GUIDELINE PREGNANCY ASSESSMENT FOR FEMALE CHILDREN REQUIRING GENERAL ANAESTHESIA IN CHI@CRUMLIN

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OLCHC Guideline on Pregnancy Assessment in: Female Children Who Are Undergoing General Anaesthesia & Who Are 12 Years or Older, and Have Reached Menarche	
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Stakeholder review

This document has been reviewed by the following groups during the course of its drafting at CHI@Crumlin

1. Senior Nursing Management Group,
2. Nurse Practice Committee,
3. Division of Surgery,
4. Department of Anaesthesia & Critical Care Medicine,
5. Department of Radiology,
6. Physicians Group,
7. Clinical Risk Manager,
8. Medical Board,
9. Pharmacy Department,
10. OLCHC Ethics Committee,
11. OLCHC Legal Consultant,
12. Corporate Management Team,
13. Clinical Risk Management Committee.

1.0 Introduction

Significant numbers of children and young people undergo elective and emergency surgical and medical procedures/treatment under general anaesthesia in Ireland each year. Should a patient be pregnant, such interventions may pose a small, but recognised, risk to the safety and wellbeing of the patient, or her foetus.[1] In such instances, there may be a need to modify the anaesthetic or surgical technique, or delay the procedure. Evaluation of pregnancy status prior to a procedure being undertaken is recommended by a number of relevant bodies.[2]

Thus, Children's Health Ireland at Crumlin has adopted the position that any female patient attending the hospital who is older than 12 years of age, and who has reached menarche, should have her pregnancy status ascertained prior to undergoing general anaesthesia. As per the algorithm (appendix 1), this will generally take the form of a urinary pregnancy test.

Where the anaesthetised patient will require exposure to ionising radiation of the anatomy between the diaphragm and the symphysis pubis, which includes all radionuclide imaging, additional safeguards are required,[3] and a *CHI Pregnancy Status Declaration Form* (appendix 3) must be completed. This must be placed in the chart prior to the child coming to theatre, so that the radiographer can electronically scan the form into NIMIS PACS in order for it to be held as part of the patient record, and made available to HIQA on request. It is the responsibility of the clinician requesting the relevant imaging to ensure that the correct documentation accompanies the child to theatre. If a completed *CHI Pregnancy Status Declaration Form* is not in the chart, then no x-ray or scan of the anatomy between the diaphragm and the symphysis pubis will be performed.

Where more than 28 days have passed since the date of the LMP, or the patient is known to be pregnant, a *CHI Clinical Rejustification Form* must be completed prior to arrival into theatre, retained in the chart,

[1] Pregnancy testing guidance; risks associated with anaesthesia and surgery in early pregnancy. *RCPCH*, 2012.
[2] E.g. The National Patient Safety Agency (NPSA), National Institute for Health and Care Excellence (NICE) and the Royal College of Paediatrics and Child Health (RCPCH) in the UK all state that pregnancy status should be ascertained in females of child-bearing age prior to operations, and other investigations that could be harmful to foetal and maternal health. Checking pregnancy before surgery. *NPSA*, 2010; The use of routine pre-operative tests for elective surgery. *NICE*, 2003. Pre-procedure pregnancy checking for under 16s – guidance for clinicians. *RCPCH*, 2012.
[3] S.I. 256 of 2018. *European Union (Basic Safety Standards for Protection Against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations* 2018.

electronically scanned into NIMIS PACS, and be available for inspection by HIQA. More details concerning instances where the patient will be exposed to high dose radiation in the Radiology Department are contained in section 5.

2.0 Aim of this guideline

- To provide an evidence-based rationale to staff and patients/parents/guardians on the requirements to establish the pregnancy status of female patients who are over 12 years of age, have reached menarche, and are undergoing an operation, procedure, investigation or treatment under general anaesthesia.
- To support a consistent approach for clinicians and nursing staff involved in establishing pregnancy status in this cohort.
- To provide guidance on communication with patients and families in the management of sensitivities around verbal questioning about pregnancy and sexual activity.
- To provide a training resource.
- To act as a quick reference guide on the management of an identified pregnancy.

3.0 Guideline Rationale

1. Children may not always provide accurate information regarding their pregnancy status if asked by a healthcare professional. Factors that influence this include: irregular menstrual cycles or difficulty recalling dates, lack of awareness of pregnancy, presence of their parent/guardian, embarrassment, etc. For these reasons, routine pregnancy testing has been determined to be the most appropriate approach to protect the patient cohort identified in this guideline.
2. In general, the likelihood of pregnancy in females under 15 years is very low, and the risks associated with most procedures are small. However, in a patient with an undisclosed pregnancy the maternal/foetal risks include:
    - Increased risk of miscarriage;
    - Altered responses to medications, including anaesthetic agents;

- Anaesthetic risks to the health of the patient;
- Medication related harm to the developing foetus.

4.0 Procedure supporting establishment of pregnancy status (see Flowchart)

1. Information regarding the requirement and rationale for establishing pregnancy status in the patient cohort should be provided to the child and parents/guardians at the earliest opportunity, preferably when the procedure is being planned – an information sheet to support this guideline is available (appendix 2). Urine testing for pregnancy can only take place following the child and her parent being informed, and providing their verbal consent.
2. A patient who meets the criteria for pregnancy testing will be asked to provide a urine sample for point-of-care analysis on arrival to the department/ward area.
3. It must be borne in mind that false negatives can occur, and if there is a high degree of suspicion that a patient may be pregnant despite a negative initial test, then a second specimen should be sent to the laboratory for testing.
4. When a ward-based point of care pregnancy test is positive, it should be repeated and a sample sent to the laboratory for testing, prior to any discussion or disclosure.
5. Children who may be pregnant have the right to disclose information about their pregnancy status in a supportive environment. Healthcare professionals involved in pregnancy status assessments should be cognisant of the considerable personal rights of the young girl, such as liberty, bodily integrity, and freedom to communicate with others, while simultaneously acknowledging the importance of involving the parent/guardian in matters relating to their child's care.
6. If pregnancy is confirmed, a senior member of the medical/surgical team must attend to inform the child and her parents/guardians. A child who is pregnant has the right to discuss their pregnancy in private. This conversation should be held with sensitivity and discretion. The patient should be supported to inform their parents/guardians. However, if they absolutely refuse to do so, this creates a tension between the child's right to confidentiality, and a parental right to information about their child's welfare. Where the balance is to be struck (and this may relate to the age of the

child) is currently uncertain.[4] Thus, in the unlikely circumstances that a child is both pregnant, and refusing to disclose this to her parents/guardians, senior management advice should be sought prior to any disclosure being made.

7. It must be borne in mind that should a patient reveal sexual activity in discussion, or have a positive pregnancy test, staff must consider their responsibilities under child protection legislation.[5] In the event of a safeguarding concern, child protection procedures in line with legislation must be initiated. If abuse is not suspected, or alleged, the team, in liaison with the medical social worker, should support the child and her family in obtaining the relevant care. Appropriate notifications, in line with the requirements of child protection legislation, must be made.
8. In the event of a positive pregnancy test, the primary consultant must assess the risk/benefits of proceeding with, deferral, or cancellation of the procedure.
9. In a case where a child or parent refuses consent for pregnancy testing, the primary consultant and clinical team should discuss whether they are willing to proceed with the planned procedure using LMP only (when known), or whether the procedure should be postponed, or cancelled.
10. The risks of proceeding with, or postponing a procedure, should be explained to the child and parents to ensure they make an informed decision. A consultant may reasonably decide to not proceed if they consider the level of risk to be unacceptable.
11. All findings and decisions should be clearly documented in the patient's healthcare record (HCR).

5.0 Special Considerations - Clinical Emergencies and Long-term Conditions

1. When dealing with major trauma or a clinical emergency, it may be impossible, or inappropriate, to determine pregnancy status through enquiry or consented testing prior to dealing with the patient's condition. In this case, the consultant must consider the relative balance of risk and benefit of proceeding with treatment. If testing cannot be performed this should be documented, with the reason, in the patient's HCR.

[4] McK v The Information Commissioner, [2006] IESC 2; Axon, R (on the application of) v Secretary of State for Health & Anor [2006] EWHC 37.
[5] See *Children First Act* 2015; *Children First, National Guidance for the Protection and Welfare of Children* 2017 at https://www.tusla.ie/uploads/content/Children_First_National_Guidance_2017.pdf.

2. When a patient is under-going a long-term course of treatment, or has severe or multiple disabilities, the consultant anaesthesiologist may make a judgment based on his/her involvement with the patient and her family about whether ascertaining pregnancy status prior to each anaesthetic is necessary. This decision should be documented in the patient's HCR. This approach does not obviate the legal requirement to ascertain pregnancy status prior to each relevant radiology procedure.
3. For female children who have reached menarche, and are undergoing high dose radiation procedures (eg CT abdomen / pelvis) in the radiology department **under general anaesthesia**, the following will be required:
    - A negative pregnancy test.
    - A *CHI Pregnancy Status Declaration Form* must be completed. An elective scan should only be scheduled when the LMP is < 10 days prior to the scan date, when the chances of conception are minimal.
    - This must be borne in mind by those scheduling a theatre list - if it is known that a CT abdomen / pelvis might be required as part of an intervention, then the surgical procedure should be scheduled to occur within the first 10 days post-LMP.
    - Should the pregnancy test be positive, or the LMP be >10 days prior to the scan date, a *CHI Clinical Rejustification Form* **must** be completed, if the examination is to proceed.

6.0 References

- *Axon, R (on the application of) v Secretary of State for Health & Anor* [2006] EWHC 37.
- Department of Children (2017) *Children First: National Guidance for the Protection and Welfare of Children,* Dublin Ireland.
- Director of Public Prosecution (2006) Submission by the Director of Public Prosecutions Oireachtas Joint Commission on Child Protection, *The Criminal Law Relating to the Sexual Offences against Children,* Dublin Ireland.
- HSE (2017). National Consent Policy.
- IAPM, IIRRT, Faculty of Radiologists (2017). *National policy for the protection of the unborn child arising from ionising radiation received during medical diagnostic or therapeutic procedures.*
- *McK v The Information Commissioner*, [2006] IESC 2.
- National Institute for Health and Clinical Excellence (2003). *Preoperative test: The use of routine preoperative tests for elective surgery.* Clinical Policy 3. NICE. 2003 Available at http://www.nice.org.uk/
- National Patient Safety Agency (2010). *Rapid Response Report Checking Pregnancy before surgery.* NPSA, UK.
- RCPCH (2012) *Pre procedure pregnancy checking for under 16s* - https://www.rcpch.ac.uk/child-health/standards-care/clinical-guidelines-and-standards/published-rcpch/pregnancy-testing/pre
- Royal College of Obstetricians and Gynaecologists (2008). *Obtaining Valid Consent.* Clinical Governance Advice No. 6 RCOG. 2008. Available at http://www.rcog.org.uk.
- S.I. 256 of 2018*. European Union (Basic Safety Standards for Protection Against Dangers Arising from Medical Exposure to Ionising Radiation) Regulations 2018.*

PREGNANCY ASSESSMENT FLOWCHART

Female children: age >12 years, who have commenced menarche, and who are Attending CHI at Crumlin for a procedure under general anaesthesia, Must have their pregnancy status evaluated prior to their procedure. (1)

Relevant child attends OLCHC for a procedure requiring general anaesthesia.

If child is undergoing high dose radiation e.g. CT, radionucleotide scan, in the radiology dept, see radiology guidelines (2)

The patient / parent / guardian are informed of hospital policy that a pregnancy test is to be carried out (3)

Parents/patient agree to pregnancy test (4)

Parents / Child refuse pregnancy test (8)

Point of care pregnancy test carried out. (5)

Contact the medical/surgical team to discuss with the parents and child.

RESULT NEGATIVE *

RESULT POSITIVE

Determine the reason for the refusal and refer to the consultant.

Document result in the healthcare record

Send a urinary HCG (6)

Consider any Child Protection concerns

Continue with the child's plan of care

Test is positive

The consultant may proceed with the procedure, or defer it, based on an individual risk/benefit analysis.

Contact the Medical or Surgical Consultant

- Disclosure (7)
- Consider Child Protection
- Consider need to proceed with the procedure
- Refer to Medical Social Worker
- Refer to local antenatal service

* If the child is to undergo ionising radiation of the anatomy between the abdomen and the pubic symphysis, a *Pregnancy Status Evaluation Form* **must** be completed by a clinician, and placed in the chart before the child goes to theatre, or other interventional site (9).

Created by the working group Date of Issue May 2019

Explanatory Notes on Flow Chart

1. Female children who are to attend the theatre department for a procedure under anesthesia must be asked in a sensitive manner if they have commenced menstruation. If the answer is yes, and the child is over 12 years of age, then a pregnancy assessment must be carried out (see 5). In children with a significant chronic health problem or disability, or be returning to theatre for multiple procedures, the consultant anaesthesiologist caring for the child can decide that there is no requirement to carry out a pregnancy test in that instance. However, the default position is to perform a pregnancy test on all menstruating patients. Any deviation from this should be clearly documented in the HCR.

2. Current legislation imposes specific requirements on healthcare institutions for the protection of post-menarchal female patients undergoing high dose radiation (e.g CT). Please contact radiology for guidance.

3. There are two main options to determine the pregnancy status of female patients. Direct enquiry is one option. This option may not reveal the presence of pregnancy, and thus CHI at Crumlin have opted to carry out point of care urine testing. If being asked about pregnancy, patients have a right to be asked in confidence, and separate from their parent/guardians if required. Information obtained must be treated sensitively. Safeguarding concerns must always be considered when asking about pregnancy.

4. The need for a pregnancy test should be explained and discussed with the patient and parents/guardians by the admitting nurse, and verbal consent acquired.

5. A ward-based Point of Care Test should be carried out by the admitting nurse. This detects the presence of Human chorionic gonadotropic (HCG) within a few days of implantation of the embryo. It must be borne in mind that there is a risk of false negative test. If the Point of Care test is negative, but there is good reason to suspect that patient might be pregnant, a second specimen should be sent to the lab.

6. If a positive Point of Care test is positive a sample of urine is sent to the laboratory for testing as some point of care urine tests can be positive in the absence of pregnancy, and some rare conditions can cause a positive result. The primary consultant must be informed as soon as possible of a positive test. The consultant will decide if the intended procedure needs to be deferred. Consider Child Protection concerns at this stage.

7. If pregnancy is confirmed, a senior member of the medical/surgical team must attend to inform the child and her parents/guardians. A child who is pregnant has the right to discuss their pregnancy in private. This conversation should be held with sensitivity and discretion. The patient should be supported to inform their parents/guardians. However, if they absolutely refuse to do so, this creates a tension between the child's right to confidentiality, and a parental right to information about their child's welfare. Where the balance is to be struck (and this may relate to the age of the child) is currently uncertain. Thus, in the unlikely circumstances that a child is both pregnant, and refusing to disclose this to her parents/guardians, senior management advice should be sought prior to any disclosure being made.

8. In the event that a patient / parent / guardian refuses to allow a pregnancy test to be carried out, the responsible consultant must be contacted and a decision made whether they will proceed with the proposed procedure, or postpone it. On an individual basis the surgeon /clinician may decide to go ahead in the absence of a pregnancy test with the risks documented. Alternatively the surgeon/clinical is also justified to refuse to go ahead with the procedure detailing his concerns in the HCR. It is essential that Child Protection issues are considered in this situation.

9. Where the anaesthetised patient will undergo radiological screening of the anatomy between the diaphragm and the symphysis pubis, which includes all radionuclide imaging, a *CHI Pregnancy Status Declaration* must be completed by the clinician, and placed in the chart prior to the child coming to theatre. The radiographer needs to electronically scan the form into NIMIS PACS. It is essential that the correct documentation accompanies the child to theatre, as in their absence the radiological screening/scanning cannot take place. It is essential that safeguarding is considered in this situation.

INFORMATION LEAFLETS FOR PARENTS / CARERS OF A CHILD

INFORMATION FOR TEENAGE GIRLS

WHY AM I HAVING A PREGNANCY TEST BEFORE HAVING AN ANAESTHETIC ?

If someone is pregnant when they are having an operation, x-ray or special scan, it may cause harm to themselves, or to their unborn baby. This is especially true at the beginning of a pregnancy, when someone might not even realise they are pregnant. For this reason, we need to check before going ahead with the test or operation.

WHY ARE YOU ASKING ME IF I MIGHT BE PREGNANT, I'M NOT SEXUALLY ACTIVE?

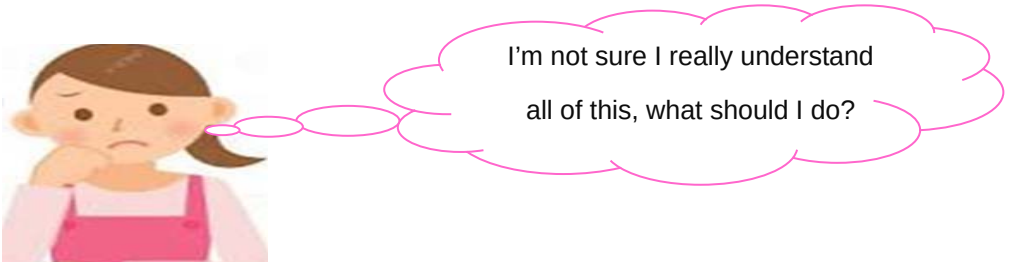
We understand that most teenage girls are not sexually active, so it is not possible for them to be pregnant. However, some girls are sexually active and feel afraid to say so. To ensure we care for everybody safely, we ask everyone who has commenced their periods to give us a urine sample on which we will carry out a pregnancy test. By doing this, we hope to prevent the possibility of causing harm to girls, or their pregnancy.

WHAT SHOULD I DO IF I THINK IT MIGHT BE POSSIBLE FOR ME TO BE PREGNANT WHEN I COME TO THE HOSPITAL?

It is important that you tell a nurse or doctor so that we can decide what to do next. Everything you tell us will be treated confidentially, which means that we will not tell anyone else without your permission.

You may be offered a pregnancy test, which is done by testing a sample of your urine.

Because the pregnancy test is not always reliable very early in a pregnancy, you may still be pregnant even if the result is negative. In this case, a doctor will talk to you about whether you should go ahead with your operation, x-ray, or special scan.



Ask a nurse or doctor to explain anything that you are not clear about, they will be happy to help, and you can ask them to talk in private if you wish.

Developed by the CHI @ Crumlin pregnancy assessment group
Date issued: May 2019
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CHI CLINICAL REJUSTIFICATION (WAIVER) FORM

Patient name: Patient DOB:

MRN: Date:

Procedure:

The **first** day of the patients last menstrual period was: _____

Does this examination follow the 10 day rule or 28 day?

10 ☐ **28** ☐

1. To be completed by the Prescriber/Practitioner if the patient is pregnant or pregnancy cannot be ruled out			
This procedure has been deemed clinically urgent and justified. I understand it is the hospitals policy to avoid radiological examinations involving anatomy between the diaphragm and the symphysis pubis in women who are or might be pregnant. However I wish to proceed with the examination.			
Print name: Signature:	_____	IMC number:	_____

2. To be completed by the Parent/Guardian/Patient over 16 if the patient is pregnant or pregnancy cannot be ruled out	
The benefits and risks associated with this procedure have been explained to me and I consent to proceed.	
Print name: Signature:	_____

CHI PREGNANCY STATUS DECLARATION FORM:

Patient Name			
DOB	___/___/_____	Procedure	
MRN		Date	___/___/_____

We request that you complete the form below and hand it to the radiographer when the patient is called.

1. To be completed by the Parent/Guardian of patient or patient over the age of 16 undergoing a high/low foetal dose procedure			
Explanation of the risks associated with this procedure			
We are **legally obliged** to establish the patient's pregnancy status in advance of this procedure. X-rays have the potential to be harmful to the unborn child. Although the risk is generally low, it is important to reduce this risk by limiting radiation exposure. It is very important that you inform staff performing the procedure if there is **any** possibility the patient is pregnant.			
Has the patient started menstruating? If No, please proceed to the end of the form and sign	Yes [ ]	No [ ]	
Is there any possibility the patient may be pregnant?	Yes [ ]	No [ ]	Don't Know [ ]
If pregnant, how many weeks?			
The **first** day of the patients last menstrual period was:	___/___/_____		

2. Parent/Guardian/Patient over 16's Signature	Print Name: Signature:
3. Radiographers Signature	Print Name: Signature:

For staff only:

Does this examination follow the 10 day rule or 28 day?

10 ☐ **28** ☐

Children's Health Ireland at Crumlin

Patients, Parents and Guardians

As part of our patient safety programme,

female patients who are scheduled to have a procedure under general anaesthesia

will be asked if their periods have commenced.

If yes, a routine urinary pregnancy test will be carried out prior to treatment.

Information leaflets are available.