Retained Products of Conception Guideline (RPOC) MATY145	
Type: Guideline	HDSS Certification Standard:
Issued by: Maternity PPG Group	**Version:** 1.0
Applicable to: Hutt Valley DHB	**Contact person:** CHOD O&G
Lead DHB: Hutt Valley DHB	**Level:**

Hutt Maternity Policies provide guidance for the midwives and medical staff working in Hutt Maternity Services. Please discuss policies relevant to your care with your Lead Maternity Carer.

Purpose:

To provide guidance for the management of retained products of conception.

Scope:

For the purposes of this document, staff will refer to:

All staff within Hutt Valley DHB. This includes staff not working in direct contact with patients/consumers. Staff are taken to include anyone engaged in working to the Hutt Valley DHB. This may include but is not limited to:

- Employees irrespective of their length of service
- Agency workers
- Self-employed workers
- Volunteers
- Consultants
- Third party service providers, and any other individual or suppliers working in Hutt Maternity, including Lead Maternity Carers, personnel affiliated with third parties, contractors, temporary workers and volunteers
- Students

Abbreviations and Definitions:

bHCG	beta Human chorionic gonadotropin
EPAC	Early Pregnancy Assessment Clinic/Unit
ERPOC	Evacuation of retained products of conception
ET	Endometrial thickness
RPOC	Retained products of conception
TOP	Termination of pregnancy
USS	Ultrasonographic scan

Retained Products of Conception Guideline Content

Background

RPOC is tissue that remains in the uterus following a spontaneous or managed miscarriage, birth, or termination of pregnancy (TOP). The tissue can be fetal or placental in nature (Sellmeyer, 2013). Although Incidence of RPOC cannot be accurately measured, it is more common in the first and second trimesters than the third trimester, with rates ranging from 17% in the 1st trimester to 40% in the second trimester. (Van den Bosch et al, 2008)

Diagnosis of RPOC is usually based on a combination of,

- clinical symptoms,
- an open cervix,
- ultrasonography (Wolman, 2009).

Clinical symptoms for RPOC can be non-specific. Acute presentation includes significant bleeding, clots, and pain, and/or signs of infection. Sub-acute is more common, often with minimal bleeding or pain, an unusually raised human chorionic gonadotropin (HCG) level at some weeks post pregnancy loss, an ultrasound scan (USS) result that is suspicious for RPOC, or failed return of normal menses post pregnancy loss.

The potential for significant haemorrhage, sepsis, or conversely, unnecessary intervention with associated potential complications, underlines the importance of accurate diagnosis (Hooker, 2016).

Evaluation for RPOC in the first trimester is indicated in women post miscarriage or TOP

- where bleeding is heavy and/or prolonged
- where there is significant pelvic pain
- in the presence of fever or uterine tenderness
- with a persistently raised bHCG

Woman's/People's experience of Retained Products of Conception

No research was found specifically pertaining to people's experience of RPOC, or anything examining the New Zealand experience.

Several studies looking at people's experience of miscarriage may be applicable. They highlight the generally negative experiences people experiencing pregnancy loss have coming through the health system, and increased rates of anxiety and depression following miscarriage.

- Lok and Neugebauer (2007), reported higher rates of satisfaction with expectant and medical management of miscarriage – although this reduces with failed medical management – and follow up phone calls to check on well-being are highly desirable.
- Trinder et al (2006) showed no difference in rates of anxiety or depression based on management of miscarriage, and the involvement of the person in choosing treatment options is likely to increase satisfaction.

The need to present accurate information in a non-judgemental and open way, that facilitates informed choices, is important in reducing long-term physical or emotional harm.

Within the Aotearoa / New Zealand context, it is important to discuss women's/people's wishes regarding disposal or return of any pregnancy tissue passed. This will be of most relevance in EPAC within the context of surgical management.

Investigations for Retained Products of Conception

Ultrasonography

Ultrasonography is invariably used to diagnose suspected RPOC yet agreed criteria for the diagnosis of RPOC on scan do not exist.

Sonography has limited value in triaging patients with suspected RPOC because sonographic findings correlate poorly with clinical symptoms and histological results. There is marked overlap in the sonographic uterine appearance of asymptomatic and symptomatic patients; the endometrial cavity is commonly irregular and thickened and may show prominent colour Doppler flow in patients with an uneventful course, as well as those with histologically proven RPOC (the work of McEwing et al. (2009) as cited by Carusi et al. 2021).

There is no good evidence that any endometrial cut-off is clinically useful. (Carusi et al. 2021)

The presence of blood clot or decidual tissue on scan can mimic RPOC (Wolman, 2009). Avascular remains are less likely to be RPOC and/or should pass spontaneously.

Sonographic parameters that may be helpful in diagnosing RPOC include

- Echogenicity – the presence of an echogenic mass within the endometrium (Van den Bosch et al. 2008)
- Vascularity - Sellmeyer (2013) found measuring vascularity using colour doppler scanning increases accuracy of diagnosis to 80%.
- ET alone should not be used as a predictor of RPOC management as clearly defined parameters at which RPOC may be present have not been established (Rottenstreich, 2019).

The positive predictive value of USS findings (echogenic mass, haematometra, ET >3cm, doppler flow) is low in stable, minimally symptomatic patients, but higher in symptomatic, infected patients (Carusi et al. 2021)

Ultimately scanning should be used as an aid to clinical history, examination, and judgement.

Diagnostic differentials to consider on scan are:

- arteriovenous malformation (AVM) – a rare complication generally caused by instrumentation to the area,
- anatomical abnormalities,
- molar pregnancies (Sellmeyer, 2013).

Enhanced myometrial vascularity (EMV) is a relatively new term that may be confused with AVM but is thought to be due to the remains of RPOC rather than instrumentation. (Grewal, K et al. 2019)

HCG

- Serial HCG levels, rather than a one-off HCG level, may assist in diagnosing the presence of RPOC.
    - Two studies from 2004 attempted to define normal rates of HCG decline post spontaneous and medically managed miscarriage. They showed the average return to non-pregnant levels is ~37 days (Barnhart et al, Nov 2004).
    - The rate of decline is more significant than the actual value of the HCG and a fall of <60% after 1 week suggests potential RPOC. (Barnhart et al, Nov 2004).
    - Post misoprostol, the study by Barnhart et al. (April 2004) found a fall in HCG of 74% on day 3, or 78% on day 7, gives a 90% chance of a completed miscarriage.
- A study of HCG trend in people post medical termination (MTOP) demonstrated a 98.5% positive prediction of successful outcome if HCG had fallen by 80% from 1-2 weeks post treatment. (Fiala et al, 2003).
- It is possible to have RPOC with a negative HCG as necrotic RPOC may remain in the uterus without actively secreting hormone. (Carusi, A. et al. 2021)

Management options for Retained Products of Conception

(For persistent RPOC please see Appendix 3)

Expectant management

Expectant management is a safe and acceptable option for management of RPOC and should be offered to haemodynamically stable people with bleeding at 7-14 days post miscarriage, TOP, or EOU.

Trinder et al. (2006) found expectant management for incomplete miscarriage worked well (~75% success rate), especially if already bleeding, although there was a higher risk of unplanned admission to hospital.

Lemmers et al. (2016) conducted a small RCT comparing expectant management of RPOC with surgical. Although ERPOC had a higher success rate, based on scan results, expectant management was ~76% successful with no increase in complication rates such as bleeding or infection.

For people who are hemodynamically stable and well, expectant management is worth considering as the first line in management for RPOC, particularly to avoid potential complications from surgery.

Medical management

Medical management of miscarriage and RPOC involves the administration of misoprostol to induce uterine contractions and bleeding. Misoprostol can be given orally, buccally, sub-lingual or vaginally, with minimal difference in success rate, although less gastrointestinal side effects are noted per vaginum (Kim et al., 2017).

Although commonly given in the management of RPOC, the advantage of misoprostol over expectant management is yet to be established (Kim et al., 2017).

A retrospective cohort study by Rottenstreich, A et al (2019) reports repeat doses of misoprostol had no benefit in RPOC management following initial miscarriage management with misoprostol, unless the gestational sac is still in situ. However, a study by Stewart, (2020) specifically researching medical management of RPOC, reported 65% of participants taking misoprostol avoided surgery, with higher success rates if taken after initial management was expectant (76%) versus 44% if having already taken misoprostol, or 40% if having had initial surgical intervention.

Surgical management

- This is the primary option for management of RPOC in acute presentation with significantly heavy bleeding, or sepsis, generally via evacuation of retained products of conception (ERPOC).
- ERPOC in the sub-acute setting may be a choice for people with prolonged bleeding, failure of expectant or medical management, if there is any suspicion of a molar pregnancy, or if other management options are not acceptable to the woman/person (RCOG, 2018).

Seen as a relatively low-risk procedure, it is not without potential complications. Common risks include

- infection (~4%),
- RPOC (~5%),
- intrauterine adhesions (IUAs), (3-38%)

The significance of IUAs is not clearly understood and can range from mild (~58%) to severe (~13%) but has been shown to be more common and severe over increased numbers of procedures (RCOG, 2018).

Uncommon or more serious risks include

- uterine perforation (~0.10%),
- heavy bleeding necessitating blood transfusion (~0.3%),
- cervical trauma (~0.10%) (RCOG, 2018).

Hysteroscopy

With unsuccessful evacuation of uterus if this occurs, secondary management may include an operative hysteroscopy where evacuation is performed under camera guidance, as opposed to the 'blind' ERPOC procedure.

Recommendations

- Expectant management is a safe and acceptable option for management of RPOC with approximately a 75% success rate.
- Medical management is a reasonable option for management of RPOC, but people should be advised that its superiority to expectant management is unproven. (Carusi, A. et al. 2021)
- The presence of a focal hyperechoic mass in the endometrium, particularly with evidence of blood flow on colour Doppler, has high sensitivity, but intervention should be based on clinical presentation. ET alone should not be used as a predictor of RPOC management.
- All people offered miscarriage management through EPAC have a baseline bHCG taken, so it is available for comparison with repeat bHCG IF required. A fall of <80% after 1 week could be suggestive of potential RPOC.
- If there is persisting RPOC at 3 weeks post diagnosis, O&G specialist review of the management plan is required to create a definitive plan.

⚠ EPAC staff to flag the 3-week date for review on front of notes.

- Hysteroscopy should be considered for persistent RPOC. Particularly for people with prolonged irregular bleeding, or persistent signs of RPOC on imaging, or requiring repeat surgery.

Persistent Retained Products of Conception

⚠ In cases of expectant and/or medical management of RPOC where there are persisting RPOC at 3 weeks post diagnosis, O&G specialist review of the management plan is required to create a definitive plan.

Use of Antibiotics with Retained Products of Conception

There is no evidence to either recommend or to abandon the use of prophylactic antibiotics in women with an incomplete pregnancy loss. Clinical judgment needs to be used by the health care provider. (May, W. et al., 2007)

Discharge Procedure

- Ensure that LMC/GP is aware of discharge from EPAC – if details are known
- Advise administration staff to cancel any obstetric referrals currently in the system and/or obstetric clinic appointments pending.

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Related Documents:

- Miscarriage Management Policy - MATY081
- Molar Pregnancy Policy – MATY042

Keywords for searching:

1. Retained Products of Conception
2. RPOC
3. Incomplete miscarriage
4. Miscarriage

Informed Consent:

The right of a consumer to make an informed choice and give informed consent, including the right to refuse medical treatment, is enshrined in law and in the Code of Health and Disability Consumers' Rights in New Zealand. This means that a woman can choose to decline treatment, referral to another practitioner, or transfer of clinical responsibility. If this occurs follow the process map on page 18 of the Referral Guidelines (Ministry of Health, 2012).

Tangata Whenua Statement:

The Women's Health Service recognises the rights and responsibilities of Māori as tangata whenua and Treaty Partners. This allows and acknowledges the importance of cultural diversity in all aspects of our care and practice in Aotearoa New Zealand.

As stated in Te Pae Amorangi (Hutt Valley DHB Māori Health Strategy) 2018-2027, Hutt DHB as a Crown agency is committed to our role in maintaining active relationships with iwi, under Te Tiriti o Waitangi. This strategy recognises the established principles of Partnership, Participation and

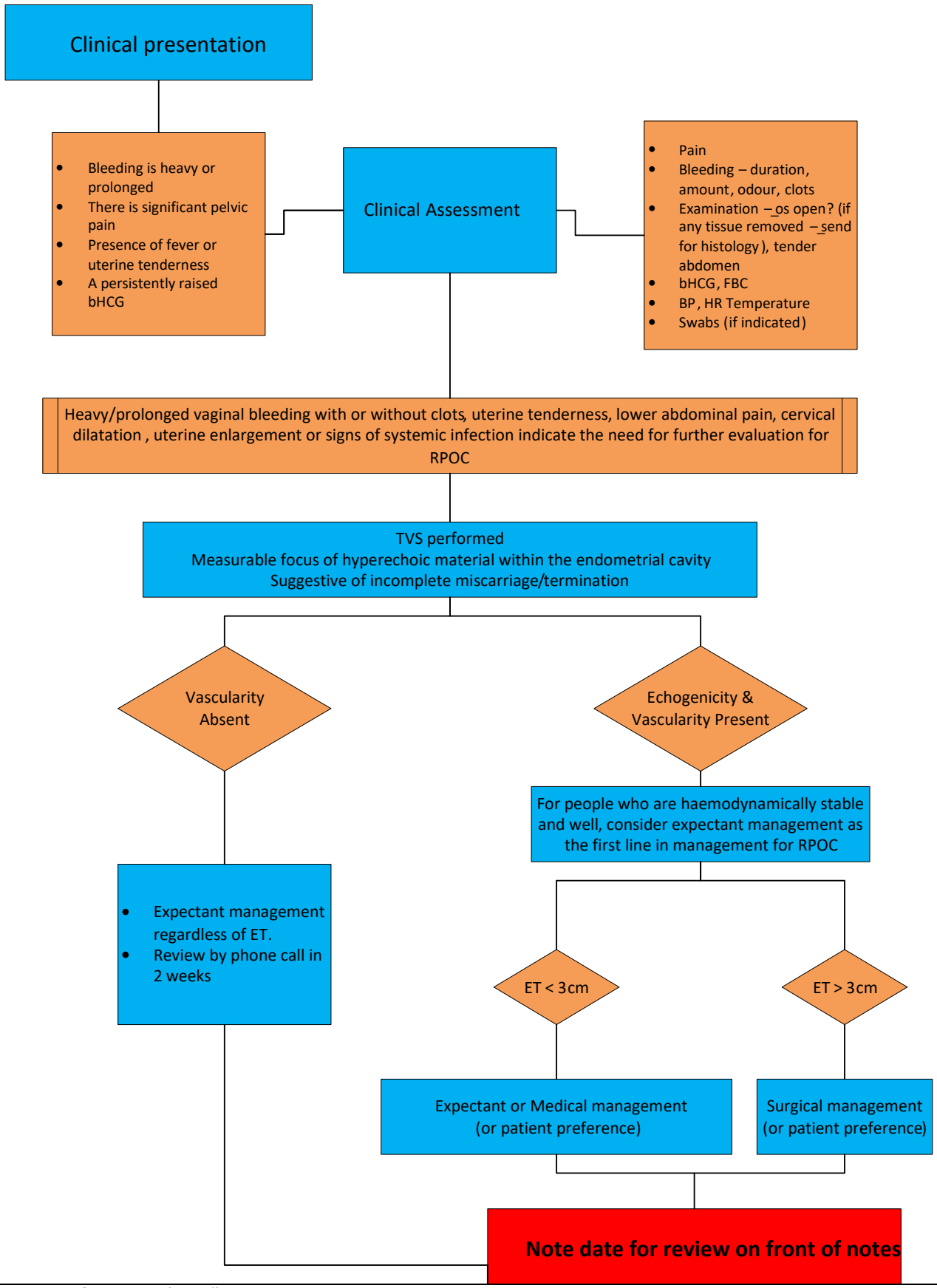
Protection and recognises steps towards the reviewed interpretation of Te Tiriti principles to date (from the Wai 2575 claim into health). These are tino rangatiratanga, equity, active protection, partnership and options.

Attention in particular is drawn to:

- **Article one – Kāwanatanga**: actively engaging and working alongside with local iwi through the Hutt Valley Māori Health Unit
- **Article two – Tino Rangatiratanga**: Self-autonomy, self-determination; the responsibility to enable Māori to exercise their authority over their own health, determinants and definition of health
- **Article three – Ōritetanga**: equal health outcomes of peoples; ensuring that policy, guidelines or programmes do not further perpetuate any inequity
- **Article four (the 'oral clause') – Wairuatanga**: spirituality; thriving as Māori and the importance of health providers understanding health in te ao Māori (the Māori world), acknowledging the interconnectedness and inter-relationship of all living and non-living things.

Appendix 1

Management of incomplete miscarriage or incomplete termination of pregnancy



Appendix 2

USS request and reporting guidelines

Expectations for requesting an USS

Request

- Pelvis USS
- Full bladder (warn person Trans Vaginal Scan will be requested)
- Provide a recent bHCG result if possible
- Please flag women's/person's expectation in scan request i.e. are they considering a TOP.
- Describe why requesting scan
- Provide information about prior scans – where, when, outcome. Give copies of reports to Radiology to attach to scan request.

Expectations for reporting on suspected RPOC

Scanning to report

- Endometrial Thickness – full diameter
- Presence of echogenicity
- Vascularity
- Position of RPOC E.g. fundal, cervical canal

Appendix 3

Process for flagging escalation to SMO review for persistent RPOC

Text (see below) for printer labels to be printed and attached to the front of the EPAC notes.

EPAC staff to complete the required information and document review date in the EPAC diary and electronic notes.

If RPOC is still present at 3 weeks post initial diagnosis, to be discussed with an SMO and the plan documented in the EPAC notes, and the secondary label attached to the front of the EPAC notes.

1) 1st label to print and attach to front of EPAC notes

Date of RPOC diagnosis: Date for SMO review: (3 weeks later, if required)

2) 2nd label to use if extended follow up is required

Plan by: Further review date (Document in EPAC diary):