



**ADMINISTRATION OF MENINGOCOCCAL B & ACWY VACCINES FOR  
NURSING STAFF IN THE HAEMOGLOBINOPATHY DEPARTMENT  
STANDARD OPERATING PROCEDURE**


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## 1.0 Introduction

Children's Health Ireland at Crumlin is the largest teaching hospital in Ireland. CHI at Crumlin is committed to the provision of safe quality care to the infants and children it cares for, against the backdrop of legislation and regulatory requirements.<sup>1</sup>

CHI at Crumlin recognises the importance of medication safety management and has created processes and practices to minimise the risk to children by incorporating the '10 rights' of medication management as stated by the NMBI 2015 Guidelines.

***'These standards for medicines management are authoritative statements developed and monitored and enforced by NMBI. These standards describe the responsibilities and conduct expected of Nurses and Midwives in their involvement with medicines across all care settings.'*** NMBI (2015)<sup>2</sup>

The HSE released updated guidelines in relation to immunisation against meningococcal infection in July 2018.<sup>3</sup> Immunocompromised conditions such as haemoglobinopathies result in an increased risk of invasive and/or recurrent meningococcal disease. The HSE recommends that these patients require both Meningococcal B (Men B) and Meningococcal ACWY (Men ACWY) vaccines.

This SOP supports the administration and single checking of Meningococcal B and Meningococcal ACWY vaccine courses to all Haemoglobinopathy asplenic or hyposplenic patients in Haemoglobinopathy clinics.

## 2.0 Definition of Standard Operating Procedure

The term '***Standard Operating Procedure***' is a means of carrying out a particular course of action and includes operations, investigations, pharmaceutical treatment, examinations and any other treatment carried out. Nursing staff will administer Men B and Men ACWY vaccinations to the required cohort of Haemoglobinopathy patients in advance of examination by the medical team.

## 3.0 Applicable to

Nursing staff in the Haemoglobinopathy Department OPD.

## 4.0 Objectives of Standard Operating Procedure

Nursing Staff in the OPD Haemoglobinopathy Department will administer Men B and Men ACWY vaccinations as a single checker in advance of examination by the medical team and on clarification; the patient is fit to have the vaccine from the parent.

## 5.0 Definitions / Terms

**HSE** - Health Service Executive

**OPD** - Out Patient Department

**Men B** - Meningococcal B

**Men ACWY** - Meningococcal ACWY

<sup>1</sup> Health Information and Quality Authority (2012) *National Standards for Safer Better Healthcare*, HIQA, Cork Ireland

<sup>2</sup> Standards for Medicine Management for Nurses and Midwives (Draft)

<sup>3</sup> HSE Immunisation Guidelines, Chapter 13 Meningococcal Infection.

## 6.0 Procedures

Vaccinations will be pre-ordered by pharmacy staff from the National Cold Chain and stock will be controlled by pharmacy

Vaccinations will be prescribed on the medication kardex by the medical staff prior to vaccination administration and recorded on the prescription after administration.

Nursing staff will select the appropriate and safe location in the clinic to vaccinate the patients and for ease of transport of vaccines from the storage fridge. A single room beside the medical team to enable close proximity to resuscitation and anaphylaxis equipment should it be required.

Vaccinations are administered to the child by one registered nurse checking the child's name and date of birth and double-checking identity with the parent/guardian. In the event a parent is unavailable to be second checker the double checking algorithm will apply and the vaccination will need to be checked with a second nurse and the identity of child must be checked against the medication kardex. At all times the nurse will follow CHI at Crumlin '*Medication Policy*'

Vaccinations will need to be recorded on the Immunisation Form Type 2 and returned to National Immunisation Authority Council.

Vaccinations will be administered as per the CHI at Crumlin Guidelines on '*Intramuscular and Sub-cutaneous Injections*'. (See Appendix 1)


The nurse will discard the vaccination in a sharps bin and the medication waste in the clinical waste bin.

### Recommended sites for IM Injections (NIAC 2013)

Age	Recommended Site of IM Injections
0-12 months	Vastus lateralis
13-36 months	Vastus lateralis or Deltoid
3 years and older	Deltoid

The patient will need to wait for 15 minutes after vaccination in the clinic waiting room to assess for any immediate reactions.

In the event of any adverse side effects the nurse will follow the CHI at Crumlin Guidelines for '*Anaphylaxis*' & '*Paediatric Basic Life Support*' algorithms. (See Appendices 2 & 3)

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## 7.0 Implementation Plan

This activity will be included in the education and training of the Haemoglobinopathy Team. Prescriptions will be pre-prescribed and allergies assessed on the day of vaccination by the medical team. Parents will be informed by way of a postal letter to inform them of the vaccination clinic in OPD and Day Units. Pharmacy will be notified of clinic lists for ordering of vaccinations. Sepsis posters will be displayed in the HOOPS clinics to inform parents of the importance of preventing sepsis in particular to those who are immunocompromised in the sickle cell cohort. Information leaflets will be displayed and given to parents with information regarding meningococcal and sepsis prevention via administration of these vaccines. The CNSp must ascertain whether the patients have already received these vaccines- via Immunisations Book, contact with GP, and liaising with pharmacy in CHI at Crumlin for those children who have had a splenectomy.

## 8.0 Evaluation and Audit

Monitoring of compliance is an important aspect of procedural documents. However, it is not possible to monitor all procedures. Self-audits will be performed on procedure of vaccination and medication management documentation audits will be performed by pharmacy during Immunisation Form collection and stock checking. A monthly audit will be performed on the uptake of the vaccine from when the vaccination catch up clinic commences. This will allow the CNSp to be aware of any education for parents deficits they may prevent consent for vaccination administration.

## 9.0 References

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Royal College of Physicians in Ireland / Health Service Executive (2015) Guidelines for hand hygiene in Ireland Healthcare settings: Update of 2005 guidelines. Dublin: HSE Health Protection Surveillance Centre.

Nurses & Midwives Act (2011) Freedom of Information Act 2014, Government of Ireland.

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## 10.0 Appendices

### Appendix 1 - Guidelines on the Administration of an IM Injection

#### ACTION AND RATIONALE

##### Preparation of the child


- Explain procedure to child/parents, to gain co-operation and trust and reduce anxiety.
- Ensure privacy/dignity for the child throughout the treatment (OLCHC 2007)
- If the infant/child needs to be clinically held, the local guideline is followed at all times (OLCHC 2009).

##### Reducing Pain

- Distraction is very effective in reducing pain / anxiety, involve the play specialist
- Rubbing or stroking the skin close to the injection site
- Rapid needle insertion and do not aspirate, if possible (NIAC 2013)
- Infants **up to 6 months**: administer sublingual sucrose to reduce pain.
- Offer soother to infant if appropriate as non-nutritive sucking enhances analgesic effect of sucrose (OLCHC 2010b)
- Apply ice to numb the site, (GOSH 2013)

##### Preparation of Medication

- Gather equipment. Ensure it is intact, to prepare for the procedure.
- Select a syringe size that is appropriate to the medication volume (Macqueen et al 2012).
- Individual assessment of child to determine appropriate needle length and gauge.
- Change needles after drawing up medication to ensure a clean needle for administration. This reduces irritation, pain and inadvertent administration of foreign particulate matter (Ford et al 2010)
- Avoid the presence of air bubbles in injection syringes, to ensure accurate dosage
- Administer all medication as per hospital/national policy (An Bord Altranais 2003, OLCHC 2001)

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### Select and Assess Injection site:

- Assess injection site by observation and palpation. If any evidence of damage or trauma, do not use.
- Identify and landmark the injection site
- If administering more than one injection, use separate sites (NIAC 2013). If using one limb, allow a distance of 2.5cm between sites (NIAC 2013)

### Positioning


- Position child to allow relaxation of the muscle to be used, to reduce pain/anxiety (Ford et al 2010).
- Lie the infant down or ensure the child is seated.

### Skin Disinfection

- Not required if the child is socially clean. Soap and water can be used if necessary (NIAC 2013).
- If immunosuppressed: **do** require skin disinfection, to prevent infection (Malkin 2008)
- If an alcohol swab is used, allow it to dry for 40 seconds prior to injection, to ensure alcohol is effective.

### Administering an IM Injection

- Aseptic Non-Touch Technique (ANTT) level 3 throughout the procedure (OLCHC 2013). It is not necessary to use gloves if the nurse's and patient's skin is intact (NIAC 2013).
- Use the Z-track technique, if possible.
- Use non-dominant hand to secure the injection site/tissue and use the dominant hand to inject the medication. This ensures control of the needle and syringe during the procedure (Barron and Hollywood 2010).
- Hold syringe firmly between thumb and forefinger, with heel of hand resting on the thumb of the non-dominant hand. This ensures a 90-degree angle is achieved and the correct site is targeted (Ford et al 2010).
- At the injection site: spread the skin taut between the thumb and forefinger. Infants or children with little muscle: skin can be bunched up (NIAC 2013)
- Administer the injection as quickly as possible (that both the medication and the child will allow). This minimises injection time and discomfort (Ford et al 2010).
- Insert needle smoothly and swiftly
- Inject at a 90 degree angle, to ensure the medication reaches the muscle (Macqueen et al 2012, NIAC 2013)
- Use clinical judgement to assess if aspiration is necessary (do aspirate if it is felt that injection site is near a blood vessel)
- If blood is evident on aspirating, discard medication and syringe and prepare a new injection
- Inject medication slowly: 1-2 seconds (NIAC 2013).
- If possible, leave needle in place for 5-10 seconds after injecting medication, to allow surrounding tissue to expand and absorb the medication (Ford et al 2010). Use **clinical judgement** (child may be distressed /unable to hold their position safely).
- After removing needle, use gentle pressure with sterile gauze. Do not rub injection site, to avoid discomfort (Macqueen et al 2012).

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- Leakage at injection site after withdrawal of needle: apply light pressure with gauze. A plaster may be applied.

**Swift needle entry, slow injection of medication and swift needle withdrawal = less pain**

#### **After the injection**

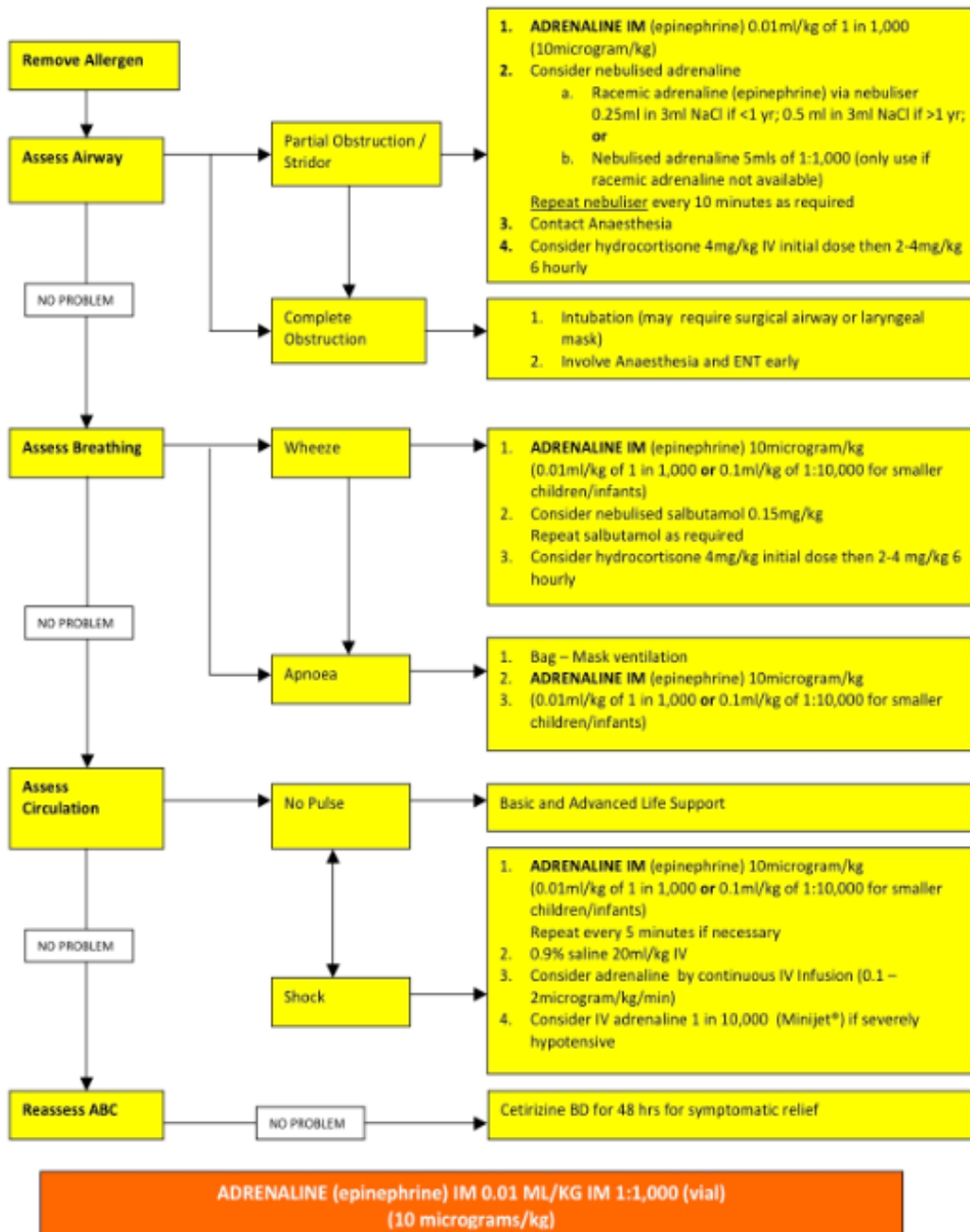
- Dispose of equipment as per hospital policy, to ensure the safety of staff and children (OLCHC 2014, OLCHC 2011).
- Assess child during and after the procedure, documenting any adverse events, refer to medical team as appropriate.
- If the child is discharged after the injection, verbal advice is given to parent / carer.
- Record the medication administration as per hospital policy, including which site was selected



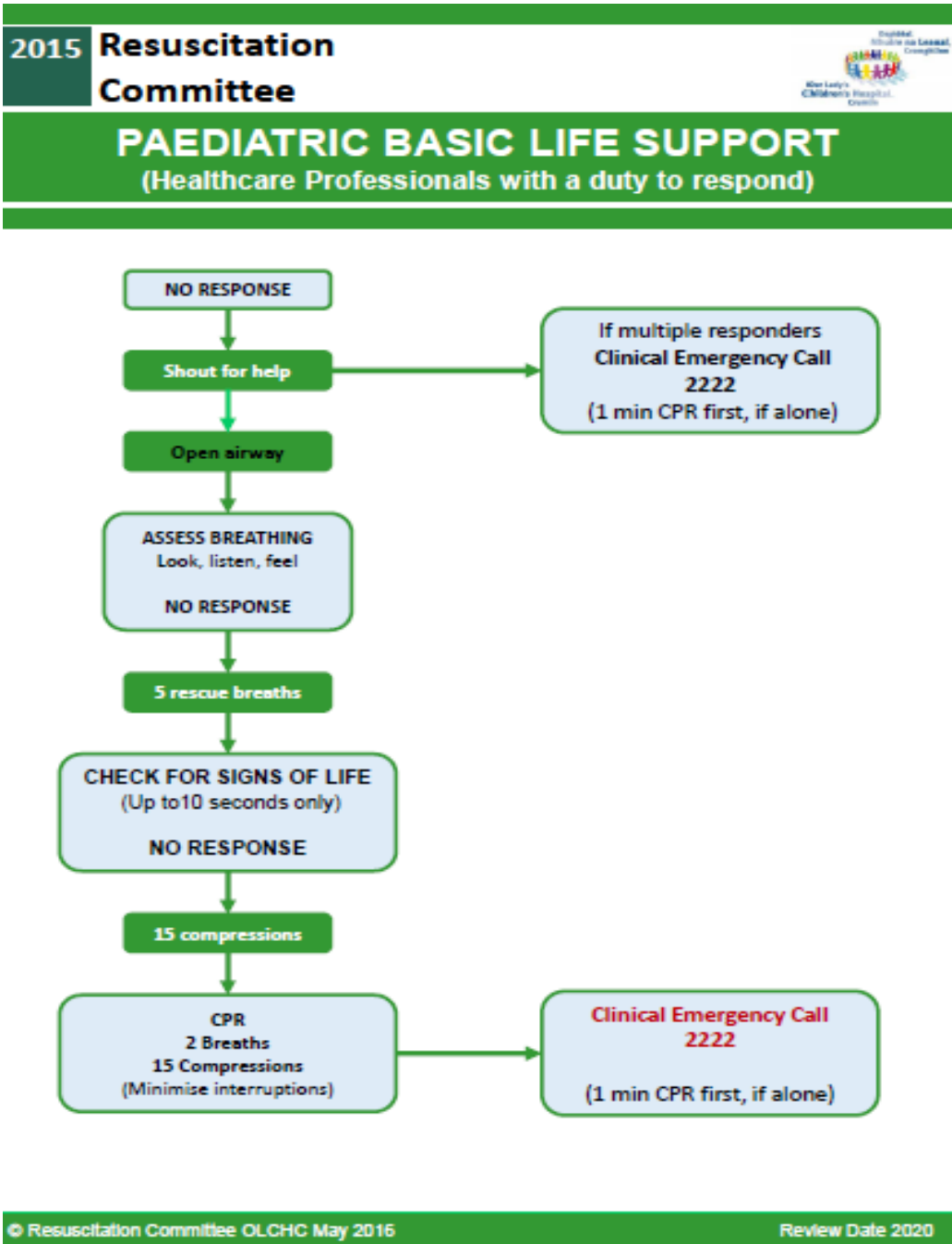
## Appendix 2 - Anaphylaxis Algorithm



### Acute Management of ANAPHYLAXIS



### Appendix 3 Paediatric Basic Life Support Algorithm



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