

# Training Manual: Peer Education Workshop

CERVICAL CANCER PREVENTION PROGRAM IN ZAMBIA  
(CCPPZ)

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Lusaka, Zambia



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# Part I: Introduction to Peer Education

## I. Purpose of the handbook

The purpose of this handbook is to serve as a reference manual for peer supervisors and peer educators, providing basic, up-to-date information about prevention, screening, and treatment of cervical cancer. It can also be used as a self-education tool.

### **Vision of CCPPZ**

The vision of Cervical Cancer Prevention Program in Zambia (CCPPZ) is to be recognized locally, regionally and internationally for its innovation in providing cervical cancer screening services and is to eliminate cancer of the cervix in Zambia.

### **Mission statement of CCPPZ**

Every woman has a right to live a life free from cervical cancer and the Cervical Cancer Prevention Program in Zambia (CCPPZ) will make strides towards this goal by working to achieve global access to effective cervical cancer prevention and treatment methods.

### **Values of CCPPZ**

- Right to Confidentiality: We promise to serve our clients with high confidentiality.
- Right to Safety: High standards of sterilization are employed to maintain a safe environment and sterile instruments and tools.
- Right to opinion: Our clients have got a right to air their views
- Right to privacy: we promise to serve our clients with high standard of privacy
- Right to access: our client have got a right to access to our services
- Right to dignity: We treat our clients in a distinctive way

- Right to information: we promise our clients with update information and that they'll have access to it
- Right to choice: our clients have got a right to choose a clinic of their preference so that they can access our services
- Right to comfort: We console our clients by counselling them and assure them of confidentiality
- Right to continuity: We promise our clients with permanence of the program

## History and background of CCPPZ

Historically, access to cervical cancer screening in Zambia, as in most resource-constrained nations, has been limited and only available to the affluent and/or overtly symptomatic. In 2005, Parham et al performed a pilot cervical cancer screening study of 150 women seeking HIV care and treatment at the University Teaching Hospital of Zambia. It found 33% of the study participants had Pap smear evidence of high grade cervical pre-cancer while 20% already had evidence of cancer. These findings, coupled with the previously described epidemiology of cervical cancer and HIV in Zambia, motivated us to establish early detection and treatment services for ALL Zambian women, targeting those receiving HIV care and treatment through **PEPFAR (President's Emergency Plan for AIDS Relief)** - funded primary care sites in Zambia.

Started in January 2006, the **CIDRZ Cervical Cancer Prevention Program (CCPPZ)** is the first in any resource-constrained African nation to specifically target HIV-infected women. The primary goal of the CCPPZ is to reduce the incidence of cancer of the cervix in Zambia. It is now operating in 14 clinics with plans to significantly expand throughout Zambia as funds become available. All early detection and treatment services are integrated into pre-existing government public health clinics and are free of charge.

Nurses take a digital photograph of the cervix which is used to aid them in diagnosis and to educate patients. The picture can be wirelessly transmitted to a gynecologist for immediate distance-consultation. Complex cases are referred to the Gynecologic Cancer Prevention Unit at the University Teaching Hospital of Zambia, where they are further evaluated by gynecologists.

## Outcomes

1. Over 30,000 women have been successfully screened and 7,000 treated as of May, 2009.
2. Approximate 35% of the women screened for cervical cancer are HIV-infected, 34% are HIV-negative and 31% are of unknown HIV status.
3. Almost 40% of screened women have positive tests and require some form of treatment or evaluation.

4. The program is safe, effective and highly acceptable by patients.
5. All women who have never been tested for HIV or were tested more than 6 months ago are offered testing; 70% accept and of these, 30% are found to be HIV-positive.
6. We offer integrated screening and treatment for sexually transmitted infections (STIs). 11% of women present with clinical evidence of one or more STIs and prescribed treatment.

### **Mission statement of CCPPZ Community Outreach Unit**

- By putting ourselves on the front line, we will work to create better access to treatment, care and support
- We will serve as role models by speaking openly about cervical cancer and our own experiences
- We will work to mobilize our communities through clinic health talks, door to door, church, nongovernmental organisations, companies and school sensitizations

## Acknowledgments

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## II. Pre-Test Questionnaire for Peer Educators

|       |                               |                                 |         |
|-------|-------------------------------|---------------------------------|---------|
| Date: | Name:                         |                                 |         |
| Sex   | <input type="checkbox"/> Male | <input type="checkbox"/> Female | Clinic: |

**Please circle those that apply**

**1. What is a cervix?**

- a. The womb
- b. The ovary
- c. The opening between the uterus and the vagina

**2. What is cancer?**

- a. A disease caused by witchcraft
- b. It's a drug
- c. It is a disease caused by an uncontrolled growth of cells

**3. Cervical cancer...**

- a. Begins with infection of the cervix by a sexually transmitted virus
- b. Is a disease caused by the white mucus of the cervix
- c. Is the same thing as breast cancer

**4. What causes cervical cancer?**

- a. Human Immunodeficiency Virus (HIV)
- b. Human Papillomavirus (HPV)
- c. The white mucus of the cervix

**5. What are the symptoms of cervical pre-cancer?**

- a. Warts and fibroids
- b. Bleeding after having sex or no symptoms at all
- c. Breast lumps and breast pain

**6. What are some of the symptoms of advanced cervical cancer?**

- a. Bleeding after having sex and bleeding between menstrual periods
- b. Itching and scratching
- c. Warts and fibroids

**7. What is the relationship between HIV and cervical cancer?**

- a. HIV is a disease that causes cervical cancer
- b. HIV-infected women have a higher chance of developing cervical cancer
- c. HIV protects women from getting cervical cancer

**8. If a man has sex with a woman who is infected with Human papillomavirus (HPV) can she give him cancer?**

- a. A man is not at any risk from having sex with a woman with cervical cancer
- b. She will pass the cervical cancer to his sexual organs every time
- c. She may give him the HPV infection but men rarely manifest a serious disease from HPV

**9. Is there a cure for cancer of the cervix?**

- a. No – There is never a cure
- b. Sometimes - if the cancer is caught in an early stage by screening
- c. Yes – There is always a cure

**10. What are the services provided for prevention of cervical cancer?**

- a. HIV testing and anti-retrovirals (ARVs)
- b. Drugs for cancer and HIV
- c. Screening and treatment of pre-cancer

### III. Roles of a Peer Educator

#### Who is a Peer Educator?

- A peer educator is a community member who is seen by others as a focal point for information and assistance.
- After they receive their training, they have increased capacity to provide health information to those around them in the community.

#### Types of Peer Educators

- Formal peer-educators:
  - Are employed at the clinic to perform certain duties
  - An allowance is given for the hours they work but not a full time salary
- Informal peer-educator:
  - Are volunteers
  - Everything that he/she is doing in the community is free. No allowance is involved.

#### Role of Peer Educators:

- Educate clients on cervical cancer basic information, care and treatment
- Conduct client enrollments in the cervical cancer clinic
- Provide emotional support to the patients through counseling, with an understanding, empathetic, and encouraging manner
- Encourage partner disclosure for clients that are diagnosed to have pre-cancer cells and have received treatment
- Assess patient adherence to care and treatment
- Assist with adherence techniques and offer suggestions as to how to overcome problems with adherence
- Make sure the client understands the process of cervical cancer screening and help them navigate the CCPPZ system
- Make sure patient understands the services being offered in the cervical cancer clinic, including:
  - Screening
  - Cryotherapy
  - Referral to UTH
  - HIV Counseling and Testing
  - Diagnosis and treatment of sexually transmitted infections

### **Role of Peer Educators continued:**

- Observe absolute confidentiality with the information the client shares with you
- Be non-judgmental and treat everyone in the community equally
- Help with patient tracking and follow-up monitoring
- Serve as an advocate/educator for the community about cervical cancer prevention
- Work with local groups and community structures to inform the community about cervical cancer
- Serve as a role model and lead by example

### **How Does the Peer Education Program Help?**

- It brings in more people from the community
- The help of peer educators eases the workload of clinical staff, increasing the time and quality of patient care in the clinic
- Can boost the self esteem and pride of the peer educators and can help them make new contacts and learn new skills
- Helps with communication between the clients and the providers to make sure that our services are accessible and relevant
- Because of shared experiences with the clients, the peer educators may get more information than clinical team members about any challenges the client is having with adherence and may be able to help them with practical ideas/suggestions
- Complements clinic efforts and reinforces the work of clinic counselors
- Encourages a quick and positive response from the community
- Improves client adherence to follow ups and reduces missed appointments
- Update the community with accurate and relevant information from the clinic

## **IV. Peer Educator Counseling Skills**

### **What is counseling?**

- A professional relationship between a trained counselor and a client, designed to help the client resolve their problems through:
  - thinking about their situation
  - setting self-determined goals
  - making meaningful, well-informed choices
- Counseling is both a process and a therapy. It is therefore not a one off event but continues over time so the client and counselor can develop a relationship.
- The aim of counseling is not to solve every problem but to strengthen and improve the client's coping skills

## **Basic Counseling Skills**

1. Attending
2. Listening
3. Empathy
4. Probing
5. Challenging
6. Paraphrasing
7. Reflecting
8. Summarizing

### **1. Attending Skills –**

This is sometimes referred to as creating a good rapport with patients. You should try to create a comforting and welcoming atmosphere in the clinic. This involves:

- *Friendliness and courtesy*
- *Eye contact*
  - If it is appropriate during the discussion, look your clients in the eye to show you are interested in their responses.
- *Relaxed body posture & body language*
- *Vocal tone*
  - When you are communicating, speak in a friendly manner. Avoid a harsh or judgmental tone.
  - Try to use simple language when describing the basics of cervical cancer and treatment. Avoid difficult clinical terms.
  - Also consider the local language when communicating information
- *Speech rate*
  - Speak at a slow enough pace so that patients can understand what you are saying.
- *Time commitment*
  - Give clients a chance to ask questions and try to not rush enrollment of clients.

### **2. Listening Skills**

This tool is used to gather information about the client. It involves listening to the following:

- Meaning of said and unsaid words
- Non-verbal behavior/ body language/ facial expressions
- Mood
- Voice tone: emphasis on certain words, hesitation, nervousness
- General appearance

### **3. Probing/Questioning Skills**

You may have clients with barriers to good communication – for example, someone may be mistrustful, nervous, or resistant.

- Use open ended questions

- Prompt them when they hesitate
- Don't interrupt them
- Avoid being patronizing, judgmental or using too many technical terms
- Pay attention to non-verbal clues

#### **4. Empathy Skills**

- Empathy can be described as temporarily living in another's life, to try and understand their perspective and condition, without judgment.
- By trying to understand what your patients are going through from their perspective, you will be better able to support them and will also make your clients feel more comfortable being honest with you.

#### **5. Challenging Skills**

When appropriate, the client may need to be asked to examine internal and external behavior is self defeating or harmful to others. With your support and encouragement, progress can be made to address the following:

- Failure to accept problems
- Failure to accept that there can be a solution
- Incorrect interpretation of clinical experiences
- Unwillingness to take on new perspectives

#### **6. Paraphrasing Skills**

A counselor can repeat back the essence of what the client has said. This can:

- act as a prompter for discussion
- show understanding of what the client has said
- act as an alternative way of responding other than asking questions or making statements

#### **7. Reflecting Skills**

Reflecting refers to the counselor's ability to help the client address their own concerns, emotions and thoughts about their condition and the possible impact of difficult news. Here are a few examples of questions you can ask:

- How would you feel if the HIV test result was positive?
- How do you feel about your husband's reaction?
- What seems to be your main concern in this?

#### **8. Clarifying/Summarizing Skills**

This refers to synthesizing what has been communicated during the session into a few summary comments and follow up instructions.

- This can help determine if the client and counselor are on the same page so the client leaves the clinic feeling their concerns have been addressed and a plan has been made for what comes next.

## V. Facilitation Skills

### **Role of a facilitator**

The facilitator plays a role similar to a “chairperson” but does so with the consent of the group. They help the group decide what they want to accomplish during meetings and how to reach these goals.

- A good facilitator is concerned that the objectives of the meeting get accomplished and that decisions are actually reached.
- They ensure that participants are responsible to the goals of the meeting and do not get stuck going off topic and telling irrelevant stories.
- The facilitator helps manage the discussion and minimizes disruption from group members who are speaking out of turn.
- At no times does he/she make the decision for the group or take up functions which are the responsibility of the group.
- They ensure that each person is contributing to the group.

### **Facilitator Techniques**

- Welcome the participants and thank them for coming.
- Review the agenda and objectives of the workshop/meeting.
- Introduce yourself & provide biographical description, which establishes the trainer’s credentials.
- Personalize the formal introduction.
- Ask each participant to introduce him/herself, including where they work, why they work for that organization and /or personal interests.
  - The goal is to facilitate a more personal understanding of who the individuals are in terms of their interests, motivation, and background.
- Refer to objectives of meeting and ask what the group members’ expectations are.
  - Point out how their expectations fit within the objectives.

## VI. **Community mobilization**

Peer educators play an important role in community mobilization so we will briefly discuss this concept here.

### **Definitions**

- **Community** is defined as a group of people living in a well defined area with a common purpose. This community can be made up of different types of people in terms of race gender, religion, educational background, economic standing, etc.

- **Mobilization** is defined as a systematic process of bring together a group of different people (background) for a particular purpose.
- From the above definitions, we can describe **community mobilization** as a critical process of organizing human resources for a particular activity or purpose.
- Community mobilization requires skillful personnel to make it happen or realized.

### **What are the Characteristics of a community mobilizer?**

- Someone who knows the area under consideration very well
- Someone who is trustworthy by the general membership of the community or the leaders of the local area
- Someone who is ready to be part of the solution or an intervention in the community
- Some who is a team player
- Someone who is influential in linking the community members to any health related issue.

### **Why is community mobilization important?**

- It helps spread important health information throughout a community
- It helps to remove the negative issues or stigma that might arise in the process
- It is a platform where misconceptions can be handled using different methods
- It creates ownership and acceptance of a program aimed at improving health
- It links the health workers and community
- By getting the community involved in spreading health messages, it allows a chance for community members to help offer suggestions appropriate to their culture and lifestyle

## **VII. Male Involvement in Preventing Cervical Cancer**

### **What is male involvement?**

It can simply mean **engaging the male folk in an activity**, and in this case, a health issue that affects the well being of women.

### **Level of male involvement**

They can be involved at all levels, including:

- ***Family level***
  - By accepting and encouraging their wife/daughter/sister in participating in cervical cancer screening)
- ***Community Mobilization level***
  - they can be involved in sensitizing others about cervical cancer
- ***Feedback level***
  - By being involved in the review and evaluation of the screening program

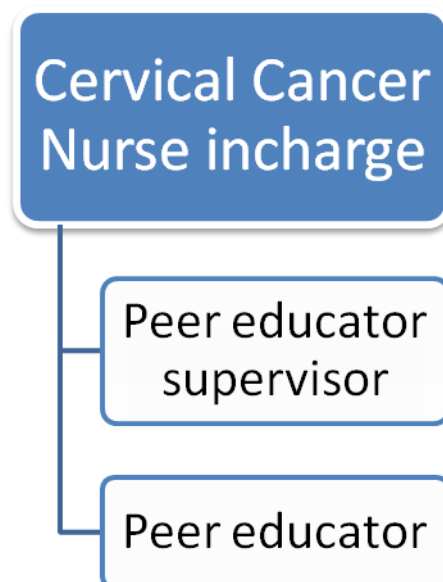
### **How to effectively involve the male folk in Cervical Cancer:**

- The male should be sensitized right from the start of brining the program to a community
- The male should be given a leading role in providing feedback about the prevention process & strategies after being sensitized
- The male should share what they have learned about cervical cancer with other people so they can be activists to improve women's health.

### **The benefits of male involvement in Cervical Cancer**

- They will be well informed about the health issues facing their community
- A sense of responsibility will be created and adhered to
- They are an entry point at the family and community level due to the influence they play in terms of decision making (be it related to cultural, social or economical issues)
- They become role models (they can give testimonies, case study and even role play)
- Effective communication between the wife & husband is enhanced
- It creates ownership and acceptance of the program or health service delivery
- The spouse(woman) will receive better support and care from their husbands
- An enabling environment that is conducive and safe for both partners will be enhanced
- Clear and accurate prevention message tailored to the couples regarding Cervical Cancer will be accelerated

## **VIII. Operational structure for Peer Educators**



## **Relationship between Nurse in Charge and Peer Educator**

- Work allocation is allocated by the nurse in-charge and the super peers.
- A schedule of how one works in a particular week will be kept by the department head and copied to the overall in-charge. The schedule needs to be signed in and out on daily basis.
- Although the pay per month has been allocated, this will be influenced by the number of days and work one has put in.
- A log book on clients one has attended to per day will be kept (for follow up on quality of work and work commitment).

\* If one works for less days than expected the total amount will be divided by a number of days worked and be paid accordingly.

## **Team Work**

- There are other peer groups existing in the clinics.
- The different peer educators are expected to work as a team and collaborate with other groups although they may have different functions.

## **Partnership**

- The peer education program is a partnership between the clinic staff and the peer educators to improve the treatment and care of women living with cancer of the cervix in the community.

## **Conduct and Discipline**

Each peer educator is expected to:

- Conduct him/herself in a respected and dignified manner.
- Observe confidentiality: keep patient information between themselves and the patient. Any patient information should only be shared with others if patient consent is obtained.
- Not indulge in activities that will compromise/contradict the regulations of the program for example using CIDRZ name with force pretence, forgery etc
- Not be involved in pilfering from the clinic.
- Have open communication with the patients and members of staff.
- Maintain a certain level of knowledge and skill—give correct and truthful information and when not sure of information, refer or consult with experts.
- Should be role models to their peers.
- Gross violation of confidentiality or misconduct will result in disciplinary action or dismissal

## **Issues of Confidentiality**

- The client must always be assured of confidentiality in all that is discussed with the Peer Educator

- **Confidentiality** refers to information that is given in trust to you and is considered private.
- **Shared confidentiality** refers to sharing information among others within a professional context (for example between Peer Educator and the clinic counselor about a client).
  - The purpose of this type of sharing is to discuss issues related to each individual's case to get them the best care possible.

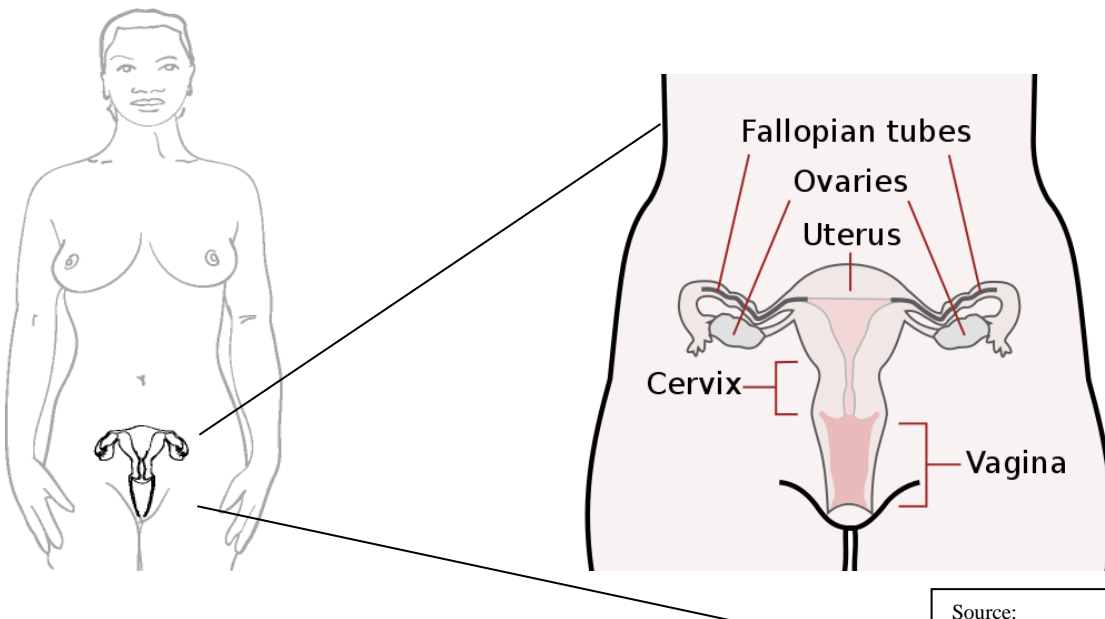
# **Part II: Knowledge issues about Cervical Cancer, Screening & Treatment, and HIV**

## **I. Cervical Cancer Basics**

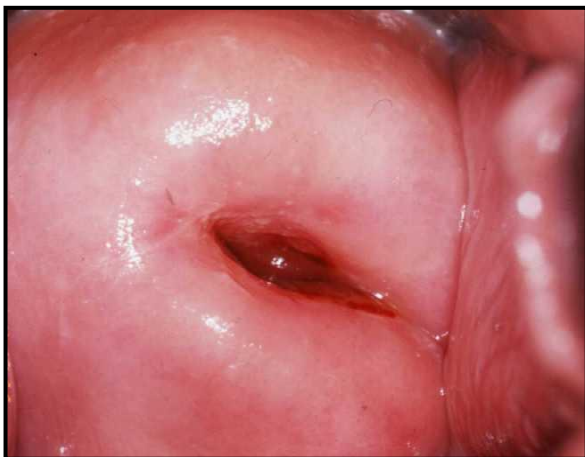
### **Anatomy of Cervical Cancer**

- **What is a cervix?**

- The cervix is the opening of the womb. Sometimes it is called the mouth of the womb.
- During birth, the baby passes through the cervix and during menstruation, the menstrual flow passes through here as well and then on through the vagina.



Source:  
[http://en.wikipedia.org/wiki/File:Scheme\\_female\\_reproductive\\_system-en.svg](http://en.wikipedia.org/wiki/File:Scheme_female_reproductive_system-en.svg)

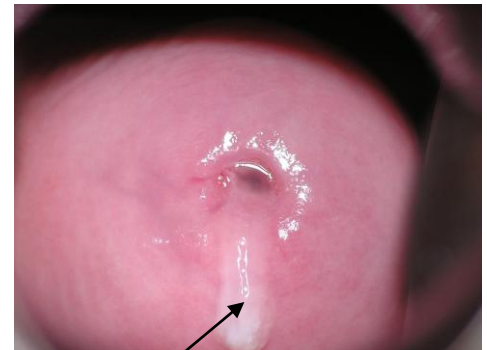


← This is a digital image of a healthy cervix as taken by our nurses during the screening procedure.

**What protects the female reproductive system from infections/diseases?**

- *Good bacteria*

- A healthy vagina has good bacteria that produce acid which stop the growth of HIV, HPV and other sexually transmitted germs
- The same bacteria are found in fermented products, e.g. sour milk, yogurt
- *Cervical mucus*
  - Cleans the vagina
  - Traps and kills germs
  - Provides lubrication
  - Helps transport sperm to the egg for pregnancy
- *Acid conditions*
  - Creates an inhospitable environment for bad bacteria or viruses so they are less able to survive in the female reproductive tract
- *Immune cells*
  - Protect against invading bacteria or viruses
- *Vaginal and cervical epithelium*
  - Provide a layer of protective tissue on the outer surface of the female reproductive tract



Healthy, white cervical mucus

## How can women keep a healthy reproductive system?

- **Clean your vagina carefully and regularly**
  - **BUT DO NOT:**
    - Douche
    - Clean inside vagina with fingers
  - When you douche or clean far inside the vagina, you are removing the protective cervical mucus and you may damage the surface of the vagina, which causes a higher risk of contracting a sexually transmitted infection
- **Eat healthy**
  - Maintain a diet rich in fresh fruits and vegetables
- **Use condoms**
  - Protect yourselves from vaginal infections, sexually transmitted infections and unplanned pregnancies
- **Visit a screening clinic regularly**
  - Routine check-ups can prevent severe infections in the genital tract

## What is cervical cancer?

Cervical cancer begins with a viral infection of the cervix. The name of the virus is the Human papillomavirus, commonly called “HPV.”

- The virus is sexually-transmitted and can be passed on through sexual intercourse with an infected individual or by skin-to-skin-contact with infected areas.

- Approximately 130 different types of HPV have been identified, however, only a few of these types can cause cancer and these are classified as “high-risk.”<sup>1</sup> Some other types can cause genital warts or no symptoms at all and these types of HPV are referred to as “low-risk.”
- Most people who become infected with HPV do not know that they have it. You cannot see HPV.
- Women are at risk of developing **cervical cancer** if infected with high-risk HPV. In men, it can lead to cancers of the anus and penis.<sup>2</sup> It is important to note that BOTH men and women can carry the virus and transmit it to each other.
- If a woman is infected with a high risk form of HPV, her body may be able to fight off the viral infection. In fact, 80% of HPV is eliminated by the body’s immune system within approximately 18 months. Twenty percent of HPV persists, with the risk of developing into pre-cancer.
- With immuno-compromised individuals, such as those who are HIV positive, the body’s ability to eliminate HPV is weakened.
- If the body does not eliminate the HPV virus, it can first turn into pre-cancer and then into malignant cancer over 10-20 years.

### **Burden of Cervical Cancer**

Worldwide, cervical cancer is the fifth most deadly cancer in women.<sup>3</sup> It affects about 16 per 100,000 women per year and kills about 9 per 100,000 per year.<sup>4</sup> Screening has greatly reduced cervical cancer incidence and mortality in nations with regular screening programs.

- Approximately 500,000 women per year are diagnosed with cervical cancer
- Approximately 250,000 women per year die from cervical cancer
- 80% of cancers and deaths occur in women who live in developing nations
- Cervical cancer is the # 1 cause of cancer and cancer-related death in sub-Saharan Africa
- Cervical cancer peaks at 35-45 years of age
- Zambia has the second highest rates in the world, after Tanzania

<sup>1</sup> Gottlieb, Nicole (2002-04-24). "A Primer on HPV". *Benchmarks*. National Cancer Institute. <http://www.cancer.gov/newscenter/benchmarks-vol2-issue4/page2>. Retrieved on 2007-12-02.

<sup>2</sup> "STD Facts - Human papillomavirus (HPV)". www.cdc.gov. <http://www.cdc.gov/std/HPV/STDFact-HPV.htm>. Retrieved on 2009-04-13

<sup>3</sup> World Health Organization (February 2006). "Fact sheet No. 297: Cancer". <http://www.who.int/mediacentre/factsheets/fs297/en/index.html>. Retrieved on 2007-12-01.

<sup>4</sup> "GLOBOCAN 2002 database: summary table by cancer". [http://www-dep.iarc.fr/GLOBOCAN/Table1\\_sel1.htm](http://www-dep.iarc.fr/GLOBOCAN/Table1_sel1.htm). Retrieved on 2008-10-26.

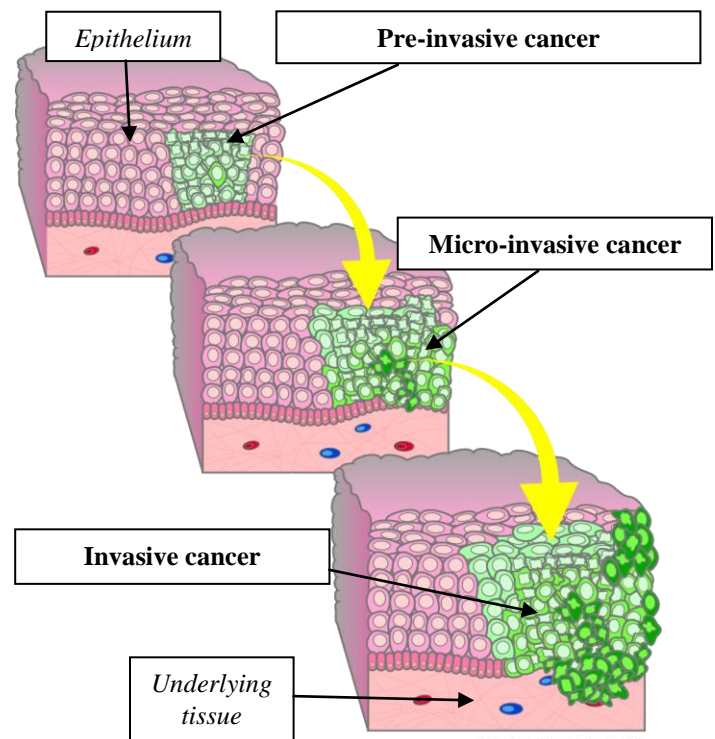
- Rates of cervical cancer are FIVE times higher in HIV-infected women

## II. Stages of cervical cancer

**Cancer** is a disease in which a group of cells in the body display *uncontrolled growth* (division beyond the normal limits), *invasion* (intrusion into and destruction of adjacent tissues), and sometimes *metastasis* (spread to other locations in the body via lymph or blood).

An infection with one or more high-risk HPV types is believed to be a prerequisite for the development of cervical cancer. As mentioned before, the vast majority of HPV infections are not high risk, and most HPV infections are cleared rapidly by the immune system and do not progress to cervical cancer. However, some HPV infections cannot be cleared by the body. This puts a woman at risk of developing pre-cancerous cells on her cervix, which can progress into cancer. Because the process of transforming normal cervical cells into cancerous ones is slow, cancer occurs in people who have been infected with HPV for a long time, usually over a decade or more.<sup>5</sup>

As seen in the image to the right, when cervical cancer begins, it starts on the surface of the cervix, called the epithelium. This is the first stage, or pre-invasive cancer. The next stage is micro-invasive cancer, in which the cancerous cells begin to invade the underlying tissues. Invasive cancer, the third stage is when the cancerous cells have invaded the underlying tissue and are starting to reach blood and lymph vessels where they can spread to other parts of the body. Advanced cervical cancer may take many years to develop.



<sup>5</sup> Greenblatt R.J. 2005. [Human papillomaviruses: Diseases, diagnosis, and a possible vaccine](#). *Clinical Microbiology Newsletter*, 27(18), 139-145. Abstract available.

### Pre-Cancer vs. Cancer

- Abnormal growths can be *benign* (not cancer) – in this case, tumor cells grow only locally and cannot spread by invasion or metastasis.
- Cancerous (*malignant*) growths – Cells invade neighboring tissues, enter blood vessels and can spread to different sites of the body.

### Signs and Symptoms of cervical cancer

- HPV and pre-cancer are asymptomatic (meaning there are NO symptoms)
- Even once cervical cancer has started to develop, there are often NO symptoms until the late stages
- Most common sign is abnormal bleeding (post-coital = after sexual intercourse)
- Back and leg pain, renal failure and fistulae are late features
- Irregular menstrual cycles

### Images of the cervix taken during screening:



Healthy cervix with white mucus



Cervix with pre-cancer



Cervix with cancer

## III. Cervical cancer transmission and prevention

The human papillomavirus, which can cause cervical cancer, is sexually-transmitted and can be passed on through sexual intercourse with an infected individual or by skin-to-skin-contact with

infected areas. It is important to note that BOTH men and women can carry the virus and transmit it to each other. Most people who become infected with HPV do not know that they have it. Women are at risk of developing cervical cancer if infected with high risk HPV. In men, it can lead to cancers of the anus and penis.<sup>6</sup>

### What are the risk factors for cervical cancer?

1. Young age at sexual debut (first time having sexual intercourse)
  1. Increased risk in adolescents due to lack of protective cervical mucus,
  2. Increased cervical ectopy,
  3. Increased susceptibility to local trauma
2. Higher number of sexual partners
3. Higher number of partners with multiple sex partners
4. Presence of other STIs (including HIV)
5. Immune suppression, including HIV
6. Smoking
7. Low intake of fresh fruits and vegetables

### Protective factors

1. Male circumcision
2. Use of condoms (*moderate degree because HPV can still be transmitted via genital contact*)

## IV. Prevention & Treatment of Cervical Cancer

**Cervical Cancer** is a disease that can be prevented by lifestyle changes and early detection via screening. Invasive cervical cancer is a preventable cancer.

### Early detection and prevention

- **Primary prevention:**
  - *Lifestyle changes*
    - Delay onset of intercourse
    - Limit number of sexual partners
    - Don't smoke
    - Eat more fruits and vegetables
    - Condoms "may" help if used consistently and correctly
  - *HPV vaccine*: currently available for girls and women in some countries
- **Secondary prevention:**

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<sup>6</sup> "[STD Facts - Human papillomavirus \(HPV\)](http://www.cdc.gov/std/HPV/STDFact-HPV.htm)". www.cdc.gov. <http://www.cdc.gov/std/HPV/STDFact-HPV.htm>. Retrieved on 2009-04-13

- *Screening*

**1. Pap smear:** cells are removed from cervix and examined under a microscope to check for disease or other problems

- Available in Zambia mostly at private clinics
- Expensive
- Requires:
  - Well developed health system.
  - Experienced and well trained lab staff.

- Mostly done by doctors in Zambia who are in short supply

**2. Visual Inspection with Acetic Acid (VIA) with Digital Cervicography**  
*(this is the method used in our screening clinics)*

- Cervix smeared with 5% acetic acid (house-hold vinegar)
- Cervix visualized through speculum and examined for 'Aceto-white' precancerous lesions (positive VIA test) by trained personnel

**3. HPV DNA testing:** also available in some countries

## **Treatment**

|                           |
|---------------------------|
| <b>Pre-cancer lesions</b> |
|---------------------------|

- Freeze it
- Remove it
- Burn it

➔ **Cure rate = 100%!!**

### **Freeze it (Cryotherapy)**

- Uses ice-cold gas to freeze the pre-cancer
- What happens after cryotherapy?
  - A patient may have:
    - watery discharge from the vagina for 4 weeks
    - some pain and a little bleeding
  - During the 4 weeks following cryotherapy, a patient SHOULD NOT:
    - Douche
    - Put herbs in her vagina
    - Clean her vagina with her fingers
    - Have vaginal sex

### **Remove it (LEEP)**

- **LEEP: Loop Electrosurgical Excision Procedure**
  - A small wire is used to remove the abnormal area of the cervix and send it to the lab for evaluation
  - What happens after cryotherapy?
    - A patient will have:

- Brown, black, or blood-tinged discharge from her vagina for about 2 weeks
- During the 4 weeks following LEEP, a patient SHOULD NOT:
  - Douche
  - Put herbs in her vagina
  - Clean her vagina with her fingers
  - Have vaginal sex

### Invasive Cancer

- Removal of the uterus
- Drugs that cure cancer cells

#### Cure Rates

- Stage 1 - 90%
- Stage 2 - 70%
- Stage 3 - 40%
- Stage 4 - 10%

### **Cervical Cancer Prevention Program of Zambia (CCPPZ)**

One of the best ways to keep from getting cervical cancer is to undergo a quick and simple screening test in a health clinic. This is the primary goal of **CCPPZ**. We are now establishing free cervical cancer prevention clinics throughout Zambia.

## **V. HIV/AIDS Basics**

### **What is HIV?**

HIV stands for **Human Immunodeficiency Virus**

Human (refers to us)

Immunodeficiency (means lack of protection for the body)

Virus (type of germ)

HIV is a virus. A virus is a tiny germ – it is so small you cannot see it. HIV slowly makes your body weak and you start to get sick very often and it becomes more and more difficult to get better.

### **What is AIDS?**

AIDS stands for **Acquired Immune Deficiency Syndrome**

Acquired (means “to get”)

Immune (protection)

Deficiency (lack of)

Syndrome (group of symptoms associated with the disease)

When you have been infected with the virus, you are **HIV positive**. Being HIV positive does not mean you have AIDS. You can still live a happy and healthy life for many years.

### **Stages of HIV**

Most people go through the same stages after they have been infected with HIV. HIV destroys the body's defense system very slowly. From the time you become infected with HIV to becoming ill with AIDS can take many years.

#### **Stage 1: Newly Infected with HIV**

- When you are first infected with HIV, you may feel no different at all. Some people feel ill for a short time, as if they have malaria or flu.
- There is a 'window period' of 1-6 months when some people test negative for HIV even though they have been infected with the virus.
- During this time you can pass HIV on to other people. You are highly "infectious"

#### **Stage 2: HIV Positive without AIDS**

- You can remain healthy for many years with no sickness.
- During this time you can still infect someone with HIV

#### **Stage 3: Early AIDS**

- You start to get sick with different infections.
- You can still infect someone with HIV.

#### **Stage 4: Full AIDS**

- Your body becomes very weak and you become ill very easily with sicknesses that do not finish.
- You can still infect someone HIV. You are highly infectious.

#### **REMEMBER:**

- You cannot tell by looking who is HIV positive. People can look and feel very well and not know for a long time that they have the virus.
- The only way to tell is by having an HIV test and that is why it is important to get tested.

### **Our body's immune system:**

- The body is kept safe from diseases by ones immune system. The immune system is like an army. HIV is like an enemy, which attacks ones army.
- The army is made up of soldiers called CD4 cells. When the HIV enters the body, the CD4 cell 'soldiers' try to fight the enemy.

### **How does HIV control the immune system?**

- HIV is a virus that attacks and destroys your CD4 cell soldiers. This means that your immune system becomes weak.

- The more CD4 cells you lose, the weaker your immune system becomes because your CD4 cell soldiers are too few to fight back. This means you are no longer kept safe from diseases and you are more likely to get sick.
- After some time, the HIV will destroy so many of your CD4 cells, that it is very easy for you to get sick.
- AIDS is the illness you get when HIV has destroyed almost all of your CD4 (soldier) cells.

### **Transmission of HIV**

4 types of bodily fluids transmit HIV:

- Blood
- Semen
- Vaginal Fluids
- Breast Milk

Most of the time in Zambia, HIV is passed from one person to another during sex. Mothers can also pass HIV on to their baby when they are pregnant, during childbirth, or when they are breastfeeding.

HIV can be transmitted when one of these fluids is present (and is infected) and there is a “portal of entry” (a way of “getting into” the body).

## **VI. Integrating HIV testing with cervical cancer screening**

### **Cervical cancer, HIV and antiretroviral therapy (ART)**

**Women with HIV are:**

- More likely to have higher prevalence of HPV
- More likely to have cervical cancer lesions
- More likely to have cervical cancer at a younger age
- Equally able to show good response if diagnosed and treated early enough

In the past, because they could not get ART, most women in Africa who got infected with HIV died within a few years. Today, because they can get ART, HIV-infected women in Africa can live very, very long lives. The immune systems of HIV infected women are sometimes not as strong as they used to be, even if they take their ART medications. When the immune system is weak, cancers can sometimes grow in the body. Cervical cancer is one of the cancers that HIV infected women have a high chance of getting. **ALL** women, especially those who have HIV, need to be tested for cervical pre-cancer so that they won't get it.

**Clients eligible for cervical cancer screening:**

- Any woman who has ever been sexually active
- Including:

- **Sexually active woman:**
  - Any woman having sex, or has had sex before
- **HIV sero-status:**
  - Any woman regardless of HIV status. (HIV positive women highly encouraged to come for screening).
- **Marital Status:**
  - Regardless of relationship status.

### **Clients eligible for HIV testing:**

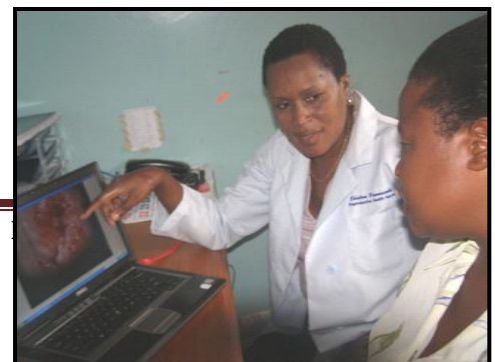
- Present HIV status unknown
  - Never been tested for HIV
  - Previously HIV negative but current status unknown
- Client has a disease or condition associated with HIV that is diagnosed during cervical cancer screening: STI, cervical cancer, etc.

### **Definitions**

- **Voluntary Counseling and Testing (VCT)**
  - Client volunteers and asks to be tested
- **Diagnostic Counseling and Testing (DCT)**
  - HIV testing is recommended based on diagnosis of HIV-associated disease (like cervical pre-cancer)

### **What happens at the clinic during cervical cancer screening?**

1. Client is **enrolled** by peer educators in a private setting
  - a. Peer educators use a locator form to gather important contact information from the client as well as some basic information about the client's reproductive and sexual history
2. The following screening procedures are done with a trained nurse:
  - a. **Visual inspection with acetic acid (VIA)** is done to check for possible pre-cancerous lesions
  - b. **Digital cervicography**
    - i. A digital camera is used to take a photo of the cervix which is enlarged on a TV monitor or computer screen to better visualize the cervix and diagnose any precancerous lesions
  - c. **HIV testing** if needed and agreed to by the client



### 3. Post-test counseling with nurses:

- Thank the client for her patience
- Show her the digital image of her cervix and explain your diagnosis
- Provide HIV status results clearly and calmly and give her time to understand the results
  - Explain how she can access support and antiretroviral treatment from the clinic
- Ensure she understands the diagnosis and the plan for follow-up visits
- Offer support and a message of hope
- Identify immediate concerns and allay anxiety
- Be careful of information overload
- Discuss importance of disclosure, risk of transmission to partner and available measures to reduce re-infection
- Explain the importance of unprotected sex and sexually transmitted infections as risk factors for HIV and cervical cancer
- Explain relationship between HIV and cervical cancer
- Let her know she can always come back to you for more information, or just to talk
- Tell her you understand how stressful the day has been, but she has been very brave to come in & thank her for coming in

### **Benefits of post-test counselling using digital photography**

- Client gets involved in what is happening as she views picture of her cervix on TV / computer monitor
- Client and nurse see same lesion
- Alerts client to seriousness of medical issues

## **VII. Sterilization and infection prevention**

**Objectives:** By the end of this chapter, you will be able to:

- Explain proper infection prevention (IP) practices & procedure
- Justify and support the need to improve IP practices to protect staff and clients

### **Goals of infection prevention**

Minimize the risk of transmitting serious infection (e.g., HBV, HIV/AIDS) from or to:

- Client
- Services providers
- Other staff, including cleaning and housekeeping personnel

### **Key steps in processing instruments:**

- I. Decontamination
- II. Cleaning
  - a. Sterilization
    - i. Autoclave

- ii. Dry heat
    - 1. Cool storage
- b. High Level Disinfection
  - i. Boil or steam
  - ii. Chemical treatment

## A. Sterilization Techniques

- Destroys all microorganisms including endospores
- Used for instruments, gloves and other items that come in direct contact with blood stream or tissue under the skin

### Practices:

- Steam sterilization (autoclave)
  - 121C (250F): 106 kpa (15lbs/in) pressure: 20 minutes for unwrapped items
  - Allow all items to dry before removing
- Dry heat (oven)
  - 170 C (340F) for 1 hour, or 160C (320F) for one hour, or 160C (320F) for 2 hours
- Chemical sterilization
  - Soak items in glutaraldehyde (2%) for 10 minutes
  - Rinse with sterile water
  - Handle only with a sterile instrument to remove and rinse
  - Store sterilized equipment in a sterile container

## B. High-Level Disinfection

- Destroys all microorganisms including HBV, and HIV
- Does not reliably kill all bacterial endospores
- Only an acceptable alternative when sterilization equipment is not available

### Practices:

- **High-Level Disinfection by Boiling**
  - Boil instruments and others for 20 minutes (sufficient up to 5,500 meters or 18,000 ft.)
  - Always boil for 20 minutes in a pot with tight lid
  - Start timing when water begins to boil
  - Do not add anything to pot after timing begins
- **Chemical High-Level Disinfection**
  - Cover all items completely with disinfectant
  - Soak for 20 minutes
  - Rinse with boiled water
  - Handle only with sterilized instrument to remove and rinse cleaned instruments

- Air dry before use and storage
- Store high-level disinfected instruments in sterile container



## **Formulas**

- For **making Dilute Chlorine Solution from concentrate solution** (Jik):
  - Total parts water (H<sub>2</sub>O) =  $\frac{\% \text{concentrate}}{\% \text{required}} - 1$
  - *For example:* To make 0.5% decontamination solution from 3.5% concentrated chlorine solution (Jik):
    - $\text{total parts (H}_2\text{O)} = \frac{3.5\% \text{ concentrate}}{0.5\% \text{ Dilute}} - 1 = \frac{.035}{.005} - 1 = 6$
    - Thus, mix 6 parts water to 1 part Jik
- **Making dilute chlorine solution from dry powder**
  - $\text{Grams/liter} = \frac{\% \text{required}}{\% \text{concentrate}} \times 1000$
  - *For example:* To make 0.5% decontamination solution from a 35% concentrate chlorine powder
    - $\text{Gram/liter} = \frac{0.5\% \text{ dilute}}{35\% \text{ concentrate}} \times 1000 = 14.2\text{g/liter}$
    - Thus, to make a 0.5% decontamination solution from a 35% chlorine powder mix 14.2g in 1 liter of water

### **SUMMARY of Sterilization and Infection Prevention**

- Simple, low cost infection protection measures will protect staff, client, and the community
- Hand washing is the single most important procedure in IP
- Decontamination with 0.5% chlorine solution inactivates HIV and Hepatitis B and C
- Proper instrument processing requires precision and attention to details
- Proper handling of sharp instruments and waste disposal protects staff and communities

# **Part III: Healthy living with cervical cancer**

## **I. Good nutrition and health**

### **What is the immune system?**

- The immune system is made up of the parts of the body which protect and defend it from diseases.
- The Human Immunodeficiency Virus (HIV) attacks and weakens the human body by killing the major white blood cells of the immune system. These cells are called CD4 cells and they work together with other immune cells to protect and defend the body from diseases

### **Why eat good food?**

Healthy food is essential for our bodies to:

- Develop, replace and repair immune cells
- Protect against and fight diseases
- Produce energy to be active
- Maintain body weight and strength

People living with HIV have increased needs for nutrients because their immune systems are very active, trying to fight the virus.

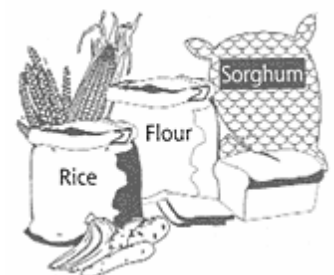
### **What is good food?**

Good nutrition is the key to good health. A healthy diet is made up of food that contains nutrients that are needed for the body to function properly.

- These nutrients are carbohydrates, proteins, vitamins and minerals.

### **Carbohydrates (Starch)**

These foods give the body energy to be active and fight infections. They also provide fiber which is important for regulation of the bowels. Maize, rice, potatoes, cassava, sorghum and millet all contain carbohydrates.



### **Proteins**

Proteins are needed to develop and repair cells, and to build strong muscles.

- Good and affordable sources of protein are legumes (e.g. beans, groundnuts and soybeans).
- Caterpillars, grasshoppers, fish, kapenta, eggs and milk are all rich in protein as well



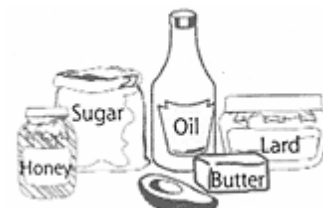
## Fruits and Vegetables

Fruits and vegetables provide vitamins and minerals, which improve immune response to infections, including HIV. In people living with HIV, vitamins and minerals prevent damage to body cells. They can also help boost an increase in CD4 cells.



## Sugars, Fats and Oils

Foods that contain sugar and fats are good sources of energy but they lack nutrients that contribute to immune function. They should be eaten in small amounts in addition to a healthy meal.



## What foods can help boost the immune system?

- Key components of the immune system, such as antibodies, are made from **proteins**.
- **Vitamin C** increases our body's resistance to infection and improves absorption of nutrients in the intestines.
  - Guavas, oranges, lemons, mangoes, tomatoes and cabbage are high in vitamin C.
- **Vitamin A** boosts production of CD4 cells and antibodies, especially in children.
  - Pumpkin, pumpkin leaves (chibwabwa), spinach, cassava leaves, yellow maize, orange and yellow sweet potatoes, carrots, paw-paw and mangoes are rich in vitamin A
- **Vitamin B** increases appetite, boosts production of antibodies and increases blood hemoglobin levels.
  - Some foods which contain high vitamin B are beans, maize, avocado, groundnuts, spinach and watermelon
- **Vitamin E** is good for the skin and works with the other vitamins to boost CD4 cell activity.
  - Pumpkin leaves, spinach, rape, vegetable oils, groundnuts and egg yolk contain high vitamin E.
- **Zinc, selenium, copper** and **iron** promote the production of red blood cells, increase CD4 cells and can cause a reduction in HIV viral load.
  - Liver, beans, spinach, beet root, garlic, mushroom, onions, groundnuts, pumpkin seeds and millet are among foods that are rich in these minerals
- **Fresh ginger, garlic, turmeric, cayenne pepper** and **cinnamon** are natural antibiotics that can be used to treat diarrhea and other problems of the immune system. They can be added to cooked food or tea to improve the flavor and enhance appetite.

- **Fermented foods** such as yoghurt, sour milk and cheese help build immunity. They contain the same healthy bacteria that are found in the intestine. These bacteria can protect the body from developing infections

#### **Further Recommendations to improve your diet**

1. Try to eat 3 well-balanced meals daily and snack in-between meals whenever possible.
  - **Fresh** fruits, yoghurt or sour milk are healthy snack choices
2. Include carbohydrates in every meal, e.g. nshima, rice or potatoes. The carbohydrates should be in larger amounts than any other food.
3. Eat fresh vegetables and fruits everyday to increase vitamin and mineral intake. Do not cook vegetables for too long to avoid destroying the nutrients
4. Drink plenty of **clean** water everyday
5. Alcoholic drinks, e.g. beer, remove water from the body and can also interfere with the action of the immune system. Alcohol should therefore be taken in moderate amounts, or not at all if one is on medication.

## **II. Physical activity and Health**

### **What is exercise and why should we do it?**

- **Exercise:** Any physical activity that requires exertion of energy, usually performed to maintain physical fitness
- Beyond diet, physical fitness helps boost immune function and improve health status
- Regular, moderate exercise:
  - Boosts the immune system by increasing immune cell numbers and activity
  - Good for the heart and muscles and helps prevent diseases such as high blood pressure and diabetes
  - Generally maintains physical and mental fitness
  - Relieves stress

**What kind of physical activity can help keep us healthy?**



- **WALKING**



- **BICYCLING**



- **STRETCHING**



- **DANCING**



- **GARDENING**



- **HOUSEWORK**

## **Part IV: Challenges**

### **I. Stigma and discrimination**

#### **Background**

- Stigma and discrimination occur when people think about and act negatively toward a certain group of people.
- Stigma and discrimination toward people living with cervical cancer are barriers to prevention and treatment.
- It deters women from getting screened, telling their partners that they have been screened, going to the clinic for treatment (Cryotherapy), and getting necessary care and support.
- Stigma and discrimination can lead to isolation, violence, abandonment, death and the breakdown of social networks in the community.

#### **Definitions – STIGMA**

- Stigma is a negative attitude or belief you have about another person because you think he is different in some way.
- Stigma is what you think as opposed to what you do.

#### **Types of stigma**

1. Self-Stigma→When a person internalizes shame
2. Felt-Stigma→Feeling that others see you differently
3. Enacted Stigma→Discrimination and unfair treatment

#### **Definitions – DISCRIMINATION**

- Discrimination is an unfair way of treating someone or acting toward someone because you think she is different.
- Discrimination is what you do as opposed to what you think.

#### **Causes of stigma and discrimination**

- Lack of information;
- Myths and fears about transmission;
- fears about death and illness;
- Moral judgments and assumptions about women with sexually transmitted infections and/or cervical cancer

#### **Consequences of stigma and discrimination**

- It prevents people from getting tested or getting treatment;
- Makes people feel lonely and sad;

- Prevents women from telling their partners that they have pre-cancer cells and need treatment
- Leads to violence and abandonment;
- Makes the problem of cervical cancer bigger.

### **Benefits of Reducing Stigma and Discrimination**

- More women will get screened, receive treatment, and tell their partners if they have cervical cancer;
- Women with cervical cancer would not feel so sad and lonely.

### **Preventing or Reducing Stigma and Discrimination**

- Be aware of your own feelings of stigma and discrimination.
- Inform people in your community about cervical cancer.
- Correct misunderstandings and myths about cervical cancer.
- Talk to people about the dangers of stigma and discrimination.
- Be a role model by respecting and caring for women with cervical cancer.
- Involve women with cancer of the cervix in discussions with community members about cervical cancer, stigma and discrimination to increase understanding.



### **Key Points**

- Stigma is a negative attitude or belief you have about another person because you think he or she is different in some way (what you think).
- Discrimination is an unfair way of treating someone or acting toward someone because you think she is different in some way (what you do).
- Often people do not talk about, learn about, prevent or treat cervical cancer because of stigma and discrimination.
- Peer educators can decrease stigma and discrimination by educating people, setting an example, and offering people support, care, and treatment for cervical cancer.

- Peer educators need to be aware of their own feelings and attitudes toward women living with cancer of the cervix

## **II. Myths and misconceptions of cervical cancer**

There are several myths/misconceptions surrounding cervical cancer that our clinicians and peer educators have noticed since the cervical cancer screening program began. It is important to work to change these misconceptions and educate the community in a sensitive, thoughtful and truthful manner.

Here are some of the myths/misconceptions that clients have mentioned:

- We are afraid to be cut by the nurses
- The instruments they use are painful
- They are Satanists and may take our children
- When one has cervical cancer that means she was bewitched
- The taking of flesh after screening causes you develop a tube like vein
- If you are found to have cancer of the cervix, that means you were a prostitute
- The inserting of herbs in private parts can cause cancer of the cervix
- The food that we eat causes cancer
- The family planning medicines cause cancer
- After screening you have prolonged period/discharge
- Privacy – fear to be screened by known nurses/doctor
- Not sure of how clean the instruments are for fear of being infected with HIV or any other disease
- If found with cervical cancer you will die
- People think that if you have cancer, they say you have HIV
- Some people think that it's a family disease
- People think that cervical cancer is not a sexually transmitted
- When someone is found with cervical cancer, they think that the uterus will be removed

- Screening destroys fertility of a woman
- Use of condoms cause cancer of the cervix
- Screening reduces sexual enjoyment
- Screening enlarges the vagina
- The clinics are blamed by men for bringing cancer to the community

### III. Post-Training Questionnaire for Peer Educators

|   |         |
|---|---------|
| Date:   | Name:   |
| Sex <input type="checkbox"/> Male <input type="checkbox"/> Female | Clinic: |

**Please circle those that apply**

**1. What is a cervix?**

- a. The womb
- b. The ovary
- c. The opening between the uterus and the vagina

**2. What is cancer?**

- a. A disease caused by witchcraft
- b. It's a drug
- c. It is a disease caused by an uncontrolled growth of cells

**3. Cervical cancer...**

- a. Begins with infection of the cervix by a sexually transmitted virus
- b. Is a disease caused by the white mucus of the cervix
- c. Is the same thing as breast cancer

**4. What causes cervical cancer?**

- a. Human Immunodeficiency Virus (HIV)
- b. Human Papillomavirus (HPV)
- c. The white mucus of the cervix

**5. What are the symptoms of cervical pre-cancer?**

- a. Warts and fibroids
- b. Bleeding after having sex or no symptoms at all
- c. Breast lumps and breast pain

**6. What are some of the symptoms of advanced cervical cancer?**

- a. Bleeding after having sex and bleeding between menstrual periods
- b. Itching and scratching
- c. Warts and fibroids

**7. What is the relationship between HIV and cervical cancer?**

- a. HIV is a disease that causes cervical cancer
- b. HIV-infected women have a higher chance of developing cervical cancer
- c. HIV protects women from getting cervical cancer

**8. If a man has sex with a woman who is infected with Human papillomavirus (HPV) can she give him cancer?**

- a. A man is not at any risk from having sex with a woman with cervical cancer
- b. She will pass the cervical cancer to his sexual organs every time
- c. She may give him the HPV infection but men don't manifest a serious disease from HPV as often as women

**9. Is there a cure for cancer of the cervix?**

- a. No – There is never a cure
- b. Sometimes - if the cancer is caught in an early stage by screening
- c. Yes – There is always a cure

**10. What are the services provided for prevention of cervical cancer?**

- a. HIV testing and anti-retrovirals (ARVs)
- b. Drugs for cancer and HIV
- c. Screening and treatment of pre-cancer

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