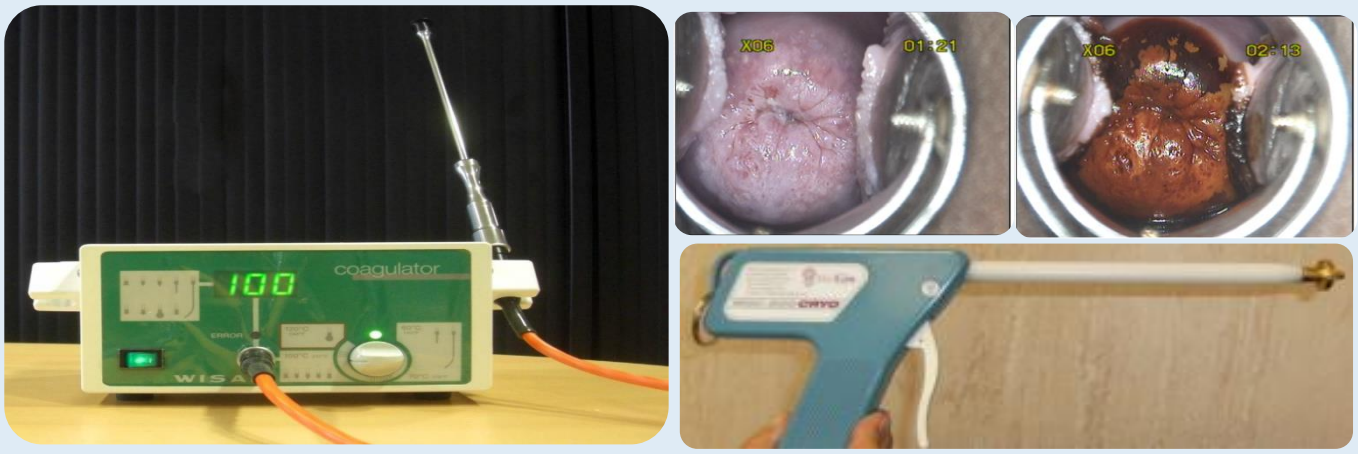
ICMR- National Institute of Cancer Prevention and Research

Training Manual on

Visual Inspection with Acetic Acid (VIA)



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Training Manual on

Visual Inspection with Acetic Acid (VIA)

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ABOUT THIS MODULE

Government of India is undertaking a population-based cancer screening of three common cancers in the country; oral, breast and cervical cancer. According to the operational guidelines, cervical cancer screening will be done using Visual Inspection with Acetic acid (VIA) by ANMs and staff nurses at the Primary Health Centre (PHC) level.

This manual is intended mainly for ANMs and staff nurses at PHCs. It covers VIA test in detail, the interpretation of the test with pictorial representation of each condition. This manual also gives information on the ablative treatment modalities like cryotherapy and thermal ablation that can be used in "Screen and Treat Approach" which is the recommended treatment strategy done in the same visit for eligible screen test positive individuals to minimize the loss to follow up and to avoid unnecessary overloading of the higher referral facilities.

Gynecologists and Lady medical officers trained in cervical cancer screening and management will be the master trainers. ANMs and staff nurses will undergo a comprehensive 10 days training on VIA at medical colleges or district hospitals in which the trainees will be empowered with both theoretical knowledge on principle of VIA test, appropriate interpretation and reporting of the test and practical skills like insertion of speculum, performing VIA test, performing ablative treatment methods which will make them proficient in screening and treatment of precancerous lesions using ablative methods.

To be certified as VIA trained, the trainee needs to score at least 70% in the knowledge and 80% in the skill assessment at the end of the training. The objective is to create a work force that'll be confident and competent to perform cervical cancer screening at PHC and effectively bring down the burden of this preventable cancer in the country!

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CHAPTER 1

Visual inspection with acetic acid (VIA)

Visual inspection with acetic acid is naked-eye examination of the uterine cervix, after application of 5% acetic acid and interpreting the result after one minute. This is a simple and inexpensive test for the detection of cervical precancerous lesions and early invasive cancer. The results of VIA are immediately available and do not require any laboratory support.

Principle of VIA test:

Acetic acid application on cervical epithelium causes reversible intracellular dehydration and coagulation of the protein within the cervical cells. The intensity of coagulation is dependent on amount of protein in the cell. As the dysplastic cells have more chromatin content, the coagulation is intense and cells turn white after application of acetic acid.

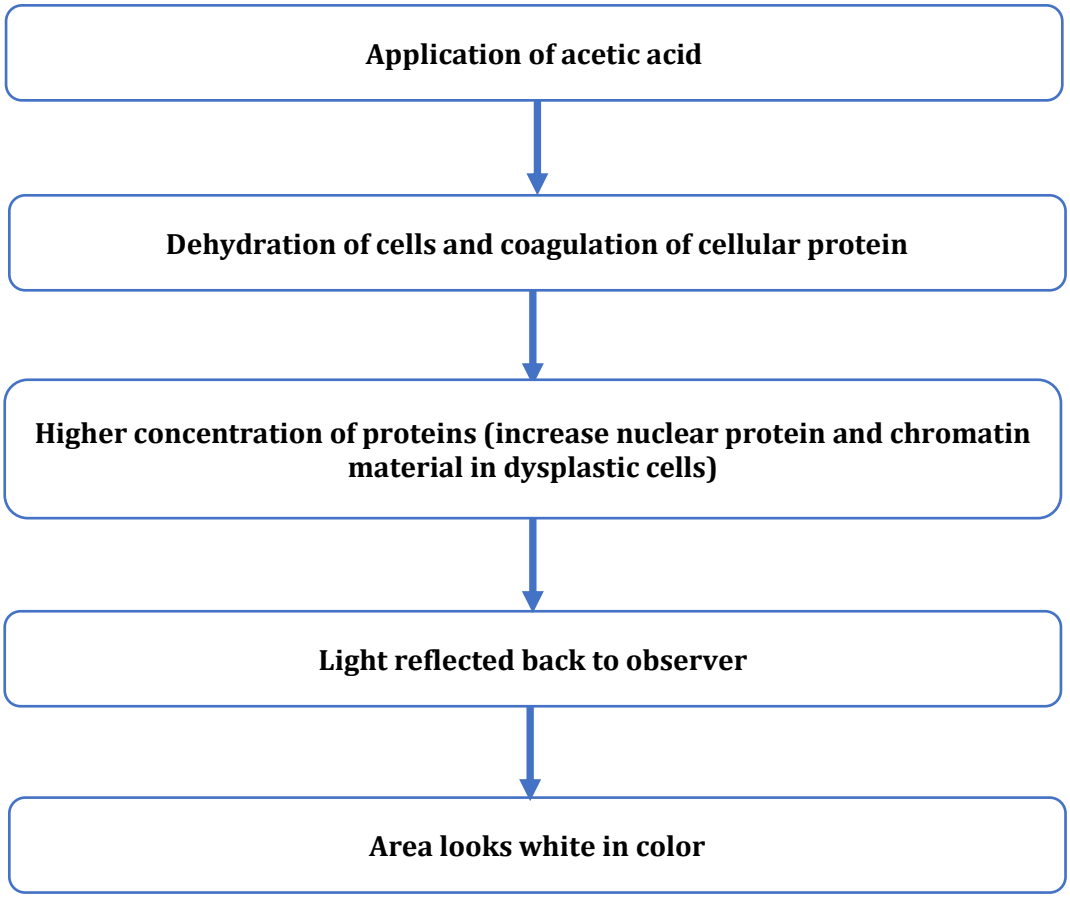


Fig: 1.1: Principle of VIA Test

A thorough understanding of the anatomy and physiology of the cervix is absolutely essential to understand the basics and to interpret the outcome of screening.

Gross anatomy of the uterine cervix:

The cervix is the inferior portion of the uterus, separating the body of the uterus from the vagina. The average length of the cervix is 3-4 cm. The external opening into the vagina is termed the external os, and the internal opening into the endometrial cavity is termed the internal os. The lower half of the cervix, called portio vaginalis, protrudes into the vagina through its anterior wall, and the upper half, called the supravaginal portion, remains above the vagina. In parous women, the cervix is bulky and the external os appears as a wide, gaping, transverse slit. In nulliparous women, the external os resembles a small circular opening. The endocervical canal, which traverses the endocervix, connects the uterine cavity with the vagina and extends from the internal to the external os. The portion of the upper vaginal cavity that surrounds the portio vaginalis is called the fornix.

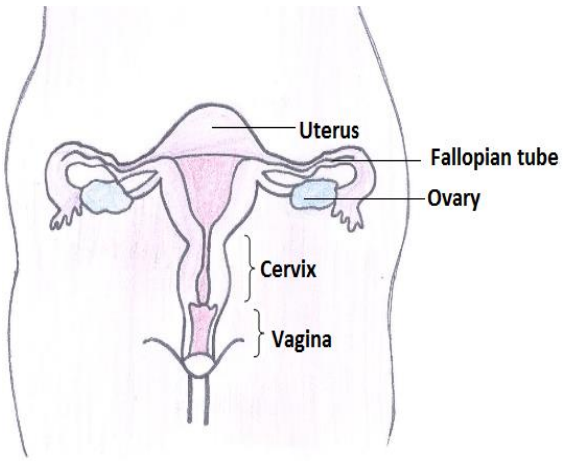


Fig. 1.2: Gross anatomy of the uterine cervix

The stroma of the cervix is composed of dense, fibro-muscular tissue traversed by the vascular, lymphatic and nerve supplies to the cervix. The arteries of the cervix, derived from internal iliac arteries through the cervical and vaginal branches of the uterine arteries, descend in the lateral aspects of the cervix at 3 and 9 o'clock positions. The veins run parallel to the arteries and drain into the hypogastric venous plexus. The lymphatic vessels from the cervix drain into the common, internal and external iliac nodes, obturator and the parametrial nodes. The nerve supply is derived from the hypogastric plexus. The endocervix has extensive sensory nerve endings, while there are very few in the ectocervix.

Microscopic anatomy:

Ectocervix is covered by a pink stratified squamous epithelium, consisting of multiple layers of cells and a reddish columnar epithelium consisting of a single layer of cells lines the endocervix. The intermediate and superficial cell layers of the squamous epithelium contain glycogen. The location of squamocolumnar junction in relation to the external os varies depending upon age, menstrual status, and other factors such as pregnancy and oral contraceptive use.

Squamous metaplasia in the cervix refers to the physiological replacement of the everted columnar epithelium on the ectocervix by a newly formed squamous epithelium from the sub-columnar reserve cells.

Transformation zone is the region of the cervix where squamous metaplasia occurs between the original and new squamo-columnar junction (Fig 1.3). Identifying the transformation zone is of great importance in cervical cancer screening, as almost all manifestations of cervical carcinogenesis occur in this zone. The squamocolumnar junction appears as a sharp line, due to the difference in the height of the squamous and columnar epithelium.

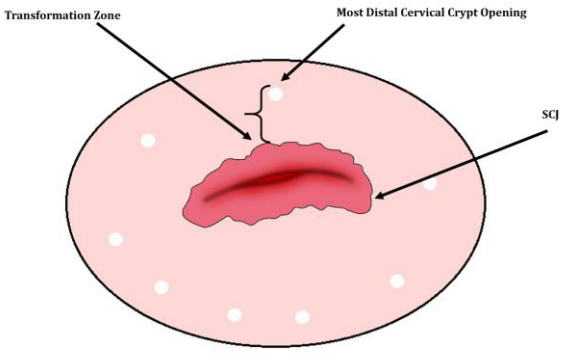


Fig 1.3: transformation zone

The location of the squamocolumnar junction in relation to the external os is variable over a woman's lifetime and depends upon factors such as age, hormonal status, birth trauma, oral contraceptive use and certain physiological conditions such as pregnancy. During childhood and perimenarche, the original squamocolumnar junction is located at, or very close to, the external os (Fig 1.4). After puberty and during the reproductive period, the female genital organs grow under the influence of estrogen. Thus, the cervix swells and enlarges and the endocervical canal elongates. This leads to the eversion of the columnar epithelium of the lower part of the endocervical canal on to the ectocervix. This condition is called ectropion or ectopy, which is visible as a strikingly reddish-looking ectocervix on visual inspection (Fig 1.5). During menopause, due to lack of estrogen, the cervix shrinks and squamocolumnar junction is indrawn into the cervical canal (Fig 1.6).

Fig 1.4 Childhood and perimenarche

Fig 1.5 Reproductive age

Fig 1.6 postmenopausal

Instruments and materials required:

- Examining table
- Light source (white)
- Bivalve speculum, self-retaining speculum (Cusco)
- Instrument tray or container
- Distilled water/ boiled & cooled water
- Glacial acetic acid (100% acetic acid)
- Cotton-tipped -swab sticks
- Disposable gloves
- 0.5% chlorine solution for decontaminating
- Forms and registers for recording the findings

Fig 1.6: Consumables for VIA

Fig: 1.7: White light source

Preparation of 5% acetic acid:

<u>Acetic acid is to be freshly prepared every day.</u>

Ingredients	**Quantity**
1. Glacial acetic acid	5 ml
2. Distilled water	95 ml

Preparation: Carefully add 5 ml of glacial acetic acid into 95 ml of distilled water and mix thoroughly.

Storage: Unused acetic acid should be discarded at the end of the day. Only freshly prepared acetic acid is to be used every day. If not, the potency will be reduced and the lesions may be missed.

Note: It is important to remember to dilute the glacial acetic acid, since the undiluted strength causes a severe chemical burn if applied to the epithelium.

Procedure of VIA examination:

- Explain the screening in detail to the woman. The woman should be reassured that the procedure is painless, and every effort should be made to ensure that she is fully relaxed and remains at ease during testing.

- Written informed consent should be obtained before screening.
- The woman is invited to lie down in a modified lithotomy position on a couch with leg rests or knee crutches or stirrups.
- Gently introduce the speculum and open the blades of the speculum to view the cervix in the presence of good light source.
- Identify the external os, columnar epithelium (red in colour), squamous epithelium (pink) and the squamocolumnar junction.
- Proceed to identify the transformation zone, the upper limit of which is formed by the squamocolumnar junction. (Cervical neoplasia occur in the transformation zone nearest to the squamocolumnar junction).
- Gently, but firmly, apply 5% acetic acid using a cotton swab soaked in acetic acid. The secretions should be gently wiped off. The swabs after use should be disposed of in the waste bucket.
- The curdy-white discharge associated with candidiasis is particularly sticky, and if particular care is not taken to remove it properly, it may mimic an acetowhite lesion, thus leading to a false-positive result.
- After removing the swab, carefully look at the cervix to see whether any white lesions appear, particularly in the transformation zone close to the squamocolumnar junction, or dense, non-removable acetowhite areas in the columnar epithelium.
- The results of VIA test should be reported after one minute (Reporting before one minute may miss lesions that appear late). Note how rapidly the acetowhite lesion appears and then disappears.

Carefully observe:

- The intensity of the white colour of the acetowhite lesion: if it is shiny white, cloudy-white, pale-white or dull-white.

- How rapidly the lesion appears after applying acetic acid. Lesions which appear immediately after application and stay for more than a minute, are more likely to be high grade lesion.
- The borders and demarcations of the white lesion: distinctly clear and sharp or indistinct diffuse margins; raised or flat margins; regular or irregular margins.

- Whether the lesions are uniformly white in colour, or the colour intensity varies across the lesion, or if there are areas of erosion within the lesion.
- Location of the lesion:
    - ✓ Whether it is in or away from the transformation zone?
    - ✓ Is it abutting (touching) the squamocolumnar junction which indicates it's a significant lesion?
    - ✓ Does it extend into the endocervical canal (in that case, we cannot consider her for ablative therapy)?
    - ✓ Does it occupy the entire, or part of, the transformation zone?
- Size (extent or dimensions) and number of the lesions.

Reporting the outcome of VIA

VIA negative (-)

VIA screening is reported as negative in the case of any of the following observations:

- No acetowhite lesions are observed on the cervix.
- Polyps protrude from the cervix with bluish-white acetowhite areas (Fig 1.5)
- Nabothian cysts appear as raised areas which are button-like (Fig 1.6)
- Shiny, pinkish-white, cloudy-white, bluish-white, faint patchy or doubtful lesions with ill-defined, indefinite margins, blending with the rest of the cervix
- Streak-like acetowhitening is visible in the columnar epithelium.
- Ill-defined, patchy, pale, discontinuous, scattered acetowhite areas suggestive of squamous metaplasia (Fig 1.9)
- Multiple red spots visible on the cervix after application of acetic acid, that gives it an appearance commonly known as 'strawberry cervix'(Fig 1.10)
- Angular, irregular, digitating acetowhite lesions, resembling geographical regions, distant (detached) from the squamocolumnar junction (satellite lesions). (Fig 1.11)
- Dot-like areas are present in the endocervix, which are due to grapelike columnar epithelium staining with acetic acid. (Fig 1.12)

- Faint line-like or ill-defined acetowhitening is seen at the squamocolumnar junction. (Fig 1.13)
- After the procedure, document the interpreted results in the standard format (annexure I)

Images for VIA negative

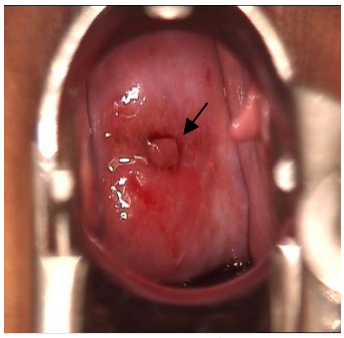


Fig 1.8: Polyp

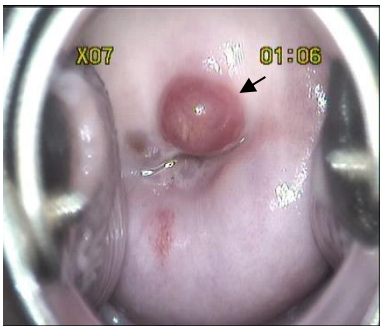


Fig 1.9: Nabothian cyst

Fig 1.10: Mucus plug

Fig 1.11: Ectopy

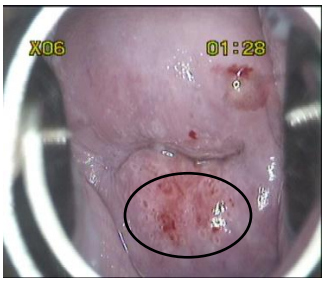


Fig 1.12: Squamous Metaplasia

Fig. 1.13: Strawberry cervixsuggestive of trichomonas vaginalis infection

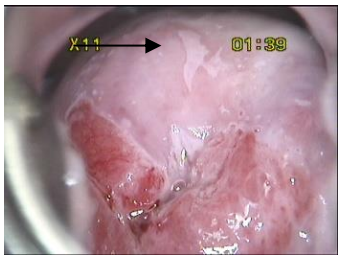


Fig 1.14: Satellite lesion

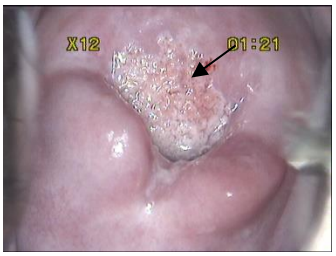


Fig 1.15: Columnar epithelium Staining with acetic acid

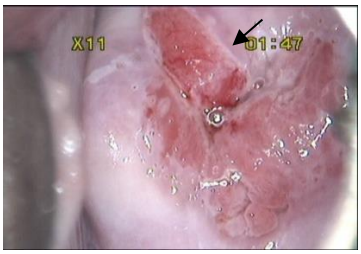


Fig. 1.16:Faint acetowhitening seen at the squamocolumnar junction

VIA positive (+)

The VIA test outcome is reported as positive in any of the following situations:

- There are distinct, well-defined, dense (opaque, dull- or oyster-white) acetowhite areas with regular or irregular margins, close to or abutting the squamocolumnar junction in the transformation zone or close to the external os if the squamocolumnar junction is not visible.
- Strikingly dense acetowhite areas are seen in the columnar epithelium

- The entire cervix becomes densely white after the application of acetic acid.
- Condyloma and leukoplakia occur close to the squamocolumnar junction, turning intensely white after application of acetic acid.

Images for VIA positive

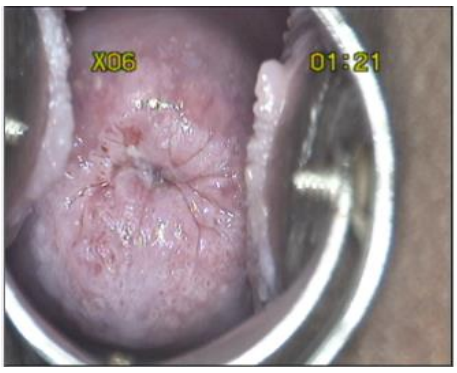


Fig: 1.17: Via Positive Circumferential

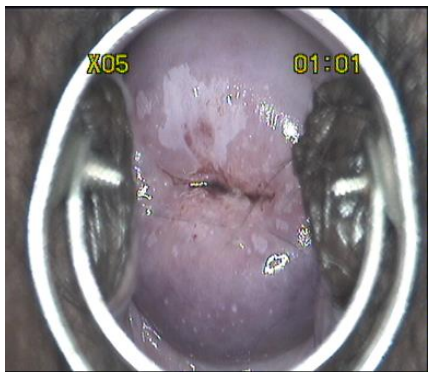


Fig: 1.18: VIA positive (11 to 12 o clock)

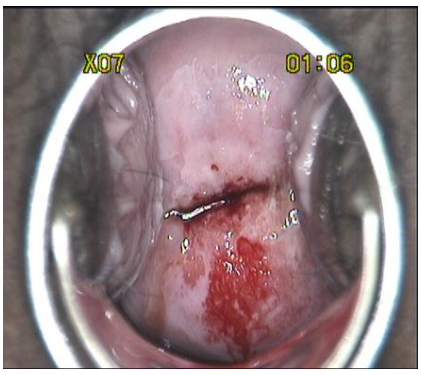


Fig: 1.19: VIA positive 11 to 1 o clock&4 to 7o clock

VIA positive, invasive cancer

The test outcome is scored as invasive cancer when:

- There is a clinically visible ulcero proliferative growth on the cervix that turns densely white after application of acetic acid and bleeds on touch

Images for VIA positive, invasive cancer

Fig: 1.20: Suspicious of Malignancy(dense white)

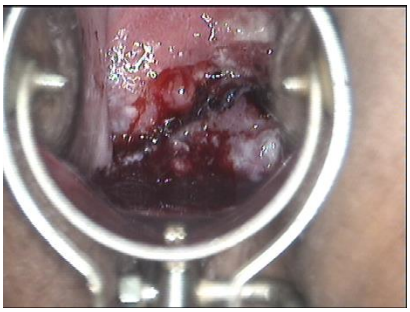


Fig: 1.21: Suspicious of Malignancy(growth, bleeds on touch)

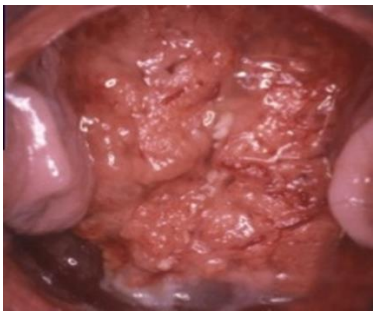


Fig: 1.22: Suspicious of Malignancy(growth)

CHAPTER 2

Visual Inspection with Lugol's Iodine (VILI)

Naked-eye visual inspection of the uterine cervix, after application of Lugol's Iodine as an adjunct to VIA test to confirm and delineate the abnormal lesion. VILI is not used as a primary screening test for cervical cancer screening.

Principle of VILI:

The squamous epithelium contains glycogen. Since iodine is glycophyllic, when applied to normal squamous epithelium, it turns mahogany brown or black in colour. But columnar epithelium and immature metaplastic cells does not contain glycogen, so it does not stain after the application of lugol's iodine. The inflammatory cells either stain partially or do not stain.

The abnormal cells (cervical intraepithelial neoplastic cells) contain either less glycogen or no glycogen depending upon the degree of the lesion. So, these lesions do not stain brown after the application of iodine and becomes mustard yellow in colour.

Instruments and materials required:

Along with the instruments and materials that used for visual inspection of cervix with acetic acid, lugol's iodine is required. It need not be prepared daily. It can be prepared at any facility or it can be purchased in ready to use form and it has a long shelf life.

Preparation of Lugol's iodine:

- Dissolve 10 g of potassium iodide in 100 ml distilled water.
- Add 5 g of iodine after the potassium iodide is fully dissolved.
- Stir well until all the iodine flakes have fully dissolved.
- The solution should be stored in a sealed amber glass container to prevent evaporation of iodine and loss of staining activity

Fig. 2.1 Commercially available Lugol's iodine

Procedure of VILI examination:

After the VIA procedure, immediately after interpreting the VIA result, apply lugol's iodine to the cervix using a swab stick. Unlike VIA, VILI results can be interpreted immediately. If any VIA positive lesion present, that abnormal area will not stain iodine and will have mustard yellow colour.

Reporting the outcome of VILI:

VILI Negative-

- The cervical epithelium which stains brown (normal cervical epithelium) is termed as VILI negative
- VILI screening is reported as negative in the case of any of the following observations after iodine application:
- A normal cervix; the squamous epithelium turns mahogany brown or black and the columnar epithelium does not change colour .(Fig 2.1)
- Patchy, indistinct, ill-defined, colourless or partially brown areas are seen.
- Pale areas of no or partial iodine uptake are present on polyps.(Fig 2.2)
- A leopard-skin appearance is associated with T. vaginalis infection. (Fig 2.3)
- Pepper-like non-iodine uptake areas are seen in the squamous epithelium, far away from the squamocolumnar junction
- Satellite, thin, yellow, non-iodine uptake areas with angular, or digitating margins, resembling geographical areas, are seen far away from the squamocolumnar junction.(Fig 2.6)
- If there is any isolated area is VIA negative yet does not stain iodine, then it is insignificant and such lesions are also considered VILI negative

Images for VILI Negative

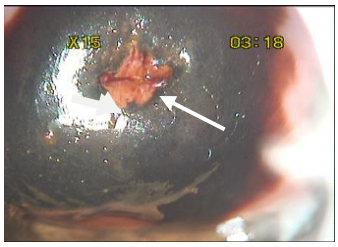


Fig: 2.1: VILI negative (columnar epithelium)

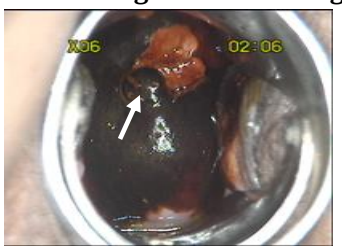


Fig: 2.2: VILI negative(Polyp)

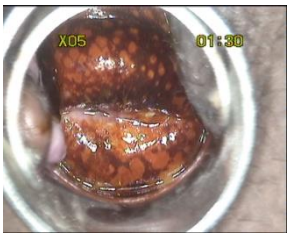


Fig: 2.3: VILI negative(leopard skin appearance- T.V infection)

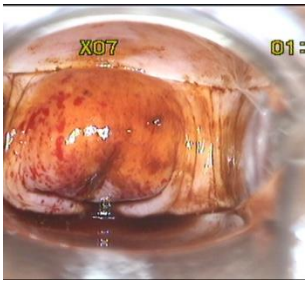


Fig: 2.4: VILI negative (post menopausal cervix)

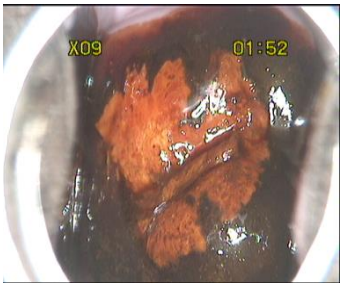


Fig: 2.5: VILI negative(Ectopy)

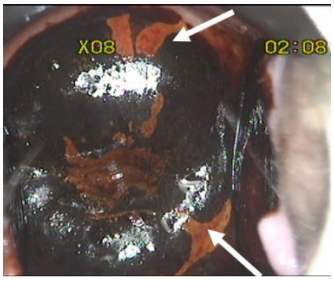


Fig: 2.6: VILI negative (Satellite lesion)

VILI Positive- The outcome is scored as positive if dense, thick, bright, mustard-yellow or saffron yellow iodine non-uptake areas are seen in the transformation zone, close to or abutting the squamocolumnar junction or close to the os if the squamocolumnar junction is not seen or when the entire cervix turns densely yellow.

Images of VILI Positive

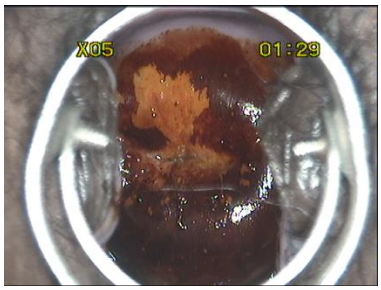


Fig: 2.7: VILI positive (12 o' clock position)

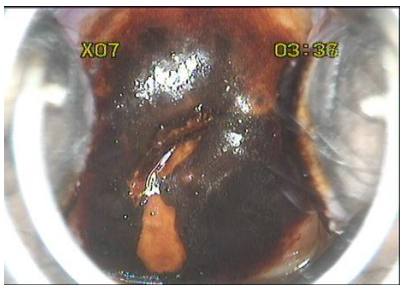


Fig: 2.8: VILI positive (7 o' clock position)

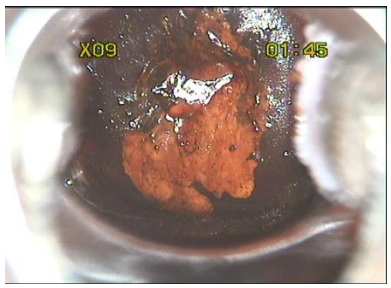


Fig: 2.9: VILI positive (3-8 o' clock position)

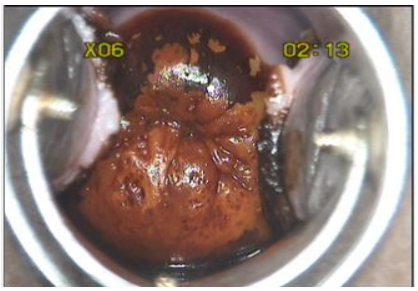


Fig: 2.10: VILI positive (Circum-oral)

VILI positive, invasive cancer: Invasive cancer is reported when a frank, nodular, irregular, ulceroproliferative growth is visible on the cervix which turns densely yellow on application of iodine.

Images of VILI positive, suspicious of malignancy

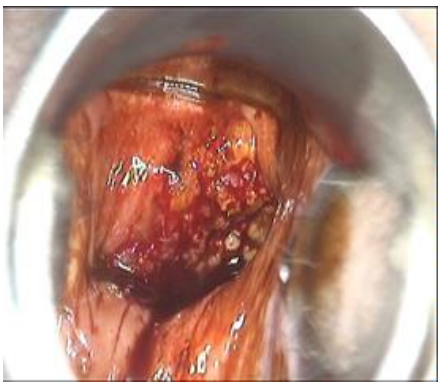


Fig: 2.11: VILI positive (suspicious of malignancy)

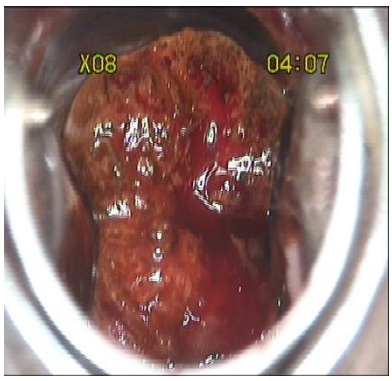


Fig: 2.12: VILI positive (suspicious of malignancy)

CHAPTER 3

Treatment of VIA positive cases in the same visit: 'Screen-And-Treat' approach

Adding a diagnostic step after screening, before treatment of pre-cancer, can result in high loss to follow-up because additional patient visits are required as well as a longer time interval between screening and treatment. To reduce such loss to follow-up, the screen-and-treat approach has been developed and this strategy is increasingly being adopted worldwide. This approach eliminates the extra visits and time required for the diagnostic step.

VIA-positive women are eligible for cryotherapy/Thermal ablation if

- Entire lesion is visible on ectocervix
- Lesion is not extending to the endocervical canal or to vagina
- Lesion is occupying less than 75% of the ectocervix
- There should be no evidence or suspicion of cancer or glandular abnormality

Women who are diagnosed as VIA positive and who are eligible for ablative therapy as per the criteria mentioned above, could be treated using cryotherapy/thermal ablation in the same visit. These women should be advised to come for follow up after one year to the health facility where VIA should be repeated during this follow up visit to check for the remission status.

Algorithm for 'screen-and-treat' approach

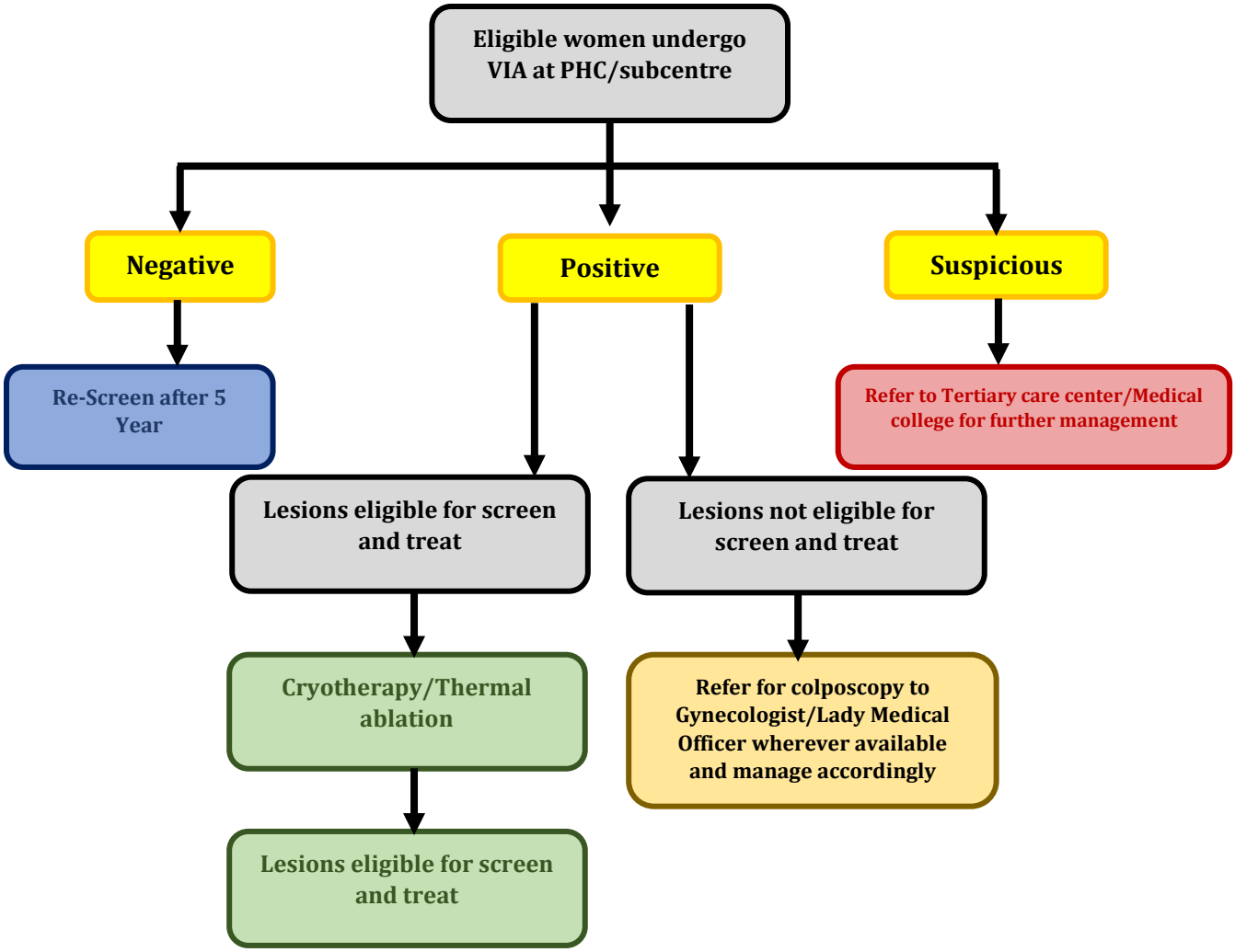


Fig: 3.1: Algorithm for 'Screen-and-treat' approach

Cryotherapy for the treatment of VIA positive lesions

Cryotherapy is the freezing of the abnormal areas of the cervix by the application of a very cold probe. It takes only a few minutes and has no major side effects. The compressed gas like nitrous oxide (N_2O) or carbon dioxide (CO_2) is delivered on to the surface of ectocervix through specially designed probes known as cryoprobes.

Fig. 3.2: Cryotherapy unit

Fig. 3.3: Probes

Fig. 3.4: Cryogun with probe

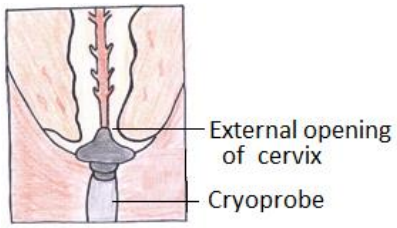


Fig. 3.5: Demonstartion of positioning the probe

Equipment and consumables required:

- Examination table
- Light source
- Self-retaining bi-valved vaginal speculum
- Disposable gloves
- Cotton swabs for wiping the cervix
- Normal saline solution
- Dilute Acetic acid (5%) solution (freshly prepared)
- Cryosurgery unit with adequate gas supply
  - ✓ Cryogun
  - ✓ Cryoprobes
  - ✓ Gas conveying tube
  - ✓ Pressure gauge
  - ✓ Gas cylinder connector

Steps of performing Cryotherapy

- Explain the procedure, and why it is important to return for further management as requested.
- Ensure that the woman has understood and obtain informed consent.
- Insert the speculum and expose the cervix properly
- Apply 5% acetic acid to outline the abnormality and wait for a minute
- Choose an appropriate size cryoprobe that adequately covers the lesion
- Apply the cryoprobe tip at the external os of the cervix
- Ensure that the vaginal wall is not in contact with the cryoprobe or you may cause a freezing injury to the vagina
- Check the pressure inside the gas tank. It should be in the green zone as indicated in the pressure gauge of most of the cryotherapy models
- Release the gas by pressing the trigger on the cryogun and hold it for 3 mins
- You will observe the ice forming on the tip of the cryoprobe and on the cervix. When the frozen area extends 4–5 mm beyond the edge of the cryoprobe, freezing is adequate
- Release the trigger and allow thawing for 5 minutes. Repeat freezing for 3 more minutes
- After second freezing, allow time for thawing. Do not pull cryoprobe till it comes out on its own
- Gently remove the cryoprobe and remove the speculum after careful inspection of the cervix.
- Examine the cervix for bleeding. If bleeding is noted, apply Monsel's paste. Do not pack the vagina
- Document treatment completion in individual case record form
- Provide her the date for next follow up and emphasize on the importance of it.

Advise on post-treatment care and follow up

- Provide a sanitary pad
- The woman should be told that she may experience excessive watery discharge for upto 4 weeks. She should not get worried about it.
- Instruct the woman to abstain from intercourse for 4 weeks.
- Avoid douching or use of tampon for 4 weeks
- Inform her of possible complications and ask her to return immediately if she notes:
  - ✓ Fever with temperature higher than 38 °C lasting for more than 48 hrs.
  - ✓ Severe lower abdominal pain
  - ✓ Foul-smelling or pus-like discharge
  - ✓ Bleeding for more than two days or bleeding with clots

Thermal-ablation (Cold coagulation)

Thermal ablation is a safe and acceptable procedure used as an alternative to cryotherapy for treatment of VIA positive lesions. A probe heated to 100°C destroys by direct contact the abnormal zone of the ectocervix (destructive therapy), and does not require anesthesia. Multiple overlapping applications may be used to cover the entire lesion.

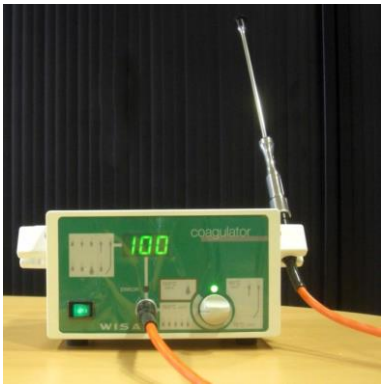


Fig. 3.6: Thermocoagulator

Fig. 3.7: Thermocoagulator Probe

Equipment and consumables necessary for Thermal-ablation

Thermocoagulation unit (as shown in the figure above)

- Metallic probe
- Wire for electrical connection
- Light source
- Instrument tray containing
  - ✓ Self-retaining bivalve speculum
  - ✓ Disposable gloves
  - ✓ Sterile cotton swabs, cotton tipped swabs
  - ✓ Dilute Acetic acid (5%) solution (freshly prepared)

Steps of Thermal-ablation procedure

- Expose the cervix using the self-retaining speclum
- Focus light source for clear visualization of cervix
- Apply 5% acetic acid to outline the abnormality and wait for a minute
- Set the Thermocoagulator at 100°C
- Apply the heated thermocoagulator probe on the area to be treated on ectocervix and heat for 45 seconds at 100°C

- Switch off the thermocoagulator unit and gently remove the probe taking care not to touch the vulva or vagina with the probe
- Remove the speculum after careful inspection of the cervix. Do not pack the vagina
- Document treatment completion in individual case record form
- Provide her the date for next follow up and emphasize on the importance of it.

Possible side effects: Thermal ablation is well tolerated. However following symptoms may be experienced rarely:

- Mild pelvic pain.
- Watery discharge, spotting or light bleeding for 2 weeks.
- Other side effects are rare. (Infection, very rarely cervical stenosis)

Advise on post-treatment care and follow up

- Provide a sanitary pad
- The woman should be told that she may experience excessive watery discharge for upto 4 weeks. She should not get worried about it.
- Instruct the woman to abstain from intercourse for 4 weeks.
- Avoid douching or use of tampon for 4 weeks
- Inform her of possible complications and ask her to return immediately if she notes:
  - ✓ Fever with temperature higher than 38 °C lasting for more than 48 hrs
  - ✓ Severe lower abdominal pain
  - ✓ Foul-smelling or pus-like discharge
  - ✓ Bleeding for more than two days or bleeding with clots

Note: Do not perform ablative therapy if the patient is

- menstruating at the time of the procedure
- Pregnant (to be treated after 6 weeks of child birth)
- Suffering from any genital tract infection (treat the infection before the procedure)

CHAPTER 4

Referral of VIA positive lesions not eligible for cryotherapy/thermal ablation

Lesions which are not amenable for treatment by ablative methods using cryotherapy or thermal ablation should be referred to the nearest facility where gynecologist is available for performing colposcopy.

Colposcopy

Colposcope is an instrument that uses a light and a low-powered microscope to make the cervix appear much larger and colposcopy is a procedure that involves examination of the cervix, vagina and vulva with the help of Colposcope. A colposcope has a powerful light source for illumination of the area to be examined and a variable magnification ranging from 4 times to 25 times. Colposcopy helps in differentiating between normal, benign and cancerous lesions of cervix, directing biopsy from the suspicious area on the cervix and in taking treatment decisions.

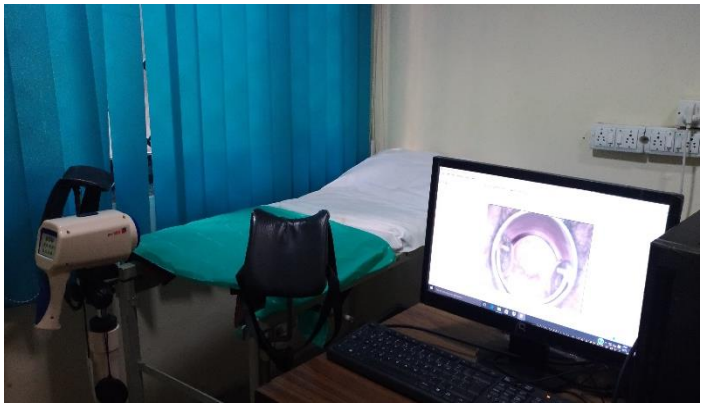


Fig. 4.1: Video colposcope

Fig. 4.2: Binocular colposcope

Common indications of Colposcopy:

- Positive VIA or any other cervical cancer screening test
- Suspicious looking cervix
- Confirmation of lesions prior to treatment
- Women with symptoms suggestive of invasive cancer eg, postcoital bleeding, postmenopausal bleeding, menorrhagia, irregular PV bleeding etc
- Follow up of women after treatment

Annexure-1

Sample Consent Form

I have been explained in detail about the oral visual examination, clinical breast examination, vinegar test (VIA) for the early detection and prevention of cancer in the oral cavity, breast and neck of my womb (uterine cervix) respectively. The advantages and the purpose of these tests have been clarified to me.

I understand that the surface of my cervix will be visually inspected after application of 5% acetic acid to detect or to exclude precancer/-cancer. I understand that these procedures are generally harmless, but may occasionally cause some irritation or mild bleeding, which can be easily controlled.

where other tests such as magnified inspection of the cervix with an instrument called a colposcope, ultrasound of breast and/or examination of a sample of the tissue in my cervix/breast/mouth (biopsy) may be recommended

I understand that, if any one of these tests is positive, I might have to undergo further tests such as biopsy of oral lesion, ultrasound/mammogram/FNAC of breast abnormalities like lump/nipple discharge, magnified inspection of the cervix with an instrument called a colposcope and examination of a sample of the tissue from my cervix (biopsy) may be recommended before appropriate treatment (which will be explained to me) is provided. I have been informed that treatment by cryotherapy/ thermocoagulation (destroying the diseased portion of the cervix) or removing the diseased portion by minor surgery or major surgery and/or treatment with radiation, may be required, in the event of any abnormality (precancer or cancer) being detected.

I understand that a negative screening does not rule out the possibility of developing these diseases later.

I need to contact the health facility at the earliest, whenever I have any symptoms/warning signs/complaints listed in the IEC materials provided and explained to me.

I hereby express my willingness to undergo the above tests and treatment, if advised.

Signature of the individual:
Name:
Date:
Screening ID:
Address:

Health care provider's name & signature
Date:

VIA Reporting Chart

1. Screening ID: _____ 2. Name: _____

3. Age: _____ 4. Center name_____

5. District_____ 6. Date of visit: ____ /____ /____(Day/Month/Year)

7.Parity_____

8. Do you have any of these following symptoms? (Tick whichever is applicable)

a) Excessive vaginal discharge
b) Ulcers in the external anogenitalia
c) Pain during sexual intercourse
d) Intermenstrual bleeding
e) Itching in the external anogenitalia
f) Lower abdominal pain
g) Bleeding after intercourse
h) Low back ache

9. Visual examination findings (per speculum) (Tick whichever is applicable)

a) Squamocolumnar junction fully seen
b) Nabothian follicles
c) Leukoplakia
d) Growth
e) Cervical polyp
f) Cervicitis
g) Condyloma

10. Findings one minute after application of 5% acetic acid (VIA)
a) VIA Negative
b) VIA Positive
c) invasive cancer

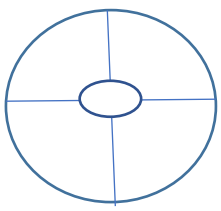
11. In case of VIA positive lesion, does the acetowhite lesion extend into the endocervical canal? (Skip this question in case of VIA negative)
a) Yes
b) No

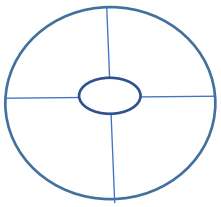
12. In case of VIA positive lesion, number of quadrants involved
a) One
b) Two
c) Three
d) Four

13. Findings after application of Lugol's iodine (VILI)
a) Negative
b) Positive
c) invasive cancer

14.Draw the location of VIA positive & VILI positive

VIA **VILI**





_____
Signature of the health care provider

Training curriculum for VIA & Cryotherapy

Trainees: Staff nurses and ANMs

DAY 1		
	Topic	**Duration**
Theory sessions	Pre-training knowledge assessment	15 mins
	Goals and objectives of the training	30 mins
	Introduction to Universal Screening of Common NCD	30 mins
	Key tasks of Staff nurses and ANMs in cervical cancer prevention	30 mins
	Rationale for screening, target age group; risk factors, signs and symptoms, etiopathogenesis of cervical cancer	45 mins
	Natural history of cervical cancer	30 mins
Practical sessions	Anatomy of female reproductive organs in relation to cervix (using model)	1 hour
	Per speculum examination using pelvic model	2 hours
	Summary of the day	30 mins
DAY 2		
	Recap of Day 1	30 mins
	HPV and cervical cancer	30 mins
	Counselling for cervical cancer screening	30 mins
	Video demonstration of per speculum examination to visualize the cervix	30 mins
	Pictures of normal variants of cervix	30 mins
	VIA procedure and principle of test	30 mins
Practical sessions	Preparation of 5% acetic acid	30 mins
	Trainer demonstration of VIA on women (observation of the procedure)	2 hours 30 mins
	Summary of the day	30 mins
DAY 3		
	Recap of Day 2	30 mins
	Equipment, supplies, infection prevention items and preparing the woman	30 mins
	Demonstration of preparing 0.5% Chlorine solution	30 mins
	Practice in small groups: Counseling for cervical cancer screening	1 hour 30 mins
	Supervised demonstration of VIA in the gyne OPD, gyne ward and cervical cancer screening clinic (Trainer guides the trainees one by one to carry out VIA test)	3 hours 30 mins
DAY 4		
	Recap of Day 3 (trainee will be asked about the ease of VIA procedure).	30 mins
	Interpreting results of VIA	1 hour
	Documenting results of VIA	30 mins
	Pictures of positive VIA test	45 mins

	VIA positive, what next?	45 mins
	Hands-on demonstration of VIA in women (done by trainees under supervision)	3 hours
DAY 5		
	Recap of Day 4	30 mins
	Principle of VILI	30 mins
	Confirmation of VIA positives with VILI	30 mins
	Skills Practice in classroom ▪ Counseling for screening for cervical cancer ▪ Getting consent from women undergoing the test ▪ Screening cervix with VIA	2 hours
	Hands-on demonstration of VIA in women (done by trainees under supervision)	3 hours
DAY 6		
	Supervised practice of performing per speculum examination and VIA on model using checklist	1 hours
	Video demonstration of positive VIA and VILI	30 mins
	Slideshow of positive VIA and VILI pictures	1 hour
	Independent practice of VIA on women	2 hours
	Role play by trainees on counselling women for cervical cancer screening	2 hours
DAY 7		
	Overview of Cryotherapy system and step-by-step approach to cryotherapy	1 hour
	Cryotherapy equipment	30 mins
	Demonstration cryotherapy on model (apple, potato etc)	2 hours
	Side effects of cryotherapy procedure	30 mins
	Pre-cryotherapy counselling Post cryotherapy advice/instructions	30 mins 30 mins
	Independent practice of VIA on women	1 hour 30 mins
DAY 8		
	Review Cervical Images Practice VIA, Cryotherapy on models	30 mins 1 hour
	Hands-on VIA on women in OPD/ward	2 hours
	Hands-on cryotherapy on VIA positive women	3 hours
DAY 9		
	Addressing/answering women's concerns regarding cervical cancer screening (Role play by trainees)	2 hours
	Sterilization of instruments used during screening	1 hour
	Hands-on VIA on women in OPD/ward	3 hours 30 mins
DAY 10		
	Post-training knowledge assessment	30 mins
	Post training skill assessment using the checklist	1 hour 30 mins
	Certificate distribution	30 mins
	Feedback from the trainees	**30 mins**

Eligibility criteria for VIA certification

The recommended number of procedures to be performed by the trainee during the training period are as follows:

VIA-100

- Observed -20
- Supervised practice- 30
- Independent practice-50

Cryotherapy/Thermal ablation-10

- Observed -5
- Supervised practice- 2
- Independent practice-3

Note: The trainee needs to score at least 70% in the knowledge and 80% in the skills assessment (Annexure-IV) at the end of the training to be certified as competent

Skill Assessment Checklists for VIA

Note for the Trainer: Give the score of '1' against each task done satisfactorily and '0' for tasks not done or not done satisfactorily. Add the total score and total score % achieved by the participant. To be competent in the skill, the participant must score ≥ 80%.

Checklist for VIA Counseling and Clinical Skills					
Step/Task	**Cases**				
Pre-VIA Counseling	1	2	3	4	5
1. Greet woman respectfully and with kindness					
2. If cancer screening counseling not done, counsel woman prior to performing VIA test					
3. Assess woman's knowledge about cervical cancer and VIA test					
4. Respond to woman's needs and concerns about cervical cancer and the VIA test					
5. Describe the procedure and what to expect					
Getting Ready					
6. Check that supplies and light source are available and ready for use					
7. Check that the woman has emptied her bladder					
8. Have the woman undress from waist down. Help her get on to the examination table and drape her					
9. Wash hands thoroughly with soap and water and air dry them.					
10. Put one pair of new examination gloves on both hands					
11. Arrange instruments and supplies					
Visual Inspection with Acetic Acid					
12. Insert speculum gently and fix blades so that entire cervix can be seen clearly					
13. Move light source so cervix can be seen clearly					
14. Check the cervix for cervicitis, ectropion, tumors, nabothian cysts or ulcers and clean cervix with cotton swab if necessary. Dispose off the swab					
15. Identify the cervical os, Squamo-columnar junction (SCJ) and transformation zone					
16. Apply 5% acetic acid to cervix with a swab on a stick and wait 1 minute. Dispose off the swab					
17. Check if cervix bleeds easily. Check for any raised and thickened white plaques or acetowhite epithelium					

18. Remove any remaining acetic acid from the cervix and vagina with a swab. Dispose off the swab					
19. Remove speculum gently and place it in 0.5% chlorine solution for 10 minutes for decontamination					
POST-VIA TASKS					
20. Wipe light source with 0.5% chlorine solution or alcohol					
21. Immerse all used instruments in 0.5% chlorine solution for 10 minutes for decontamination					
22. Wash both hands with soap and water and air dry					
23. Record the VIA test results and other findings in woman record					
24. Discuss the results of VIA test and pelvic examination with the woman and answer any questions ▪ If VIA test is negative, tell her when to return for repeat VIA after 5 years ▪ If VIA test is positive and eligible for ablative therapy, discuss screen and treat option with cryotherapy/thermal ablation ▪ If VIA test is positive, not eligible for ablative therapy or suspicious for cancer, refer her to higher appropriate facility for management					
POST-VIA COUNSELING					
25. Assure woman that she can return for advice or medical attention any time					
26. Provide follow-up instructions					
Total Score					
Total Score %					

Result: Circle the appropriate result based on the score and score% achieved.

Pass **Needs Improvement**