

Ward 1A Orientation Package

The Prince Charles Hospital
MNHHS
Cardiology W1A



Metro North
Hospital and Health Service



Queensland
Government

Orientation Package

Ward 1A

This package has been produced to assist with your induction to Ward 1A. You will also be assigned a preceptor who will be available throughout the orientation period to supervise your clinical work and be responsible for your performance review in consultation with the NUM.

Please utilise the preceptor in Ward 1A. This person is always willing to help you.

We welcome you and hope you enjoy your stay in Ward 1A

Your preceptor is: Eddie

Helpful Phone Numbers
1A NUM: 5342
1A TEAM LEADER: 5398
1A CLINICAL SUPPORT: 3245
1A AIN: 81532
1A RECEPTION: 4398
1A CLINICAL NURSE CLINICAL FACILITATOR: 5005

Welcome to the Prince Charles Hospital

TPCH is a major tertiary referral hospital within Metro North Hospital and Health Service (MNHHS) which also includes The Royal Brisbane, Redcliffe, Caboolture, and Kilcoy Hospitals. TPCH, has a proud history of delivering specialised cardiothoracic care to Queensland and Northern New South Wales. Established services provided at TPCH include cardiac surgery, cardiac and thoracic medicine, orthopaedics, care of the older person, palliative care, specialist sleep and mental health services. More recently, children's emergency, inpatient and outpatient services have also been introduced.



Cardiovascular health care is a dynamic and complex healthcare industry. The Prince Charles Campus provides specialist Cardiology services through expert units within the Heart Lung Institute (HLI) to create dependable health care and better cardiac health for all. It is the aim of Ward 1A to provide holistic care for patients, utilising an individualised, coordinated, multidisciplinary approach that will achieve optimal outcomes for the individual and their family.

How we work

Ward 1A is a 30-bed cardiology ward using a modified practice partnership model of care. During day and evening shifts nursing staff are split into three teams made up of either RN/EN, RN/RN or CN/RN. Each team utilises practice partnership nursing by taking on 10 patients and managing the workload together as they see fit on a shift-by-shift basis. Additionally, on each of these shifts there is a Team Leader to coordinate patient care and a Clinical Support or “Float” nurse to assist as required.

Core Nursing positions and staff working within Ward 1A:

- **Nurse Unit Manager:** Responsible professionally and operationally for the clinical standards and day to day running of the ward. Our NUM manages daily patient flow and bed management, staff allocation, rostering, recruitment and retention and HR.
- **Clinical Nurses Clinical Facilitator:** Supports the delivery of education, training and preceptorship of new staff.
- **Clinical Nurse:** Responsible for the delivery of direct patient care and often as Team leader. Each CN manages a portfolio related to a National Safety and Quality Standard of which you will also be assigned to. It is expected that all CNs will have experience and knowledge in the speciality area of cardiology.
- **Registered Nurses:** Responsible for the delivery of direct patient care within their scope of practice as well as the direct and indirect supervision of EN's and AIN's
- **Enrolled Nurse:** Provide direct clinical care under the supervision of the RN within their scope of practice.
- **Non-Clinical Assistant in Nursing:** Work within their designated role to assist with the operational and environmental management of the service. This includes clinical stock management and patient flow support activities such as bed making.
- **Medical teams:** Comprised of a Consultant Cardiologist a Registrar and one or two Resident medical officers. They are responsible for medical decisions regarding treatment for patients admitted under the consultant. Cardiologists will also lead medical research with their Registrar's participation. Residents are often your first point of contact with each team.
- **Administration Officers:** Provide administrative support including patient bookings and transport, visitor enquiries and maintenance of medical charts. Ours are extremely friendly.
- **Continuity of Care Coordinator:** (sometimes referred to as the discharge coordinator) Assists with the implementation of services at home for patients upon discharge (e.g.: blue care or meals on wheels)
- **Allied Health Team:** We have access to social workers, occupational therapists, physio, podiatry, indigenous liaison officers and many more for patients who require these services.

WARD 1A Acceptable Behaviours

Above the Line Behaviours

Support the Metro North Values of:
Teamwork, Respect, Compassion, Integrity and High Performance

This includes being supportive, encouraging, honest, tolerant, courteous, kind, well mannered, optimistic, punctual, motivated, inquisitive, accountable, and professional.

Below the Line Behaviours

Do not support the Metro North Values

This includes bullying, aggression, gossip, cutting corners, intolerance, passing on responsibility, discrimination, rudeness, arrogance foul language, disrespect and lateness.

Program Goals

The purpose of this orientation package is to:

- Provide new staff members with a planned approach to orientation to Ward 1A
- Promote development of a theoretical knowledge base, which will assist with development of clinical skills
- Provide basic building blocks for individual professional development through achievement of specific objectives/activities
- Assist new staff member and Preceptor in setting realistic, achievable **objectives** as outlined below:

1. Cardiopulmonary Nursing Assessment

- Outline the information that would be elicited from the nursing history of a patient with cardiovascular disease.
- Describe the various objective measures used for the examination of the cardiopulmonary systems in terms of a physical examination. These will include:
 - Vital signs
 - Auscultation of heart sounds
 - Auscultation of lung sounds

2. Coronary Heart Disease, Unstable Angina

- Define Coronary Artery Disease
- Identify the risk factors that contribute to CAD
- Discuss the classifications associated with the terminology Acute Coronary Syndrome
- Discuss the assessment of Unstable Angina
- Outline the management of Unstable Angina

3. Acute Coronary Syndrome- ST Elevation Myocardial infarction (STEMI) & Non-ST Elevation MI(NSTEMI), Type 2 MI

- Define myocardial infarction and identify possible causes
- Discuss the criteria used to diagnose a myocardial infarction
- Predict the potential complications of myocardial infarction and their significance
- Broadly discuss the treatment of myocardial infarction.

4. Common Cardiac Investigations and Procedures

- Briefly describe the purpose of and the information which may be obtained from the following investigations: 12 lead ECG, Chest X-Ray, blood tests, Exercise Stress Testing, Nuclear Medicine scans (MRI), Echocardiography, Trans Oesophageal Echo, Coronary Angiogram, Electrophysiology Studies
- Briefly describe the following interventions: Coronary angioplasty and stents, pacemaker insertion.
- Briefly discuss the nursing care involved pre- & post all the investigations/ procedures above.
- Outline the nurse's responsibility in relation to patient education at the ward level
- Patient Education Issues

5. Infective Endocarditis

- Define infective endocarditis
- Discuss assessment and diagnostic techniques used in infective endocarditis
- Outline the management of infective endocarditis

6. Cardiac Failure

- Briefly review the factors involved in the regulation of cardiac output (Define Cardiac Failure and identify possible causes)
- Describe how the body compensates for cardiac failure
- Distinguish between the assessment findings which relate to left sided and right-sided heart failure.
- Broadly discuss the management of cardiac failure

7. Understanding Medications used in the Cardiac setting

- Review the principles of safe administration of medication
- Identify the range of medications used in the cardiac setting: antihypertensives, antianginal, antiarrhythmics, anticoagulants and diuretics
- Identify the nursing practices that are linked to the safe administration of cardiac medications
- Discuss the need for patient education regarding medications and patient compliance with medication regimen.

- Target appropriate resources to help with the safe administration of cardiac medications

Preparing patients having Cardiac Surgery

- Briefly describe the various types of Cardiac surgery performed at TPCH
- Briefly discuss the routine care given to the patient pre- and post-cardiac surgery.
- Identify the most common complications that occur post cardiac surgery

Anticoagulant Medications

Please be aware that as part of a clinical incident review it was decided that all new graduates (first 12 months) should be supported to administer any anticoagulation therapy as a two-nurse witnessed bedside medication check (similar to DDs).

Policies, Procedures and Guidelines

Open Intranet

Click on '*Organisational Structure*' – upper left

On right side of screen click on '*The Prince Charles Hospital*'

On upper tabs click on '*Policies & Procedures*' - TPCCH

To reach the Cardiology work unit guidelines (WUG)

Open Intranet

Click on '*Organisational Structure*' – upper left

On right side of screen click on '*The Prince Charles Hospital*'

Click '*Cardiology Services*' located under the '*Clinical*' tab at top left of the screen

Click '*Guidelines – Heart-Lung*'

Please know how to access the following procedures:

- | | |
|--|---|
| <input type="checkbox"/> Angina Management | <input type="checkbox"/> Medication Administration – Nursing |
| <input type="checkbox"/> Aseptic Technique | <input type="checkbox"/> NSTEMI Management |
| <input type="checkbox"/> Blood and Blood Products – Management | <input type="checkbox"/> Observations – Minimum Standards |
| <input type="checkbox"/> Code of Conduct | <input type="checkbox"/> Occupational Health (all procedures) |
| <input type="checkbox"/> Clinical Handover | <input type="checkbox"/> Percutaneous Interventions – Monitoring Access Sites |
| <input type="checkbox"/> Documentation | <input type="checkbox"/> Pressure Injuries – Management and Devices |
| <input type="checkbox"/> Falls, Patient – Prevention and Management | <input type="checkbox"/> Telemetry Management |
| <input type="checkbox"/> Hand Hygiene | <input type="checkbox"/> Ryan's Rule |
| <input type="checkbox"/> Infection Control Guidelines (all procedures) | <input type="checkbox"/> Staff Illness or Injury at Work |
| <input type="checkbox"/> Intravenous Management – Peripheral Catheters and Infusions | <input type="checkbox"/> Waste Management |

Please ask your preceptor to help you access and familiarise yourself with the following programs and processes:

- ☐ RISKMAN (incident reporting)
- ☐ WHS
- ☐ AVAC (attendance variations)
- ☐ MyHR / Leave requests and payslips
- ☐ TMS (Talent Management System)
- ☐ Roster Requests book and WUG (Soon to be through MyHR with IWFM)
- ☐ QuEST

Clinical Handover

Clinical handover is a core priority for the safety and quality of healthcare delivery. As the nurse you are responsible and accountable for ensuring information received and provided about patients is appropriately managed and accurately transferred in a timely manner. The use of the ISBAR communication tool is preferred in Ward 1A. The tool sets out simple cues for verbal transfer of relevant patient information and is summarised by the following key components:

I	Introduce, identification (ID Band check), involve patient
S	Diagnosis, complication, significant events relevant to current situation
B	Relevant background, allergies/alert/risks, advance care plan
A	Important vital signs/observation, treatments, current status and progress
R	Pending care, patient preferences and questions

Observation/MET/ Q-ADDS

The early recognition of clinical deterioration, followed by prompt and effective action, can minimise the occurrence of adverse events such as cardiac arrest, and may mean that a lower level of intervention is required to stabilise a patient.

Observations are taken QID as a minimum on Ward 1A, at 0400hrs, 1000hrs, 1600hrs and 2100hrs. Observations are also taken on patient admission, patient discharge and post procedure.

Patient observations are documented on the Observation Chart (Q-ADDS). A score is attributed to each observation based on the degree of physiological abnormality. Individual observation scores are added together to provide a total Q-ADD score. The Q-ADDS identifies the escalation pathway for review of the patient

Area	Q-ADDS observation frequency				
Acute Patient	<p>Minimum four times a day Specific times are unit specific to optimise patient assessment, consider shift changes, and allow the patient rest after lunch and overnight. Maximum permissible interval between observation is 9 hrs.</p> <table> <tr> <td>Post-Operative</td><td>Every 30 minutes for two hrs, then Hourly for four hours, then Every four hours for 24 hours, then Four times daily</td></tr> <tr> <td>Post Procedural sedation</td><td>Refer to approved procedure document (for areas providing sedation/analgesia without anaesthetic support)</td></tr> </table>	Post-Operative	Every 30 minutes for two hrs, then Hourly for four hours, then Every four hours for 24 hours, then Four times daily	Post Procedural sedation	Refer to approved procedure document (for areas providing sedation/analgesia without anaesthetic support)
Post-Operative	Every 30 minutes for two hrs, then Hourly for four hours, then Every four hours for 24 hours, then Four times daily				
Post Procedural sedation	Refer to approved procedure document (for areas providing sedation/analgesia without anaesthetic support)				

Documentation of escalation Nursing staff document when an escalation has occurred on the Observation Chart (QADDS). All clinical staff involved in the patient's care are responsible for timely and

accurate documentation of the patient's condition, escalation, treatment and response to treatment in the medical record.

Q-ADDS modifications

A modification may be made to the Q-ADDS if considered safe by the medical team when observations are outside usual parameters. Only registrars and consultants are permitted to make modifications. All modifications to the QADDS are to be documented by the registrar or consultant on the QADDS observation chart and patient progress notes. Modifications must be reviewed as required.

A decision not to place a MET call, despite the patient meeting escalation criteria, may only be made by the treating consultant. The consultant must be in attendance at the time. This is to be clearly documented in the medical record.

Increasing Q-ADDS frequency

Actions Required for Cardiac Q-ADDS				
Q-ADDS Score	Observations (minimum frequency)	Notify	Escalate (if no review)	Intra-hospital Escort
0	8 hourly			
1-3	4 hourly	• Team Leader		
4-5	1 hourly	• Team Leader • Registrar review within 30 minutes	• If no review after 30 minutes call Registrar	Nurse
6-7	½ hourly	• Team Leader • Registrar review within 30 minutes	• If no review after 30 minutes initiate Emergency Call • If concerned initiate Emergency Call	Nurse
≥8	10 minutely	• Initiate Emergency Call • Registrar to ensure Consultant is notified	• Registrar to ensure Consultant is notified	Nurse and Medical Officer

Intravenous Catheter Management (IVC)

Nursing staff in Ward 1A are required to review PIVC each shift and document VIP Score (see pictured below) on Peripheral Cannula Insertion Record and Care Plan. Timely removal is required when the PIVC is no longer required; the gold standard is if the PIVC is not being used within 8hrs it should be removed.

Discuss need for PICC or CVL with Medical Officer if PIVC is likely to be required for >72 hours

- PIVCs are managed in accordance with Heart-Lung Work Guideline *Intravenous Catheter (Peripheral) Management- Cardiology HLWUG15018v1*
- PIVCs must be replaced every 72 hours
- PIVCs inserted in other facilities should be replaced on arrival or within 24 hours if PIVC is required in an emergency situation
- PIVCs should be replaced within 24 hours when inserted by Emergency Department or Queensland Ambulance Service

Cannula 3													
Inserted by: _____ (name) _____ (signature)													
<input type="checkbox"/> QAS <input type="checkbox"/> DEM <input type="checkbox"/> Other facility <input type="checkbox"/> Ward:													
Date inserted: / /								Site:					
Time inserted:								Gauge:					
Shift checks	Date												
	Shift	AM	PM	ND	AM	PM	ND	AM	PM	ND	AM	PM	ND
V.I.P. score													
Flush													
Date removed: / /		Removed by:											
Time removed:		*Insertion duration variance reason:											

V. I. P. Score (Visual Infusion Phlebitis Score)

VIP score should be evaluated during each shift and documented on the observation chart

I.V. site appears healthy	0	No signs of phlebitis <input type="checkbox"/> OBSERVE CANNULA
One of the following is evident: ● Slight pain near I.V. site or slight redness near I.V. site	1	Possible first signs of phlebitis <input type="checkbox"/> OBSERVE CANNULA
Two of the following are evident: ● Pain near I.V. site ● Erythema ● Swelling	2	Early stage of phlebitis <input type="checkbox"/> RESITE CANNULA
ALL of the following are evident: ● Pain along path of cannula ● Erythema ● Induration	3	Medium stage of phlebitis <input type="checkbox"/> RESITE CANNULA <input type="checkbox"/> CONSIDER TREATMENT
All of the following are evident & extensive: ● Pain along path of cannula ● Erythema ● Induration ● Palpable venous cord	4	Advanced stage of phlebitis or start of thrombophlebitis <input type="checkbox"/> RESITE CANNULA <input type="checkbox"/> CONSIDER TREATMENT
All of the following are evident & extensive: ● Pain along path of cannula ● Erythema ● Induration ● Palpable venous cord ● Pyrexia	5	Advanced stage of thrombophlebitis <input type="checkbox"/> INITIATE TREATMENT <input type="checkbox"/> RESITE CANNULA

Developed by Andrew Jackson, Consultant Nurse Intravenous Therapy and Care, Rotherham General Hospitals, NHS Trust.



Useful Resources

Queensland health Intranet (QHEPS), is our home page in all internet browsers. On the right side of the page you will find quick links for:

- MIMS – The Australian Medication Handbook
- CKN – Clinician Knowledge Network
- AHPRA – Australian Health Practitioners Regulation Agency
- Informed consent

The Prince Charles Hospital intranet site can be found by following site path:

[QHEPS](#) > [organisational structure](#) > [Metro North](#) > [The Prince Charles Hospital](#)

And contains:

- Hospital Procedures
- Staff Wellness Portal
- Medication Imprest - [Clinical support](#) > [Pharmacy](#) > [Master Imprest List](#)
- Isolated patient information - [Clinical](#) > [Infection Control](#) > [Patient Information Sheets](#)
- Cardiac Procedure Advice - [Clinical](#) > [Cardiology Services](#) > [Procedural Instructions](#)
- Work Unit Guidelines (WUGs) - [Clinical](#) > [Cardiology Services](#) > [Guidelines](#)

Emergency Numbers

This emergency number key is next to each phone within Ward 1A.

Medical Emergency	Ring 333 – State either “ Arrest ” or “ MET ” then “ Ward 1A room ... ”
Fire Emergency	Ring 666 - State “ Code Red ” and give location
Bomb/Arson Emergency	<p>If threat is via phone – alert colleagues to dial 666 “Code Purple”</p> <ul style="list-style-type: none"> - Try to keep caller on phone use checklist near phone to record as much detail as possible. - Dial 258 on your phone to begin recording phone call.
Internal Emergency	Ring 666 - State “ Code Yellow ” and give detail of emergency
Personal Threat	<p>Ring 666 – state “Code Black” and give location</p> <p>Alternately – Activate Duress alarm (there are 3 in W1A)</p>
External Emergency	Ring 666 - state “ Code Brown ” And give detail of emergency
Evacuation	Ring 666 – state “ Code Orange ” and give location

Telephone Procedures

- When answering telephones, it is protocol to answer in the following manner: acknowledge the caller, state your area of work and your name.
- Out of state telephone calls must be arranged through the switchboard operator by dialling 9. You will be required to provide your name and area of work to the operator.
- International telephone calls require the prior approval of the General Manager prior to making the call.
- For local calls and mobile numbers press 0 first to obtain an outside line.
- Patients can use their mobile phones – there are guidelines displayed in the patient’s rooms.
- Patients can receive phone calls via the bedside phone between 10am and 8pm
- Staff at work are not to use personal mobile phones

Staff Allocation Book

This book is used to allocate patient loads each shift and will be decided by the NUM or Team leader on the prior shift. These allocations are done with consideration to skill mix, patient acuity, continuity and other factors, if you have any concerns regarding your allocation, please calmly discuss with the Team Leader of the previous shift.

Rostering

- The roster is completed on a 4 weekly basis and emailed to your nominated address as well as published on Teams and in the Allocation book.
- Staff have ability to make requests **prior** to the development of each roster – the cut off times for these requests is displayed in the roster request book
- The roster request book also contains information regarding leave entitlements as well as the Ward 1A roster WUG which sets out rostering guidelines to ensure fairness and clear instruction for staff requests. **Please read this WUG**
- Any concerns/queries can be discussed with the CN developing each roster or the NUM
- Shift swaps with other staff must be approved by the NUM (or in emergent situations a CN)

Sick Leave (Refer HR Guidelines Document)

- 0600-1530 – please notify Ward 1A NUM - 3139 5342
- After hours – please notify Ward TL - 3139 5398
- **Where possible a minimum of 4 hours-notice is preferred to ensure sufficient time to arrange replacement staff**
- Sick leave greater than 3 days requires a medical certificate as per award guidelines
- Sick leave greater than 5 days requires an 'Application for Leave Form' (HR012) via My HR

Reporting clinical Incidents/ injury/ hazards /workload grievances

- RISKMAN is used to report all clinical incidents/events, including occupational violence or aggression and Workplace Health and Safety risks or incidents including near misses. Riskman is located on every computer and when completing please ensure to set your manager to the correct manager for the location of the incident. (eg: Emergency Department or Ward 1A)
- "Workload Concerns" form is used to report heavy workloads and this form is located in the start menu of every computer. When completing this form please ensure you tick the "Send copy to Queensland Nursing and Midwifery Union (QNMU)" as this means your concerns are tabled at high level meetings.
- Both types of reports are received by the line manager (NUM) who decides what action to take.
- When completing an incident include as many appropriate details as possible to give a full account of the event. Please keep language professional and do not unnecessarily afford blame.
- WHS, Workcover, infection control or other department may contact you if you have a workplace injury or incident

Supply Ordering Procedures

The Ward 1A AIN does most of the stock orders. Please leave a message on the whiteboard in the 'Clean Supplies Room' if you notice more stock is needed – put the date and your name on the board. It's a good idea to familiarise yourself with all the stock storage on the ward, including the main storeroom.

Engineer and Biomedical Engineering Requests

Requests to the engineer's department include - electricians, carpenters, painters, or contractor. The Biomedical Engineers (BTS) relate to specialist medical equipment. Faulty medical equipment is tagged with a yellow repair tag. Only the Ward Receptionist, NUM and selected staff are authorised to submit these requests.

Operational Communications

- Ward meetings are held monthly in Ward 1A. This provides an avenue for members of staff to discuss organisational and professional issues and to receive information and feedback from the NUM. All staff can write agenda items on Ward Meeting Agenda Form prior to meetings. Minutes of these meetings are available to staff who are unable to attend.
- Teams application is used to provide day-to-day information of changes occurring within the ward. It is recommended that you read this each shift. All staff can communicate organisational and professional information in TEAMS.
- There are 'pigeonholes' for staff mail and everyone has a QH email which should be checked regularly for organisational and ward updates.

Our model of care is “Practice Partnership” and we strive to foster effective teamwork.

Course/Competency	Date
Learning Packages/Clinical Competencies	
Nursing Hospital Orientation	
Practical - BLS	
Practical – Manual Handling	
Practical - ANTT	
Medication exam (theory at orientation, practical sign off by CNCF during S/N period)	
Email to new staff once appointment confirmed	
Ward 1A - Orientation Package	
Ward 1A Orientation (**= with CNCF)	
**Practical - Heparin theory test & practical	
**Practical - IV medication run through using Alaris pump & Alaris syringe driver (program heparin, frusemide infusion, MgSO4 + KCL)	
**Practical - Zoll Defibrillator practical (Transport monitor and trolley)	
**Practical – Phillip’s monitor run through	
**Theory – Q-ADDS TMS (and run through in person)	
**Theory - Hematoma and Post-PCI package	
**Introduction to TMS (Central Skills Development Service)	
**Chest Pain Assessment & Management (Chest Pain Protocol)	
Mandatory Training (assigned by NUM)	
First 2 days: <ul style="list-style-type: none"> General Evacuation Instructions (Completed on ward) First Response Evacuation Instructions Infection Control Awareness First 14 days: <ul style="list-style-type: none"> Work, Health, Safety and Wellbeing Induction Cyber Security Essentials First 30 days: <ul style="list-style-type: none"> Australian Charter for Healthcare Rights Code of Conduct Public Interest Disclosure (PID) 	<ul style="list-style-type: none"> Fraud Control Awareness Infection Control Awareness SAFE – Child Safety Awareness Prevention and Management of Musculoskeletal disorders (MSD) First 90 days: <ul style="list-style-type: none"> Aboriginal and Torres Strait Islander Cultural Practice Orientation Recognise, Respond, Refer (domestic and family violence training) Occupational Violence – Conflicting and Challenging Behaviour Awareness Performance Development and Planning

Ward 1A Mandatory Modules and TMS courses

*Enrol in Cardiac Monitoring modules 1,2,3 & 4 on TMS + associated tutorials.



Cardiac Monitoring
1.docx

Intravenous Iron: Administration and Monitoring - TMS

Recognising and Responding to Clinical Deterioration in Adults (CSDS via TMS)

Adult Sepsis Inpatient Package - TMS

CSDS - Electrograph (ECG) rhythm interpretation ECG-Online

Bloodsafe – Patient Blood Management - TMS

3 – 6 months

Cardiac monitoring 1

Cardiac monitoring 2

Cannulation and Venepuncture Theory (TMS) + Practical (CNCF)

Day in CIU (practicing cannulation and observing procedures/cares)

Pressure Injury Prevention Awareness - TMS

Delirium Assessment and Management - TMS

Falls Prevention Awareness - TMS

6 – 12 months

Post percutaneous management package

Cardiac monitoring module 3 and 4

ECG Interpretation Education Centre Training

Nasogastric Tube insertion

Domestic and Family Violence Modules 1-4

Heart Failure Module - TSP

Preventing Catheter Associated UTI (CAUTI) - TMS

PICC Competency (CVAD course RBWH)

Non-invasive ventilation

Respiratory Monitoring (including respiratory arrest)