EMERGENCY EQUIPMENT – CHECKING AND MAINTAINING

STANDARD
- This standard applies to Registered and Enrolled Nurses and Registered midwives.
- The emergency trolley equipment must be checked at least daily preferably on each shift), and after every use. For departments, which do not offer a 7-day service, the emergency trolley equipment must be checked daily when the department is open. Wall oxygen and suction in all clinical areas must be checked at least daily, and more often where specified by local policy. Nursing and Midwifery Unit Managers or Department Heads are responsible for ensuring that appropriate checking of emergency equipment, including wall oxygen and suction, occurs in their area.

This Standard is to be used in conjunction with:
- Adult Cardiac Arrest Equipment Checklist
- NSW Health Department Circular 95/94 Resuscitation Equipment and Training
- NSW Health Department Circular 2002/30, Framework for Area Health Services to Develop Policy and Procedures relating to clinical Care and resuscitation of the Newly Born Infant.
- The Royal Hospital for Women Infection Control Manual.

OUTCOME
Emergency equipment is maintained in a functional state and is ready to use in an emergency situation.

VARIANCE MANAGEMENT
Where equipment is identified as not being functional, the appropriate department is contacted to arrange immediate repair and replacement. Where immediate repairs cannot be attended, replacement equipment is provided to ensure that emergency equipment is ready for use in an emergency situation whenever needed. Unit Managers must be notified immediately.

GENERAL GUIDELINES
Check the emergency trolley equipment according to the Adult Cardiac Arrest Equipment Checklist/Neonatal Resuscitation Equipment Checklist. Equipment which is missing, not functional or expired must be replaced or repaired immediately. Wall oxygen and suction should be checked to ensure that it is functional. Where problems are identified with oxygen and suction equipment they must be reported and rectified as soon as possible.

All Emergency equipment should be checked daily.

Equipment
- Adult Cardiac Arrest Equipment Checklist
- Emergency trolley contents, including portable oxygen and suction, and semi-automated external defibrillator (SAED)
- Wall oxygen and suction

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EMERGENCY EQUIPMENT – CHECKING AND MAINTAINING  cont’d

Neonatal Resuscitation Equipment Checklist:
Emergency trolley contents, include resuscitators, portable oxygen and suction in all maternity areas. Neopuff Infant Resuscitators in Newborn Care Centre, Delivery Suite and Birth Centre.

Method

Portable Oxygen & Suction Equipment
Oxygen cylinder and Twin-O-Vac or other portable suction units are essential in the event an incident occurs in an area where there is no access to wall oxygen or suction (eg. corridor, bathroom). The oxygen cylinder from the emergency trolley should never be removed from the trolley for routine patient transport.

Oxygen Equipment
- Check that an oxygen flow meter and regulator are attached to the oxygen cylinder.
- Ensure that an oxygen key is attached to the cylinder.
- Using the oxygen key, open the valve to check that the oxygen cylinder is greater than half full and not leaking. If not, the cylinder must be replaced immediately with a full cylinder. When replacing the oxygen cylinder, first remove the Twin-O-Vac unit to ensure that a proper seal is achieved.
- Check oxygen flow by turning the flow meter on. Use a 15 Litre Flow Meter.
- Check that there is at least 2m of oxygen tubing attached to the oxygen flowmeter.

Neopuff
- Check that a gas supply line (green) is connected from the gas flow meter to the Neopuff.
- Check that a clean patient circuit (corrugated) is connected to the Neopuff.
- Check that clean masks are on top of the resuscitation bed for use (Size 0/1 Silicone mask for term infants and Size 00 for preterm infants <2.5 kg.
- Check that the maximum pressure relief valve is set at factory setting of 40cm H₂O. If not, flip the cover of maximum pressure relief valve aside and turn the maximum pressure relief knob until 40 cm H₂O is reached.
- Check the pressure settings are at PIP of 25cm H₂O and PEEP of 5cm H₂O for term infants and change setting to PIP of 20cm H₂O and PEEP of 5cm H₂O for preterm infants.

Suction Equipment
- Ensure the collection canister is correctly secured to the unit head.
- Check that there is 2m of suction tubing attached to the suction outlet.
- Turn suction on and place finger tip over the end of the suction tubing to check that there is adequate suction pressure. Pressure generated should be sufficient to adhere the fingertip to the tubing. Only low suction is required for neonatal resuscitation and should be less than 100mmHg.
- Ensure suction catheters Sizes 8, 10 and 12 are available for neonatal use.

When checking is complete, turn off the flow meter, and close the valve using the black key to prevent oxygen leakage. Turn the flow meter back on to expel remaining oxygen and then turn off.

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EMERGENCY EQUIPMENT – CHECKING AND MAINTAINING  cont’d

Wall Oxygen and Suction
- Check oxygen flow by turning the flow meter on.
- Check the suction to ensure that there is adequate suction pressure. Place finger tip over the end of the suction tubing. Pressure generated should be sufficient to adhere the fingertip to the tubing. Only low suction is required for neonatal resuscitation and should be less than 100mmHg.
- Check that all connections to the collection canisters are correctly assembled.
- Check that each outlet has adequate oxygen and suction tubing for use in an emergency, and appropriate suction catheters, yanker suckers and oxygen masks are available if required in an emergency.

Automated External Defibrillator-ZOLL (ground floor OPD).
Refer to the appropriate equipment manual for specific checking instructions.

Semi-Automated External Defibrillator (SAED)
HEWLETT PACKARD CODEMASTER

1. Verify that the instrument is connected to AC power, and that the ‘BATT CHRG’ and ‘AC POWER’ lights are on. If the unit is plugged in and the ‘AC POWER’ light is not on, the power cord may be faulty.
2. Check that the ‘AC POWER’ and the ‘BATT CHRG’ lights go off when the unit is unplugged.
Perform the Delivered Energy and Shock Button Functional Test, which follows.

Delivered Energy and Shock Button Function Test
To check the instrument with the paddles, perform the following steps.

1. Turn the Energy Select control to the 100 joules position.
2. Verify that the paddle electrodes are installed.
3. Push the paddles completely into their holders (Apex paddle in right pocket, Sternum in left) and press either Charge button. Wait for the Charge Done indicators. Keep hands clear of the paddle electrode edges. Use your thumbs to depress the Shock buttons on the paddle handles. Check passed test on record paper.
4. With the paddles in their holders, grasp the paddle handles and press the Apex paddle Shock button. Verify that the defibrillator does not discharge.
5. Release the Apex paddle button, then press the Sternum paddle Shock button. Verify that the defibrillator does not discharge.
6. Press ‘SYNC’ to place the defibrillator in sync mode.
7. Press and hold both Shock buttons. Verify that the defibrillator does not discharge.

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8. Press ‘SYNC’ again to remove the defibrillator from sync mode.

9. With the paddles in their holders, press and briefly hold both Shock buttons at once.

10. The recorder will print a report test.

**Resuscitator BVM (bag-valve-mask) units (Adult and Neonatal)**

Nursing staff are responsible for checking that the disposable BVM units plastic outer bag is sealed, and that there is no evidence of package tampering. This is to ensure that the BVM bag is in working order.

**Check that there is green tubing connected to the wall oxygen flow meter and to gas blenders in Newborn Care Centre ready for use.**

The BVM is disposable and is to be discarded after use. New bag valve mask units are stored in the Acute Care storeroom.

**Intubation equipment (Adult and Neonatal)**

**Check laryngoscope.** Turn laryngoscope on by either raising blade and locking into position, or twisting the grey base of non-adjustable laryngoscopes. The globe should illuminate. Ensure the globes is screwed in tightly to the laryngoscope blade.

Laryngoscopes and blades with green markings are fibre-optic, and do not require globes. All equipment should be washed with warm soapy water before sending to SSD. For laryngoscopes, remove the globe, wash the blade, wipe globe over and replace bulb.

**Laryngoscopes blades and Magill's forceps:** should be reprocessed by SSD and returned to the ward.

Whilst used equipment is in CSSD spare laryngoscopes, laryngoscope blades and Magill's forceps can be obtained from Acute Care Centre. **Intubating (malleable) stylets:** are single use only and should be discarded after use. Endotracheal tubes must be in date as they are perishable. Check expiry date. Endotracheal tubes do not have to be sterile. Leave packet unopened until prior to immediate use.

The following consumables are available from:

**Acute Care for Adults:**
- Endotracheal tubes
- Disposable Pocket masks
- Intubating stylets

**For Neonates in:-**
- **NCC**
- Endotracheal tubes
- Intubating Stylets
- Saturation probes for oximeter
- Delivery suite and Operating Theatre
- Endotracheal tubes
- Resuscitaire tubings
- Bacterial filters
- Intubating Stylets
- Saturation probes for oximeter

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Drugs and fluids
Check the expiry dates of all fluids and drugs. Drugs can be safely used until the end of the month of expiry, and replacements should be obtained before the expiry date. Pharmacy (during hours), or Emergency Drug Room (after hours).

O₂ Cylinders
Replacement cylinders can be obtained from Porter Station on extension 26784 between 0800-1600 hours or Page 44000 after hours.

Defibrillators
If problems are experienced with AEDs or manual defibrillators contact biomedical engineering during business hours. After hours, notify the After Hours Nurse Manager.

REFERENCES
4. ‘Checking and Maintaining Emergency Equipment’ Prince of Wales Hospital policy.