

Rheumatic Heart Disease Cardiac Surgical Clinical Pathway

Expected length of stay 7 days



Inclusion criteria

- All children ≤15 years
- Acute rheumatic fever (ARF)*
- Chronic rheumatic heart disease (RHD)
- Elective admissions

*Acutely unwell children in PICU pre-operatively may join the pathway post-operatively at the discretion of the surgical team.

Pathway Instructions

Pathway

- If the child meets the inclusion criteria, please document 'Commenced on the Clinical Pathway' in clinical notes.
- Keep the pathway in the front of the clinical notes at all times
- Handover the pathway between shifts to ensure everyone is following it
- Discuss the pathway at ward rounds with the medical team
- Tick the boxes corresponding to your shift ONLY if the goals are achieved. If not applicable write N/A.

Care Goals and Clinical Management

- Document when a decision was made not to follow the recommended action or intervention.
- If the child breached the pathway briefly document why
- If the child is diverted off the pathway, when stable they may resume the pathway in discussion with the treating clinician as per the pathway

- Clinical pathways are a guide to care delivery
- Some goals may not be achievable due to clinical status and this should be recorded on the pathway.
- When there are deviations from the care goals the pathway can still be referred to, to guide other aspects of care, e.g. if a child needs to maintain fluid restriction this deviates from the expected pathway goal, but it might not stop the child being able to be mobilised as suggested in the pathway.
- Documenting deviations allows pathways to be tracked and modified to meet clinical care requirements.

NB: In post cardiac surgical patients with ARF the CRP and ESR are not a useful indicator of rheumatic inflammation for two weeks post cardiac surgery.

Summary Table- MRO screening and transmission based precautions

Scenarios	MROs screened for	Samples required	Precautions pending screening results
Overnight admission in a NZ healthcare facility (other than ADHB) or residential care facility in the previous <u>6 months</u>	ESBL-MRSA VRE	<ul style="list-style-type: none"> 1x Rectal swab for ESBL & VRE 1x Nasal swab 1x Perineum/groin swab for MRSA If IDC send urine for ESBL A swab for MRSA and ESBL should also be taken from: wounds, umbilicus of neonates 	Standard precautions in multi-bed room pending results
Travel to a South Asian (India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan, Afghanistan) or South-East Asian country (Vietnam, Thailand, Cambodia, Myanmar, Laos in the previous <u>6 months</u> .	ESBL-CPE	<ul style="list-style-type: none"> 1x Rectal swab for CPE & ESBL If IDC send urine for CPE & ESBL 	
Direct transfer from any overseas hospital	ESBL-MRSA VRE CPE MRAB	<ul style="list-style-type: none"> 1x Rectal swab for ESBL, VRE, CPE, & MRAB 1x Nasal swab for MRSA x 1 and perineum/groin swab for MRSA 1x Groin swab for MRAB 1x Tracheal aspirate or sputum for MRAB If IDC send urine for ESBL, CPE, MRAB A swab for MRSA, ESBL, CPE, MRAB should also be taken from: wounds, umbilicus of neonates 	Contact precautions in single room pending results
Overnight admission or outpatient haemodialysis in an overseas hospital in the previous <u>12 months</u> .	ESBL-MRSA VRE CPE	<ul style="list-style-type: none"> 1x Rectal swab for ESBL, VRE, & CPE 1x Nasal swab for MRSA & perineum/groin 1x Perineum/groin swab for MRSA If IDC send urine for ESBL & CPE A swab for MRSA, ESBL, CPE, should also be taken from: wounds, umbilicus of neonates 	

Transmission-based precautions for given MRO	ESBL-E. coli and CA-MRSA (nmMRSA)	Standard Precautions in multi-bed room
	CPE, MRAB, ESBL-K. pneumoniae (& other Enterobacteriaceae), VRE, and HA-MRSA (mMRSA)	Contact Precautions in single room
	MDR-P. aeruginosa	Individualised management - consult with IPC

23/03/2018 Infection Prevention & Control Service ADHB

Preoperative Day 0 Cares

Date:

Instructions: Tick the boxes corresponding to your shift, **ONLY** if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Pre-op Care Goals	Reason Goal not Met
Preadmission screening	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Screen all patients as per the MRO screening table opposite. Swab all patients for MRSA and MSSA prior to commencing Mupirocin* Commence rheumatic disease discharge pathways in children with ARF <p><i>*see Cardiac surgery-pre-operative anti-staphylococcal bundle Clinical Guideline</i></p>	
Medication management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Medications as per <i>Cardiac Surgery Admission Process</i> guideline Mupirocin treatment commenced as indicated On day of surgery administer antiarrhythmic and beta blocker unless otherwise specified by the cardiologist Pre-medication charted Last date of Bicillin: __/__/__, if the dose is due within two weeks ensure a dose is prescribed for administration in theatre 	
Preoperative preparation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Medical admission (see <i>Cardiac Surgery Admission Process</i> guideline) Bloods- FBC,U and E's, ESR and bypass bloods ESR >20mm/hr inform consultant on call/surgeon Organise interpreter for consent if required Shower and chlorhexidine wipe the night before surgery and morning of surgery. Ensure all other hygiene needs are met, for example short nails ECHO required in theatre - check the booking form, follow-up order ECG and CXR done in the last month – if not complete 	
Nutrition	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Offer water up to 1-hour pre-op Nil by mouth as per the 'Anaesthesia Fasting Guideline' unless otherwise instructed IV fluids not required – unless specified by the anaesthetist 	
Documentation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Start admission to discharge planner Pre-op Checklist and nursing care plan completed Clinical Charge Nurse to follow up if consent not completed by 5pm 	
Clinical management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Does patient have any of the following <ul style="list-style-type: none"> Temp > 37.5°C Signs of chest infection Infected skin lesions Vomiting /diarrhoea for the last 24 hours Infectious contact. i.e. chicken pox, measles ESR >20mm/hr Major dental caries If yes to any of the above contact the surgical fellow/registrar to review the patient Surgery Deferred? 	Yes/No (circle)

(Additional space for documenting why goals are not achieved or surgery delayed)

Post-operative Day 0 Cares PICU

Date:

Instructions: Tick the boxes corresponding to your shift, **ONLY** if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Pre-op Care Goals	Reason Goal not Met
Interventions	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Extubate as per EXACT protocol Administer supplemental O₂ to maintain sats >93-98% CLAB and Glamorgan score Identify on the evening ward round if the child meets the early chest drain removal criteria 	
Pain management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Follow PICU greater than 12 months or over 30kg unintubated sedation and analgesia algorithm Six hourly paracetamol Eight hourly ibuprofen unless contraindicated* Commence omeprazole daily for patients on ibuprofen Ondansetron for nausea and vomiting <p>* Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Fluid Management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Discontinue IV fluids once extubated and child is tolerating oral intake Once the patient is cardiorespiratory stable, commence oral fluids and light diet as tolerated No fluid restriction necessary NG tube is not required in children > 5 years 	
Post-operative medication	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Cephazolin - 2 doses post-operative 	
Family/whānau support	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Orientate family/whānau to PICU Surgical education post PICU admission 	
Clinical management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Diversion from the EXACT protocol: Patient breaches the pathway and diverts off the planned goals of care. Recommence patient on the pathway post-extubation Complications such as fulminant ARF, severe ventricular dysfunction/dilatation is present, the patient will breach the pathway and may recommence the clinical pathway once extubated and stable in consultation with the medical team. 	Pathway recommenced on: ____/____/____

(Additional space for documenting why goals are not achieved +/- why the patient diverted off the pathway)

Post-operative Day 1 Cares PICU

Date: _____

Instructions: Tick the boxes corresponding to your shift, **ONLY** if the goals are achieved. If not applicable write N/A. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Day 1 Care Goals	Reason Goal not Met
Interventions	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Wean O₂ • Remove chest drains at 06:00 if the patient meets early chest drain removal criteria* or post the surgical ward round as directed • Ensure the central line, and urinary catheter <i>remain in situ</i> • Post ward round remove <ul style="list-style-type: none"> - All peripheral cannulas - Arterial Line • Complete CLAB and Glamorgan bundle of care <p>*Criteria for drain removal refer to Starship Clinical Guidelines</p>	
Medication	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Commence twice daily IV furosemide and oral spironolactone <ul style="list-style-type: none"> - Aim for potassium of 4.5mmol/L - Ensure electrolytes are normal. If renal function is abnormal discuss with the medical team • If on ACE inhibitors pre-op consider restarting at ½ the usual dose 	
Anticoagulation management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> • Check blood results before commencing aspirin • Mitral Valve Repairs <ul style="list-style-type: none"> • Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) • Start day one post op, take for 6 months then stop • Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> • Do not use aspirin unless requested by surgeon • Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> • Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) • Start day one post operation, take for 6 months then stop. • Mechanical Valves (St Judes, On-X Carbon) <p>Initial management</p> <ul style="list-style-type: none"> • Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. • Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon/cardiologist for target INR) • Daily INR for mechanical valves 	
Fluid management	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Free oral fluids and soft/light diet as tolerated • No fluid restriction required 	

(Additional space for documenting why goals are not achieved +/- why the patient diverted off the pathway)

Post-operative Day 1 Cares Ward 23B

Date: _____

Instructions: Tick the boxes corresponding to your shift, **ONLY** if the goals are achieved. If not applicable write N/A. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Day 1 Care Goals	Reason Goal not Met
Interventions	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Wean O₂ • Remove peripheral IV if still in situ (CVL to remain in situ) • Remove the urinary catheter at 20:00hrs • Continuous monitoring for 24 hours post admission to IOA for 24 hours 	
Medication	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Continue with twice daily IV furosemide and oral spironolactone 	
Anticoagulation management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> • Mitral Valve Repairs <ul style="list-style-type: none"> • Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) • Start day one post op, take for 6 months then stop • Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> • Do not use aspirin unless requested by surgeon • Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> • Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) • Start day one post operation, take for 6 months then stop. • Mechanical Valves (St Judes, On-X Carbon) Initial management <ul style="list-style-type: none"> • Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. • Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon for target INR) • Daily INR for mechanical valves 	
Nutrition	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Free oral fluids and soft/light diet as tolerated • No fluid restriction required 	
Pain management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Six hourly paracetamol • Eight hourly ibuprofen unless contraindicated* • Commence omeprazole daily for patients on ibuprofen • Oral morphine PRN • Ondansetron for nausea and vomiting <p>* Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Mobilisation	<input type="checkbox"/>	<input type="checkbox"/>	<p>All patients to mobilise post operation (ARF and chronic RHD)</p> <ul style="list-style-type: none"> • Mobilise child to a chair and for a walk around the room 	
Infection surveillance	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<p>Pyrexia of < 38⁰C within 48 hours can be associated with a SIRS response</p> <ul style="list-style-type: none"> • Patient afebrile (q4 hourly temps) • Ensure patient is hydrated and manage with paracetamol 	

Patient Label

Child Health				
Daily needs bundle of care	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Glamorgan bundle of care Hygiene needs/oral care 	
Family/whānau support	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Initiate family/whānau discharge education Support family/whānau to participate in the child's care 	
Clinical management	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> If the child failed to discharge from PICU due to ward capacity and continued on the pathway in PHDU admission to the IOA can be bypassed if all day 1 post-op goals are achieved. 	Admitted to IAO? Yes/No (circle)

(Additional space for documenting why goals are not achieved +/- why the patient diverted off the pathway)

Post-operative Day 2 Cares Ward 23B

Date:

Instructions: Tick the boxes corresponding to your shift, ONLY if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Day 2 Care Goals	Reason Goal not Met
Interventions	<input type="checkbox"/> 	<input type="checkbox"/> 	<ul style="list-style-type: none"> Discontinue telemetry if the patient meets the below criteria <ul style="list-style-type: none"> - Alert - Electrolytes within normal levels - Sinus rhythm within the last 24 hours - The child is clinically stable and progressing as expected Morning bloods and ECG Continue with continuous pulse oximetry for another 24 hours Transfer out of IOA, if the child is clinically stable and progressing as expected Remove CVL as directed post ward round Wound review. Ongoing wound management as per the surgeons preferences. Check diagnostic tests are completed for the removal of pacing wires on day three post-op (see pacing wire removal guideline) Daily weight 	
Medication	<input type="checkbox"/> 	<input type="checkbox"/> 	<ul style="list-style-type: none"> Transition to oral twice daily furosemide and spironolactone Consider restarting ½ the usual dose of ACE inhibitors if having ACE inhibitors pre-op Commence lactulose OD if BNO 	
Pain management	<input type="checkbox"/> 	<input type="checkbox"/> 	<ul style="list-style-type: none"> Six hourly paracetamol Eight hourly ibuprofen unless contraindicated* Commence omeprazole daily for patients on ibuprofen Oral Morphine PRN Ondansetron for nausea and vomiting <p>* Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Anticoagulation therapy	<input type="checkbox"/> 	<input type="checkbox"/> 	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> Mitral Valve Repairs <ul style="list-style-type: none"> Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post op, take for 6 months then stop Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> Do not use aspirin unless requested by surgeon Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post operation, take for 6 months then stop. Mechanical Valves (St Judes, On-X Carbon) Initial management <ul style="list-style-type: none"> Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon/cardiologist for target INR) Daily INR for mechanical valves 	

Patient Label

Mobilisation	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> ● Mobilise onto a chair for all meals ● Mobilise out of bed and out of the room 	
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> ● Free fluids and commence a normal diet 	
Daily needs bundle of care	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> ● Bath /oral hygiene ● Glamorgan bundle of care 	
Infection surveillance	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<p>Pyrexia of < 38°C within 48 hours can be associated with a SIRS response</p> <ul style="list-style-type: none"> ● Patient afebrile (q4 hourly temps) ● Ensure patient is hydrated and manage with paracetamol 	
Discharge education	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> ● Commence rheumatic fever discharge checklist – Nurse Specialist ● Warfarin and INR teaching commenced ● Education re post op care including dental hygiene and when to seek medical advice 	

(Additional space for documenting why goals are not achieved)

Post-operative Day 3 Cares Ward 23B

Date: _____

Instructions: Tick the boxes corresponding to your shift, **ONLY** if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Day 3 Care Goals	Reason Goal not Met
Interventions	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> If pacing wires are in situ remove as per pacing wire removal protocol. Check INR prior to removal, if INR is greater than 3 do not remove wires and notify surgeon Daily weight Remove dressings on drain sites if dressings are dry Daily wound review 	
Medication management	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Continue twice daily oral furosemide and spironolactone if there are no signs of fluid overload and weight is tracking back to the pre-operative weight Continue with or consider commencing ½ the usual dose ACE inhibitors if having ACE inhibitors pre-op 	
Pain management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Six hourly paracetamol PRN ibuprofen unless contraindicated* Continue omeprazole daily for patients on ibuprofen Oral Morphine PRN Ondansetron for nausea and vomiting <p>*Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Anticoagulation management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> Mitral Valve Repairs <ul style="list-style-type: none"> Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post op, take for 6 months then stop Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> Do not use aspirin unless requested by surgeon Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post operation, take for 6 months then stop. Mechanical Valves (St Judes, On-X Carbon) <p>Initial management</p> <ul style="list-style-type: none"> Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon/cardiologist for target INR) Daily INR for mechanical valves 	
Mobilisation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Encourage mobilisation 	
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Encourage normal home diet 	

Patient Label

Diagnostic tests	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Routine post op ECHO required day 3-4 	
Infection surveillance	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Patient afebrile (q4hrly temps) Ensure patient is hydrated and manage with paracetamol 	
Daily needs bundle of care	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Hygiene needs/Shower/Bath/Teeth Glamorgan bundle of care 	
Discharge education	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Commence rheumatic fever discharge checklist – Nurse Specialist Warfarin and INR teaching commenced Education re post op care including dental hygiene and when to seek medical advice 	

(Additional space for documenting why goals are not achieved below)

Post-operative Day 4 Cares Ward 23B

Date: _____

Instructions: Tick the boxes corresponding to your shift, ONLY if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Day 4 Care Goals	Reason Goal not Met
Diuretic management	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Daily weight Daily wound review 	
Medication management	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Reduce frusemide and spironolactone to once daily with the consideration of LV size on ECHO Consider increasing ACE inhibitors to full dose if having ACE inhibitors pre-op 	
Anticoagulation management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> Mitral Valve Repairs <ul style="list-style-type: none"> Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post op, take for 6 months then stop Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> Do not use aspirin unless requested by surgeon Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post operation, take for 6 months then stop. Mechanical Valves (St Judes, On-X Carbon) Initial management <ul style="list-style-type: none"> Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon/cardiologist for target INR) Daily INR for mechanical valves 	
Pain management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Six hourly paracetamol PRN ibuprofen if not contraindicated* Continue omeprazole daily for patients on ibuprofen Oral Morphine PRN, discontinue if not required <p>* Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Mobilisation	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Mobilise at least 4 times over the course of day Sit out for meals 	
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Continue to encourage a normal home diet 	
Diagnostic tests	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Echocardiogram done 	
Infection surveillance	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Afebrile (q4hourly temps) Ensure patient is hydrated and manage with paracetamol 	

(Additional space for documenting why goals are not achieved below)

Patient Label

Post-operative Days 5 and Day 6 Cares Ward 23B

Dates:

and

Instructions: Tick the boxes corresponding to your shift, ONLY if the goals are achieved. If not applicable write n/a. If the goal is not achieved provide the reason the goal is not achieved in the far column.

	AM	PM	Days 5 and 6 Care Goals	Reason Goal not Met
Medication management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Continue on once daily diuretics Daily weight If the patient still requires interventions for congestive heart failure, the patient will breach the pathway, and individualised care is continued Consider increasing ACE inhibitors to full dose if having ACE inhibitors pre-op Daily wound review 	
Pain management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Six hourly paracetamol PRN ibuprofen if not contraindicated* Continue omeprazole daily for patients on ibuprofen Discontinue Morphine <p>*Ibuprofen may be contraindicated in ARF patients with renal dysfunction</p>	
Anticoagulation management	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>Refer to the 'Anticoagulation Following Cardiac Surgical Intervention' guideline</p> <ul style="list-style-type: none"> Mitral Valve Repairs <ul style="list-style-type: none"> Short term low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post op, take for 6 months then stop Homograft Valves (in either aortic or pulmonary position) <ul style="list-style-type: none"> Do not use aspirin unless requested by surgeon Porcine/Bovine Tissue Valves in any position (Contegra, Mosaic, Freestyle, Hancock) <ul style="list-style-type: none"> Low dose aspirin 3-5mg/kg/day (maximum 75mg/day) Start day one post operation, take for 6 months then stop. Mechanical Valves (St Judes, On-X Carbon) <p>Initial management</p> <ul style="list-style-type: none"> Start aspirin on day 1 post op (3-5 mg/kg/day) once eating, and continue aspirin while commencing warfarin until the INR is over 1.8. Then can stop aspirin, unless on combined therapy. Start warfarin day 2 post op. Aim for INR 2.0-2.5 in the initial two weeks postoperatively (check with the surgeon/cardiologist for target INR) Daily INR for mechanical valves Liaise with the NS for discharge planning 	
Mobilisation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Continue to mobilise as per day 4 plan 	
Nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Encourage a normal home diet 	
Infection surveillance	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Afebrile (q4hourly temps) Ensure patient is hydrated and manage with paracetamol 	

Patient Label

Daily needs bundle of care	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> ● Hygiene needs/shower/Bath/teeth ● Glamorgan bundle of care 	
Discharge education	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> ● Commence/continue rheumatic fever discharge checklist – Nurse Specialist ● Warfarin and INR teaching commenced ● Education re post op care including dental hygiene and when to seek medical advice ● Complete Discharge referrals – liaise with the nurse specialist <p><i>*If the patient is discharged today also complete day 7 discharge day care goals.</i></p>	<p>Discharged Yes/No (circle) Date: __/__/__</p>

(Additional space for documenting why goals are not achieved below)

Date:

	AM	PM	Days 7 Care Goals	Reason Goal Not Met
Mobilisation post discharge	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Advise patients of any discharge activity restrictions 	
Discharge criteria	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Ensure rheumatic fever discharge checklist has been completed Review medications before discharge <ul style="list-style-type: none"> Regular panadol on discharge PRN ibuprofen if not contraindicated for 2-3 days post discharge Consider continuing diuretics for 1 month unless contraindicated – discuss with the cardiologist If on warfarin: <ul style="list-style-type: none"> establish long term target INR from surgeon/cardiologist for discharge management Patient has completed INR education and can safely test their own INR Ensure INR follow-up is arranged Wound review and removal of sutures by the GP on day 7-10 postop If the wound has interrupted sutures, removal of sutures is organised by the surgical team at 14 days 	
Discharge referrals	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Complete Discharge referrals – liaise with the nurse specialist A routine check by GP within the first week of discharge 	
Discharge Status	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Patient Discharged 	

Post Discharge Management

Discharge management	<ul style="list-style-type: none">● Long term management for INR<ul style="list-style-type: none">• Refer to the '<i>Anticoagulation Following Cardiac Surgical Intervention</i>' Starship Clinical Guideline● Consider an ECHO at 4 weeks post-operatively
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