
		No peripheral oedema
		Heart sounds unchanged
		Troponin peak:_____
		Haemodynamically stable
Investigations		
Management		Review blood results
		Review antithrombin therapy, Heparin, Enoxaparin

Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Date:	***Admission Day***	***AM***	***PM***	***ND***	***Comments***
	Admitted to ICU at:_____				
Investigations	6/24 Troponins				
	Na & K^+ as per diabetic protocol				
CNS	Patient comfortable				
CVS	Continuous cardiac monitoring				
	ECG post thrombolytic, 6/24 & with chest pain				
	Vital signs 1-2/24 until stable then 4/24				
	ST segments *(monitored with vital signs)* stable or resolving				
	Patient free of chest pain				
Medications	Medications given as per MR10				
	Heparin infusion after fibrinolytic therapy as per protocol				
Respiratory	Continuous O_2 therapy_____L / min				
	Chest clear / no deterioration				
	SaO_2 >95%				
Skin Integrity/	Skin assessed to be in good condition				
Hygiene	Pressure Risk assessed :_____ P/Care :_____				
	Mouth and eye care completed				
	General hygiene *(sponge with assistance)*				
GIT/	IV Site(s) checked t.d.s.. Site(s) clean and dry				Infusions:
Hydration	Nil orally from 24:00 hrs for fasting chol / gluc levels				
	Fluids and light cardiac diet as tolerated				
	Nausea controlled / absent				
	FBC maintained				
Renal/Urinary	Urinary output > 30 mL/hour *(300 mL / shift)*				
	IDC inserted p.r.n.				
	Urinalysis completed				
Endocrine	Maintain BGL 7-10 mmol / L				
Mobility	'No Lift' assessment completed				
	Rest in bed *(bedside commode)*				
Psychological	Patient / carer orientated to ICU as per education plan				
Education	Discuss plan of care with patient / family				
	Patient understands pain score & the need to notify staff				
	Stage 1 of education plan completed				
	Identify concerns				
Discharge	Patient informed of need to remain in ICU for 48/24				
Planning					
Date/Time	Prog Notes/Variance (V black circled) with reason if known followed by Action/Treatment/Outcome, sign				
ALL STAFF:	**Please ensure Signature Register is completed**				

ACUTE MYOCARDIAL INFARCTION CLINICAL PATHWAY **WIMMERA HEALTH CARE GROUP**	Pt. ID Label

Date:_____Day 1

RMO Assessment	***Initial***			
		ECG changes:		
		Troponin peak:_____		
		Chest pain:		
		Chest clear:		
		No peripheral oedema		
		Heart sounds unchanged		
Investigations		Bloods: U & E ordered		
Management		Review Insulin therapy and order subcutaneous insulin for Day 2 (diabetic patients)		
		Coronary Angiogram Yes / No *(See Medication Management pages for precautions with renal impairment and Metformin®)*		
		Order Ace-inhibitor *(if not contraindicated)*		Contraindicated
		Order beta blocker *(if not contraindicated)*		Contraindicated
		Order statin *(if not contraindicated)*		Contraindicated
Contraindications				
ACE Inhibitors		**ACE Inhibitor contraindications**: Allergy / intolerance (Cough), patient refusal, moderate to severe aortic stenosis, bilateral renal artery stenosis, history of angioedema, hives, or rash in response to ACE Inhibitors, Hyperkalaemia, symptomatic hypotension, severe renal dysfunction		
Beta Blockers		**Beta Blocker contraindications:** Patient refusal, allergy or history of intolerance, Bradycardia (<50 per minute), Symptomatic acute heart failure, Systolic BP < 90 mmHg, PR interval > 0.24 sec, 2nd and 3rd degree heart block or bifascicular heart block, Asthma / Airways hyper-reactivity		
		Please ensure Signature Register is completed		

ACUTE MYOCARDIAL INFARCTION

CLINICAL PATHWAY

WIMMERA HEALTH CARE GROUP

Pt. ID Label

Date:_____Cardiac Rehabilitation Referral - CONFIDENTIAL -

To be completed by Allied Health / medical or nursing staff, and faxed to Cardiac Rehabilitation Nurse on extension -330. *(All patients should be referred for cardiac rehabilitation)*

Patients Preferred Phone Number:_____

General Practitioner:_____

Presenting History:

Past History:

Social History:

Discharge Medication:

Current activity Level:

Other Relevant information:

Exercise stress test: Booked Yes / No Date:_____

Echocardiogram: Booked Yes / No Date:_____

Angiography: Booked Yes / No Date:_____

Referred to:_____(Hospital)

Discharge Planning:

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Date:_____Day 1	*AM*	*PM*	*ND*	*Comments*
CNS	Patient alert				
	Patient free of chest pain				
CVS	Continuous cardiac monitoring				
	ECG daily and with chest pain				
	TPR and BP 4/24				
	Patient haemodynamically stable				
Investigations	Fasting Chol, Trigs, HDLs, Glucose & U&E				
	6/24 Troponins for 24/24, or until peak demonstrated				
	Na & K^+ as per diabetic protocol				
	APTT as per protocol if having heparin infusion				
Medications	Medications given as per MR10				
	ACE inhibitor commenced unless contraindicated *(circle)*				
	Beta blocker commenced unless contraindicated *(circle)*				
	Statin commenced unless contraindicated *(circle)*				
	Medications reviewed by pharmacist				
Respiratory	SaO_2 >95% on continuous O_2 therapy				
	Chest clear / no deterioration				
Skin Integrity/	Skin assessed to be in good condition				
Hygiene	Shower with assistance if stable				
GIT/Hydration	IV Site(s) checked t.d.s.. Site(s) clean and dry				
Dietitian	Dietitian assessment completed *(weekdays)*				
	Cardiac diet and fluids as tolerated (*after pathology taken)*				
	FBC maintained				
	Bowels open				
Renal/Urinary	Urinary output satisfactory				
Endocrine	IV Insulin therapy and BSL as per Diabetes / AMI protocol				
	Insulin subcutaneous - ordered for Day 2				
	BGL 7-10 mmol / L				
Psychological /	Discuss plan of care with patient / family				
Education	Identify concerns/emotional status of patient & family				
	Patient given AMI package. Stage 2 / education plan provided				
Mobility	SOOB and short walk b.d.				
	Physiotherapist assessment completed				
	Cardiac Rehab Program explained by Physiotherapist				
	Invitation and information pamphlet given				
Discharge	Referral to Cardiac Rehabilitation completed				
Planning	Discuss Discharge plan (*Expected LOS 5 days)*				
Date/Time	Prog Notes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome sign entry				
ALL STAFF:	**Please ensure Signature Register is completed**				

ACUTE MYOCARDIAL INFARCTION CLINICAL PATHWAY **WIMMERA HEALTH CARE GROUP**	Pt. ID Label

Date:_____Day 2

RMO	***Initial***	
Assessment		Chest pain:
		Chest clear:
		Haemodynamically Stable
		Diabetes reviewed
		No peripheral oedema
Investigations		Echocardiogram required and ordered Yes / No
		Bloods: U & E ordered Yes / No
Management		Angiogram required and ordered Yes / No
		Coronary Angiogram Yes / No *(See Medication Management pages for precautions with renal impairment and Metformin®)*
		Review Lipid therapy with Lipid pathology results
		Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Date_____Day 2	***AM***	***PM***	***ND***	***Comments***
CNS	Patient alert and comfortable				
CVS	TPR and BP q.i.d.				
	Patient afebrile and haemodynamically stable				
	ECG daily				
Investigations	U & E taken				
Medications	Medications given as per MR 10				
	Lipid lowering therapy ordered if Total Chol > 4 mmol / L				
	Review by Pharmacist				
Respiratory	SaO_2 > 95% on room air				
	Chest clear				
Skin Integrity/	Skin assessed to be in good condition				
Hygiene	Showered self				
GIT / Hydration	**IV** Site checked t.d.s. Site clean and dry				
	Remove IV cannula x1 if 2 in situ				
	FBC ceased if patient stable				
	Bowels open				
Dietitian	**Dietitian assessment completed** *(weekdays)*				
	Cardiac diet and fluids tolerated				
Renal/Urinary	Urinary output satisfactory				
Endocrine	Commenced SC Insulin as per protocol *(MR 10)* at 07:30				
	Insulin infusion ceased at 08:00 as per protocol				
	BGL t.d.s. before meals & nocte				
	BGL 7-10 mmol / L				
Mobility	Patient ambulant within ward				
	Given Physiotherapy education re graduated activity				
Psychological /	Discuss plan of care with patient / family				
Education	Identify concerns / emotional status of patient				
	Stage 3 of Education Plan completed				
Discharge	Given Home activity pamphlet by Physiotherapist				
Planning	Transfer from ICU to general ward				

Date/Time	Prog Notes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome sign entry
ALL STAFF:	**Please ensure Signature Register is completed**

ACUTE MYOCARDIAL INFARCTION CLINICAL PATHWAY **WIMMERA HEALTH CARE GROUP**	Pt. ID Label

Date:_____Day 3

RMO	***Initial***	
Assessment		Chest pain:
		Chest clear:
		Haemodynamically Stable
		No peripheral oedema
Investigations		Bloods: U & E ordered Yes / No
Management		Discuss discharge plan with patient
		Diabetes Reviewed : order oral hypoglycaemic therapy if eligible for diabetic / AMI protocol
		Review Lipid therapy with Lipid pathology results
		Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Date_____Day 3	***AM***	***PM***	***ND***	***Comments***
CNS	Patient is able to rest / sleep when appropriate				
	Patient comfortable, no pain relief required				
CVS	TPR and BP q.i.d.				
	Patient afebrile and haemodynamically stable				
	ECG daily				
Medications	Medications given as per MR 10				
	Review by pharmacist				
	Education provided as per plan				
Respiratory	Chest clear				
	SaO_2 > 95% on room air				
Skin Integrity/	Skin assessed to be in good condition				
Hygiene	Showered self				
GIT/Hydration	IV removed				
	IV Site checked t.d.s. IV resited				
	Dietitian assessment & education completed *(weekdays)*				
	Cardiac diet and fluids tolerated				
	Cease Fluid Balance Chart				
	Give aperient if BNO since admission				
Renal/Urinary	Urinary output satisfactory				
Endocrine	Diabetic patients - BGL t.d.s. before meals & nocte				
	BGL 7-10 mmol / L				
	Insulin as per protocol / MR 10				
Mobility	Commenced walking program with physiotherapist				
	Independent ambulation				
Psychological /	Discuss plan of care with patient / family				
Education	Identify concerns / emotional status of patient				
	Stage 4 of education plan completed				
Discharge	Post Acute Care assessment completed				
Planning	Discharge plan discussed for Day 5				

Date/Time	Progress Notes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome, sign entry

ALL STAFF: **Please ensure Signature Register is completed**

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Date:_________________Day 4

RMO	*initial*	
Assessment		Chest pain:
		Chest clear:
		Haemodynamically Stable
		No peripheral oedema
Investigations		Bloods: U & E ordered Yes / No
Management		Discuss discharge plan with patient
		Discharge medication script written
		Review Lipid therapy with Lipid pathology results

Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Date_____Day 4	***AM***	***PM***	***ND***	***Comments***
CNS	Patient comfortable, no pain relief required				
	Patient is able to rest / sleep when appropriate				
CVS	TPR and BP q.i.d.				
	ECG daily				
	Patient afebrile and haemodynamically stable				
Medications	Medications given as per MR10				
	Discharge medications provided and discussed				
Respiratory	No respiratory distress				
Skin Integrity/	Skin assessed to be in good condition				
Hygiene	Showered self				
GIT/Hydration	Cardiac diet and fluids tolerated				
	Give aperient if BNO for 2 days				
Renal/Urinary	Urinary output satisfactory				
Endocrine	Diabetic patients - BGL q.i.d. before meals & nocte				
	Insulin as per protocol / MR 10				
	BGL 7-10 mmol / L				
	Oral hypoglycaemic therapy recommenced if applicable				
Mobility	Patient ambulating independently				
Psychological /	Discuss plan of care with patient / family				
Education	Identify concerns / emotional status of patient				
	Stage 5 of education plan completed				
Discharge	Appointments made as per medical plan				
Planning	MR68 discharge plan completed				
Date/Time	Prog Notes/Variance (V black circled) with reason if known followed by Action/Treatment/Outcome, sign				
ALL STAFF:	**Please ensure Signature Register is completed**				

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

Medical Review	*If discharge day - use Discharge Day page*	
	Initial	Date:______ Generic Day ______
Assessment		Chest pain:
		Chest clear:
		Haemodynamically Stable
		Diabetes reviewed
		No peripheral oedema
Investigations		
Management		Discharge drugs script written
		Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

If discharge day - use Discharge Day page

	Date:_____Generic Day:___	*AM*	*PM*	*ND*	*Comments*
CNS	Patient comfortable, no pain relief required				
	Patient is able to rest / sleep when appropriate				
CVS	TPR and BP q.i.d.				
	Patient afebrile and haemodynamically stable				
Medications	Medications given as per MR 10				
	Review by pharmacist				
Respiratory	No respiratory distress				
Skin Integrity /	Skin assessed to be in good condition				
Hygiene	Showered self				
GIT/Hydration	Cardiac diet and fluids tolerated				
	Bowels open				
	Give aperient if BNO for 2 days				
Renal/Urinary	Urinary output satisfactory				
Endocrine	Diabetic patients - BGL before meals & nocte				
	BGL 5-10 mmol / L				
Mobility	Patient ambulating independently				
Psychological /	Plan of care discussed with patient / family				
Education	Patient's emotional state is stable				
	Education of patient / family stage_____completed				
Discharge	MR 68 discharge plan completed p.r.n.				
Planning	Refer to A & D Coordinator if applicable				

Date/Time	Progress Notes/Variance (V black circled) with reason if known, followed by Action/Treatment/Outcome, sign entry
	Please ensure Signature Register is completed

ACUTE MYOCARDIAL INFARCTION
CLINICAL PATHWAY
WIMMERA HEALTH CARE GROUP

Pt. ID Label

	Use Generic Day if not being discharged				
Medical Review	**intial**	Date: Day Discharge Day Discharge Time:			
RMO		Review discharge plan with patient			
		Chest clear			
		No peripheral oedema			
		Haemodynamically stable			
		Coronary Angiogram Yes / No (See Medication Management pages for precautions with renal impairment and metformin)			
		Discharge Script has been completed			
		Patient is ready for discharge			
			AM	***PM***	***Comments***
CNS		Patient comfortable, no pain relief required			
		Patient is able to rest / sleep when appropriate			
CVS		TPR and BP q.i.d.			
		Patient afebrile and haemodynamically stable			
Medications		Medications given as per MR 10			
		Discharge medications provided and discussed			
		Patient understands medication regime			
Respiratory		No respiratory distress			
Skin Integrity/		Skin remains intact			
Hygiene		Patient manages own general hygiene			
GIT/Hydration		Patient is tolerating cardiac diet and fluids			
		Patient has regular bowel habit			
Renal/Urinary		Urinary output satisfactory			
Endocrine		BGL q.i.d. before meals and nocte			
		BGL 7-10 mmol/L			
		Diabetic patient understands need to control BGL			
		Patient has management plan for insulin therapy at home			
Mobility		Patient ambulating independently			
		Patient able to complete ADLs without chest pain			
		Patient has referral to cardiac rehabilitation program			
Psychological /		Patient expresses understanding of follow up plan			
Education		Patient's emotional state is stable			
		P't expresses understanding of management plan for chest pain			
		Education plan - all stages completed			
Discharge		Patient discharged home at _____ (hours)			
Planning		Physician appointment 6 weeks_____			
		GP appointment 1 week_____			
		Angiogram arranged:_____			
		Echocardiogram arranged:_____			
Date/Time		Prog Notes/Variance (V black circled) with reason if known followed by Action/Treatment/Outcome, sign			
		Please ensure Signature Register is completed			

ACUTE MYOCARDIAL INFARCTION CLINICAL PATHWAY **WIMMERA HEALTH CARE GROUP**	Pt. ID Label

Date:___________________Discharge day

	Please ensure Signature Register is completed