

# Manual Vacuum Aspiration (MVA) in Comprehensive Abortion Care



# Welcome!

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Split into pairs and ask each other:

1  
What is your name?

2  
Where are you from?

3  
What experience do you have with MVA?

4  
What expectations do you have about this training?

# Overview and Objectives

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By the end of this training session, trainees should be able to:



List the indications for MVA and the key points for patient counselling



Describe key aspects of MVA equipment



Demonstrate competency in performing MVA



Describe best practice in pre- and post-procedure care



List suitable methods of post abortion contraception

# Ground Rules

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# Quiz

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# Definitions

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# What is CAC?

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- **Comprehensive abortion care (CAC)** includes not just information and management of induced abortion, but provision of information and management of care related to pregnancy loss and post-abortion care (PAC).
- **Post-abortion care (PAC)** is the provision of services after an abortion, such as contraceptive services and linkage to other needed services in the community or beyond. It can also include management of side-effects or complications after a safe or unsafe abortion or miscarriage including resuscitation, blood transfusion, uterine evacuation, genital tract repair and treatment of infection
- **Miscarriage** (spontaneous abortion or early pregnancy loss) is the spontaneous loss of a pregnancy before the fetus is usually viable outside the uterus.



Induced abortion, spontaneous pregnancy loss and PAC are all valid indications for MVA



PAC must be offered to all women under human rights principles regardless of whether abortion is restricted in that setting. All women must be able to access emergency care and contraception

Non pregnancy uses of MVA include endometrial biopsy for investigation of abnormal uterine bleeding

# GLOBAL CHALLENGES OF ABORTION

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## OVERVIEW



# Abortion Overview

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- An abortion is a way of ending a pregnancy, using medicines (drugs) or a surgical procedure, before the fetus is capable of surviving independently outside the uterus.
- Abortion is safe when carried out using a method recommended by WHO, appropriate to the pregnancy duration and by someone with the necessary skills.
- In Great Britain, the law allows a woman to obtain an abortion up to 24 weeks of pregnancy if two doctors agree that it would cause less damage to her physical or mental health than continuing the pregnancy. You must follow the rules and regulations in your country.
- Abortion is a safe procedure for which major complications are uncommon at any stage of pregnancy. However, the earlier in pregnancy an abortion is done, the safer it is.
- The patient is offered a choice of different methods, depending on length of pregnancy.

# Abortion – Key facts

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1

**73.3M**

Abortions occurred each year  
between 2015 & 2019<sup>1</sup>

2

**61%**

of unintended pregnancies  
ended in an induced abortion<sup>1</sup>

3

**80.000**

maternal deaths per year  
due to abortion<sup>2</sup>

<sup>1</sup>Bearak J, Popinchalk A, Ganatra B, Moller A-B, Tunçalp Ö, Beavin C, Kwok L, Alkema L. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. Lancet Glob Health. 2020 Sep; 8(9):e1152–e1161. doi: 10.1016/S2214-109X(20)30315-6.

<sup>2</sup>Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels J, Gülmezoglu AM, Temmerman M, Alkema L. Global causes of maternal death: a WHO systematic analysis. Lancet Glob Health. 2014 Jun; 2(6):e323-33.

# Abortion - Classification

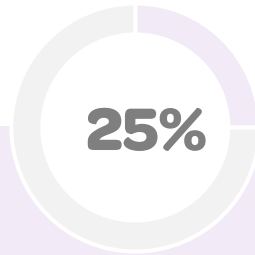
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## Safe Abortions

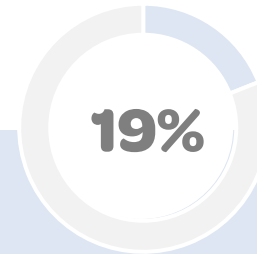
Safe abortion is an abortion provide by:

- 1) A trained person,
- 2) With a WHO qualified method (Medical abortion, Vaccum aspiration, Dilatation and evacuation)



## Less Safe Abortions

An abortion is less safe when only one of the two criteria is met (1 or 2)

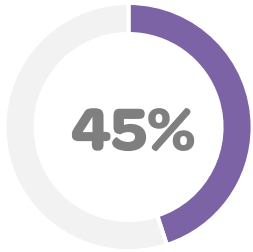


## Unsafe Abortions

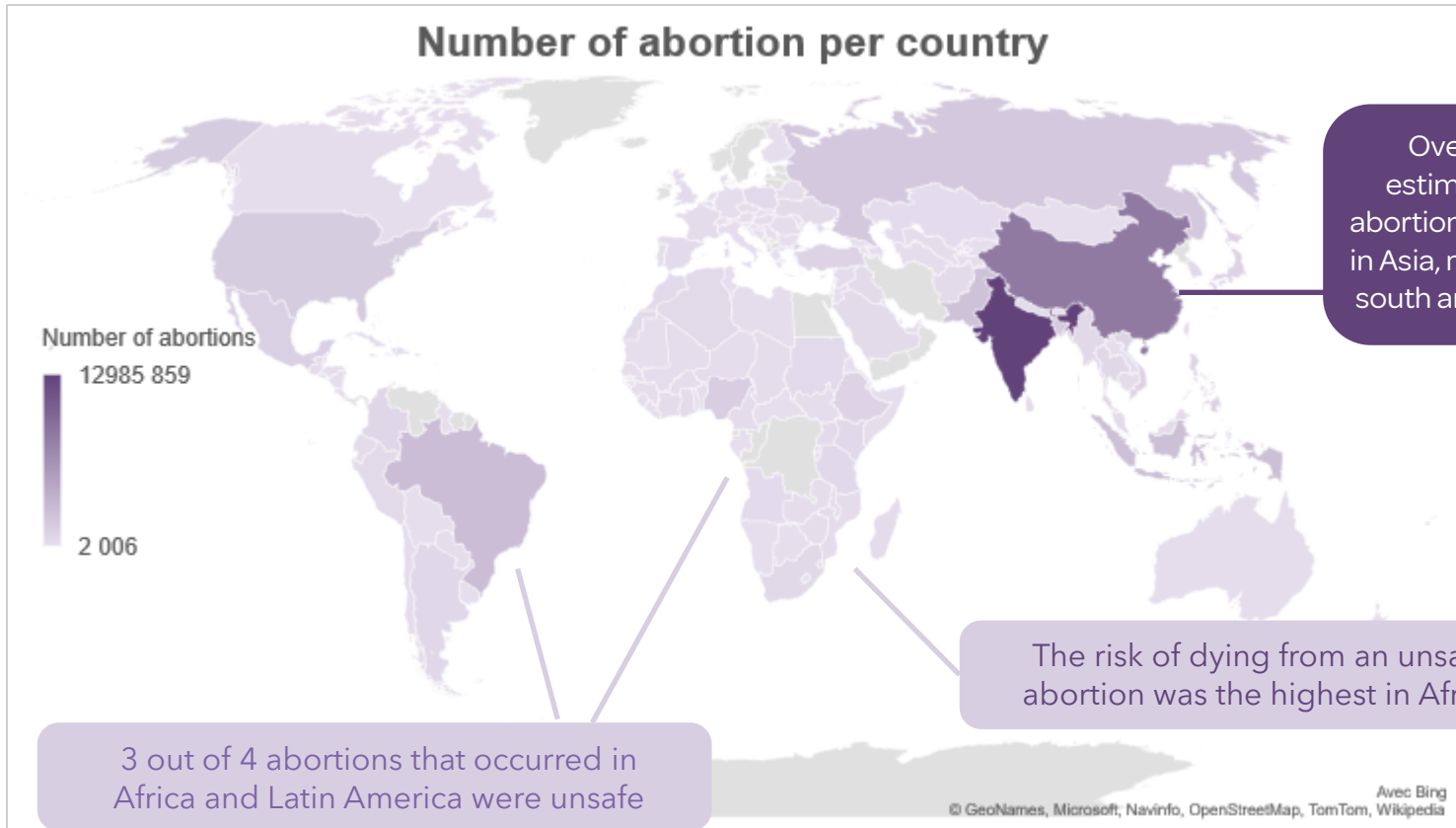
An abortion is classified least safe if it provided by untrained individual using a WHO unqualified method

<https://www.who.int/news-room/fact-sheets/detail/preventing-unsafe-abortion>  
Internal Source

# Global Challenge of Unsafe Abortion



Approximately 45% of all abortions worldwide were unsafe or less safe.



<https://www.who.int/news-room/fact-sheets/detail/preventing-unsafe-abortion>  
Internal Source

# Complications of Unsafe Abortion

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Unsafe abortions when performed under least safe conditions can lead to complications such as:



incomplete abortion (failure to remove or expel all the pregnancy tissue from the uterus)



hemorrhage (heavy bleeding)



infection



uterine perforation (caused when the uterus is pierced by a sharp object)



damage to the genital tract and internal organs by inserting dangerous objects such as sticks, knitting needles, or broken glass into the vagina or anus.

<https://www.who.int/news-room/fact-sheets/detail/preventing-unsafe-abortion>

# EARLY PREGNANCY LOSS (EPL)

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## MISCARRIAGE

# Types of EPL/Miscarriage

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## ○ Missed abortion

When the pregnancy stops developing, but it (the embryo/ fetus/ embryonic tissue or empty gestation sac) remains in the uterus and the cervical os is closed\*  
The patient may have pain, bleeding or no complaints. An ultrasound may show an embryo or fetus without cardiac activity, or a fluid-filled sac within the uterus.

## ○ Incomplete abortion

When the pregnancy has started to pass out of the uterus and the cervical os is open. The patient complains of bleeding and cramping pain.  
An ultrasound may show irregular heterogeneous echoes within the endometrial cavity on TVS \*\*. However, routine ultrasound should not be used to screen for incomplete abortion; ultrasound appearances correlate poorly with retained products of conception ( WHO 2023 )

## ○ Threatened abortion

When vaginal bleeding or spotting occurs, but the pregnancy remains alive / viable in the uterus and the cervical os is closed. There may or may not be pain.

\*Abortion care guideline. Geneva: World Health Organization; 2022. [Abortion care guideline \(who.int\)](#)

\*\* Doubilet PM, Benson CB, Bourne T, Blaivas M. Diagnostic criteria for nonviable pregnancy early in the first trimester. N Engl J Med 2013; 369: 1443–51.

# Global Challenges of Miscarriage

1

Globally **23 million** pregnancies are lost before viability every year.

That is **44 miscarriages** per minute – probably higher

**15%** risk of miscarriage

2

Population prevalence **women with previous miscarriages**

one previous = 10.8%,

two previous = 1.9%,

three or more = 0.7%

3

Increased risk with age of mother (and father)

at the **age of 30**, the risk of miscarriage is one in five (**20%**);

Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss, Quenby S et al. Lancet 2021; 397: 1658–67 .Lancet 2021; 397: 1658–67



# Global Challenges of Miscarriage

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Other risk factors include:



Black ethnicity v white,



Smoking,



Alcohol,



Uterine and endometrial abnormalities,



Chronic illnesses such as diabetes, obesity,



Vaginal (e.g. bacterial vaginosis) and systemic infections (e.g. malaria),



Increasing evidence about the role of pollution.

# Global Challenges of Miscarriage

○ 'Miscarriage: worldwide reform of care is needed' - Lancet Series, April 2021

○ Partial understanding of the burden

○ Numbers not collected accurately; diagnostic criteria not consistent

● Diagnosis based on hCG pregnancy test or ultrasound (USS)

- Biochemical pregnancy loss
- Preclinical pregnancy loss (before identification on USS)
- Clinical pregnancy loss (after identification on USS)

● Recurrent miscarriage criteria

- ASRM – 2 or more failed pregnancies
- RCOG – 3 or more consecutive including biochemical pregnancies
- ESHRE – 2 or more, non-consecutive



**All mean that women can be denied treatments and management options**

Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss, Quenby S et al. Lancet 2021; 397: 1658–67. Lancet 2021; 397: 1658–67

# Why does miscarriage matter?

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## Health risks



Vaginal bleeding in early pregnancy is linked to an increased risk of obstetric complications and poor pregnancy outcomes

- Threatened miscarriage -> increased risk of antepartum haemorrhage (APH) : risk ratio (RR) 1.62-2.47, and
- Increased risk perinatal mortality and low birth weight (RR 2.15 and 1.83)



With each miscarriage an increased risk of preterm birth

- Related to damage from curettage, changes to endometrial microbiome, leading to abnormal placentation

Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss, Quenby S et al  
Lancet 2021; 397: 1658-67

# Why does miscarriage matter?

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## Long term health risks



Recurrent miscarriage increases the risks of cardiovascular disease and venous thromboembolism



Psychological effects of miscarriage grossly underestimated\*

- 18% met criteria for post-traumatic stress
- 17% moderate to severe anxiety
- 6% moderate to severe depression

\*Farren J, Jalbrant M, Falconieri N, et al. Posttraumatic stress, anxiety and depression following miscarriage and ectopic pregnancy: a multicenter, prospective, cohort study. *Am J Obstet Gynecol* 2020; 222: 367.e1–22

Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss, Quenby S et al *Lancet* 2021; 397: 1658–67

# What do providers need to know about MVA

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# Abortion Methods Overview



Recommended methods of abortion by pregnancy duration:



Medical Abortion (MA)



Surgical abortion



Vacuum aspiration – up to 12 weeks



Manual vacuum aspiration (MVA)

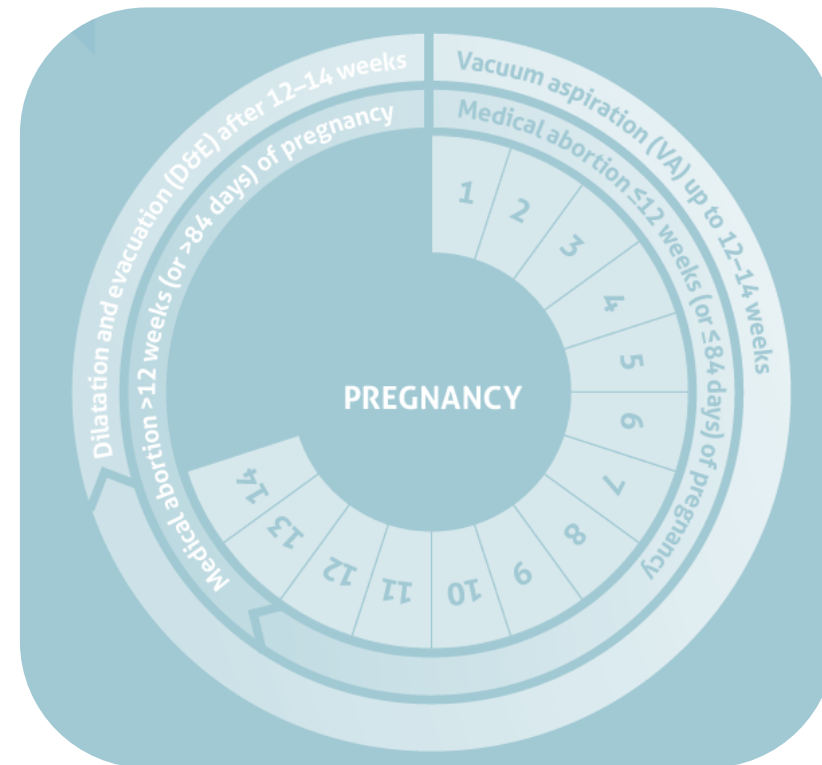


Electric vacuum aspiration (EVA)



Dilation and evacuation (D&E) - after 12 weeks.

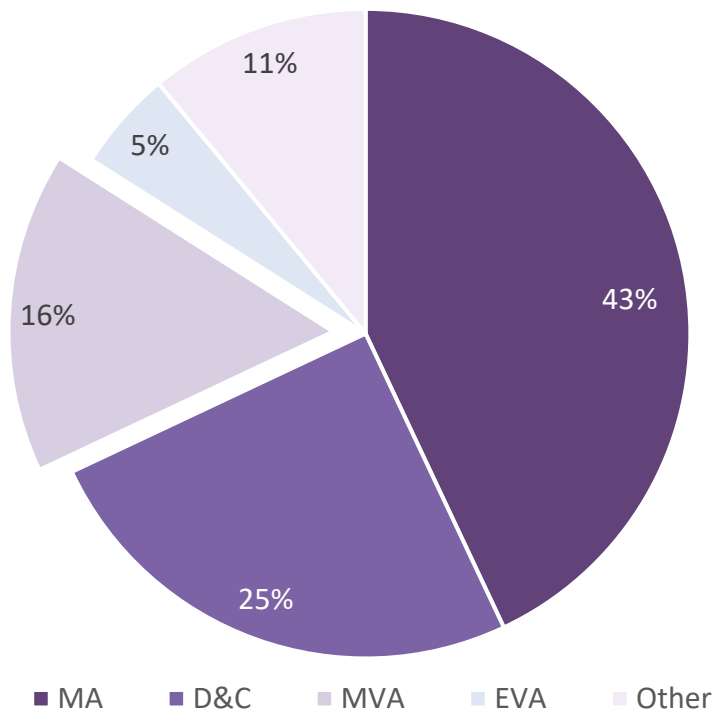
*VA should replace D&C because D&C is likely to be associated with more complications*



Clinical practice handbook for Quality Abortion Care, World Health Organization, 2023

# Abortion Methods Overview

Segmentation of abortions by method\*, 2019



**MA**

MA is the **preferred method worldwide**, specially in Northern Europe (97%\*\*), followed by Southern Asia (72%), Northern America (59%) and Western Europe (56%).

**D&C**

D&C is declining as abortion method in many countries. **It is not a recommended method for abortion.** However, many providers in less developed countries and rural areas still use this abortion method. This practice is prevalent in Central America, Western and Central Asia, Middle Africa.

**MVA**

MVA is the third most popular abortion method worldwide. It is widely used in South America, Southern and Eastern Africa and Southern Europe. In North America and Europe (esp. Northern and Western Europe), it is being gradually replaced by medical abortion.

Internal Source: Global MVA Abortion Market MarketSize, Trends and Competitive Landscape, 2021

# Comparison of Abortion Methods < 12weeks:

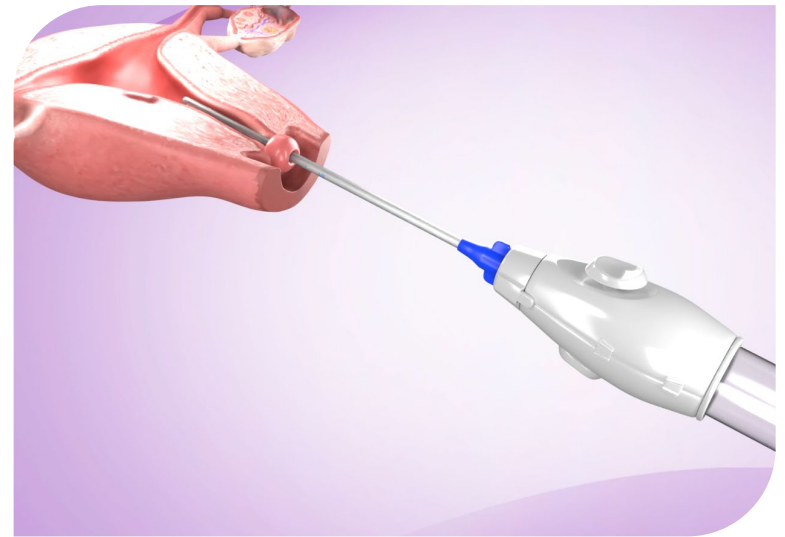
Medical Abortion	MVA
Avoids surgery.	Minor surgical procedure done in outpatient setting.
Mimics the natural process of miscarriage.	Done with the help of instruments by trained provider.
In some settings and gestations it can take place at home.	Takes place in a health facility.
Abortion takes hours or days to complete, which is unpredictable. women experience bleeding and cramping during this time. IUD can be inserted only after confirming completion which may take more than a week.	Quick procedure, takes less than 15 minutes to complete. Complete evacuation confirmed by examining aspirated products. Intrauterine contraception can be provided at the end of the procedure.
Tablets may cause other side effects such as vomiting, shivering and nausea.	Instrumentation may cause some discomfort.
May require more than one visit to the clinic if bleeding and pain require treatment and to confirm that the pregnancy has passed completely.	Single visit unless there is uterine or cervical injury – risk of injury is small in hands of trained provider.
There is a chance that women may see the products of conception.	Women do not see products of conception.
Timing of process can be women controlled.	Timing of procedure is controlled by the provider and the clinic.



# MVA Key facts

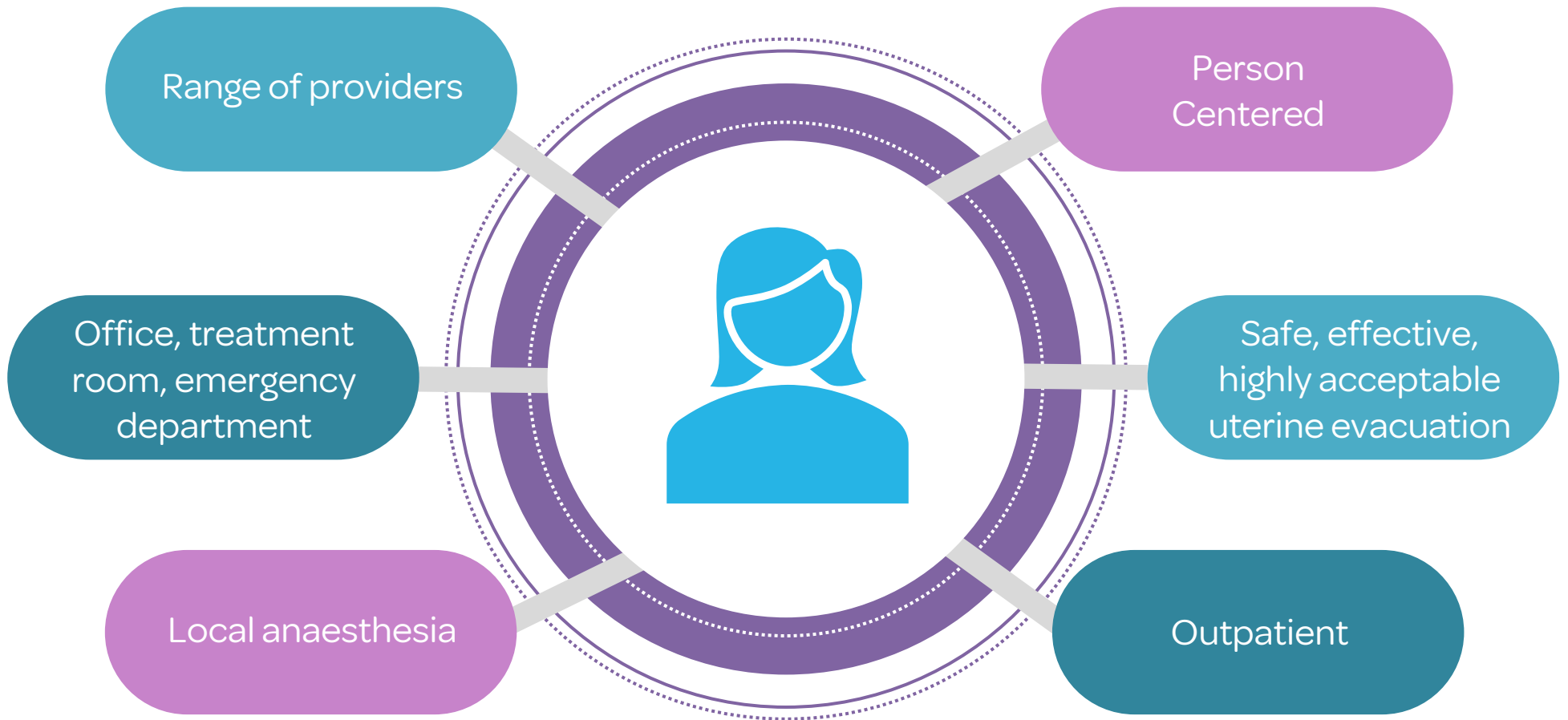
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- Safe, effective and acceptable method for uterine evacuation up to 12 weeks since the last menstrual period.
- Surgical procedure that uses gentle suction to remove the contents from the uterus using a handheld device (the aspirator).
- Performed by a trained health care provider
- Pain relief: local anesthesia in a hospital or health center, typically performed on an outpatient basis.
- Short recovery time



# MVA Key facts

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# Advantages of MVA <12 weeks

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Likely to be a 'one off' intervention with predictable bleeding patterns



Avoid admissions, general anaesthesia (GA), sedation\*



No electricity required

 No wires or tubing!



Dilatation and curettage (D&C) as a method of surgical abortion and as a sharp curettage 'cavity check' following vacuum aspiration

 'D&C causes pain and suffering to women and is not recommended for use, its use is incompatible with numerous human rights including the right to health'\*



*Patient choice after a detailed discussion expectant v medical v surgical evacuation*

## **\*Listen to the patient**

Abortion care guideline. Geneva: World Health Organization; 2022.

# Risks of MVA <12 weeks

For a MVA procedure performed at less than 12 weeks the risks are small for abortion and EPL



Failure of procedure  
1 in 1000



Incomplete evacuation  
35 in 1000



Infection less  
than one in 100



Severe bleeding requiring  
transfusion less than one in 1000



Cervical injury from dilation  
less than one in 100



Uterine perforation  
1-4 in 1000

● Infection after abortion is highly unlikely and is usually associated with pre-existing infection.

# Principles of MVA Service Set Up

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# Quality of care: Examples

Principles of quality-based care	Risks of poor quality of care
<p><b>Patient experience. e.g.</b></p> <ul style="list-style-type: none"> <li>• Clinic environment, auditory and visual privacy.</li> <li>• Clean welcoming</li> <li>• Do they have to walk round partially dressed?</li> <li>• Principles of counselling and informed consent.</li> <li>• Is your practice holistic and sympathetic?</li> <li>• Do you provide counselling for pregnancy loss and abortion?</li> <li>• Culture and religion – judgement?</li> <li>• Communication</li> </ul>	<ul style="list-style-type: none"> <li>• She may not return to your service or be put off from seeking care</li> <li>• She may not recommend you to her friends and family</li> <li>• Infection from dirty instruments</li> <li>• Untrained staff who do not know how to perform the procedure competently, or recognise complications</li> <li>• Physical and psychological morbidity</li> <li>• Death</li> </ul>
<p><b>Safety:</b> Infection processing, how to avoid and recognise and treat complications</p>	
<p><b>Effective:</b> How to perform procedure. No delays in performing the procedure</p>	

# Competency Based Training: Quality of training

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- As a provider of MVA services, you must be able to offer your patients with the highest quality service. To enable this, you should:
  - Be assessed by a trainer as competent for counselling and performing the MVA procedure so that the service you provide is safe and effective.
    - Pass: practice independently
    - Pass: with direct supervision
    - Certificate of attendance
  - Take responsibility for maintaining your own competence by accessing supportive supervision opportunities.
  - Provide a rights-based environment for service delivery with attention to acceptability, accessibility and availability of services thereby fostering trust with those seeking services.

\* WHO Global Competency Framework for Universal Health Coverage 2030, April 2022. <https://www.who.int/publications/i/item/9789240034686>

# What is good counselling? REDI Framework

<div style="text-align: center;">R</div> Rapport Building	<div style="text-align: center;">E</div> Exploring	<div style="text-align: center;">D</div> Decision Making	<div style="text-align: center;">I</div> Implementing the Decision
<ul style="list-style-type: none"> <li>Greet client with <b>respect</b></li> <li>Make <b>introductions</b> – has he been here before?</li> <li><b>Assure confidentiality and privacy</b> Explain the need to discuss sensitive and personal issues</li> <li><b>Use communication skills</b> effectively (throughout the phases)</li> </ul>	<ul style="list-style-type: none"> <li><b>Identify reason for the visit</b> in detail</li> <li>Discuss existing problems</li> <li>Focus discussion on to listen to patient</li> <li>Signs of <b>gender based violence</b></li> <li><b>Pain expectations</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Identify the decisions</b> the client needs to make or confirm</li> <li><b>Identify relevant options</b> for each decision</li> <li>Confirm that any decision the client makes is <b>informed, well-considered, and voluntary</b></li> </ul>	<ul style="list-style-type: none"> <li>Assist the client in <b>developing a concrete and specific plan</b> for implementing the decision</li> <li><b>Identify barriers</b> that the client may face in implementing the plan</li> <li>Develop strategies to overcome the barriers</li> <li>Make a follow-up plan and/or provide referrals, as needed – <b>signposting to other services</b></li> </ul>

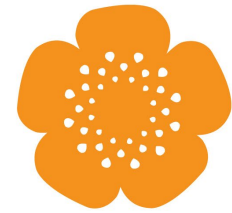
<https://www.engenderhealth.org/technical-publications-resources/redi-counseling-framework>



# What is Good Counselling?

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- Principles of good counseling?
- One well known framework is e.g. EngenderHealth REDI
  - R** Rapport Building
  - E** Exploring
  - D** Decision Making
  - I** Implementing the Decision



**EngenderHealth**  
for a better life

# What is Good Counselling?

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## Rapport Building

- Greet client with respect
- Make introductions and identify category of the client (i.e., new, satisfied return, or dissatisfied return)
- Assure confidentiality and privacy
- Explain the need to discuss sensitive and personal issues
- Use communication skills effectively (throughout the phases)

# What is Good Counselling?

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## Exploring

- Identify reason for the visit in detail
- **New clients:** SRH history, does she want spacing or no more children?
- **Return clients:** satisfaction with current method, confirm it is being used properly. Does she want spacing or no more children? Discuss existing problems, treating them or switching
- **All clients:** Focus on the method(s) of interest to the client, addressing individual and other key factors and risk of STIs/HIV

# What is Good Counselling?

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## Decision Making

Summarize from the Exploring phase:

- Identify the decisions the client needs to make or confirm
- Identify relevant options for each decision (e.g., pregnancy prevention, STI/HIV risk reduction)
- Confirm medical eligibility for contraceptive methods the client is considering
- Help the client consider the benefits, disadvantages, and consequences of each option (provide information to address any remaining knowledge gaps)
- Confirm that any decision the client makes is informed, well-considered, and voluntary



# What is Good Counselling?

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## Implementing the Decision

- Assist the client in developing a concrete and specific plan for implementing the decision(s)
- Identify barriers that the client may face in implementing the plan
- Develop strategies to overcome the barriers
- Make a follow-up plan and/or provide referrals, as needed

# Counseling: MVA checklist

## EXAMPLE OF A COUNSELING CHECKLIST



● Benefits of MVA v medical management v expectant management	
● Risks and complications	
● Pain management options and methods of anesthesia	
● Explanation of the MVA procedure itself	
● What to expect after the procedure	
● Taking verbal and written consent	

# Role Play Counselling and Informed Consent

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# Let's Play ...

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# Manual Vacuum Aspiration

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## Pre-Procedure Care

# Patient assessment

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Patient assessment consists of taking a medical history and performing a physical examination

*For the medical history document:*



*Obstetric history* including the numbers of vaginal deliveries, Caesarean sections, ectopic pregnancies, or any other pregnancy losses



*Gynecology history* any previous abdominal or uterine surgery, symptoms of genital tract infection

- It is critical to establish and treat any infection prior to instrumenting the uterus.



*Medical conditions* and medications including any herbal medications and allergies.



If *ultrasound* scan is available note:

- Pregnancy gestation

- Size and position of the uterus

# Determining gestational age

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It is critical to establish the gestational age at this clinical assessment to ensure that a first trimester MVA procedure will be appropriate and safe



Establish the first day of her last menstrual period to assess gestation of the pregnancy.



By ultrasound with a trained operator if available



By abdominal palpation and bimanual examination



If there is any suspicion of ectopic pregnancy either with a definitive diagnosis on ultrasound scan or an empty uterus, or the size of the uterus being incompatible with dates on physical examination refer for further assessment.

**Do not delay procedure**

# Pre-op MVA



## Check local protocols for:



Routine laboratory testing pre procedure



Administration of anti-D rhesus prophylaxis post-surgical evacuation for induced abortion or EPL\*

None required is less than 12 weeks



Routine prophylaxis with oral antibiotics for all women  
Surgical abortion should not be delayed if antibiotics are not available

\*Clinical Practice Handbook for Abortion. Geneva: World Health Organization; 2023

Penney G, Thomson M, Norman J, McKenzie H, Vale L, Smith R, et al. A randomised comparison of strategies for reducing infective complications of induced abortion. BJOG. 1998;105(6):599-604.

# Cervical preparation <12 weeks gestation

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- Aim to soften the cervix making dilation easier and shorten operation time
  - Misoprostol drug of choice
- WHO: Useful in women with previous surgery or nulliparous but not routinely required for first-trimester surgical procedures unless local guidance differs
- But side effects of misoprostol may outweigh benefits
  - Such as shivering and fever and the risk of bleeding while waiting for the MVA Procedure.
- RCOG: yes, all cases

**Check local protocols**  
**Do not delay procedure**

# Pain relief options

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Dilation of the cervix causes pain

- Pre procedure oral – e.g. NSAIDs 30 minutes pre procedure
- Local anaesthetic infiltration to the cervix at 12:00 o'clock position for tenacula or around the cervix in a clock face
- Paracervical block into paracervical structures to disrupt pain fibres
- Sedation or GA
- Stopping the procedure

# IPAS Manual Vacuum Aspiration

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## The Room

# Before the patient comes in...

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Procedure room must confirm to local standards and should be clean, well ventilated and adequately equipped.



Bed for dorsal lithotomy position



Ensure that all necessary equipment and supplies are ready and laid out before the patient enters the room to reduce the risk of anxiety.



# Check essential equipment and supplies



## Instruments:

- Sponge holding forceps
- Bivalve speculum
- Tenaculum
- MVA sets with cannulae
- Gauze
- Kidney dish for tissue
- Gallipot for antiseptic solution
- Sponge forceps
- Sterile and disposable gloves
- Needles and syringes
- Personal protective equipment: aprons, goggles
- Sanitary napkins



Waste disposal: (fetal remains)



Waste disposal dry waste



Sharps disposal



Decontamination solution



## Drugs:



Lidocaine 1% without adrenaline for paracervical block



Misoprostol for cervical preparation



Oral analgesia, nonsteroidal anti-inflammatory drugs

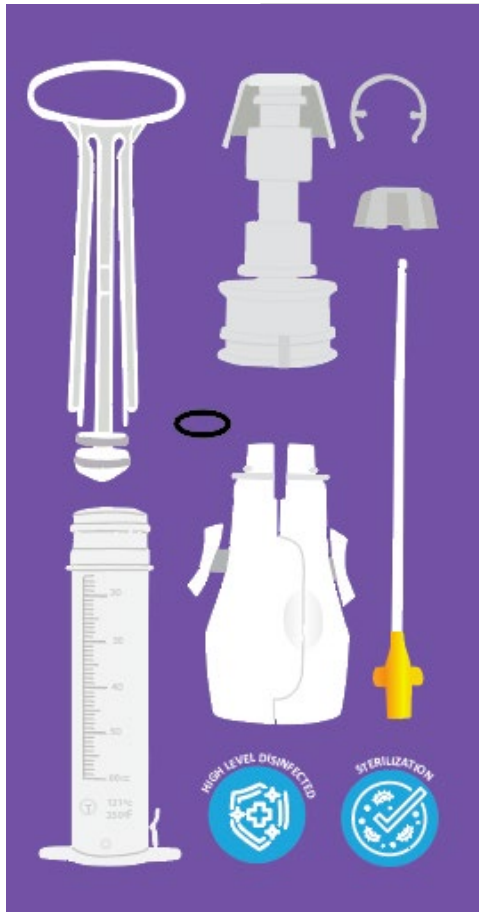


Drugs for sedation as per local protocol  
(not covered in this training)

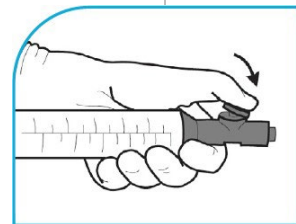


Emergency drugs box containing  
e.g. drugs for management of anaphylaxis.  
see local protocols and requirements

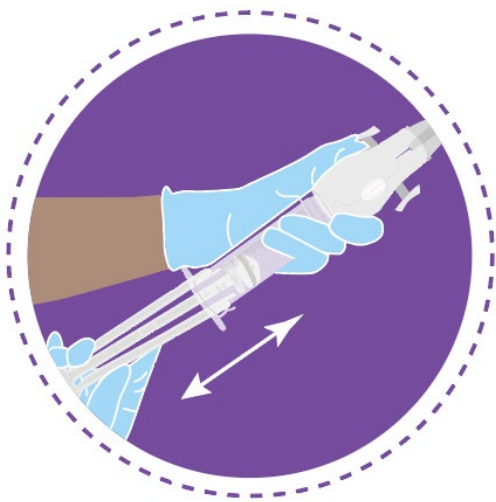
# MVA Preparation



- Have ready the appropriate sized cannulae and an aspirator.
- Inspect the aspirator. To be effective, an aspirator must be able to hold a vacuum. Discard aspirators with any visible cracks or defects, or ones that do not hold a vacuum.
- Check the plunger and valve. The plunger should be positioned all the way into the barrel and the pinch valve should be open, with the valve button out.
- Close the pinch valve by pushing the button down and forward toward the aspirator tip. When closed, the valve will lock into place.



# MVA Preparation: create and test the vacuum



- Prepare the aspirator by grasping the barrel and pulling back on the plunger until the arms of the plunger snap outward at the end of the aspirator barrel, holding the plunger in place. Check the stable positioning of the plunger arms. Both plunger arms must be fully extended to the sides and secured over the edge of the barrel. With the arms snapped in this position, the plunger will not move forward and the vacuum is maintained. Incorrect positioning of the arms could allow them to slip back inside the barrel, possibly pushing the contents of the aspirator or air into the uterus. **Never grasp the aspirator by the plunger arms.**
- Check the aspirator for vacuum tightness before use. Leave the aspirator for several minutes with the vacuum established. Open the pinch valve by releasing the button. Air will rush into the aspirator, indicating that there was a vacuum in the aspirator. If there is not a rush of air, lubricate the o-ring with silicone and test the vacuum again. Replace the o-ring or use another aspirator if the aspirator still will not hold a vacuum.
- Repeat steps to reestablish the vacuum at the time of the procedure.

# When to replace aspirators

When Ipas MVA Plus aspirators are processed using the recommended methods, the number of uses can be expected to be up to 25.

Aspirators should be discarded and replaced if any of the following have occurred:



The cylinder becomes brittle or cracked or mineral deposits inhibit plunger movement



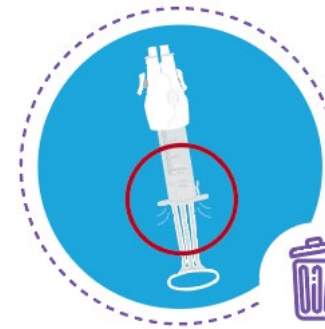
The valve parts become cracked, bent or broken



The buttons are broken



The plunger arms do not lock



The aspirator no longer holds a vacuum

# MVA

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## Uterine Aspiration Procedure

# Inviting patient into procedure room



Patient preparation: holistic



Invite her in, greet warmly



Introduce staff that are present



Cover the instruments



Assist getting on the couch and positioning her correctly



Maintain dignity throughout





# MVA Procedure: physical examination

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- Palpate the abdomen and check for scars, masses and uterine size.
- Assess the size and position of the uterus by bimanual examination
  - Consider ultrasound if gestation is queried
  - Assess any pelvic tenderness
- Insert a bivalve speculum
  - Check the genital tract and cervix for signs of infection such as abnormal vaginal discharge and discuss treatment if required.
- Clean the cervix with antiseptic solution twice from the os to the edge of the cervix

# MVA Procedure: paracervical block

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- Inject 1-2 ml of local anaesthetic at the cervical site where the tenaculum will be placed (either at 12 o'clock or 6 o'clock, depending on your preference or the presentation of the cervix)
- Stabilise the cervix with the tenaculum at the anaesthetised site
- Use slight traction to move the cervix and define the transition of smooth cervical epithelium to vaginal tissue. This delineates the sites for additional injections.
- Slowly inject 2 – 5 ml lidocaine into a depth of 1.5 – 3 cm at 4 points at the cervical/vaginal junction 2 and 10 o'clock, and 4 and 8 o'clock.
- Move the needle while injecting OR aspirate before injecting to avoid intravascular injection
- The maximum dose of lidocaine in a paracervical block is 4.5mg /kg /dose or generally 200 - 300mg (approximately 20ml of 1% or 40 ml of 0.5%)



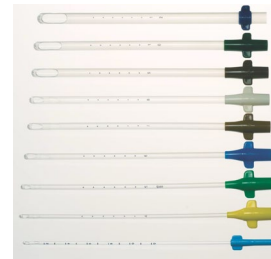
# Determining appropriate cannula size



The size of the cannula should be appropriate for the application and size of the uterus and amount of cervical dilation present.



Using a cannula that is too small may result in retained tissue or loss of suction.



For uterine evacuation, the range of suggested cannula size is relative to uterine size as follows:

UTERINE SIZE (weeks since last menstrual period (LMP))	SUGGESTED CANNULA SIZE (mm)
4 - 6	4 - 7
7 - 9	5 - 10
9 - 12	8 - 12

# MVA Procedure: cannula insertion

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Avoid risk of uterine damage, infection or pain



Place tenaculum to cervix and apply traction



Introduce a dilator which that has a diameter smaller than the estimated gestation age.



Rotating the dilator with gentle pressure can ease insertion.



Repeat this with progressively larger dilators until you reach the cannula size that is appropriate for the patient's gestation.



Insert cannula gently to avoid pain and risk of trauma



Attach the prepared aspirator to cannula, Steady the cannula so it does not move forward into the uterus suddenly.



**Do not touch the cannula!!**

# MVA Procedure: Aspirating uterine contents

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## Key Points:



Apply vacuum by releasing buttons on aspirator

- Blood, tissue and bubbles



Rotate the cannula 180 degrees in each direction while using a gentle in and out motion to cover all surface of the uterine cavity



When syringe fills up to 3/4 volume depress buttons and disconnect Aspirator from the cannula leaving it in place



Cannula clogged?

- Gently move back and forward within the uterine cavity but do not withdraw it from the uterus if this does not work Remove cannula and aspirator together while depressing the buttons remove tissue from the apparatus with sterile forceps
- Repeat Procedure

**Never try to unclog the cannula by pushing the plunger back into the cylinder**

# MVA Procedure: completing uterine aspiration

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## Key Points:



How to tell if the uterus is empty ?

- Red or pink foam visible without tissue
- Gritty sensation when cannula is in the uterine cavity
- The cervix contracts around the cannula



No products of conception?

- Consider diagnosis of ectopic pregnancy



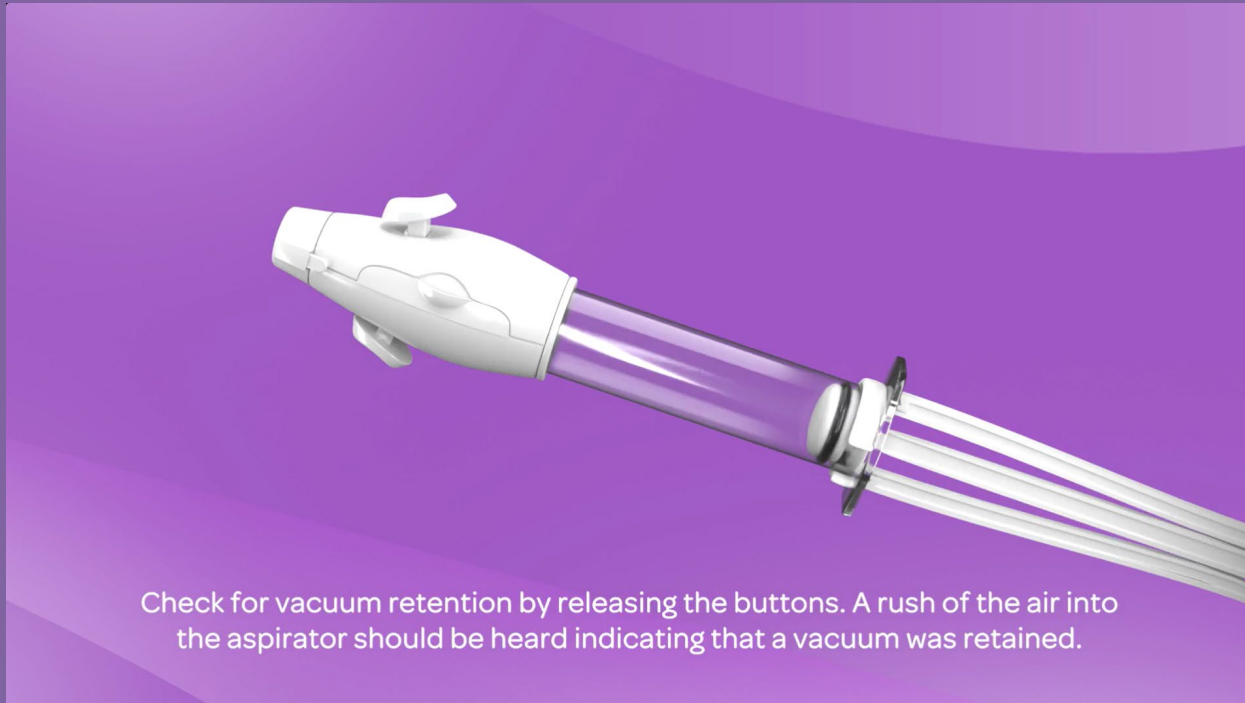
Empty aspirator contents into the designated container squeezing the plunger arms and pushing the plunger fully.



Dispose of remains as per local protocols

# Video

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# Manual Vacuum Aspiration

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## Post-Procedure Care

# Patient support and counselling:

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## Key Points:



Assist the woman to the recovery area



Before discharge ensure that

- Vital signs are normal
- Bleeding is settling,
- Pain is under control waiting
- Urine passed



Provide analgesia if required



Provide a phone number in case she needs to contact anyone in an emergency or if she has any questions

# Patient support and counselling:

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## Key Points:



### Vaginal bleeding:



- Heavier than normal periods and can last up for a week
- Avoid sexual intercourse



### Pain:



- Menstrual type cramps, should settle in a few days
- Come back if pain or bleeding persist or worsen or if she has a fever or abnormal vagina discharge



Allow sufficient time to discuss emotional needs. Offer a follow up appointment.



Provide a phone number in case she needs to contact anyone in an emergency or if she has any questions

COME BACK ANYTIME



# Managing complications of MVA

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## Key Points:



Complications can occur when a woman spontaneously miscarries elsewhere or during the procedure



The risk of these are very low with pregnancies less than 12-14 weeks



## **Key is to be prepared**

- Protocols in place for managing emergencies
- Skilled personnel who can assess diagnose and treat.
- Importance of emergency drills
- Access to essential tests, intravenous fluids , antibiotics, blood
- Referral protocol if higher level care is required

# Identifying complications for safe and effective care:

## PAC and post MVA

<b>Uterine perforation</b>	<b>Haemorrhage due to retained products</b>	<b>Infection</b>
<ul style="list-style-type: none"><li>• Suspect if cannula advances further than expected or if the vacuum lost</li><li>• If the patient is awake she may experience severe pain or increased vaginal bleeding.</li></ul>	<ul style="list-style-type: none"><li>• Suspect this if there is ongoing bleeding with abdominal pain.</li><li>• Diagnosis is made on clinical examination of the abdomen and with speculum examination to assess whether the cervical os is open or with pelvic ultrasound examination.</li></ul>	<ul style="list-style-type: none"><li>• Infection can present with fever, chills or abnormal or offensive vaginal discharge.</li><li>• The patient may also have pelvic pain with bleeding or spotting.</li></ul>

# Documentation

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Contemporaneous:



All decisions and the rationale for interventions should also be accurately documented together with any drugs administered and procedures carried out



Supports safe and effective care for the patient on the day but contains essential information if she returns with any complication



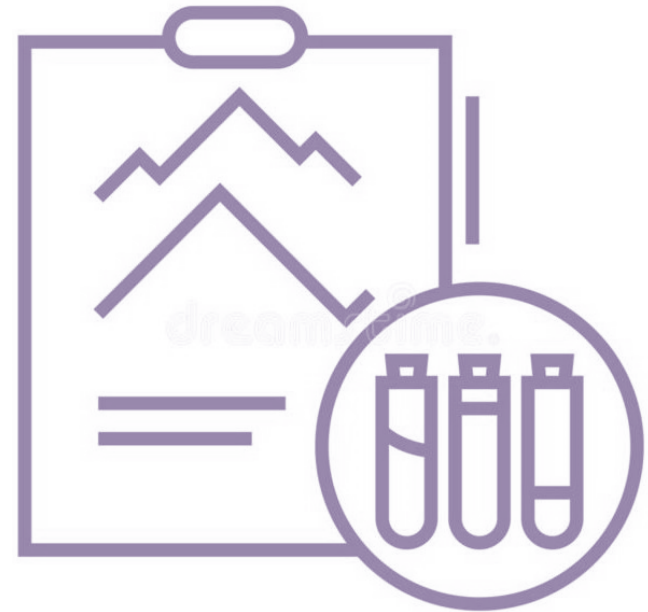
Data for quality audits



Data for incident reporting



Learning and fair blame



# POST ABORTION CONTRACEPTION

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## OVERVIEW

# Contraception

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- Following an induced or spontaneous abortion / miscarriage / EPL , ovulation can return as early as 8–10 days later and usually within one month.
- Starting contraception as soon as possible within the first month is important for women who desire to delay or prevent a future pregnancy.
- All contraceptive options may be considered after an abortion, but informed choice and the client's wishes are most important.
- Generally, almost all methods can be initiated immediately following a surgical or medical abortion.

# MVA for endometrial biopsy

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Use 3 mm cannula to perform a blind biopsy



Indications:

- Abnormal bleeding – post coital, post-menopausal, intermenstrual



As part of a suite of wider investigations including hysteroscopy and ultrasound



Simple analgesia in the hour prior because of the small diameter cannula and short procedure may be adequate but she may need more, if she is anxious, nulliparous etc

# Contraception after a surgical abortion



- Immediately** after surgical including septic abortion with no need for back up methods
- Combined oral contraceptives (COC), progestin-only contraceptives (POP) and barrier methods (condoms, spermicide, diaphragm, cap)
  - Tubal ligation



**All intrauterine devices (IUDs) may be started immediately** or up to 12 days after a first-trimester surgical abortion unless septic abortion without a backup method



## >7 days?

- start COCs POP, injectables any time it is reasonably certain she is not pregnant.
  - Use backup method for the first 7 days
- Copper IUD
  - More than 12 days abortion and no infection is present?
  - IUD inserted any time if it is reasonably certain she is not pregnant. No need for a backup method.
- LNG-IUD
  - more than 7 days and no
  - LNG-IUD inserted any time if it is reasonably certain she is not pregnant
    - backup method for the first 7 days after insertion.

# Session Summary

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- MVA can be performed in the outpatient setting for management of miscarriage, PAC and abortion
- Service should be rooted in key areas of quality
  - Rights based care
  - Know your local protocols
- Be guided by the patient regarding pain relief
- MVA equipment is straightforward to assemble, disassemble
- Cross over skills from EVA
- As for all services, staff need to be trained as competent in MVA provision and aware of their roles
- Contraception can be provided on the day, **do not delay offering it**
- How does MVA provision fit with your other services?



# References

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# Source Material

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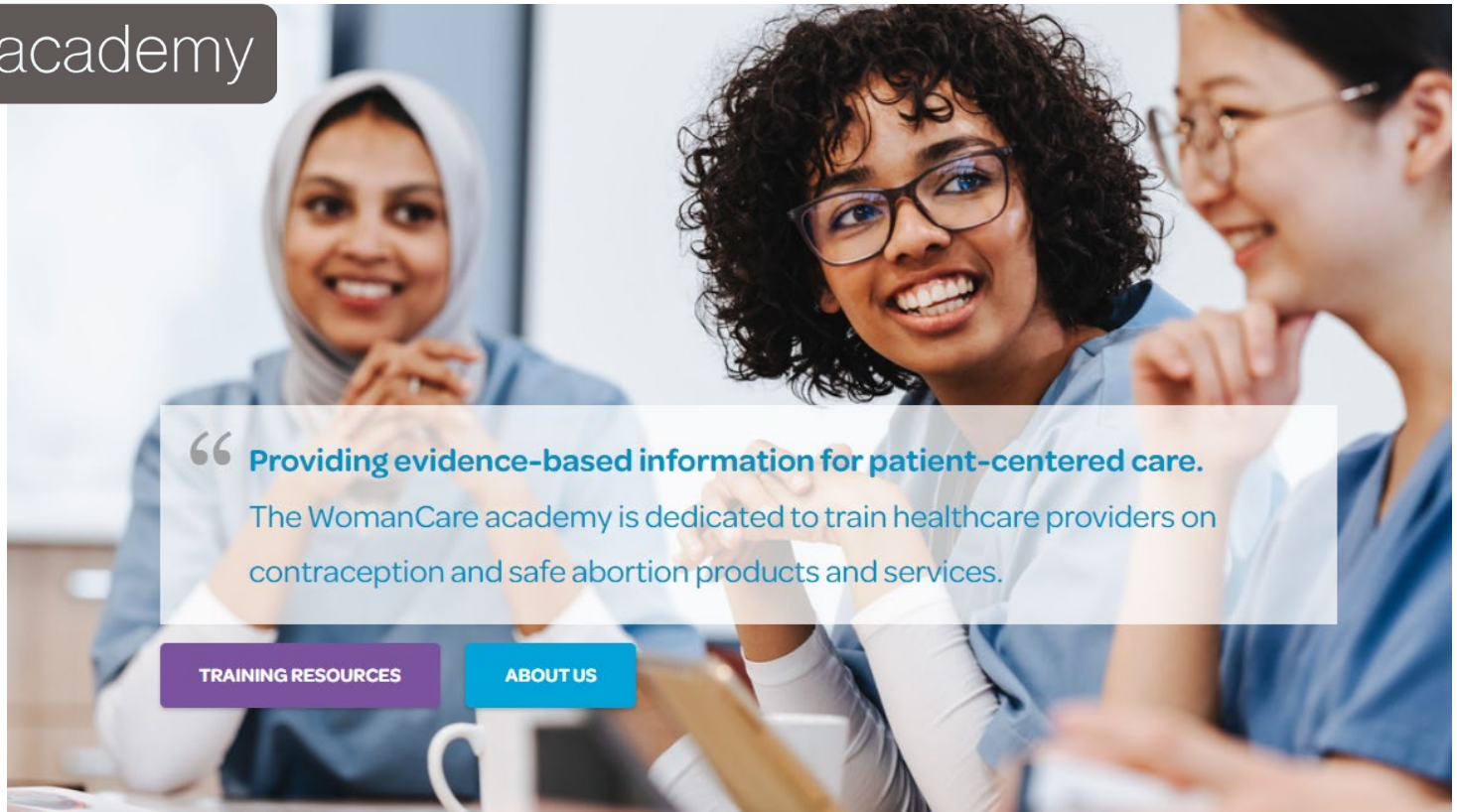
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# Questions, Comments, Or Concerns?



We want to hear about it ...

# Training resources: WomanCare Academy



“ **Providing evidence-based information for patient-centered care.**  
The WomanCare academy is dedicated to train healthcare providers on  
contraception and safe abortion products and services.

[TRAINING RESOURCES](#)

[ABOUT US](#)



# Training resources: WomanCare Academy

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## Training resources for healthcare providers

Through the WomanCare Academy, we educate a spectrum of healthcare providers: gynecologists, nurses, midwives and others worldwide, to build their skills in delivering high quality, patient-centered care using our contraceptive and safe abortion products.



[womancare-academy.org](https://womancare-academy.org)

# Training resources: WomanCare Academy

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- Training tools for contraception and safe abortion products
  - Implants
  - Emergency contraception
  - Injectable contraception
  - IUDs
  - Medical abortion
  - Surgical abortion
  - Early pregnancy loss management



[womancare-academy.org](https://womancare-academy.org)



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