PPH PACKAGE FOR SERVICE PROVIDERS

Table of Content

Note: Sources of information for the content in this presentation are: The National Guidelines for Quality Obstetrics and Perinatal Care , Focused Antenatal Care Package

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1. PRECONCEPTION CARE

Preconception Care

- A set of interventions that identify and modify biomedical, behavioural, and social risks to a woman's health and future pregnancies.
- Includes both prevention and management emphasizing health issues that require action before conception or very early in pregnancy for maximal impact
- Preconception care should also target men

Objectives of Pre-conception Care

- To provide:
  - Health promotion and education to improve knowledge attitudes and behavior
  - Evidence based screening for pregnancy
  - Interventions to address identified risks and conditions
- To achieve universal coverage of Essential Obstetric Care

Goal of preconception care

- To provide:
  - Screening for risks
  - Health promotion and education
  - Interventions to address identified risks
  - Counselling

(CDC 2006)

Reproductive health risks

- Age of the couple (<16 years and > 35 years)
- Parity (Primigravida, Grand multiparity, Short pregnancy interval less than 2yrs)
- Nutritional status (under nutrition, obesity, malnutrition)
- Low Socioeconomic status
- Previous adverse pregnancy outcome
- Medical conditions (Anaemia, Malaria, RTIs, HIV & AIDS, diabetes, hypertension, ABO and Rhesus incompatibility, Cervical cancer, etc)

Reproductive health risks cont..

- Obstetric Complications
- Substance use
- Intake of drugs that have known teratogens
- Gender based violence (FGM, Early marriage, abuse)
- Negative cultural practices (food restrictions, Health seeking behaviour)

Preconception care protocol
1.History taking

- Family : hereditary conditions, Medical conditions, congenital abnormalities
- Medical: Diabetes, hypertension, HIV
- Surgical: Previous myomectomy, C/section, Obstetric fistula repair
- Obstetric/gynaecological: Pregnancy wastage, previous preterm deliveries, STI/RTI, menstrual disorders, prolonged subfertility

Preconception care protocol
1.History taking cont

- Environmental: exposure to radiation, Chemical, severe weather conditions
- Occupational: type of work and length of working hours as in long distance drivers,
- Nutritional: diet
- Male partner history: mumps, HIV, substance abuse, tight clothing underpants

Preconception Care Protocol - 2.Physical examination

- General Examination (Head to toe)
- Vital signs
- Systemic examination of:
  - Thyroid
  - Breasts
  - Abdomen
  - Pelvis
  - Other relevant systems based on history

Preconception Care Protocol - 3. Investigations

- Minimum investigations should include;
  - Full blood count
  - Random blood sugar
  - Syphilis test
  - HIV test
  - Blood group and rhesus
  - Urinalysis
  - Addition investigations based on history

Preconception Interventions:

Health education and counselling

- Counsel the woman on seeking partner and family support
- Family planning
- Nutrition: Assess dietary status and advice on healthy nutrition. Weight: Check BMI, Advise on weight gain or loss where BMI in <20 or >30
- Substance abuse
- Timing of intercourse
- Prenatal diagnosis: Tell older women about options for prenatal diagnosis including genetic counselling (Down's syndrome, medical conditions)
- Discourage over the counter drugs and use of teratogenic medications
- Regular exercise

Preconception Specific Interventions

- **Prophylaxis**
  - Folic acid supplements 400mcg daily

  Women with a history of neural tube defects or epilepsy should take 5mg daily
  - Iron, Zinc, Vitamin A 10,000IU, Iodine, Calcium
  - Men need zinc, folate, Vitamin E & C

Management Pre-existing Medical Problems

- Stabilise medical conditions and ensure that medical control is optimal
- Check drugs needed are safe for use in pregnancy and do not affect sperm function
- Where appropriate, refer women for specialised care

Preconception Care Delivery Areas

Preconception cares should be integrated into other services:

- Family planning
- Antenatal care
- Child welfare clinic
- Postpartum care
- Outpatient
- Youth friendly sites
- Comprehensive care clinics
- Specialised clinics
- School health programmes
- Specific services that target men

Relationship between Preconception Care and PPH

During preconception period you can:

1. Identify predisposing factors to uterine atony such as high parity

2. Implement prenatal interventions such as Iron-folate supplements

PPH

2. MATERNAL NUTRITION

Introduction

- Maternal nutrition lays foundation for successful outcome of pregnancy
- Interventions should start before pregnancy
- Poor nutrition is associated with IUGR and LBW and premature delivery
- Vitamin A deficiency has been associated with risk of stillbirth and LBW
- Maternal nutrition is critical in lactation

Nutrition in Preconception Period

- Pre-pregnancy nutrition:
  - Influences woman ability to conceive
  - Determines fetal growth and development
- Underweight and overweight women experience more complications during pregnancy than normal women

Nutrition in Pregnancy

- Dietary counselling and supporting interventions through FANC are essential
- Poor nutrition associated with IUGR, LBW, birth defects, stillbirths, premature delivery
- Dietary practices that increase nutritional risk:
  - Change of diet to highly refined foods
  - Adherence to vegetarian diet
  - Rigid dieting
  - Eating disorders

Nutrition in Pregnancy cont..

- Pregnancy demands additional nutrients due to physiological changes that occur
- Maternal weight should be routinely monitored throughout pregnancy
- Weight lose may occur in first trimester due to nausea and vomiting
- Weight gain should not be used as the basis of estimating nutritional risk. Should be combined with other indicators like dietary intake, medical history

Indicators of Good Nutritional Status

- During Pregnancy:
  - Weight gain (between 11.5-16kg for whole duration of pregnancy)
  - Hemoglobin=n level more/equal 11g/dl
  - Absence of clinical signs of micronutrient deficiencies

Nutrition During Labor and Delivery

- This is a period of high energy expenditure
- Light foods and drinks high in energy should be provided (e.g. yoghurt, milk, fruits, soup, fruit juice)
- Higher intake of fluids helps prevent dehydration and is associated with:
  - Shorter duration of labor
  - Reduced need for augmentation of labor

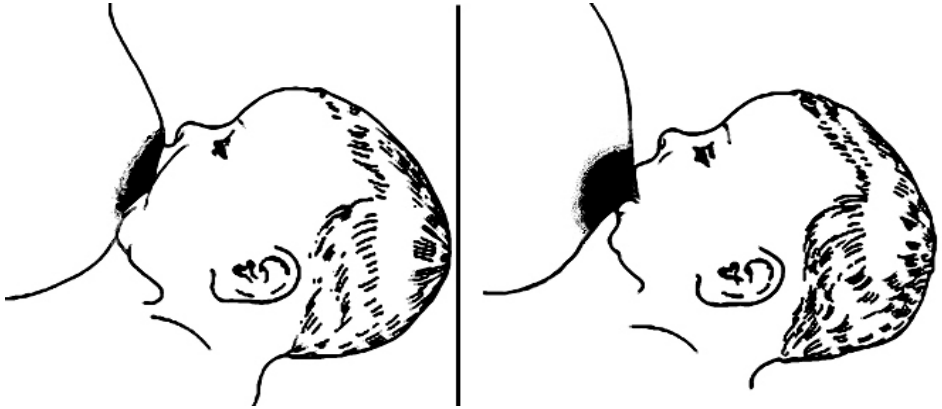
Nutritional requirements after delivery

- Following normal delivery a woman may be hungry and should have access to food
- Maternity units should ensure some food is available for women who deliver at night
- On discharge, Mothers should be counselled on taking an extra meal and snacks rich in energy protein and micronutrients
- Families should be encouraged to use locally available and affordable foods and explained to about the need of extra food portions

Early Initiation of Breastfeeding

- Initiate breastfeeding within 1 hour
- Support mother to attach and position baby

Good attachment



Poor attachment

- Ensure there is rooming in
- Give no pre-lacteal feeds- water, glucose, fluids

Energy and protein requirements during lactation

	Energy requirements	Protein requirements
First 6mths then decrease gradually	+500kcal/day	+17.5g/day for the first 6mths of lactation +13g/day for next six months and 11g/day thereafter
Underweight women	+650kcal/day	+21g/day

Micronutrient Requirements For Pregnant And Lactating Mothers

- The pregnant and lactating mothers needs extra folate and vitamin B_{12} due to the great increase in blood volume and the rapid growth of the foetus.
- Minerals involved in building the skeleton- calcium, magnesium and phosphorus are in great demand.
- Sources of calcium are mainly milk and milk products. Others are whole enriched cereal grains and green leafy vegetables
- The richest sources of folic acid are spinach, kidney beans, groundnuts, kidney and liver.

Nutritional needs during lactation

The mother should do the following:

- Eat at least 2 additional servings of staple foods per day to supply the extra 300 – 600 calories needed
- Eat at least 3 additional servings of calcium rich foods (milk and milk products, fish, salmons and sardines(Omena) to supply the extra 1200 mg of calcium needed
- Include a variety of fluids such as milk, water and fruit juices
- Eat smaller frequent meals if unable to consume larger amounts in fewer meals
- Avoid alcohol and tobacco, which decrease milk production

To increase breast milk

There are no specific foods to eat that will stimulate production of breast milk,

More important than what you eat is how your baby eats. The longer a baby nurses at your breast the more milk will be produced.

The best prescription for maximum milk production is effective and frequent breastfeeding or milk expression, plenty of fluids, adequate calories and rest

Dietary and nutritional advise for breast feeding mothers

- Drink more liquids
- Do not go on restricted diets in an attempt to lose weight while nursing this will lead to reduced milk production
- Do not drink beer or smoke (babies do not like the taste)
- Avoid stress and rest more
- Minimise caffeine intake in tea or coffee
- Avoid supplements in babies < 6 months (including solid food, water, juice, and formula).
- Snack often on foods high in protein and calcium

Foods that may increase breast milk

Popular herbal supplements have been used for many years to increase milk production, include Fenugreek, Blessed Thistle, and Red Raspberry.

Brewers Yeast (containing B vitamins) is another commonly recommended treatment for low milk supply.

Drugs e.g. Domperidone and metochlopramide also tend to increase breast milk production

To relieve the discomfort of constipation advise women to:

- Increase fibre intake by eating more whole grain breads and cereals; vegetables; and fruit and legumes such as beans, split peas and lentils.
- Drink between 8 and 12 cups of fluid every day in the form of water, milk and juice. Warm or hot fluids may be particularly helpful.
- Maintain an active lifestyle, for example, by walking or swimming regularly.
- Avoid all laxatives unless one is recommended by a physician.

In case of loss of appetite, advice the mother to:

- Eat small frequent meals spaced throughout the day (5-6 meals per day)
- Schedule regular eating time
- Eat protein from animal or plant source with snacks and meals whenever possible
- Drink plenty of liquids, preferable between meals
- Take walks before meals to stimulate appetite
- Choose and prepare food that look and smell good for them
- Use spices such as onions, garlic, cinnamon, and ginger to stimulate appetite, improve flavour and digestion
- Eat with others as this makes food more enjoyable

Iron deficiency anaemia

- Anaemic women are more likely to suffer from
  - PPH
  - Puerperal sepsis
- Iron requirements also increase after delivery
- Anaemic women or those who have suffered excessive blood loss during delivery need iron and folate supplementation post partum.
- They should consume a daily dose of 120 mg iron plus at least 400 µg folic acid for 3 months along with orange, pineapple, or citrus juice.
- The also need to restrict consumption of tea, coffee, and cocoa.

Nutritional advice for anaemic mothers

- Encourage consumption of foods rich in iron, folate, proteins and other nutrients needed for blood production.
  - Animal sources – Red meat, Liver, Kidneys, fish, poultry, eggs
  - Plant source – legumes(cow peas, kidney beans, Soya beans) fortified cereals, dark green leafy vegetables such as black night shade(managu), amaranth(Terere), spinach, stinging nettle(Thabai) and kales
- Provide foods rich in Vitamin B_{12}, Folic acid, Vitamin E and C
- Reduce intake of beverages that contain phenolic compounds and tannin such as tea leaves, wheat bran

Factors affecting bioavailability of iron

- Cooking methods: Soaking before cooking of cereals and legumes reduces the phytic effect. Cooking eggs softly avails more iron for use.
- Enhancers: Mixing of foods with Vitamin C rich foods (oranges, lemon, tangerines, Guavas, pineapples, Berries). Enhances absorption of iron.
- Fermentation, sprouting/germinating, malting of cereals enhances availability of iron and should be encouraged.
- Inhibitors: The practice of taking tea, coffee, chocolates with or immediately after food should be discouraged. They have polyphenols such as tannins that bind iron
- Iron from plant sources is not readily bioavailable as they contain phytates, oxalates and malic acid which inhibit iron absorption. These should therefore be taken together with enhancers.

Common nutrition related concerns

Nausea and Vomiting

- Practical Considerations
  - Eat small frequent meals, do not skip meals
  - Have a snack before bedtime
  - Try eating crackers or bread before getting up
  - Get out of bed slowly
  - Avoid high fat and dried foods
  - Drink fluids between meals
  - Avoid strong food smells

Heartburn

- Practical Considerations
  - Eat frequent small, low far meals
  - Eat slowly, chew food well
  - Drink fluids between meals
  - Avoid spicy food
  - Avoid lying down for 1-2 hours or bending after eating
  - Elevate head of bed
  - Do not take antacids without consulting doctor

Constipation

- Practical Considerations
  - Increase fiber intake, vegetables, fruits, legumes
  - Drink 8-12 cups of fluid every day
  - Maintain an active lifestyle
  - Avoid laxatives unless prescribed

Pica

- Practical Considerations
  - Advice woman on potential risks of eating non-food substances
  - Monitor for iron status

Relationship between Nutrition and PPH

Consequences of Iron deficiency anaemia:

Anaemic women are more likely to die from blood loss during delivery and the postpartum period

PPH

3. FOCUSED ANTENATAL CARE (FANC)

Introduction

- Demonstration exercise of counseling of an ANC client by participant:
  - The rest to identify what components were covered

What is FANC?

- Personalised care provided to a pregnant woman.
  - ✓ woman's overall health,
  - ✓ preparation for childbirth
  - ✓ and readiness for complications

- It is a service that is timely, friendly, simple and safe

- One of the High Impact Interventions (HII) for reducing maternal and perinatal deaths

Aim Of FANC

- To achieve a good outcome for the mother and baby and prevent any complications that may occur in pregnancy, labour, delivery and post partum

World Health Organisation recommends that:

- Women can benefit from just a **few antenatal visits**, as long as those visits are thorough.

- Ideally women should receive at **least 4 thorough**, **comprehensive, personalised** antenatal visits, spread out during the entire pregnancy.

- Always view **each visit** as if it were the **only visit** the woman may make. Many women may not come for 4 visits.

Four comprehensive, personalized antenatal visits:

- 1st visit: <16 weeks
- 2nd visit: 16-28 weeks
- 3rd visit: 28-32 weeks
- 4th visit: 32-40 weeks

- ***Note:*** ***Although these are the recommended minimum number of ANC visits, due to additional interventions service providers may give additional visits as appropriate***

Objectives of Focused Antenatal Care

1. Early detection and treatment of problems
2. Prevention of complications using safe, simple cost-effective interventions
3. Birth preparedness and complication readiness
4. Health promotion using health messages and counseling
5. Provision of care by a skilled attendant

Early Detection And Treatment Of Problems

Early Detection And Treatment Of Problems

- Service providers should identify existing medical, surgical or obstetric conditions during pregnancy. Such as:
  - Severe anaemia (Hb <7gm/dl)
  - Vaginal bleeding
  - Pre-eclampsia (increased BP, severe oedema)
  - RTI's, HIV and AIDS, TB and Malaria
  - Chronic diseases (diabetes, heart or kidney problems)
  - Decreased/absent foetal movement
  - Foetal malpresentation after 36 weeks

Why disease detection and not risk assessment?

- Risk approach is not an efficient or effective strategy for maternal mortality reduction

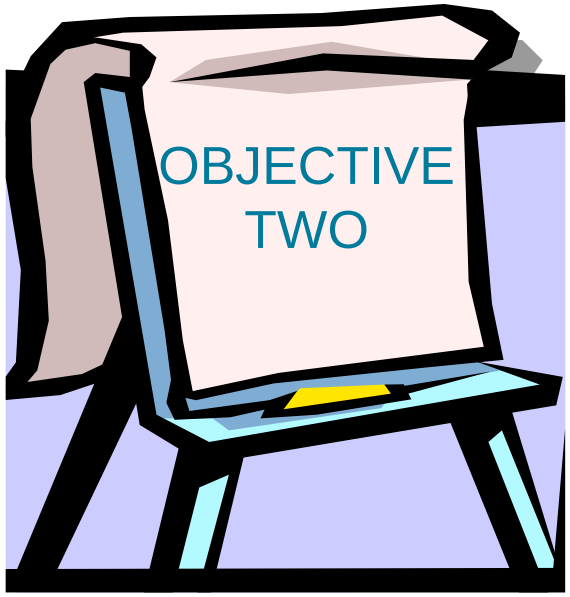
- Every pregnancy is at risk!
  - Risk factors cannot predict complications: (e.g. young age does not predict eclampsia)
  - Research showed that the majority of women who experienced complications were considered low risk (90% of women considered to be high risk, gave birth without experiencing a complication)

Why disease detection and not risk assessment cont..

- Risk factors do not predict problems. Most high risk women deliver without problems and most women who develop life-threatening complications belong to the low risk group

- Every pregnant delivering or postpartum woman is at risk of serious life-threatening complications

Every pregnant woman should be prepared for the possibility of complications



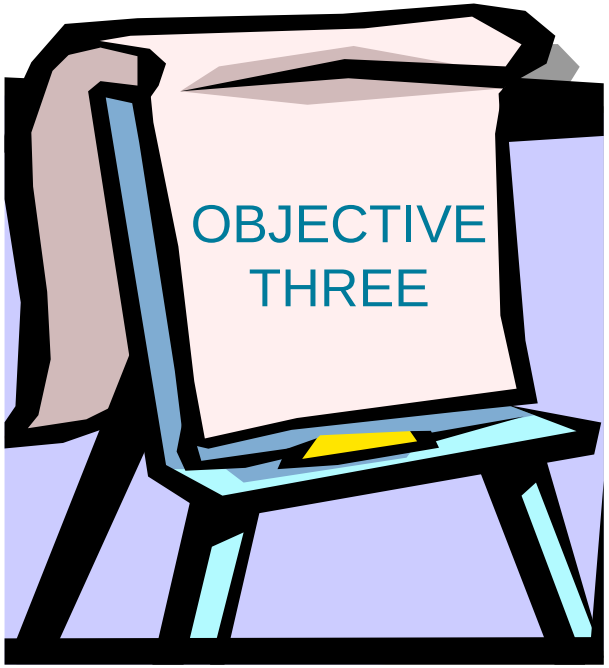
Prevention Of Complications

Prevention Of Complications

The service provider should ensure prevention of complications by providing:

- Tetanus toxoid to prevent maternal and neonatal tetanus
- Iron, folate supplementation to prevent anaemia
- SP for IPTp and LLINs to prevent malaria
- Ensure environmental hygiene to prevent intestinal worms
- Recommended presumptive treatment of hookworm infestation with Mebendazole 500mg STAT anytime after the first trimester*

*Basic Maternal and Newborn Care: A Guide to Skilled Providers



Birth Preparedness And Complication Readiness

Birth preparedness

Discuss components of birth plan which include:

- Place of birth
- Skilled attendant
- Transportation
- Emergency Funds
- Birth companion
- Items for clean and safe birth and for newborn

Individual birth plan ensures that the client:

- Knows when her baby is due
- Identifies a skilled birth attendant
- Identifies a health facility for delivery/emergency
- Tell the danger signs in pregnancy and delivery and knows what to do if they occur
- Identifies a decision-maker in case of emergency
- Knows how to get money in case of emergency
- Has a transport plan in case of emergency
- Has a birth partner/companion for the birth
- Has collected the basic supplies for the birth

Discuss birth partners/companions with your clients

- A birth partner/companion may be the father of the baby, a sister, a mother-in-law, mother, an aunt or friend
- A birth partner/companion should be involved in making the individual birth plan (IBP)
- A birth partner/companion should provide support to the woman particularly during preconception, pregnancy, delivery and postpartum period

Make sure clients at your facility know that you welcome birth partners/ companions

Mother-Baby Package

- New unused razor
- Thread/string
- Gloves
- Cord clamp
- Clothing for the baby and mother
- Money to pay for transport, delivery fees, etc
- Sanitary towels
- Napkins
- Lessos
- Cotton

Complication Readiness

- Knowledge of danger signs; what to do if they arise
- Identify decision maker
- Save emergency funds
- Plan for emergency transport
- Identify blood donor

15% of all pregnant women develop life-threatening complications requiring obstetric care*

These women could die if:

- Nobody is there to make timely **decisions at home and in the health facility.**
- No plans for referral or **transport** have been made.
- No plans on how to meet new **financial** demands are made.

** Yuster 1995, Fortney 1995 Antenatal Care*

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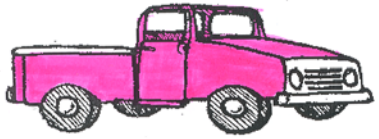
Specific transport questions for the client

- Where will you **deliver?**
- Where will you go in case of **an emergency**?
- **Where** is it located?
- **How** will you get there?
- **How far** is it from your home?
- **How long** will it take to get there?
- Have you made this **journey before**?
- **How much** will it cost to arrange for transport?
- **How** will you raise the funds for this transport?



Brainstorm
Financial planning in the community

In your community what are the systems/innovations in place to assist a pregnant woman in case of an emergency?

Some suggestions include:

- Developing a revolving fund from which families can borrow money.

  (To pay for transport to a referral facility, the family would have to pay back the debt after the birth).
- Planning before and after the birth to meet any eventualities.
- Health facilities setting aside part of their facility improvement fund, to meet emergency services and transport costs

Individual Birth Plan (IBP) !!

*Make it safe for my **baby and me!***

*Assist me make my **individual birth plan now!***

Danger Signs in:

1. Pregnancy
2. Labor & delivery
3. After delivery

Danger signs in pregnancy

- Any vaginal **bleeding in pregnancy**
- Severe **headache** or blurred vision
- **Swelling** on the face and hands
- Convulsions or **fits**
- High **fever >38°C**
- **Labored** breathing

Danger signs in pregnancy cont..

- Premature labour pains
- Draining liquor amnii
- Reduced, increased or absent fetal movements
- Vaginal discharge, genital ulcers, painful urination
- Abdominal pain
- Persistent vomiting

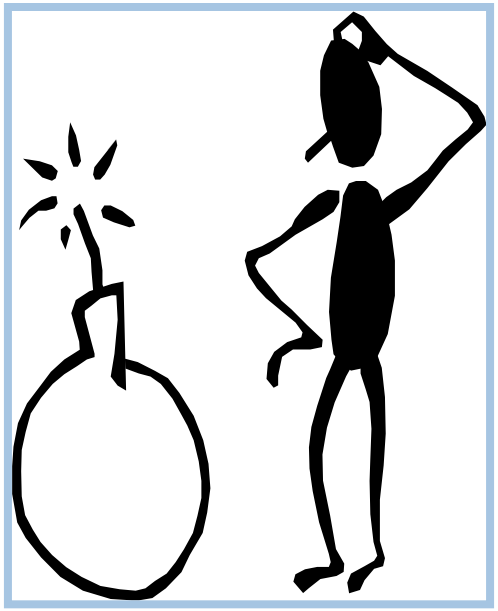
Danger signs during labour and delivery

- Severe headache/visual disturbances
- Severe abdominal pain
- Convulsions or fits during labour
- High fever with or without chills
- Foul vaginal discharge
- Labour pains for more than 12 hours
- Ruptured membranes without labour for more than 12 hours
- **Excessive bleeding during delivery**
- Cord, arm or leg prolapse

Danger signs after delivery

- Placenta not delivered within 30 minutes of baby's birth
- **Excessive bleeding after delivery**
- Severe abdominal pain
- Convulsions or fits
- High fever with or without chills

Recognize danger signs and get prompt medical attention!



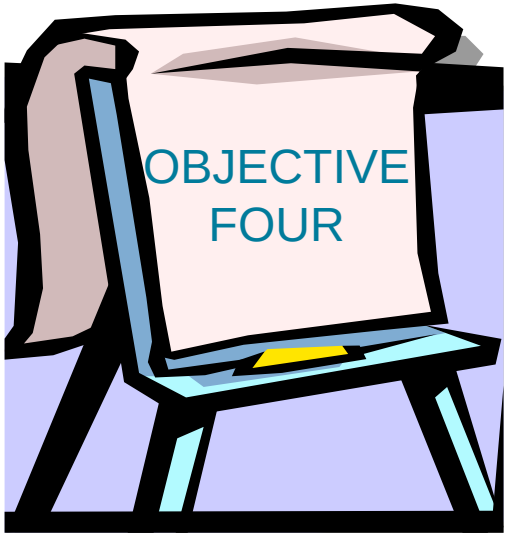
Acting quickly is important because a woman could die in a short period of time:

- in **antepartum hemorrhage** she can die in just **12 hours.**
- in **postpartum hemorrhage** she can die in just **2 hours.**
- with complications of **eclampsia** in as few as **12 hours** and
- with **sepsis** in about **3 days!**

Immediate Attention!

Don't lose precious time…

Seek help in time!!



Health Promotion Messages And Counseling

Health promotion messages and counseling

Encourage dialogue on the following:

- Nutrition
- Rest and hygiene
- Safer sex
- Care for common discomforts
- Use of SP for IPTp & LLITNs
- Drug compliance
- FP & HTSP
- Early and EBF
- Newborn care

Maintain the woman's health and survival through:

Health education and counselling on:

- Danger signs in pregnancy
- Adequate nutrition and hydration
- Early and exclusive breastfeeding
- Prevention and treatment of RTIs and worm infestation
- Avoidance of alcohol and tobacco
- Individual Birth Plan (IBP)
- Complication readiness plan

To counsel the mother on…

- Importance of attending postpartum clinic:
  - *within 48hours*
  - *2 weeks*
  - *4-6 weeks*
  - *4-6months*
- Importance of attending well baby clinic (MCH)
- Follow up for exposed babies to TB and HIV
- Postpartum family planning method
- Maternal nutrition and infant feeding options

Postpartum Family Planning Timeline

Ante Natal

FP/Child Spacing intentions

Intra Partum

LAM
IUCD
BTL

Postpartum

48 hours

LAM
IUCD
BTL
Vasectomy
Condoms
Progestin- only (if not BF)

1- 2 weeks

LAM
Vasectomy
Condoms
Progestin- only if not BF
Plan for combined hormonals at 3 weeks if not BF

4 -6 weeks

LAM
IUCD
BTL
Vasectomy
Hormonals, (prefer progestin-only if BF)
Condoms & other barriers
Natural FP methods (non BF) once menses pattern established

4 - 6 months

LAM transition
IUCD
BTL
Vasectomy
Hormonals
Condoms& other barriers
Natural FP methods once menses pattern established

Teach mothers about the importance of immunizations, vitamin A and their schedules:

Period	Vaccine
Birth	BCG, Oral polio
6 weeks	Pentavalent, Pneumoccocal
10 weeks	Pentavalent, Pneumoccocal
14 weeks	Pentavalent, Pneumoccocal
6 months	Vitamin A
9 months	Measles, Yellow fever*
12 months	Vitamin A

- Immunize baby with birth BCG and OPV before the mother leaves the health facility
- All babies delivered at home should be taken to the health facility for immunization

** Only in selected districts in Rift Valley*

Provision of Skilled Care

Provision of Skilled Care at Birth

- Currently only 44% of pregnant women receive skilled care at birth (KDHS,2008/9)
- A skilled attendant offers services either at:
  - the health facility
  - within the community (community Midwifery practice)
- FANC provides an opportunity to increase skilled care

Brainstorm strategies in your catchment area in support of increased skilled care

During FANC visits, ensure:

History taking:

- Current complaints
- Identify danger signs
- Dietary history
- Tetanus vaccination status
- Reproductive history
- History of medical illness

Examination:

- General assessment
- Head to toe
- Breast
- Abdominal
- Pelvic

Provide:

- Iron, folate
- SP for IPTp , LLINs (malaria endemic zones)
- Tetanus toxoid
- Nevirapine for newborn, AZT or ART for mother if recommended

During FANC visits, ensure cont…

Counseling on:

- Danger signs
- Individual birth plan (IBP)
- Complication readiness
- Nutrition, breastfeeding, FP, safer sex, hygiene, PMTCT
- Return date

ANC Profile

Most of the lab work should be done during the **first visit*

- Sputum for AFB (if indicated)
- Urinalysis
- HIV
- Hb, grouping and Rh factor
- VDRL/RPR
- Sickle cell, Stool and Hepatitis B (if indicated)

Are we together?

- Mention the purpose of focused antenatal care?
- **YES! We are together!**

Are we together?

Mention:

- 5 important questions to ask about an Individual Birth Plan (IBP)
- Danger signs in pregnancy
- Danger signs in labour and delivery
- Danger signs after delivery

The role of fathers/partners in antenatal care

- Many men are uncertain about how they can contribute to a woman's health during pregnancy, labor and delivery and postnatal period

The role of fathers/partners is to:

- Support and encourage women throughout pregnancy, labor and delivery and postnatal period
- Protect their spouses from acquiring STIs (or HIV) by being faithful or consistently and correctly using condoms
- Encourage mothers to attend antenatal/postpartum clinic
- Accompany their wives/partners to the health facility during childbirth

Service providers should educate fathers about antenatal care

- Fathers should make sure that the woman:
  - has enough nutritious food to eat and that she has taken iron and folate tablets; and other prescribed drugs/supplements
  - is sleeping under a long lasting insecticidal net and is able to get adequate rest
  - has had tetanus toxoid and SP for IPTp as per schedule
- Make sure that the couple has an IBP and knows the danger signs in pregnancy and labor

Adolescents and pregnancy

- In Kenya, the percentage of teenagers who have begun child bearing declined from 23% in 2003 to 18% in 2008-09*
- Pregnant youths are entitled to the same quality of care as older women
- Adolescents tend to delay seeking care due to negative socio-cultural practices and as such more attention should be directed to them
- Services should be provided in an acceptable, non-judgmental manner, convenient. Confidentiality should be provided to the adolescents

Note: This will encourage the young women to return for continued antenatal/postpartum services

* Kenya Demographic Health Survey

Reinforce counseling to the adolescents /youth on..

- Peer influence
- Early ANC attendance
- Safer sex (ABCD)
- Dangers of drug abuse
- RTI/STI, TB, HIV and AIDS
- Family Planning
- Dangers of abortion

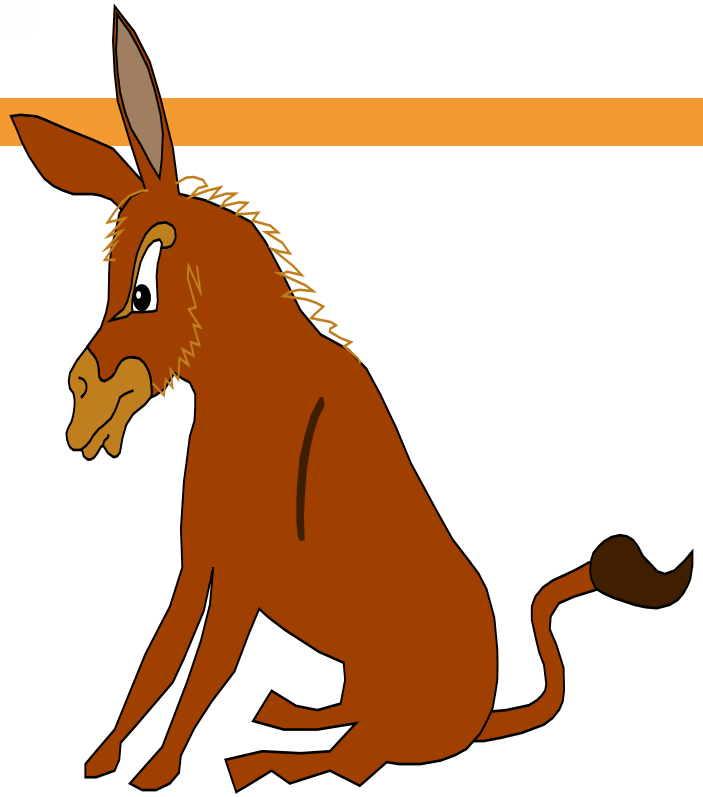
Antenatal care and adolescents

Brainstorm

- What are the attitudes of service providers about providing antenatal care to adolescents in your clinic?
- Why do providers treat adolescents differently?
- Does your clinic provide antenatal services to adolescents?
- Are the services in your clinic youth-friendly?

Brainstorm

How can we change our attitudes about providing care for adolescents?



Role play

Using a role play demonstrate how you can change your attitude towards giving care to a young single pregnant woman who walks into your clinic seeking antenatal services.

Treat her with respect, give her adequate information and treatment because you (counselor) believe and understand it is your duty to treat her as any other pregnant woman.

Before the woman leaves your clinic, STOP and ask her if she:

- Has a supply of iron and folate tablets
- Has taken her SP for IPTp and has had her tetanus toxoid injection
- Knows the danger signs in pregnancy and child birth
- Knows her appointment for the next ANC visit and SP dose
- Has an individual birth plan
- Has been screened for TB
- Knows the importance of using postpartum family planning

Integrated FANC Services

Preconception care

TB

RTIs

PMTCT

LAB

MALARIA

CCC

Link between FANC and PPH

1.Early detection and treatment of problems

5.Provision of Skilled Care at Birth

PPH

2.Prevention of complications

4.Health promotion

3.Birth preparedness and complication readiness

4. POSTPARTUM HEMORRHAGE (PPH)

Definition of Postpartum Hemorrhage

- Blood loss in excess of 500mls following vaginal delivery or 1000mls following C/S

Blood loss varies with the woman's Hemoglobin level

Types of PPH

- **Primary PPH**
  - within 24 hours of childbirth
- **Secondary PPH**
  - 24 hours following childbirth until 6 weeks

Causes of PPH

- **The 4Ts**
  - Tone 70%
  - Trauma 20%
  - Tissue 10%
  - Thrombin 1%

1. Uterine Atony

- This is when the uterus fails to contract adequately
- Commonest cause of PPH
- Can result in maternal death within 2 hours

Predisposing factors for uterine atony

- Retained placenta, placental fragments, tissue/membranes
- Overdistension of the uterus due to multiple gestation, excess amniotic fluid or a large baby
- High parity
- Prolonged labour
- Induction or augmentation of labour
- Precipitous labour (labour lasting less than 3 hours)
- Full bladder

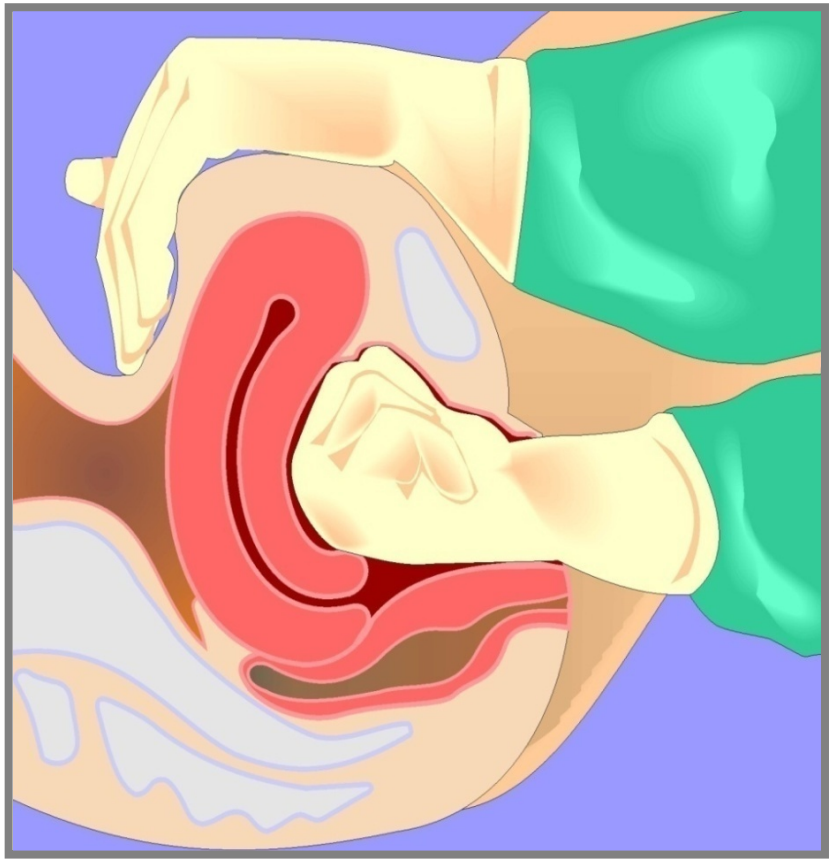
Management of Atony

- Expel clots
- Empty the bladder
- Uterine massage
- Bimanual uterine compression and massage
- Repeat oxytocin 10IU IM

If the uterus is still atonic:

- Administer IM ergometrine 0.5mg
- Start IV oxytocin infusion 20-40IU at 60 drops per minute
- If unskilled, refer for further management

Bimanual uterine compression and massage



2. Trauma

This includes:

- Trauma to the perineum, vagina, cervix or uterus
- Tears of the birth canal are the second most frequent causes of PPH
- Tears may co-exist with atonic uterus Postpartum bleeding with a contracted uterus is usually due to a cervical or a vaginal tear
- Episiotomies that are not repaired or poorly repaired can be a cause of severe bleeding

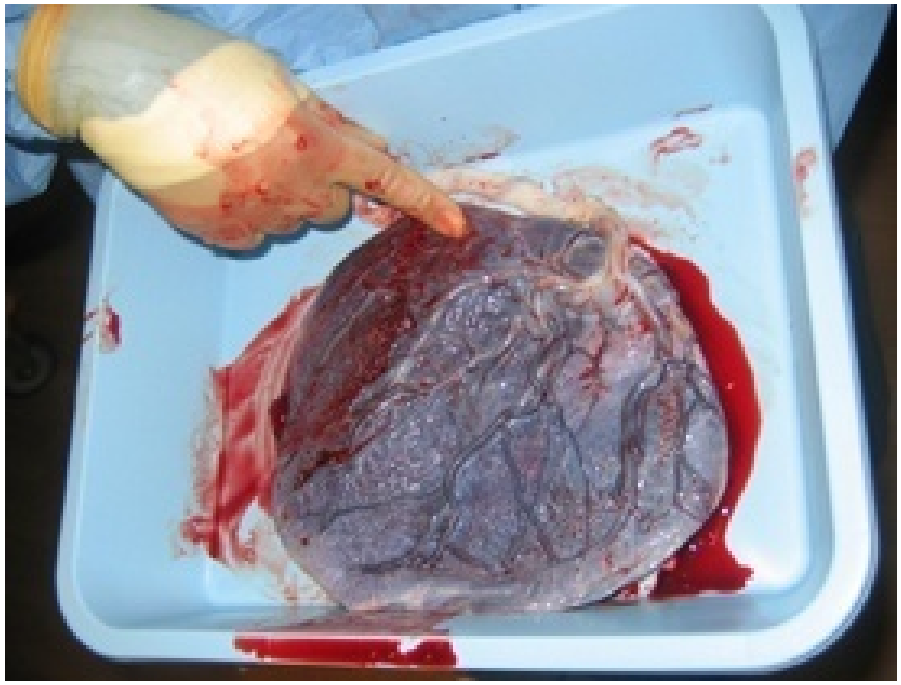
Management of Trauma

- Examine the cervix, vagina, perineum

- Repair lacerations and tears
- If unskilled, clamp bleeding vessel and refer
- Uterine rupture requires laparotomy

3. Tissue

- Retained Placenta*:* failure to deliver the placenta within 30 minutes of childbirth



Predisposing factors:

- Previous C/S
- Previous history of retained placenta
- Previous dilatation and curettage
- Previous placenta praevia

4. Thrombin

- This is when the blood fails to clot despite routine interventions
- It is a rare occurrence

Predisposing Factors

- Severe pre-eclampsia
- Placenta abruption
- Intrauterine foetal death
- Amniotic fluid embolism
- Excessive bleeding
- Infection
- Genetic factors

Management of PPH

- Call for help
- Empty the bladder
- Give oxytocin IM
- Massage uterine fundus
- Cross-match blood
- Determine the cause and manage accordingly

Management of PPH Due to Placenta

Placenta In

- Empty Bladder
- Rub Uterus
- DO CCT

If placenta still In:

- Repeat oxytocin
- Manual removal

Placenta Out

- Massage Uterine fundus
- Expel clots

- **If bleeding persists**
- Inspect genital tract
- Repair lacerations
- If unskilled, clamp and refer

Management of PPH Due to Atonic Uterus

- Massage uterine fundus
- Expel clots
- Repeat uterotonics

If bleeding persists:

- Repeat oxytocin
- Bi-Manual compression
- Empty bladder
- Explore in theater
- Manage atonic uterus with oxytocin infusion
- Monitor vital signs and bleeding

Management of PPH Due to Lacerations

- Inspect genital tract
- Repair lacerations
- If unskilled, clamp and refer

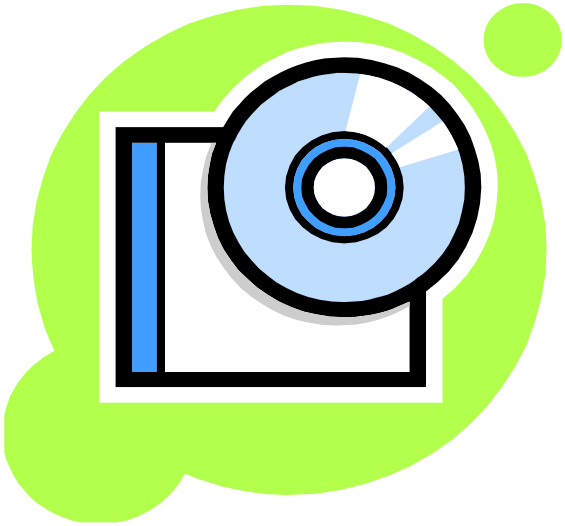
If bleeding persists:

- Repeat oxytocin
- Bi-Manual compression
- Empty bladder
- Explore in theater
- Manage atonic uterus with oxytocin infusion
- Monitor vital signs and bleeding

Prevention of PPH by Active Management of Third Stage of Labour (AMTSL)

- AMTSL by skilled attendant prevents PPH
- All women should **be considered at risk of PPH** and prevention must be a part of every intervention

3 Steps of AMTSL



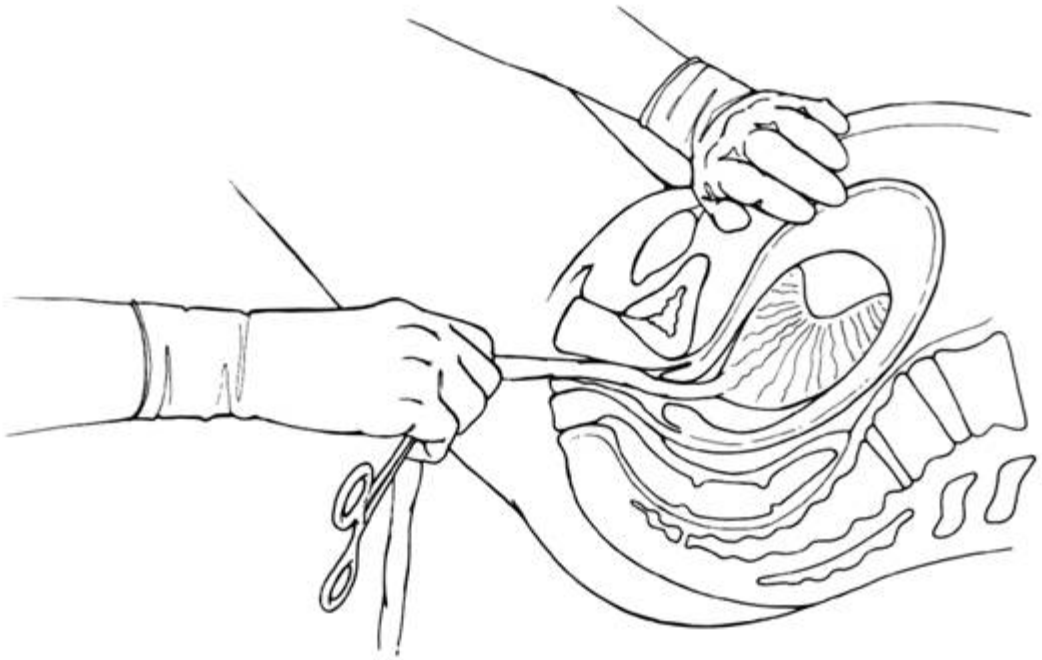
1. Give uterotonic drug (oxytocin 10 IU IM is the uterotonic of choice) within 1 minute of childbirth, after ruling out the presence of another baby.

2005. “Active Management of the Third Stage of Labor: A Demonstration” [CD-ROM]. Copyright © 2005 by JHPIEGO.

Step 1 cont..

- Oxytocin is preferred because:
  - it is effective 2-3 minutes after injection
  - Has minimal adverse effects
  - Can be used in all women
- If oxytocin is not available, ergometrine can be used as 0.25mg IM
  - Ergometrine is contraindicated in women with pre-eclampsia/eclampsia, high blood pressure and cardiac disease

2. Deliver the placenta by controlled traction on the umbilical cord and counter pressure to the uterus.



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Step 2 Cont..

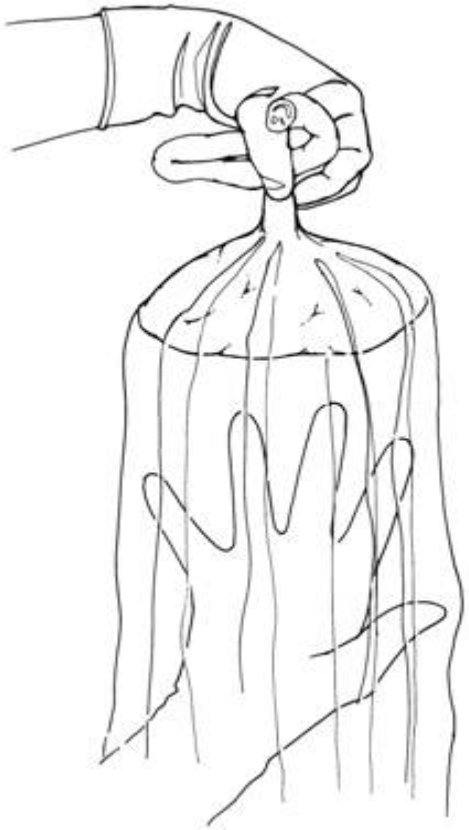
- Clamp the cord close to the perineum using sponge forceps
- Hold the clamp cord and the end of the forceps with one hand
- Place the other hand just above the woman's pubic bone and stabilize the uterus by applying counter traction during CCT
- Keep slight tension on the cord and await a strong uterine contraction. When the cord lengthens, very gently pull downwards to deliver the placenta
- Do not wait for a gush of blood

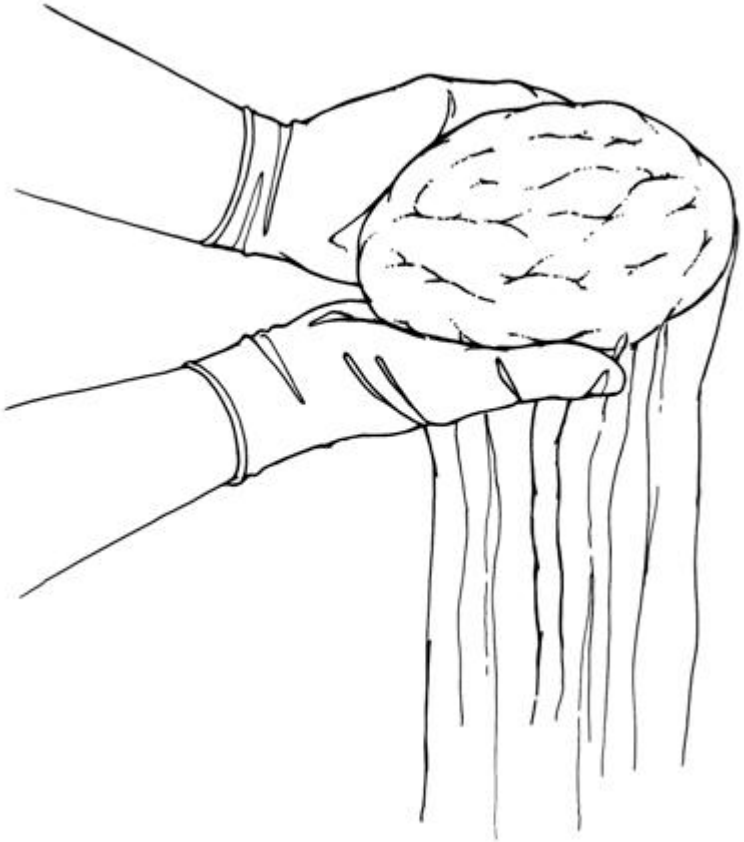
3. Massage the uterus through the abdomen after delivery of the placenta until uterus is contracted

Step 3 cont..

- Repeat the uterine massage every 15 minutes for the first hour
- Ensure that the uterus does not become relaxed after you stop uterine massage
- Ensure the urinary bladder is empty

Remember to examine the placenta





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Examination of the placenta cont..

- This is done to ensure completeness. If a portion of maternal side is missing suspect retained placental fragment
- Inspect placenta for infarcts, presence of a retro placental clot and other abnormalities
- Examine the blood vessels in the cord. (Two arteries and one vein)
- Weigh the placenta
- Record all findings

Inspect the lower vagina and perineum for lacerations

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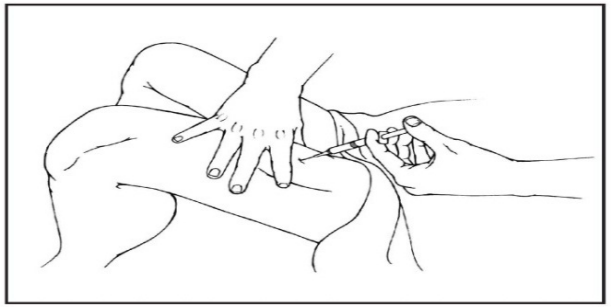
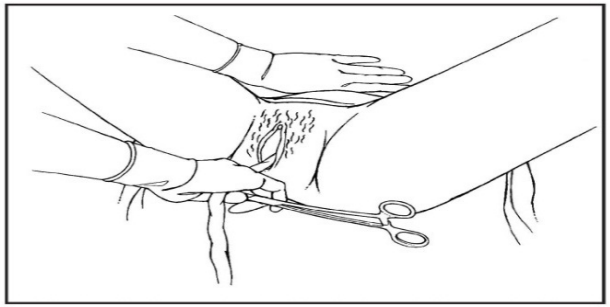
Active Management of the Third Stage of Labor (AMTSL)

Offer to every woman...

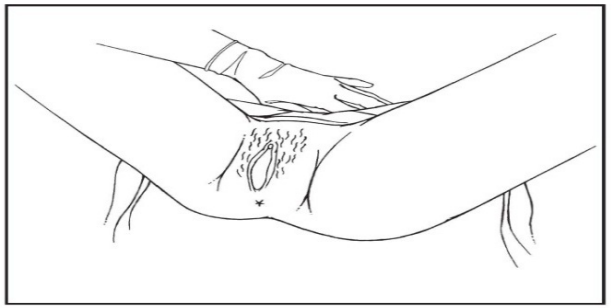
1 Give oxytocin within 1 minute of childbirth.



2 Deliver the placenta by controlled traction on the umbilical cord and counter-pressure to the uterus.



3 Massage the uterus through the abdomen after delivery of the placenta.



! During recovery, palpate the uterus through the abdomen every 15 minutes for two hours to make sure it is firm and monitor the amount of vaginal bleeding.

...at every birth, by every skilled provider.

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RTI International PATH EngenderHealth
International Confederation of Midwives JHPIEGO
International Federation of Gynecology and Obstetrics (FIGO)

POPPHI Prevention of Postpartum Hemorrhage Initiative

Illustrator: Kimberly Battista

Review Of Uterotonics

Definition

- Uterotonics are substances that stimulate uterine contractions and increase uterine tone

Common Uterotonics

Trade Name	Generic Name
Syntocinon/Pitocin	Oxytocin
Methergine	Ergometrine
Syntometrine	Ergometrine+ Oxytocin
Misoprostol (Cytotec)	E1 analog prostaglandin

Comparison of Uterotonics

	Oxytocin	Ergometrine	Misoprostol
Works the fastest	X		
Has the longest action		X	
Causes tonic contractions		X	
Has a common side effect of shivering and elevated temperature			X
Has a common side effect of headache		X	
Is contraindicated in women with or having history of hypertension, heart disease, retained placenta, pre-eclampsia, eclampsia		X	
Has no contraindications when administered in the postpartum period	X		X
Easy to administer			X

Characteristics of Uterotonics

	Oxytocin	Misoprostol	Ergometrine
Stability when exposed to heat*	2	1	3
Stability when exposed to light*	2	1	3

***Most stable: 1; Least stable: 3**

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Effectiveness after 1 Year of Controlled Storage

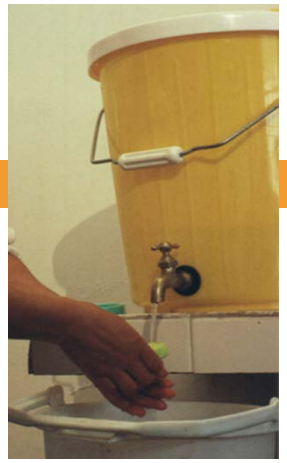
Drug	Dark 4-8^{0}C	Dark 30^{0}C	Light 21-25^{0}C
Ergometrine	5% loss	31% loss	90% loss
Oxytocin	0% loss	14% loss	7% loss

Practicum/ skills review

- Practice
  - AMTSL
  - Bimanual compression of uterus

5. INFECTION PREVENTION

Infection Prevention (IP)



- All providers must adhere to good infection prevention practices in all procedures.

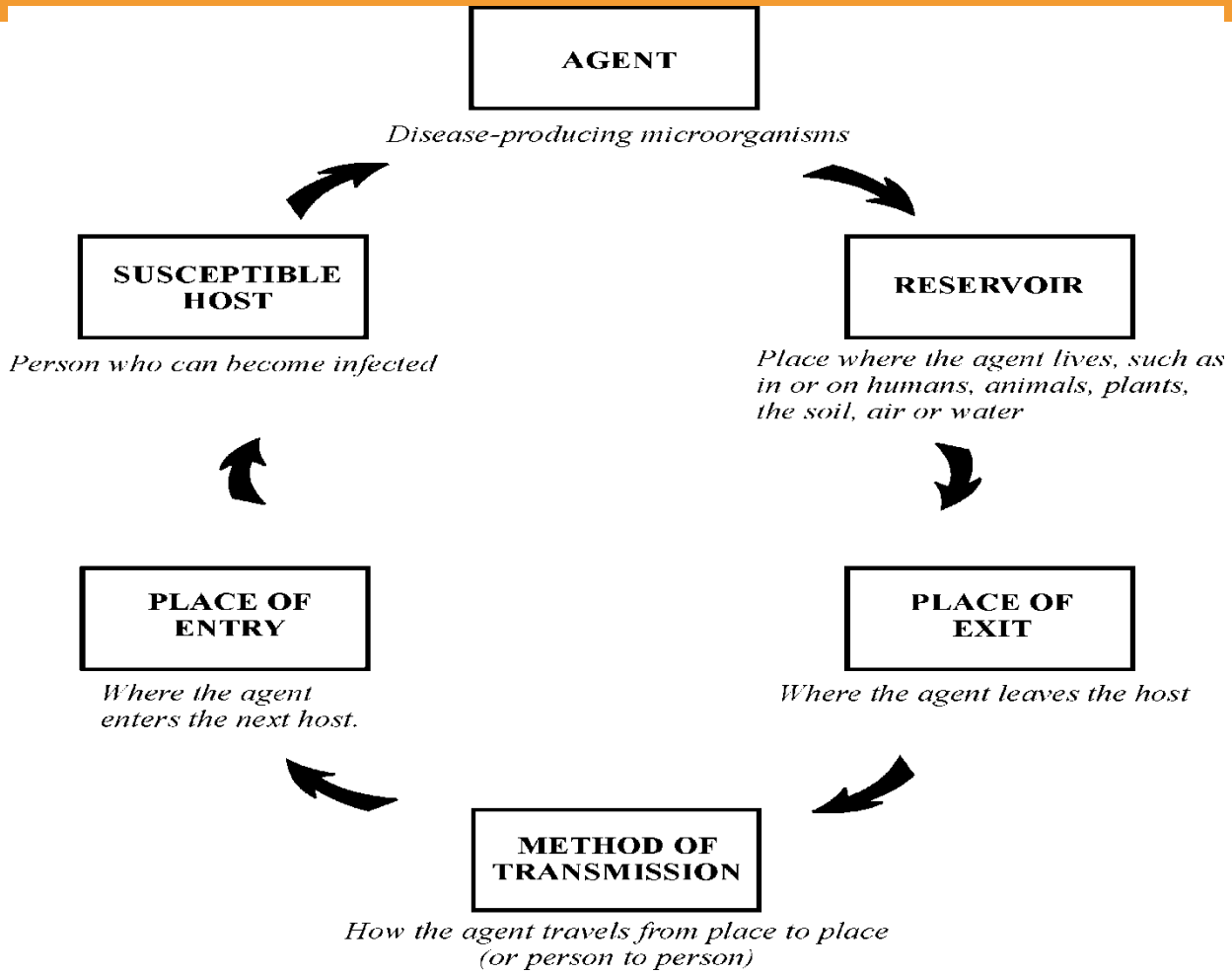
Let's brainstorm about IP :

- What is it?
- What is are its components?

Disease Transmission cycle

- Infectious agent
- Reservoir – place where agent survives/grows
- Place of exit-route where the agent leaves the reservoir
- Mode of transmission
- Place of entry
- Susceptible host

The Disease Transmission Cycle



Six components of the disease transmission cycle

In order for diseases to move from person to person the following conditions must exist:

- **Agent** (micro organism that produces disease e.g. bacteria).
- **Reservoir** (place where agent lives such as in or on humans, animals, plants, the soil, air or water).
- **Place of exit** (where the agent leaves the host).
- **Method of transmission** (how the agent travels from place to place or person to person).
- **Place of entry** (where the agent enters the next host).
- **Susceptible host** (person who can become infected).

The cycle repeats itself; infectious diseases are prevented by breaking the cycle.

Understanding the Disease Transmission Cycle (1)

- All microorganisms can cause infection.
- All humans are susceptible to most infectious agents unless immune (naturally or by vaccination).
- Risk of infection is related to the number and virulence of organisms.
- Number of organisms needed to cause infection varies with location (blood stream—least; intact skin— greatest number of organisms).

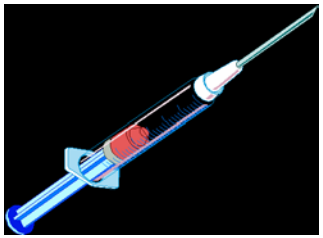
Understanding the Disease Transmission Cycle (2)

Diseases can be transmitted from:

- **Health worker to patient** – through unwashed hands, contaminated sharps
- **Patient to health worker** – through accidental pricks, contact with blood
- **Health worker to family and community** – through contaminated clothes and shoes from workplace
- **Health facility to community** – through improper disposal of medical waste.

Definition of Infection Prevention

- It is a collective effort made by healthcare providers and clients to prevent or minimize the risks of transmitting to other clients or to other healthcare providers.
- It also aims to make instruments free from infective organisms and safe for use.



Universal precautions

- Hand washing
- Wearing of gloves, eye protection or face shields and gowns
- Correct handling, transporting, and processing of instruments, used/soiled linens and client care equipment
- Safe use and disposal of needles and sharps (avoid re-capping)
- Promptly cleaning up blood and body fluid spills
- Using safe disposal systems for waste collection and disposal
- Practice of environmental cleanliness.

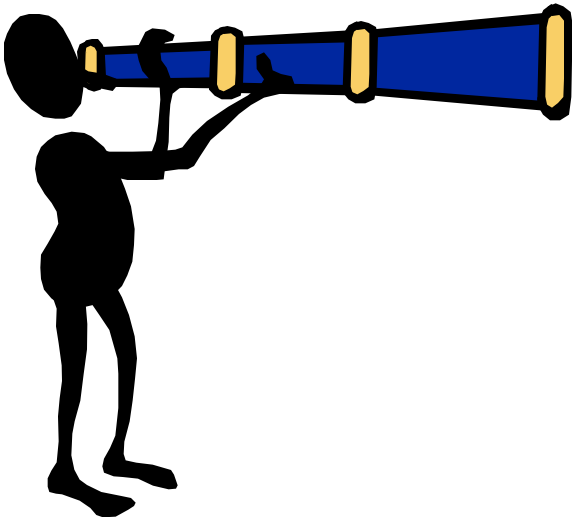
Hand Hygiene

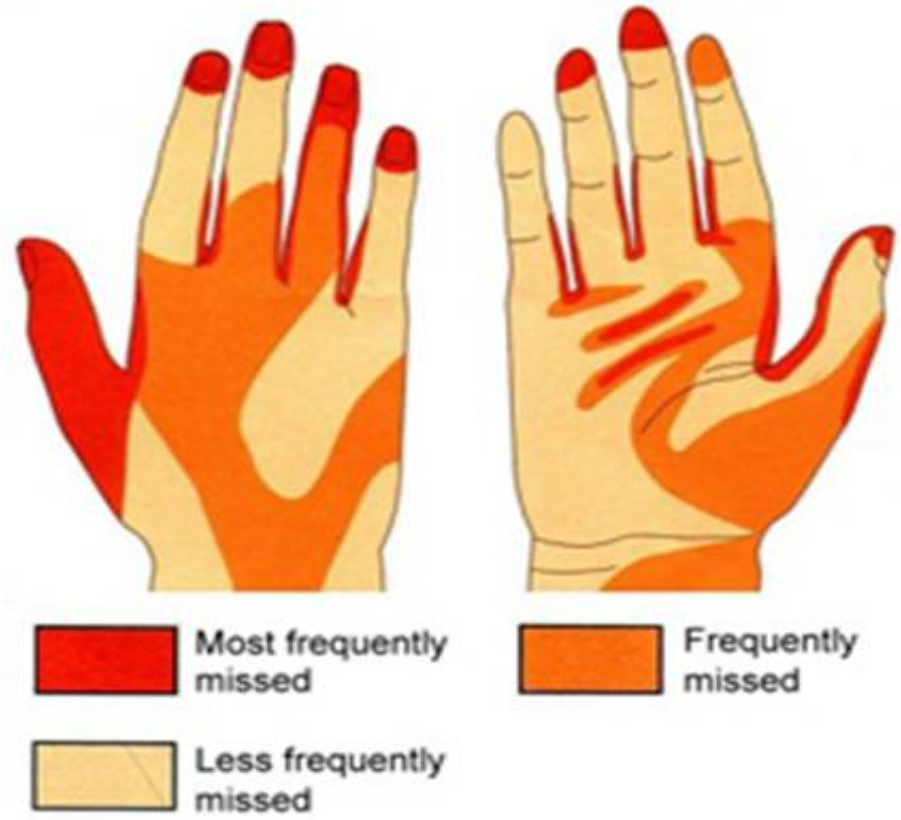
Hand Washing exercise

Requirements:

- Clean gloves
- Betadine/ colored water
- Used Flip charts

Commonly Missed Areas Of The Hands





Hand Hygiene

Definitions

- Hand hygiene is an action intended to prevent hand-borne infections by removing dirt and debris and inhibiting or killing microorganisms on skin. It includes care of hands, nails and skin.

Skin Flora

Microbes on the hands can be divided into transient and resident.

1. **Transient flora** rest on the superficial layers of the skin. They are often acquired by healthcare worker during contact with patients. These microorganisms are easily transmitted by contact and are mostly associated with cross transmission. Fortunately, they are easily eliminated by hand washing.
2. **Resident Flora** lives permanently in the deeper layers of the skin (epidermis), and is more resistant to removal. This flora is transmitted like transient flora and constitutes a serious danger within hospitals.

Types Of Hand Hygiene

Hand hygiene include:

1. Routine hand washing
2. Hand antisepsis
3. Alcohol hand rub
4. Surgical hand scrub
5. Gloving
6. Care of nails

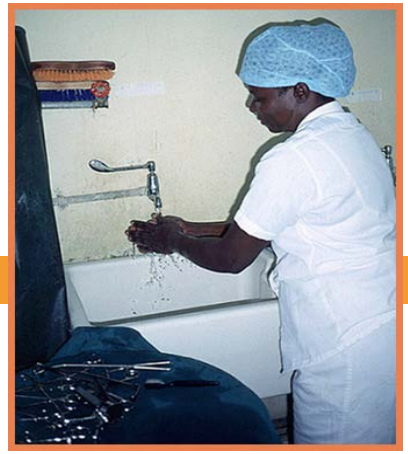
1. Routine Hand Washing

- Routine hand washing is a process of mechanically removing soil, organic materials, dirt and transient microorganisms from the hands using plain soap and water. Simple hand wash using soap, water and friction removes 99% of transient bacteria.
- Elements essential for effective hand washing are;
  - Soap,
  - Clean running water,
  - Friction, and
  - Drying.

When to Perform Hand Washing

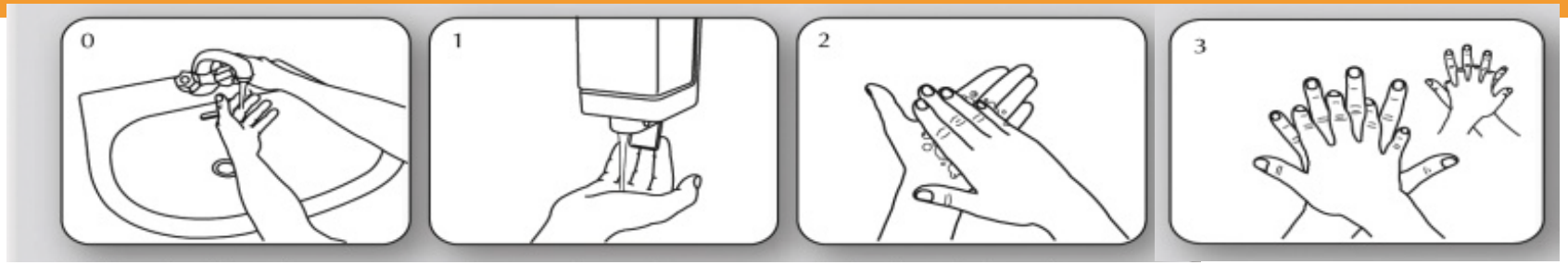
- Immediately you arrive at work
- Before and after examining each patient/client
- Before putting on gloves and after removing any kind of gloves
- Before preparing medication
- After touching any instrument or object that might be contaminated with blood or other body fluids.
- After handling blood, urine, or other specimens.
- After using the toilet or latrine
- Before preparing, handling, serving, or eating food
- Before feeding a patient
- Before leaving work

Steps to Routine Hand Washing

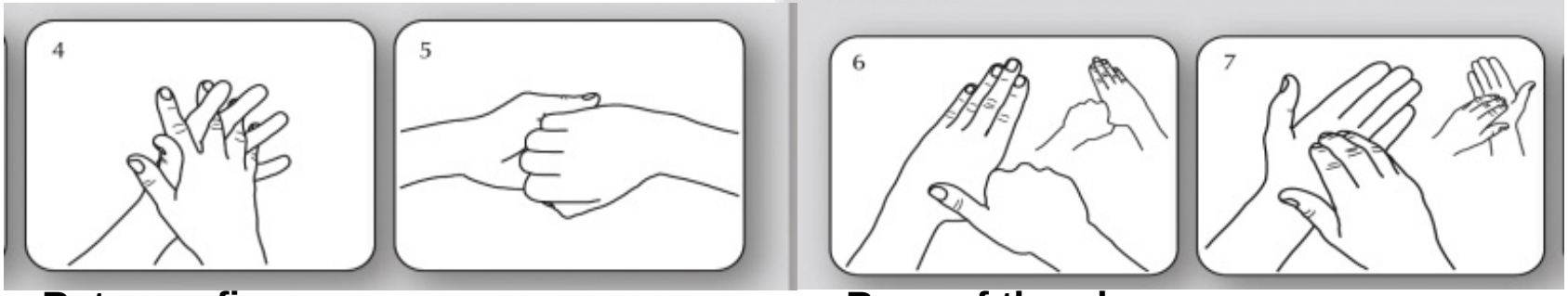


- Turn on tap.
- Thoroughly wet hands under running water.
- Lather hands adequately (using liquid or bar soap).
- Vigorously rub all areas of hands and fingers paying close attention to fingernails and between fingers.
- Rinse hands thoroughly with clean running water from a tap or bucket.
- Put a little water in your hands, rinse the tap and turn it off.
- Dry hands with paper towel or a clean, disposable towel. If towels are not available, shake off excess water and allow hands to air-dry. The whole process takes 60 seconds.

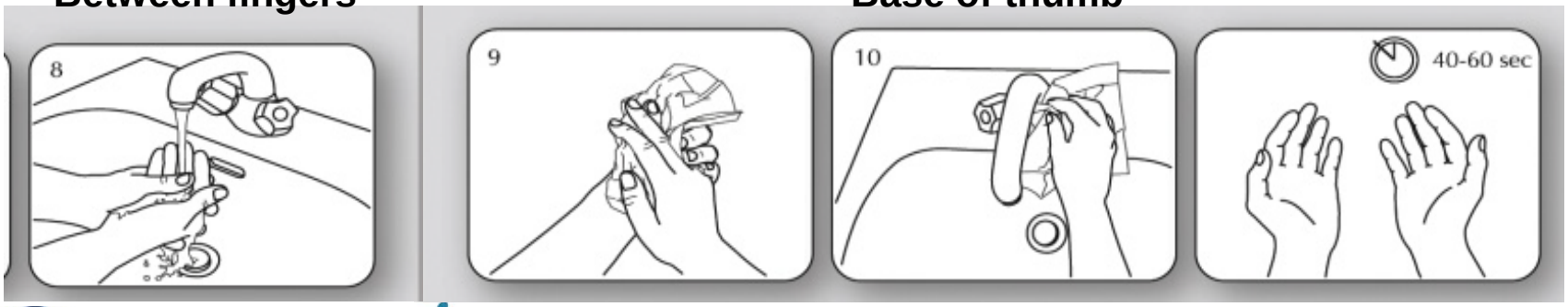
Steps In Hand Washing



Wet hands | Apply soap | Rub palm to palm | Back of hands



Between fingers | Base of thumb



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Alternative Sources Of Running Water

- A bucket with a tap can be used- water is turned *on* to wet hands, *off* to lather hands and turned *on* again for rinsing.
- A pitcher or tea kettle can provide a running stream of water. A **helper** can pour water from over the hands being washed.
- A “Tippy Tap” can be fashioned from a jerry can and piece of wood to provide a steady stream of water.

Other issues in hand hygiene (1)

1. **Lesions and Skin Breaks**
   - Minor wounds on the hands or skin lesions must be covered with moisture proof dressings.
   - If possible, healthcare workers with skin lesions should not participate in direct contact with patients.
2. **Fingernails**
   - Fingernails must be kept short and clean.
   - Chipped nail polish may support the growth of larger numbers of microorganisms.
   - Artificial nails can contribute to nosocomial infections

Other Issues In Hand Hygiene (2)

3. Jewelry:

- Rings (including wedding/marriage ring), bracelets and wrist watches may not be worn.
- It is impossible to clean and/or decontaminate the skin adequately when it is covered by jewelry.
- Rings and watches make donning gloves more difficult and may cause gloves to tear more easily.

Hand Antisepsis

- **Hand Antisepsis** removes soil and reduces or slows the growth of both transient and resident flora on the hands. The technique is similar to plain hand washing except that it involves the use of an antiseptic agent instead of plain soap.

When to use Hand Antisepsis

Hand antisepsis should be performed **before**:

- Examining or caring for highly susceptible patients (e.g., premature infants, elderly patients, those with advanced AIDS);
- Performing an invasive procedure such as placement of an intravascular device; and
- Leaving the room of patients on contact precautions (e.g., flu, hepatitis A or E) or who have drug resistance infections (e.g., methicillin-resistant *S. aureus* [MRSA]).

Alcohol Hand Rub

Definition:

Alcohol-based hand rub is a liquid solution which removes transient flora and reduces resident flora. It is sometimes referred to as antiseptic hand rub. It contains 60-90% ethyl or isopropyl alcohol, an emollient and often an additional antiseptic, chlorhexidine, that has a residual action. It can only be used when hands are not visibly soiled.

How to make Alcohol Hand Rub

To make your own, low cost hand rub, combine:

- 100 ml of 60-90% Ethyl or Isopropyl Alcohol and
- 2 ml of Glycerin
- Shake and then it's ready for use!!

How to use Alcohol Hand Rub

Use of an alcohol-based hand rub is the preferred method to decontaminate hands.

1. Apply sufficient volume of product to the palm of one hand and rub hands together, covering all surfaces and fingers until hands are dry.
2. Do not rinse the hands after applying the hand rub.
3. Do not apply on top of gloves
4. Do not use in place of soap.
5. It is quicker and easier to perform and gives a greater initial reduction in hand flora.

Surgical hand scrub

Definition

- It is the mechanical removal of soil, debris and transient organisms on hands using liquid soap, running water, antiseptics and friction before surgical procedure.

When To Perform Surgical Hand Scrub

- Prior to performing any surgical procedure,
- Hand washing with antiseptics before the surgical procedure helps prevent growth of microorganisms and reduces the risk of transmitting infections to the patient if the surgeon's gloves develop holes, tears, or nicks during the procedure.

Steps in Surgical Hand-scrub(1)

1. Remove rings, watches, and bracelets.
2. Thoroughly wash hands and forearms to the elbow with soap and running water to remove dirt and transient flora.
3. Clean nails with a nail cleaner.
4. Rinse hands and forearms with clean running water.
5. Apply an antiseptic agent
6. Vigorously wash all surfaces of hands, fingers, and forearms for at least 2 minutes.

Steps in Surgical Hand-scrub (2)

7. Rinse hands and arms thoroughly with clean water.
8. Using a sterile towel, dry the fingertips to 5 centimeters above the elbow. Use one side of the towel to dry the first hand and the other side of the towel to dry the second hand.
9. Keep hands above the level of the waist and do not touch anything before putting on a sterile gown and surgical gloves
10. Put on sterile or HLD gloves.

Encourage Patients to Wash Hands

- Do not overlook the **patient's need to wash** his or her hands, particularly after toileting or before and after eating.
- Encourage ambulatory patients to wash their hands regularly.
- Ensure availability of hand washing facilities (improvise if no running water).

Benefits of good hand hygiene

Proper hand hygiene has been shown to:

- Terminate outbreaks of diseases spread by person to person contact
- Reduce staff illness and absenteeism
- Reduce overall infection rates
- It is the single most effective way to reduce the risk of spreading or acquiring infection .
- Stop cross contamination, which leads to food poisoning.

Bad Hand Hygiene Practices

- Using a pair of gloves for a long time instead of practicing hand hygiene
- The use of spirit to decontaminate your hands.
- The use of bleach to decontaminate your hands.

Challenges to Hand Hygiene

Some of the reasons people do not wash their hands:

- Inconvenient or no sinks
- Lack of soap or paper towels
- Too busy / No time
- Causes skin irritation or dryness
- Think the risk of transmitting disease is low
- Understaffed / Overcrowded
- Lack of knowledge about the value of hand hygiene.

Improving Hand Hygiene Compliance (1)

- Full support from the management
- A clear written policy on hand hygiene
- Easy access to hand hygiene facilities
- Supplies available and at point of use
- Careful selection of products may improve compliance
- On-going educational activities and aids to increase awareness

Improving Hand Hygiene Compliance (2)

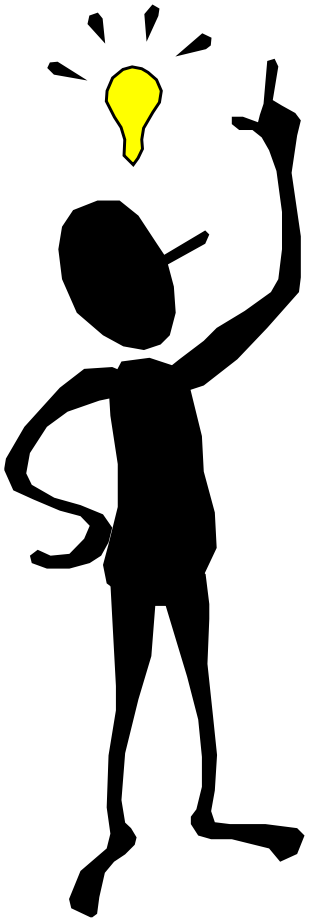
- Monitoring technique, performance feedback and rewarding role models
- Hanging posters or signs listing the steps and times for hand washing in break rooms and other staff areas to help staff become aware of appropriate hand hygiene practices.
- Benchmark best practices

Hand Hygiene

Key Points

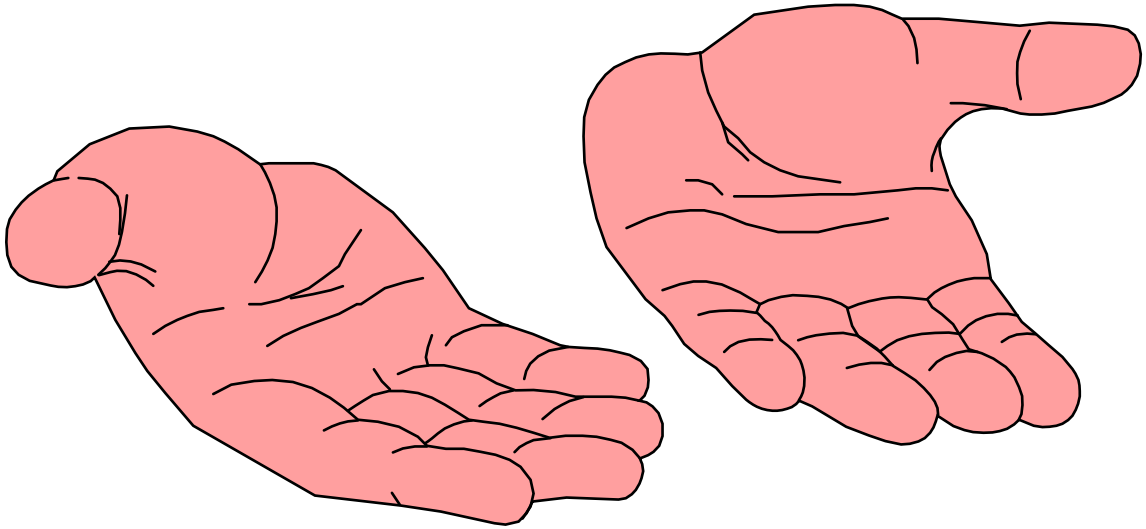
- Hand hygiene is one of the most important ways to prevent cross contamination.
- Alcohol-based hand rub is a quick safe method to reduce skin flora.
- Long nails, nail polish, rings, bracelets and wrist watches should not be worn during patient care.
- All personnel should follow written hand hygiene guidelines.
- Gloves should only be worn for specific tasks.
- Continuous education and regular audit can improve hand hygiene compliance.

Resolution



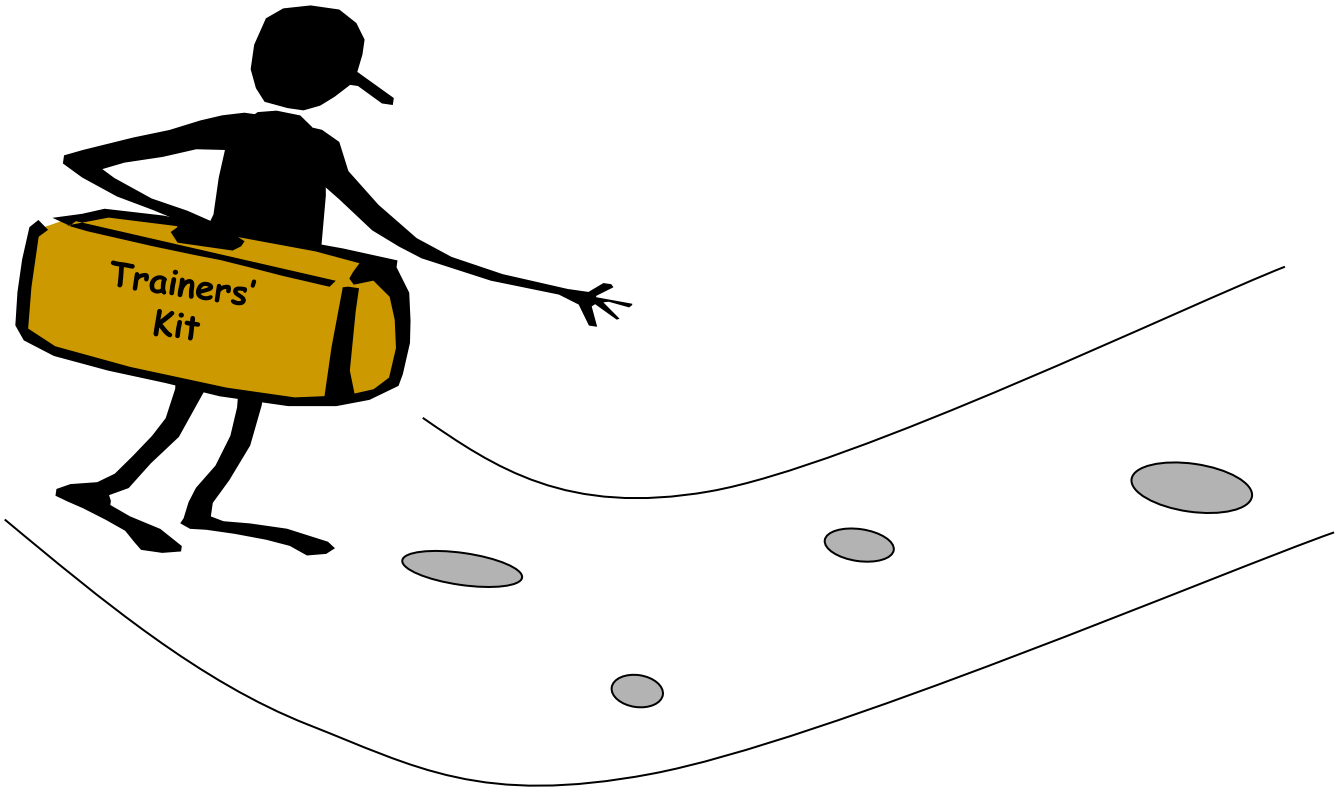
I am going to **protect** myself and my clients from unnecessary **infections!**

The power to prevent & control infections is on MY HANDS



Clean Hands Saves Lives---Start now

THANK YOU



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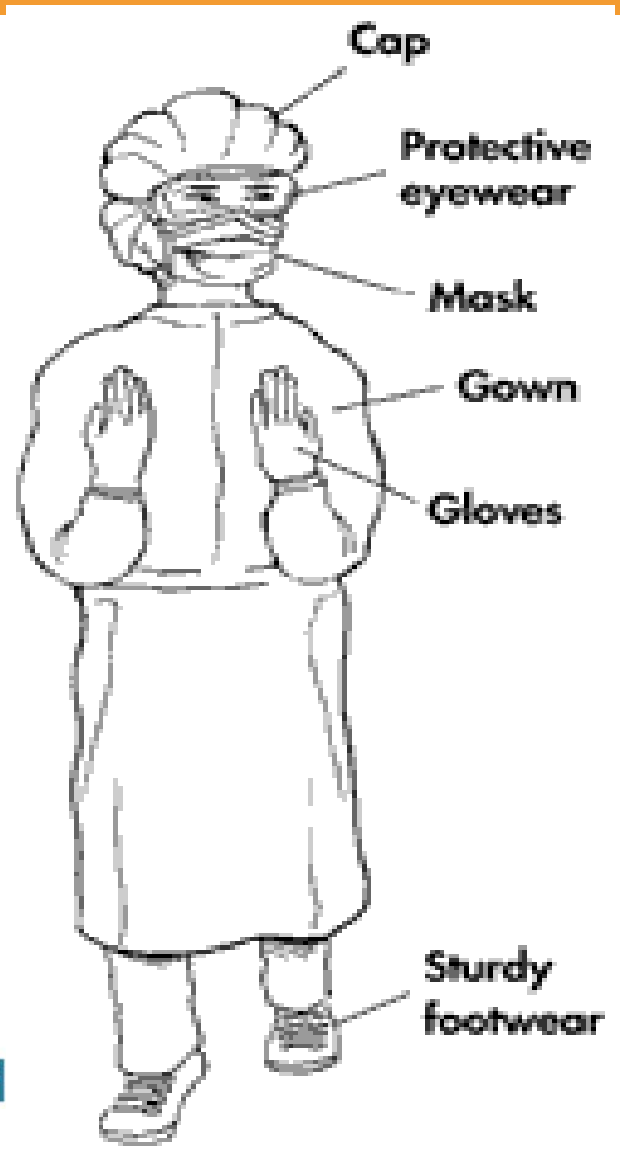
Personal Protective Equipment (PPE)

PERSONAL PROTECTIVE EQUIPMENT (PPE)



Objectives

At the end of this session a participant will be able to:

- Define Personal Protective Equipment (PPE)
- Explain how PPE blocks the spread of microorganisms.
- Explain the importance of using personal protective equipment when providing healthcare services
- Identify the various types of PPE and their uses
- Learn how to assess suitable PPEs
- When to appropriately wear PPEs
- Who is at risk of infection or injury due to improper use of PPEs

Personal Protective Equipment (PPE)

Definition

- PPEs are barriers that help prevent the spread of microorganisms from person-to-person (patients, clients or healthcare provider) and equipment, instruments and environmental surfaces to people. These include: caps, masks, eyewear, aprons, gowns, gloves, scrub suits, screens and boots or closed shoes.

Gloves

Gloves are the most important physical barriers for preventing the spread of infection. They:

- Should only be worn for the chosen task and removed immediately afterward.
- Reduce the risk of transmission of pathogens and acquiring infection from the hands of personnel.
- Protect healthcare workers' hands from patient’s flora and infectious body fluids.
- Microorganisms can contaminate the healthcare workers hands via small defects in gloves or during glove removal, therefore, hand hygiene is strongly recommended after glove removal.

Principles of Wearing Gloves

Healthcare providers must:

- Wear appropriate gloves prior to contact with blood, body fluids, secretions or excretions from any patient/client.
- Use a separate pair of gloves for each patient/client to avoid cross-contamination.
- Remove gloves before moving to another patient or after completion of a specific task.
- Dispose of used gloves in the appropriate container for contaminated waste.

Types of gloves and their use

Type of gloves	Use
Disposable examination gloves	• Medical examinations and procedures such as pelvic gynecological • Examinations or drawing blood
Sterile gloves	• Surgical or invasive procedures • Pelvic obstetric examinations
Clean heavy duty household utility gloves	• Cleaning instruments, equipment and contaminated surfaces • Housekeeping, laundry and mortuary tasks as well as for handling or disposing of contaminated waste
Elbow-length Gloves for Obstetrical Procedures	• To be worn in labour ward where the hands and forearms need to be inserted into the vagina (manual removal of a retained placenta) or deep into the uterus to deliver the infant's head (cesarean section).

DOs and DON'Ts about Gloves

DO's	DON'Ts
Select the appropriate glove	Use oil-based hand lotions or creams
Wear the correct size glove	Use hand lotions and moisturizers that are very fragrant (perfumed)
Change surgical gloves periodically during long cases.	Store gloves in areas where there are extremes in temperature
Keep fingernails trimmed moderately short	Use gloves for routine care activities in which contact is limited to a patient's skin
Pull gloves up over cuffs of gown	
Use water-soluble (non fat-containing) hand lotions and moisturizers often to prevent hands from drying, cracking and chapping.	Wear gloves while walking in corridors and traveling in elevators, unless in special circumstances e.g. transporting laboratory specimen.

Eyewear

Face shields

Masks and eyewear

Eyewear

Definition: Eyewear are materials that protect staff from splashes of blood and other body fluids by covering the eyes. These include:

- Clear plastic goggles, safety glasses, face shields and visors. Glasses with plain lenses are also acceptable, if they have side shields attached.
- Masks and eyewear should be worn whenever there is a risk of splashes into the face e.g., when performing cesarean section or vaginal delivery or when cleaning instruments) and when patients are on droplet precautions.

When and How to use Eyewear

- Eyewear and masks should be worn when performing any task where an accidental splash into the face is likely to occur; i.e. during procedures and patient care activities that could generate splashes or sprays of blood, body fluids, secretions, and excretions.
- Should be appropriate for the particular procedure.
- Discard disposable eyewear appropriately.
- If they are reusable, decontaminate them according to the manufacturers‟ instructions.
- If face shields are not available, goggles or glasses and a mask can be used together.

Masks and Respirators

Masks

- Are worn to protect others by containing moisture droplets expelled by healthcare providers through nose and mouth during procedures.
- Protect healthcare workers by preventing splashes from entering their noses or mouths.
- Qualities of masks:
  - Should be large enough to cover the nose, lower face, jaw and all facial hair (to contain it).
  - The most effective masks are fluid-resistant.

Masks and Respirators

- **Respirators** (particulate respirators) are specialized types of masks, (such as N-95), which are recommended for situations in which filtering inhaled air is considered important (e.g., for the care of a person on airborne precautions).

Types of Masks

1. **The tieback mask**
2. **The ear-loop mask**
3. **Surgical masks**

- Note: A surgical mask becomes ineffective as a barrier if the integrity is damaged or if it becomes wet (i.e., from perspiration, or if splashed with blood or other potentially infectious material). If this occurs, remove mask and replace with another.

Who and when to wear Masks

- **Surgical masks** also known as a **procedure mask** are intended to be worn by health professionals during surgery and at other to catch the bacteria shed in liquid droplets and aerosols from the wearer's mouth and nose.
- Healthcare personnel when engaged in procedures requiring sterile technique to protect patients from exposure to infectious agents carried in the healthcare worker‘s mouth or nose.
- Waste handlers when handling and burning waste.
- Morgue attendance when handling bodies.
- Laundry staff while handling linen.

Why Masks are worn

- To protect both the surgeon and patient from acquiring infection from each other
- To protect mucous membranes of the mouth, nose and eyes which are susceptible areas for infectious agents.
- The use of masks, visors or protective eyewear and full-face shields are therefore important parts of routine practices.
- Some masks are supplied with the additional protection of a screen.

Surgical gowns

Definition: Outer sterile garment worn during surgery by scrubbed staff. Sleeves should be long and cuffed, gown should be tied in the back and be long enough to reach boots.

- Surgical gowns made of fluid-resistant materials help keep blood and other body fluids off the skin of personnel, particularly in operating, delivery and emergency rooms.
- Cloth gowns should be heavy enough to provide an effective barrier.
- The HP should wear a plastic or rubber apron underneath the gown to prevent contact of the skin with blood and body fluids.
- If large spills occur, the best thing to do is shower or bathe as soon as possible after completing the procedure.

Gowns and Aprons

Aprons are Mackintoshes or plastic coverings used to protect clothing or skin from contamination.

- Aprons made of rubber or plastic provide a waterproof barrier along the front of the healthcare provider body and
- Should also be worn during procedures where the likelihood of splashes or spillage of blood, body fluids, secretions or excretions is likely (e.g., when conducting deliveries).

Footwear

Definition: Protective rigid or semi-rigid coverings for the feet.

- Worn to protect feet from injury by sharp or heavy items or fluids that may accidentally fall or trip on them.
- Rubber boots or closed shoes or leather shoes are acceptable and must be kept clean and free of contamination from blood or other body fluid spills.
- Sandals, “thongs” or shoes made of soft materials (cloth) are not acceptable.

Caps

- Caps are worn to keep the hair and scalp covered during surgery in order to prevent flakes of skin and hair from shedding into a patient's wound and to prevent your hair from coming into contact with patient's blood, body fluids, secretions, or excretions.
- Caps should be large enough to cover all hair.
- While caps provide some protection to the patient, their primary purpose is to protect the wearer from blood and body fluid splashes and sprays.

When to wear caps

Caps are worn:

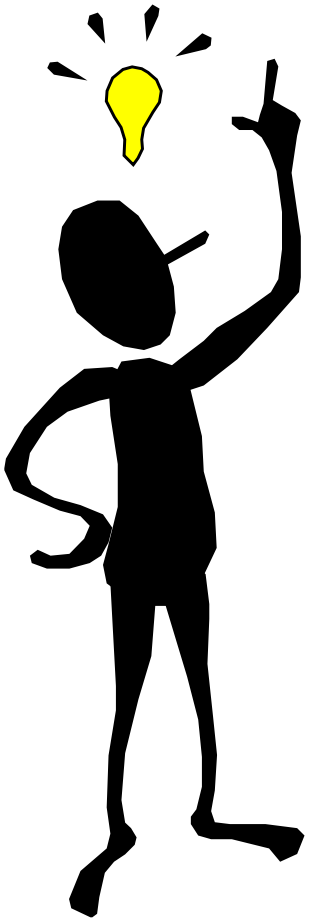
- When performing invasive procedures during which Service providers and tissue beneath the skin is exposed.
- When handling patients with infectious disease
- When handling contaminated waste.

Principles for using PPE

Health care workers are required to:

- Assess the risk of exposure to blood, body fluids, excretions, or secretions and choose items of PPE accordingly.
- Use the right PPE for the right purpose.
- Avoid any contact between contaminated (used) PPE and surfaces, clothing, or people outside the patient care area.
- Discard used PPE appropriately in designated disposal bags.
- Change PPE completely and thoroughly wash your hands each time you leave a patient to attend to another patient or another duty.
- Do not share PPE.

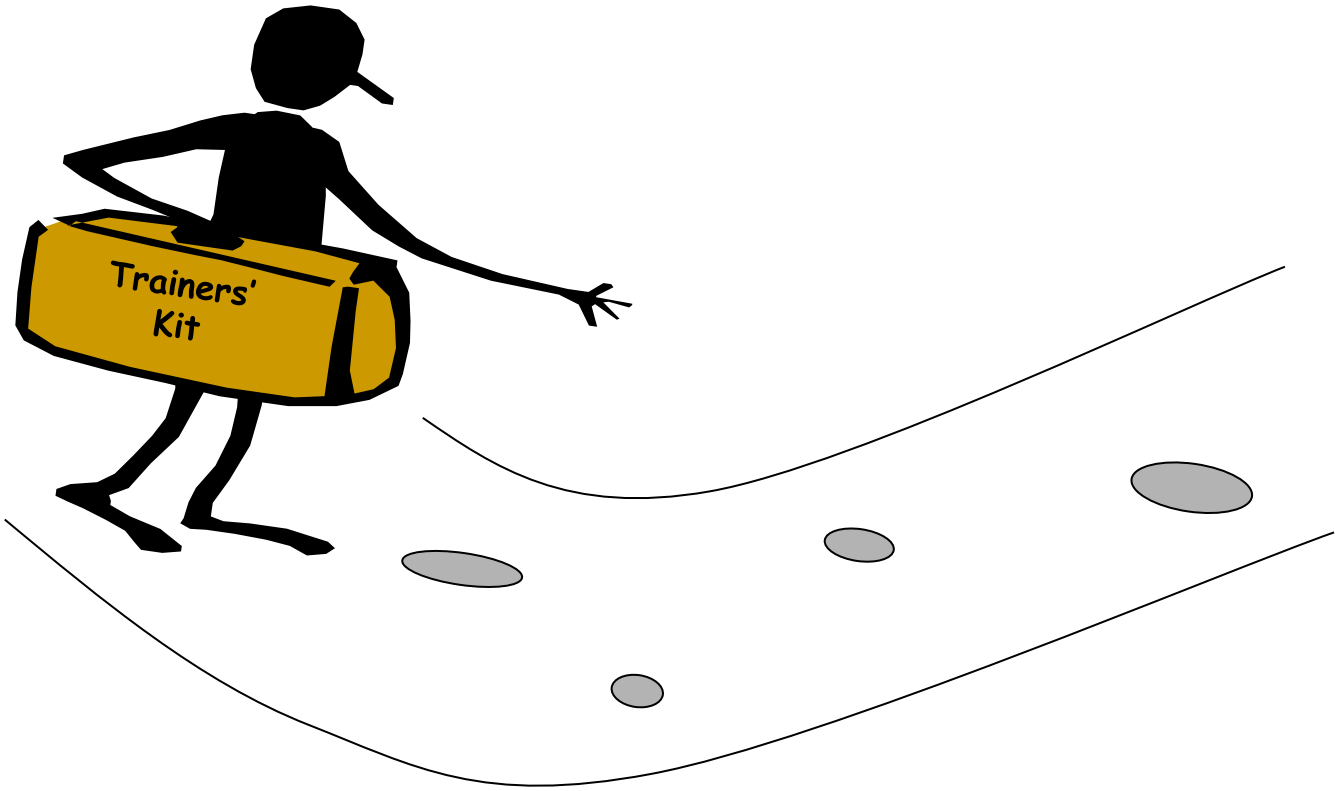
Resolution



I am going to **protect** myself and my clients from unnecessary **infections!**

Who Benefits?
I DO! You DO! We All DO…

THANK YOU



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INJECTION SAFETY AND PEP

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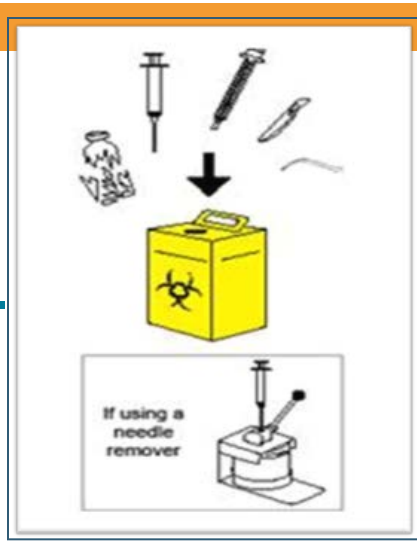
Safe handling of sharps during procedures

Objectives

At the end of this session, a participant will be able to:

- Define sharps and safe injections
- Explain the principles of safe handling of sharps
- Describe the hands free techniques
- List ways that health care workers can become injured by sharps.
- Describe and demonstrate the proper procedures for use and disposal of needles and other sharps.
- Explain the proper procedures for managing sharps injuries

What are Sharps?



- **Sharps:** any instrument capable of puncturing the skin (scissors, needles, scalpels or blades, sharp instruments etc.).
- In healthcare settings, injuries can occur easily from sharp instruments, especially during surgical procedures.

A high proportion of sharps injuries occur during disposal and waste collection.

Safe Handling Of Sharp Instruments

- Use a tray or basin to carry and pass sharp items.
- Pass instruments with the handle (not the sharp end) pointing toward the receiver.
- Do not leave sharp instruments or needles (sharps) in places other than safe zones.
- Tell other workers before passing sharps to another person.

Safe Injection

A safe injection is one that serves the intended purpose and:

- Does not harm the client,
- Does not expose the provider to any avoidable risk, and;
- Does not result in any waste material that is dangerous to staff and the community.

Injection Devices

1. ***Auto-disable (AD) syringes e.g. Kojak Selinge) -*** AD syringes are self-locking syringes that can be used only once. AD syringes are the preferred equipment for all types of immunization sessions.
2. ***Retractable e.g. vanish point.***

Principles of injection safety

- Injection should be administered by qualified personnel
- Hands should be washed before and after administering an injection
- Sharps should be disposed immediately after use

- *Needles should not be recapped*
- *Safety boxes should be used properly.*

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Strategies for achieving Safe Injection

1. Changing behaviour of healthcare workers and patients
2. Ensuring availability of equipment and supplies
3. Managing sharps waste safely and appropriately

Nine Rights of Safe Injection

1. The **right** drug
2. Given with the **right** formulation
3. To the **right** patient
4. In the **right** dose
5. Using the **right** needle and syringe
6. At the **right** site
7. By the **right** route
8. At the **right** time and
9. Using the **right** method of disposal.

Key Steps to Safe Injection

- Use a syringe and needle from a new, sealed undamaged packet for every injection.
- Manage injection waste safely and appropriately.
- Without re-capping, place syringe and needle in a safety box immediately after use.

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Safe Injection Practices ..1

1. **Preparation of the skin prior to injection**
   - Wash skin that is visibly soiled or dirty with soap and water.
   - Avoid giving injections if skin integrity is compromised (not intact).
   - For IV injection clean the site using an antiseptic and wait until it dries.
2. **Injection sites**
   - Inject at the right site for age, dosage and type of injection

Safe Injection Practices ..2

3. Injection devices

- Use sterile needle and syringe for each injection and to reconstitute each unit of medication
- Discard a needle and /or syringe whose package has been punctured, torn or damaged
- Discard a needle that has touched any non-sterile surface.
- Safely dispose of used needles and syringes immediately

Safe Injection Practices..3

4. **Reuse-prevention" injection devices:**
   - To prevent reuse of needles and syringes the following syringes are recommended: e.g., auto-disable syringe, retractable syringe
5. **To prevent contamination of equipment and medication:**
   - Prepare each injection in a clean area where blood or body fluid contamination is unlikely
   - Use single-dose vials rather than multi-dose vials
   - Always pierce the septum of vials with a sterile needle

Safe Injection Practices..4

6. Discard used syringes and needles at the point of use into a puncture proof sharps container
7. Prevent access to used syringes and needles:
   - Seal sharps containers when ¾ full for transport to a secure area.
   - After sealing, do not open, empty, reuse or sell them.
   - Dispose of sharps waste in an efficient, safe and environmentally friendly way.

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Clinical Practice: Core Areas of Injection Safety

Hand hygiene for infection prevention:

- Wash hands with running water prior to and after every injection
- Cover small cuts before the procedure

Preparation of drugs:

- Reconstitute and withdraw at point of use
- Do not withdraw more than one drug into one syringe

Use of gloves:

- Use single-use gloves if excessive bleeding anticipated and in case of infected, damaged or soiled skin
- Gloves are not essential for injections in the absence of these conditions.

Simple Ways To Improve Injection Safety

1. Prepare injections in a clean designated area where blood and body fluid is unlikely.
2. Prepare each dose immediately before administering, do not prepare several syringes in advance.
3. Never leave the needle in the top of the vaccine vial.
4. Follow product-specific recommendations for use, storage and handling of vaccines.
5. Follow safe procedures to reconstitute vaccines.
6. Use a new syringe and needle for every child/ patient.
7. Hold the child firmly. Anticipate sudden movement during and after injection.
8. Use pre-packed single-use swabs.

Factors That Contribute To Unsafe Injections

- Improper medical waste management
- Inadequate Supplies
- Human resources
- Behaviour Change and Communication among health workers
- Lack of transportation of waste from and to disposal sites
- Others: Discuss

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Factors Leading To Injections Overuse

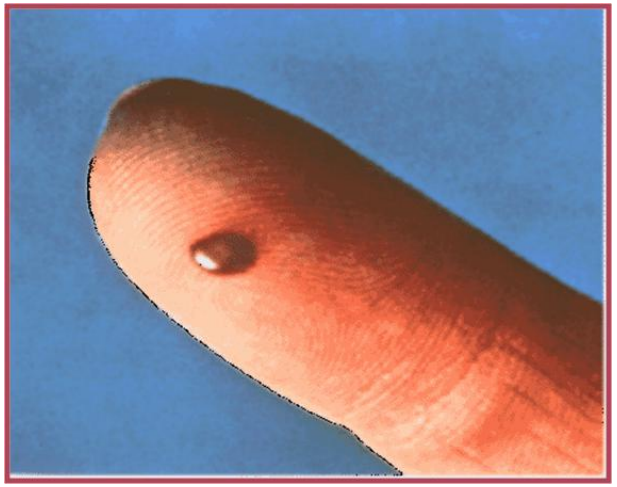
1. **Prescriber-associated factors:**
   - Some think injections work better
   - Some think that patients like injections
2. **Patient-associated factors:**
   - Some think injections work better
   - Some request injections
3. **System issues:**
   - Lack of effective oral medications
   - Financial gain

Risks to community due to improper disposal of sharps

- Improper disposal of sharps poses a great threat to members of the community.
- Sharps that are discarded where they may be found by scavengers, children, and others may cause serious injury and infection.
- Everyone in the local community is at risk of the spread of infection when scavenged syringes and needles are reused.

Minimizing the need to handle needles and syringes

1. Place a safety box within arm's reach.
2. When ready to vaccinate draw up the vaccine, inject the vaccine, and put the syringe in the safety box without putting it down between steps.
3. Avoid recapping the needle.
4. Do not manually remove the used needle from the syringe.
4. Do not carry used syringes and needles around the immunization area or work site.
5. Close the safety box securely when it is three-quarters full.
6. Do not manually sort needles and syringes.



POST-EXPOSURE PROPHYLAXIS (PEP)

Post-exposure Prophylaxis (PEP) Guidelines

Introduction

- If a healthcare worker is exposed to blood or other body fluids, either by a needle stick/sharps injury or a splash to a mucous membrane or non-intact skin, the person should be offered PEP. PEP is the management of this exposure.

Post-exposure Prophylaxis (PEP) Guidelines

- **Definition**
  Post-exposure prophylaxis is the provision of preventive services following an exposure to potentially infected blood or other body fluids in order to minimize the risk of acquiring blood borne pathogens.

Steps following Needle Stick Injury

Step 1: Exposure Site Management

- Wash site with soap and running water
- Flush mucus membrane with saline/water
- Avoid use of bleach (disinfectants) and other caustic agents to the site.
- Start PEP (starter pack) as soon as possible, within 2 hours after exposure. This should not wait for testing of the source or exposed healthcare worker.

Steps following Needle Stick Injury

Step 2. Exposure Report

The following information is to be recorded in the confidential medical report.

- Date and time of exposure.
- Details of the procedure performed and the use of protective equipment at the time of exposure.
- The type, severity and amount of fluid to which the health worker was exposed
- Details of the exposure source person
- Medical documentation that provides details about post exposure management.

Steps following Needle Stick Injury

Step 3: Evaluation of Exposed Healthcare Worker

- Evaluate as soon as possible, preferably within 72 hours of exposure
- Counsel and test for HIV, HBV and HCV
- In case of refusal to test, PEP should not be continued.

Steps following Needle Stick Injury

Step 4: Evaluation of the Source Person

- Performed when the exposed healthcare worker agrees to take PEP.
- If HIV, HBV and HCV status of a source person is unknown perform these tests after obtaining a consent.
- If the source person is not known, evaluate the exposure as high risk for infection.
- Do not test discarded needles or syringes for viral contamination.
- The exposed healthcare worker should not be involved in obtaining consent from the source person.

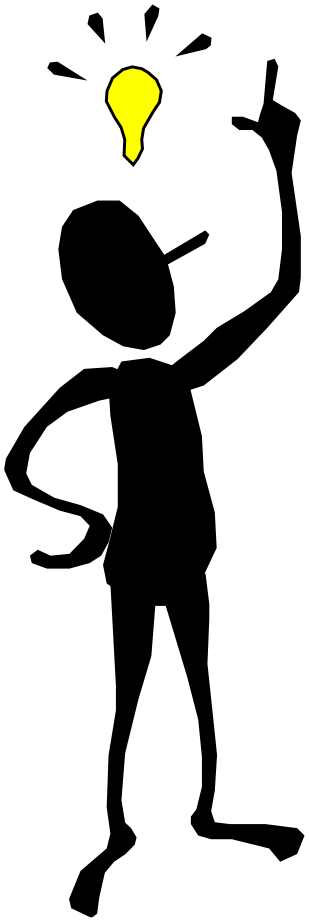
Injection Safety – Bad Practices (1)

- Recapping of needles.
- Re use of syringes and needles.
- Overuse of therapeutic injections/unnecessary prescription of injections.
- Poor handling of safety boxes.
- Inserting an I.V. line without wearing gloves, especially staff providing anaesthetic medication.
- Sticking needles in I.V., drips/ampoules.
- Contaminating drugs and IV fluids through the practice of leaving needles in the vials for repeated use resulting in drug potency.

Injection Safety – Bad Practices (2)

- Passing sharps objects hand–to-hand.
- Giving injections at wrong site causing nerve damage.
- Administering large boluses of injections causes abscesses.
- Mixing of more than one drug in one syringe
- Preparing injectable drugs away from patient rather than at patient bedside leading to mix up.
- Preparing swabs in advance predisposing to possible contamination and infection.
- Overfill of safety boxes.

Resolution



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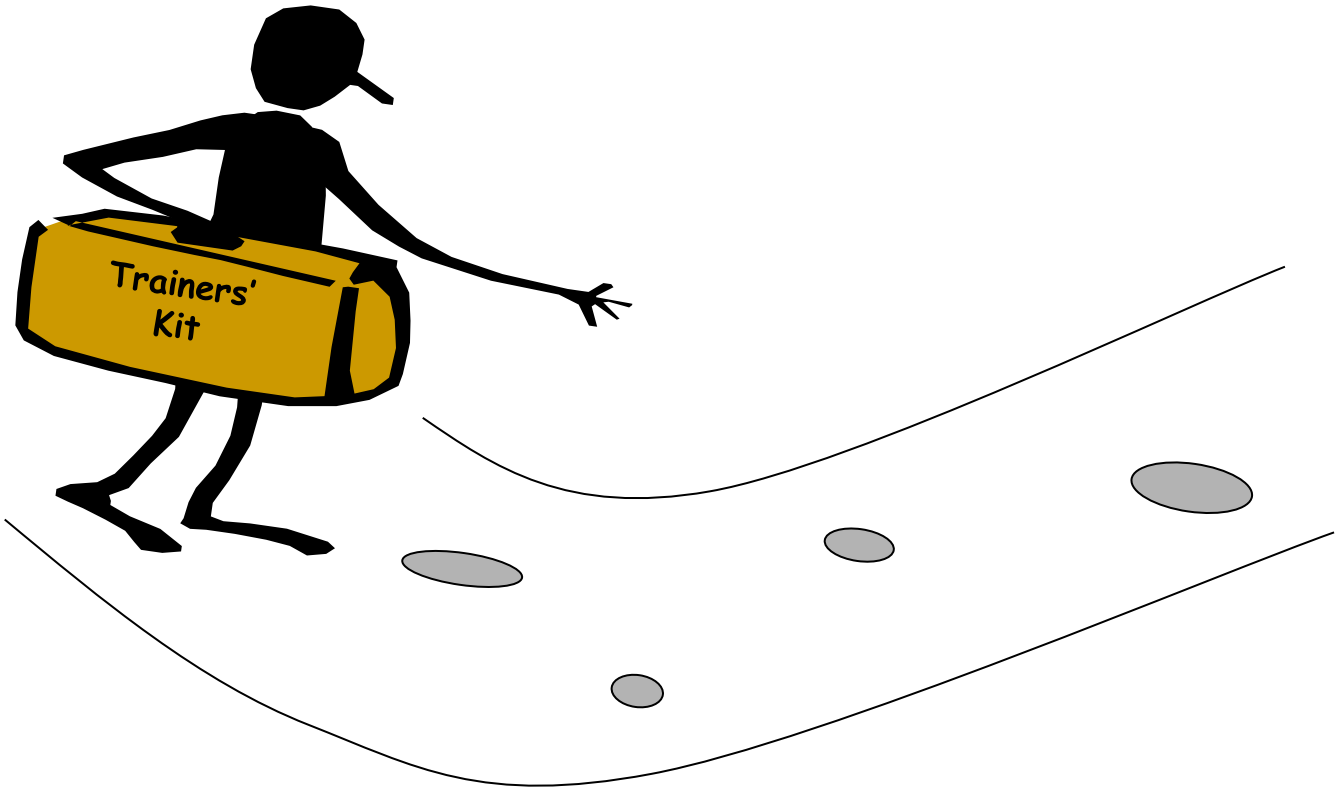

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INSTRUMENT AND LINEN PROCESSING

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Definitions Of Terms Used (1)

- **Decontamination:** A process that makes inanimate objects safer to handle by staff before cleaning
  - This is done by soaking in 0.5% chlorine solution for 10 minutes (i.e., inactivates HBV, HCV and HIV and reduces the number of other microorganisms but does not eliminate them).
- **Cleaning:** A process that physically removes all visible dust, soil, blood or other body fluids from inanimate objects as well as removing sufficient numbers of microorganisms to reduce risks for those who touch the skin or handle the object.

Definitions Of Terms Used (2)

- **Disinfectant:** A chemical that destroys or inactivates microorganisms on inanimate objects and surfaces
- **High Level Disinfection (HLD):** Process that eliminates all microorganisms except some bacterial endospores from inanimate objects. Processes include boiling, steaming or the use of chemical disinfectants
- **Sterilization:** Process that eliminates all microorganisms (bacteria, viruses, fungi and parasites) including bacterial endospores from inanimate objects. The processes include high-pressure steam (autoclave), dry heat (oven), chemical sterilants or radiation.

Key Steps in Processing Instruments

- All soiled instruments and other reusable items should be processed by decontamination, cleaning and either sterilization or HLD.
- Regardless of the type of operative procedure, the steps in processing surgical instruments and other items are the same. The steps are illustrated in the figure next page.

Items Commonly Processed For Reuse

These include:

- Instruments used during surgery or other clinical procedures
- Other items such as pickups (lifters or cheatle forceps), instrument pans and trays, reusable gloves, and linens.

Processing Instruments And Other Items

Decontaminate

Soak in 0.5% chlorine solution for 10 minutes.

Clean thoroughly under water and rinse. Wear gloves and other protective barriers

Sterilization

High-level disinfection

Dry/Cool and Store

Decontamination Tips

- Decontamination is the first step in handling used instruments and other items and should be done immediately in 0.5% chlorine (fully submerged).
- Use a plastic, non-corrosive container and soak for 10 minutes.

- Do not soak metal instruments that are electroplated (i.e., not 100% stainless steel) even in plain water for more that an hour because rusting will occur.

Making A Decontamination Solution Of Bleach

Making Chlorine Solution (using liquid chlorine)

Check concentration (%concentrate) of the chlorine product you are using :

$$\text{Total Parts (TP) water} = \left(\frac{\%\ \text{Concentrate}}{\%\ \text{Dilute}}\right) - 1$$

- Mix 1 part concentrated bleach with the total parts water required

Example: Make a dilute solution (0.5%) from 5% concentrated solution

STEP 1: Calculate TP water: $\left(\frac{5.0\%}{0.5\%}\right) - 1 = 10 - 1 = 9$

STEP 2: Take 1 part concentrated solution and add to 9 parts water.

Making Chlorine Solution (From Chlorine Powder)

Determine gram bleach needed using the formula below:

$$\text{Grams/ Liter} = \left(\frac{\%\ \text{Dilute}}{\%\ \text{Concentrate}} \right) \times 1000$$

- Mix measured amount of bleach powder with 1 liter of water.

Example: Make a dilute chlorine-releasing solution (0.5%) from a concentrated powder (35%)

STEP 1: Calculate grams/liter: $\left(\frac{0.5\%}{35\%} \right) X1000 = 14.2\ g/\ L$

STEP 2: Add 14.2 grams (= 14g) to 1 liter of water.

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Instrument Cleaning Tips (1)

- Wear thick household or heavy duty utility gloves, protective eyewear and a plastic apron while cleaning instruments and equipment.

- *Hold instruments and other items under the surface of the water while scrubbing and cleaning to avoid splashing.*

Instrument Cleaning Tips (2)

- Disassemble instruments and other items with multiple parts
- Brush in the grooves, teeth, and joints of items where organic material can collect and stick
- Wash instruments with a soft brush in soapy water to remove all foreign matter
- Rinse thoroughly to remove any soap residue
- Dry items (or allow to dry) after rinsing, before sterilization or high-level disinfection

High level Disinfection (HLD)

High-level disinfection is the process that eliminates all microorganisms **(bacteria, viruses, fungi and parasites)** except **some** bacterial endospores from inanimate objects.

Sterilization

Sterilization. Process that eliminates all microorganisms (bacteria, viruses, fungi and parasites) including bacterial endospores from inanimate objects that can cause infections.

Types of Sterilization

- High-pressure steam (autoclave),
- Dry heat (oven) or
- Chemical sterilants, such as glutaraldehydes or formaldehyde solutions, or physical agents (radiation)

Differences between Sterilization and HLD

Sterilization destroys all microorganisms, including bacterial endospores while **HLD** destroys all microorganisms (including vegetative bacteria, tuberculosis, yeasts and viruses) **except** some bacterial endospores

Storage of Sterile Instruments

- Store all sterile items protected from dust, dirt, moisture, animals and insects
- Ensure that the storage area is situated next to or connected to the location where sterilization occurs
- The storage area should be separate and enclosed, with limited access.
- The storage area must be used just to store sterile and clean patient care supplies

Storage of HLD Instruments

- Store in a closed cabinet free of dust and lint
- Label all stored instrument packs with the date of processing
- Store instruments in a dry, HLD covered container (the cover as well as the container must be HLD)
- Ensure that the HLD containers remain closed (no peeking) until the instruments are needed
- Re-process after one week if the not been used
- Clearly label all stored instrument packs or containers with the date of processing

Handling Instruments

Sterile instruments:

- Must be handled only with sterile instruments (e.g., when removed from chemical sterilization solutions)
- Must be stored in sterile containers

High-level disinfected instruments:

- Must be handled with HLD or sterile instruments (e.g., when taken out of the boiler or chemicals)
- must be stored in HLD or sterile containers

Shelf Life (1)

Remember:

- Before using any sterile item, look at the package to make sure the seal is not broken and the wrapper is intact, clean and dry and has no water stains.
- The shelf life of an item (i.e., how long it can be considered sterile) after sterilization is event-related

LINEN PROCESSING

Processing Linen

- Staff must wear PPE as indicated in the guidelines when collecting, handling, transporting, sorting and washing soiled linen. ***Consider all used linen infectious***
- Carry soiled linen in covered containers or plastic bags to prevent spills and splashes, and confine the soiled linen to designated areas (interim storage areas) until transported to the laundry.
- Carefully sort all linen in the laundry area before washing.
- ***NB Do not presort or wash linen at the point of use.***
- All linen items (e.g., bed sheets, surgical drapes, masks, gowns) used in the direct care of a patient must be thoroughly washed before re-use.
- Soiled linen must be washed immediately to avoid staining.

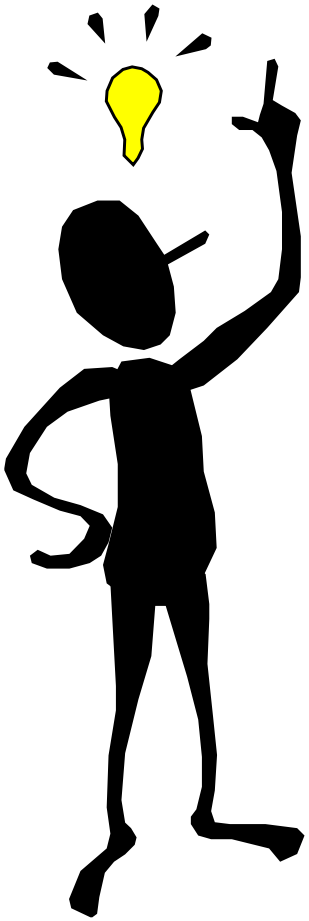
Distributing Clean Linen

- Protect clean linen until distributed for use
- Use clean trolley to distribute linen
- Handle clean linen as little as possible
- Do not leave extra linen in patients' rooms
- If not necessary, do not handle linen
- Avoid shaking clean linen
- Clean soiled mattresses by wiping with 0.5% chlorine solution and let them dry before putting clean linen

Instrument Processing – Bad Practices

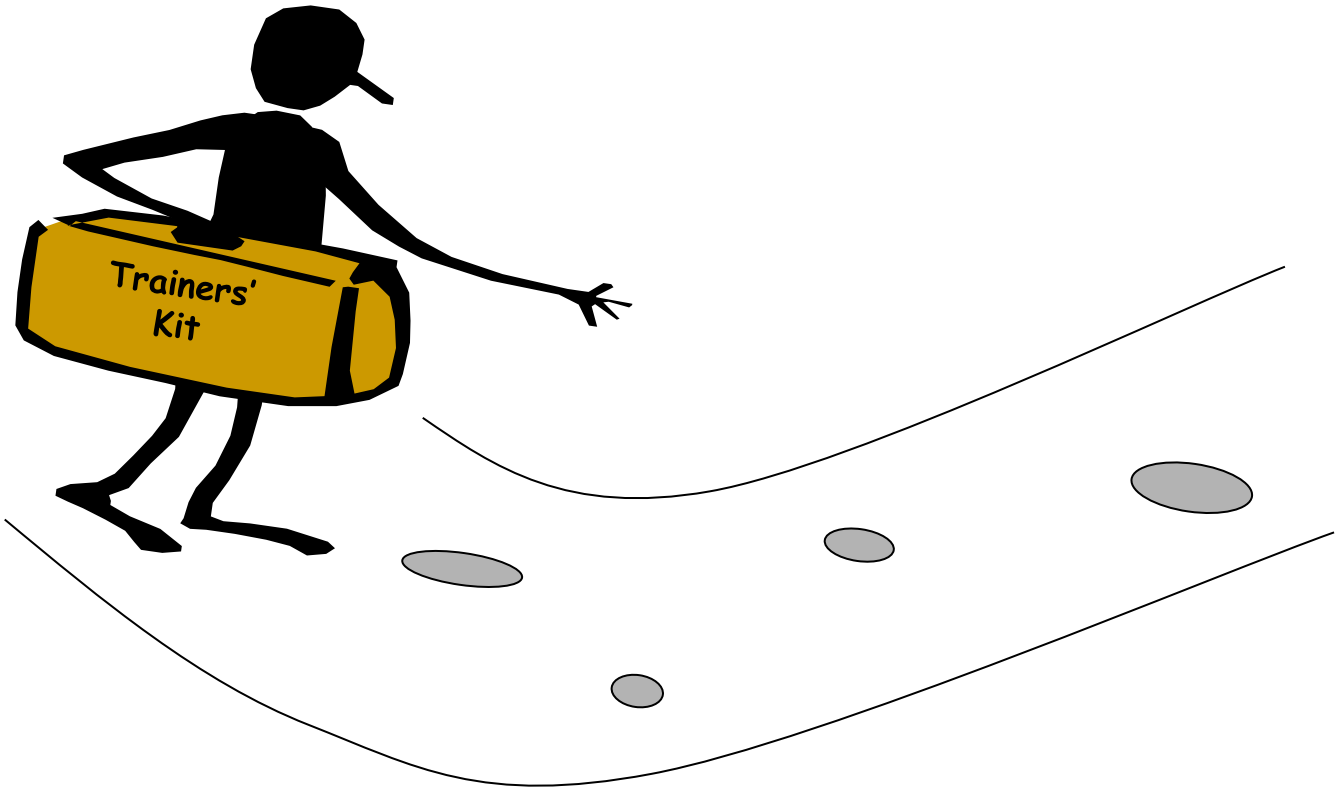
- Cleaning used instruments without prior to decontamination
- Sorting soiled linen in patient care areas
- Washing soiled linen without “Sorting”
- Using improperly processed instruments to care/ operate on patients
- Using chlorine solution of unknown strength or made from expired chlorine compound

Resolution



I am going to **protect** myself and my clients from unnecessary **infections!**

THANK YOU



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HOUSEKEEPING AND OCCUPATIONAL HEALTH RISKS

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Definition Of Housekeeping

- The general cleaning of facilities including the floors, walls, equipment, furniture and other surfaces as well as outdoor space. It entails the removal of dust, soil and microbial contaminants on environmental surfaces

Importance of Housekeeping

General housekeeping:

- Reduces number of microorganisms that come in contact with patients, clients, visitors and staff
- Reduces risks of accidents by preventing falls caused by a slippery floor following spillage of either body fluids or solutions
- Provides a clean and pleasant atmosphere for patients, visitors and staff

PPE In Housekeeping

- Healthcare providers doing housekeeping activities should wear appropriate personal protective equipment (according to IPC national policy and guidelines) to prevent themselves.

Cleaning Methods

Cleaning methods should be determined by the:

- Type of surface
- Amount and type of organic matter present
- Purpose of the area

Wet Mopping

- Process of using mop (with handle), soap (and in certain cases disinfectant) and water to clean floors
- It is the most common and recommended method to clean floors in health facilities

Damp Dusting

Damp Dusting is the process of cleaning surfaces such as walls, doors, furniture using a wet cloth.

- Avoid dry dusting.
- Perform dusting in a systematic way
- During high dusting (ceiling tiles and walls), check for stains that may indicate leaks. Repair leaks as fast as possible.
- Always wear utility gloves when cleaning surfaces that may have come in contact with blood, body fluids, secretions or excretions.

Damp Dusting

Key points

- Cleaning should start with the least soiled area and move to the most soiled area and from high to low surfaces.
- Using cleaning equipment that is not properly maintained can contribute to the spread of infectious agents.
- Dry all cleaning equipment completely before reuse; drying mops and cloths in the sun is best because the sun's ultraviolet rays can aid in killing microorganisms
- Use properly maintained cleaning equipment to avoid spread of organisms.

Cleaning Contact Surfaces

- Surfaces that come in contact with clients, such as examination tables and patient beds, must be kept clean and decontaminated to avoid cross-infection. Wipe them with a disinfectant solution (0.5% chlorine) after every client, regardless of whether they are visibly contaminated or not.
- Clean most areas of the facility with detergent and water (low-risk areas such as waiting rooms and administrative areas).
- Wipe any surface that is visibly contaminated using 0.5% chlorine solution immediately after the procedure.
- Clean high-risk areas where heavy contamination is expected with a disinfectant cleaning solution (0.5% chlorine).

Cleaning up spills

- Clean up spills of potentially infectious fluids immediately
- Always wear gloves.
- If the spill is small, wipe it with a cloth that has been saturated with a disinfectant (0.5% chlorine) solution.
- If the spill is large, cover (flood) the area with a disinfectant (0.5% chlorine) solution, mop up the solution, and then clean the area with a disinfectant cleaning solution.
- Do not simply place a cloth over the spill for cleaning up later; someone could easily slip and fall on it and be injured.

Housekeeping: Key Points

1. All cleaning staff must wear appropriate PPEs
2. Cleaning staff must be properly trained and supervised
3. An ongoing cleaning schedule must be established
4. All linen, whether visibly soiled or superficially clean, must be processed to the same high standard.

MEDICAL WASTE MANAGEMENT

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Medical Waste Management

Segregation of Medical Waste - Four Categories

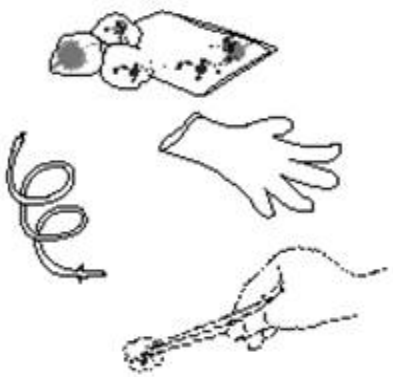
Kenya

Non-Infectious Waste

- Paper/Packaging material
- Food

Infectious Waste

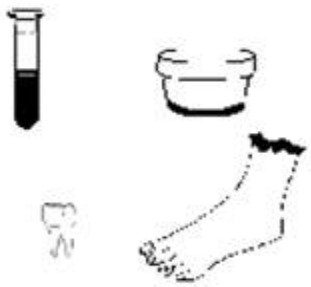
- Gauze/Dressing
- Blood/IV fluid lines
- Gloves



Highly Infectious Waste

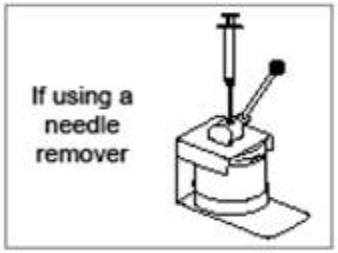
Anatomical waste
- Teeth
- Placenta

Pathological waste
- Sputum container
- Test tubes containing specimens



Sharps Waste

- Infusion sets
- Broken slides
- Broken vial
- Broken ampules
- Lancet
- Retractables
- Scalpels
- Blades
- Needles



Healthcare Waste

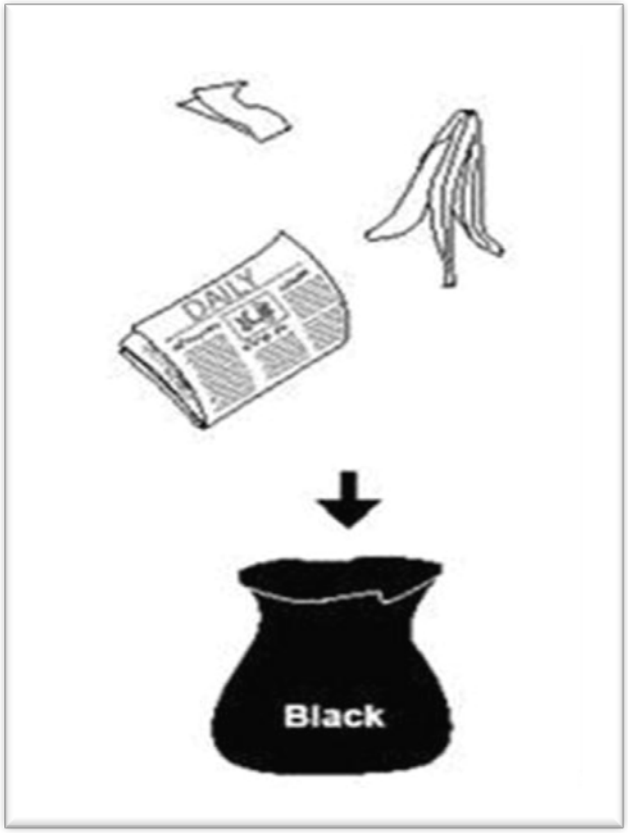
- Healthcare waste is defined as total waste generated by medical activities and includes both contaminated (potentially infectious) waste and non-contaminated (non-infectious) materials.

Types of waste generated at a health facility

1. Non-Infectious Waste
2. Infectious Waste
3. Highly Infectious Waste
4. Sharps

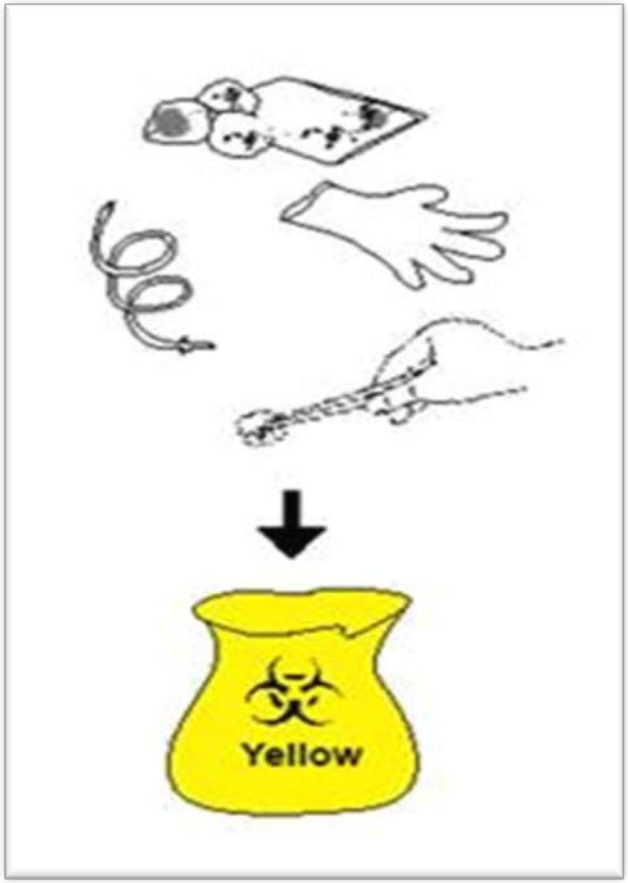
1. Non-contaminated Waste

- This is waste that poses no infectious risk to persons who handle it.
  - Example: paper, boxes, food remains, bottles and plastic containers
  - can be picked up by the local authorities for disposal in municipal waste sites.



2. Infectious Waste

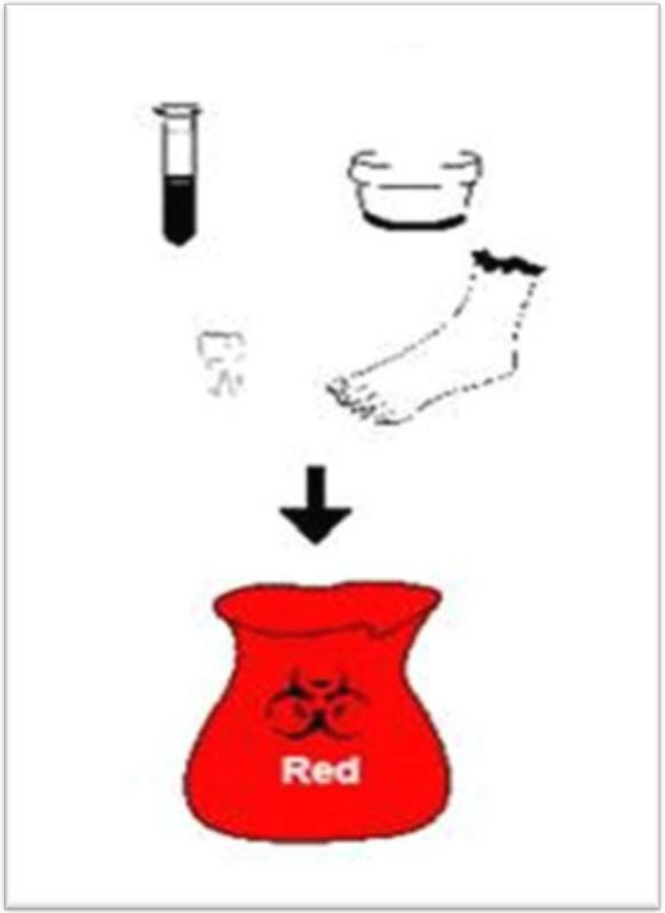
- Material that has been in contact with blood or other fluids.
  - Examples:
    - gauze, cotton, dressings,
    - laboratory cultures,
    - IV lines,
    - blood bags,
    - gloves,
    - anatomical waste



3. Highly Infectious Waste

1. Anatomical waste
   - Examples:
     - Teeth
     - Placenta

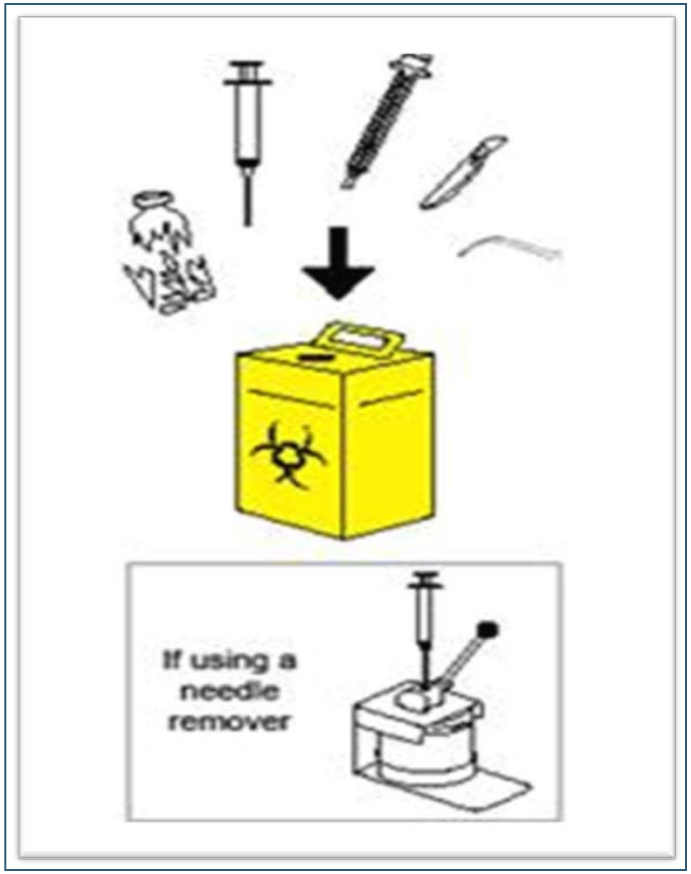
2. Pathological waste
   - Examples:
     - Sputum containers
     - Test tubes with specimens



4. Sharps Waste

Has the potential to puncture the skin and cause disease.

- Examples:
  - needles
  - infusion sets
  - scalpels
  - blades
  - lancets
  - broken glass

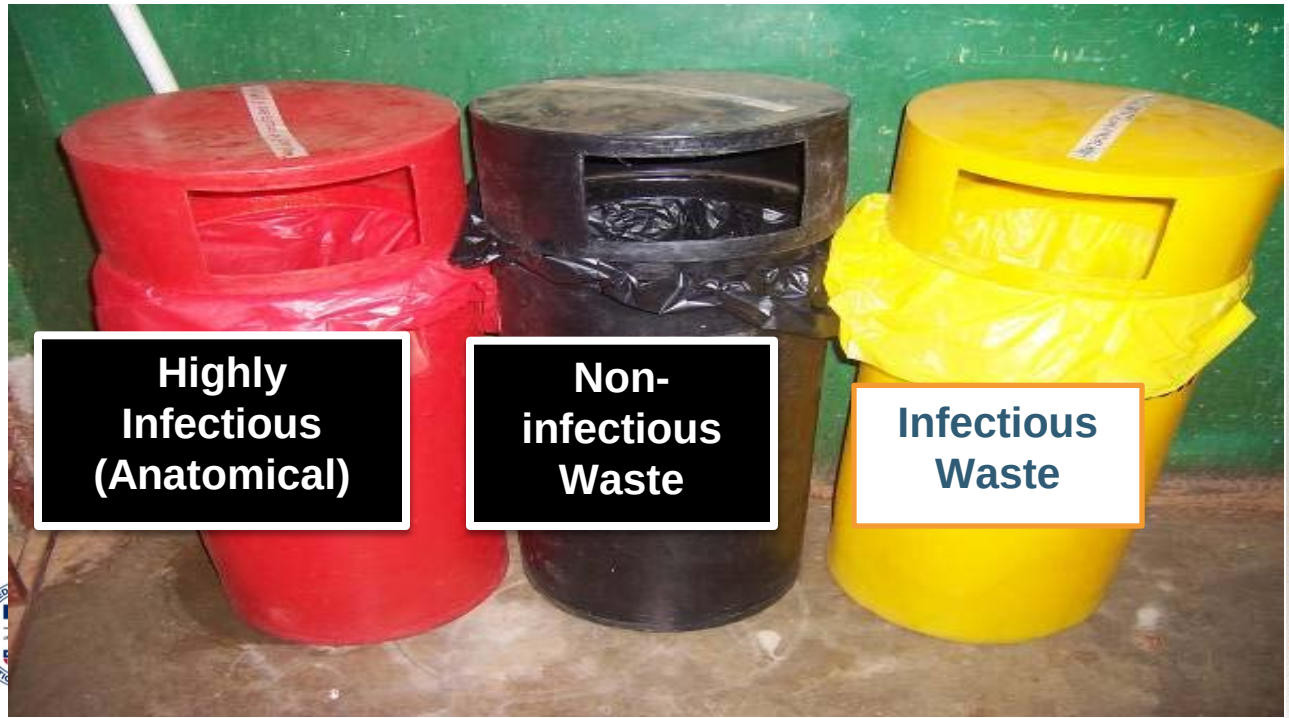


Key Steps in Waste Management

1. Minimization
2. Generation
3. Segregation
4. Containment
5. Handling and Storage
6. Transport
7. Treatment or Destruction
8. Disposal

Color Coding

- The colour coding system aims at ensuring an *immediate* waste segregation. In that respect, the colour coding system shall remain simple and be applied uniformly throughout the country.



Waste Collection

- Collect waste daily or as frequently as it is necessary.
- Do not allow waste to accumulate at the point of production.
- Remove waste from the segregation point after labeling.
- Replace bags or containers immediately with new ones of the same type.
- Supply fresh collection bags or containers at all locations where waste is produced.
- The collection route should be the most direct one from the collection point to the central storage facility. The collected waste should not be left even temporarily anywhere other than at the designated central storage facility.

Waste Storage

- The designated central storage facility should be located within the hospital premises close to the treatment unit but away from food storage or food preparation areas.
- The designated central storage facility should be totally enclosed and secured from unauthorized access. It should be inaccessible to animals, insects and birds. It should be easy to clean and disinfect, with an impermeable hard-standing base, good water supply, drainage and ventilation.

Treating and Disposing Options

- Incineration
- Burning and burial
- Burial

<u>Note:</u> Always dispose of medical waste correctly; **never** simply throw it outside or leave it in an open pile.

Incineration

Definition: Incineration process is the deployment of high temperatures in burning waste (above 800°C).

- Incineration is used to burn waste at high temperatures hence it destroys microorganisms and therefore is the best method for disposal of contaminated wastes.
- Incineration reduces the bulk size of wastes to be buried.
- Ensure that there is an efficient monitoring system for proper functioning of incinerators:
  - weighing waste and regular maintenance recommended
- Follow MOH/NEMA guidelines in construction of incinerator
- Dispose of ashes from the incinerator in an ash pit.

Burning and Burying

- **Burning:** Open burning is not recommended because it causes scattering of waste, is dangerous, and is unattractive. However, if open burning must be done, carry the waste to the site just before burning, and burn it in a small, designated area. Remain with the fire until it is completely out.
- **Burying:** On-site burial is the next best option. To use burying, you must have space for a pit big enough for all the waste generated at the site. The pit should be surrounded by a fence or wall to limit access to it and to prevent scavenging of waste.

The four components of a waste-management plan

Facility waste management plan should contain the following four components:

a. **Sorting:** Separating waste by type at the place where it is generated.

b. **Handling:** Collecting and transporting waste within the facility.

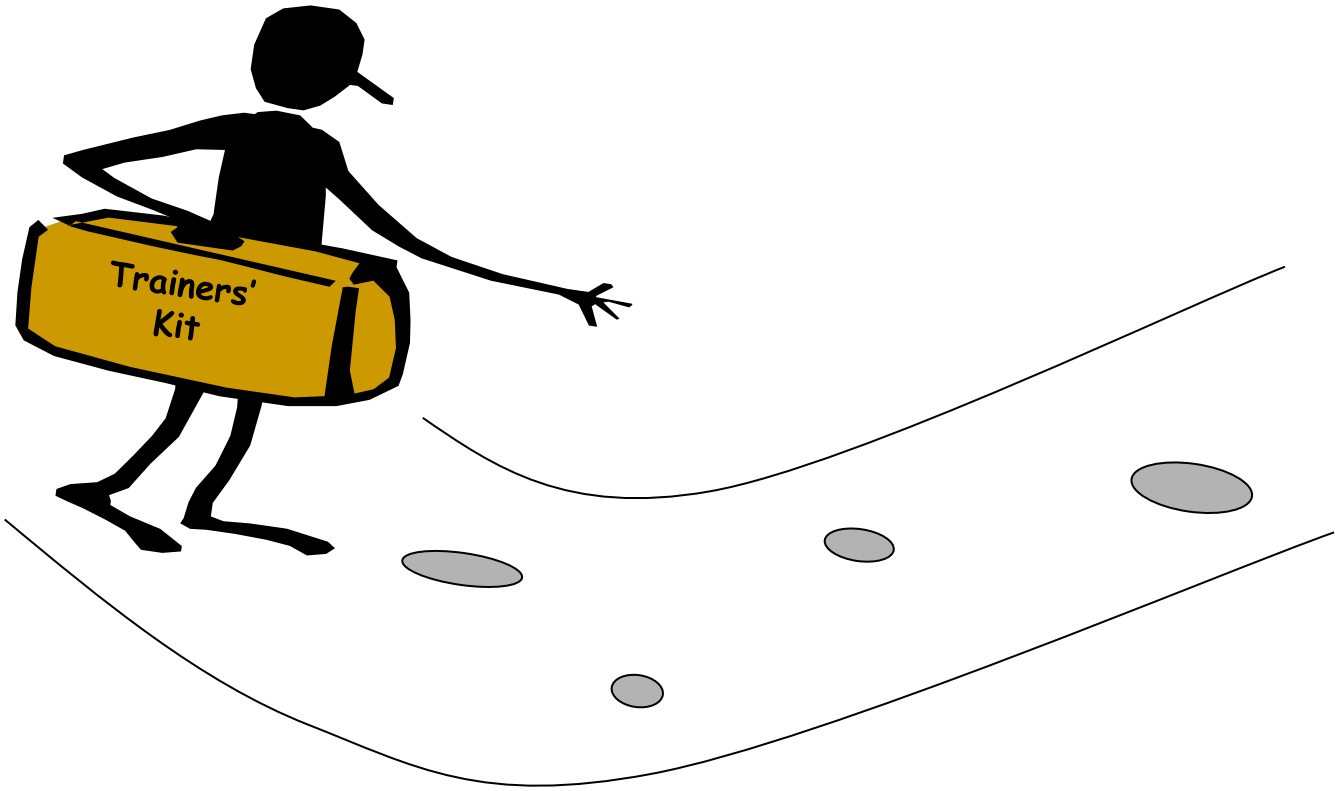
c. **Interim storage:** Storing waste within the facility until it can be disposed of.

d. **Final disposal:** Eliminating or transporting solid medical waste, liquid medical waste, sharps, and hazardous chemical waste from the health facility.

Bad Practices

- Mixing medical waste
- Sorting waste after mixing
- Overfill of safety boxes
- Poor handling of safety boxes

THANK YOU



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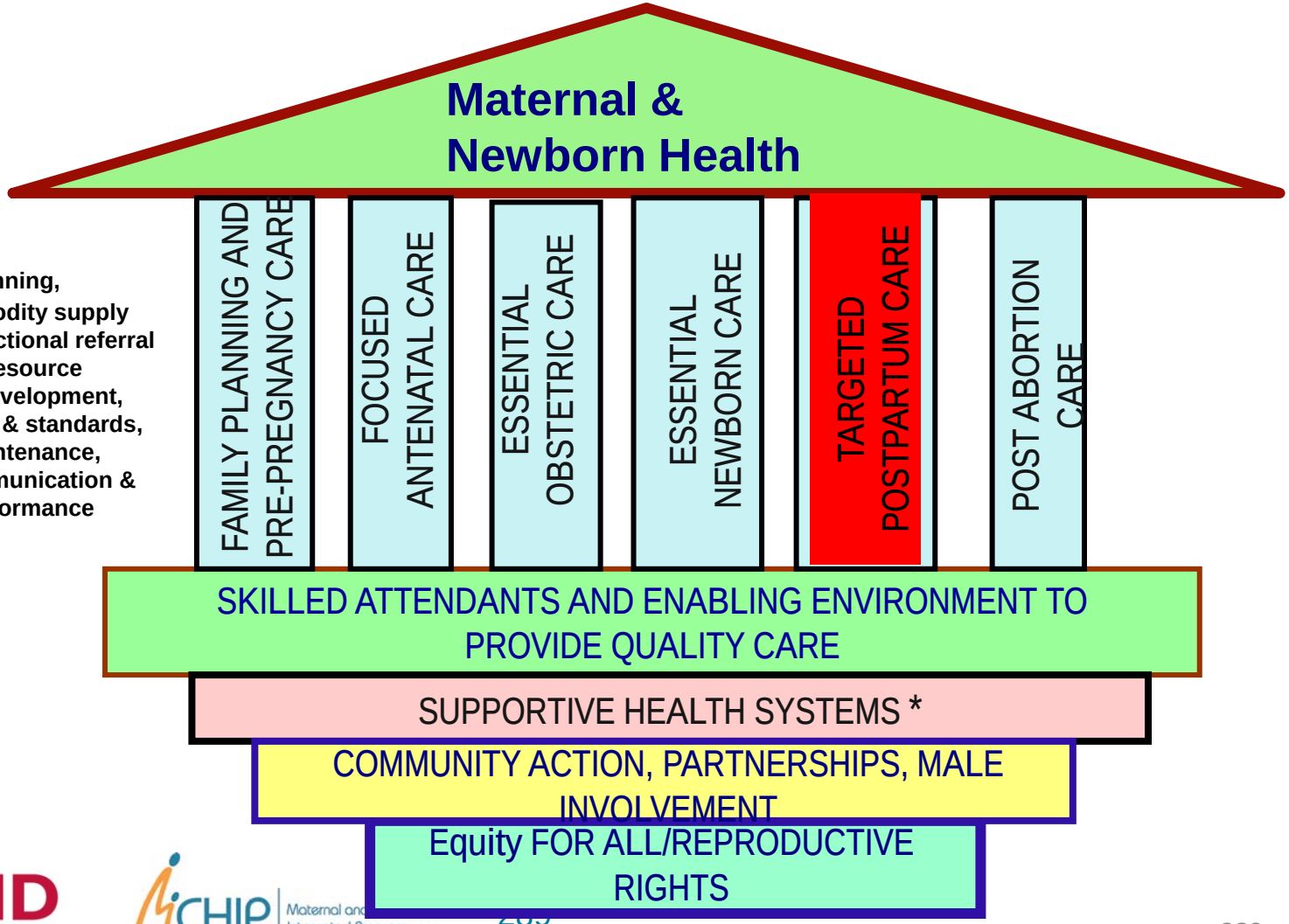
6. POSTNATAL NATAL CARE

What is Postnatal Family Planning

- **Post partum family planning** - is the initiation and use of family planning methods during the first year after delivery. The timing may be as follows:
  - Post-placental – within 10 minutes after placenta delivery
  - Immediate postpartum – delivery to 1 week
  - Postpartum – 1 week up to 6 weeks
  - Extended postpartum – 6 weeks to one year after delivery

Targeted Postnatal care is one of the pillars of Maternal and newborn health in Kenya

Kenya Maternal and Newborn Health Model



***M&E; Health planning, financial & commodity supply management: functional referral network, human resource management & development, quality assurance & standards, investment & maintenance, information, communication & technology & performance monitoring**

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Why focus on PNC?

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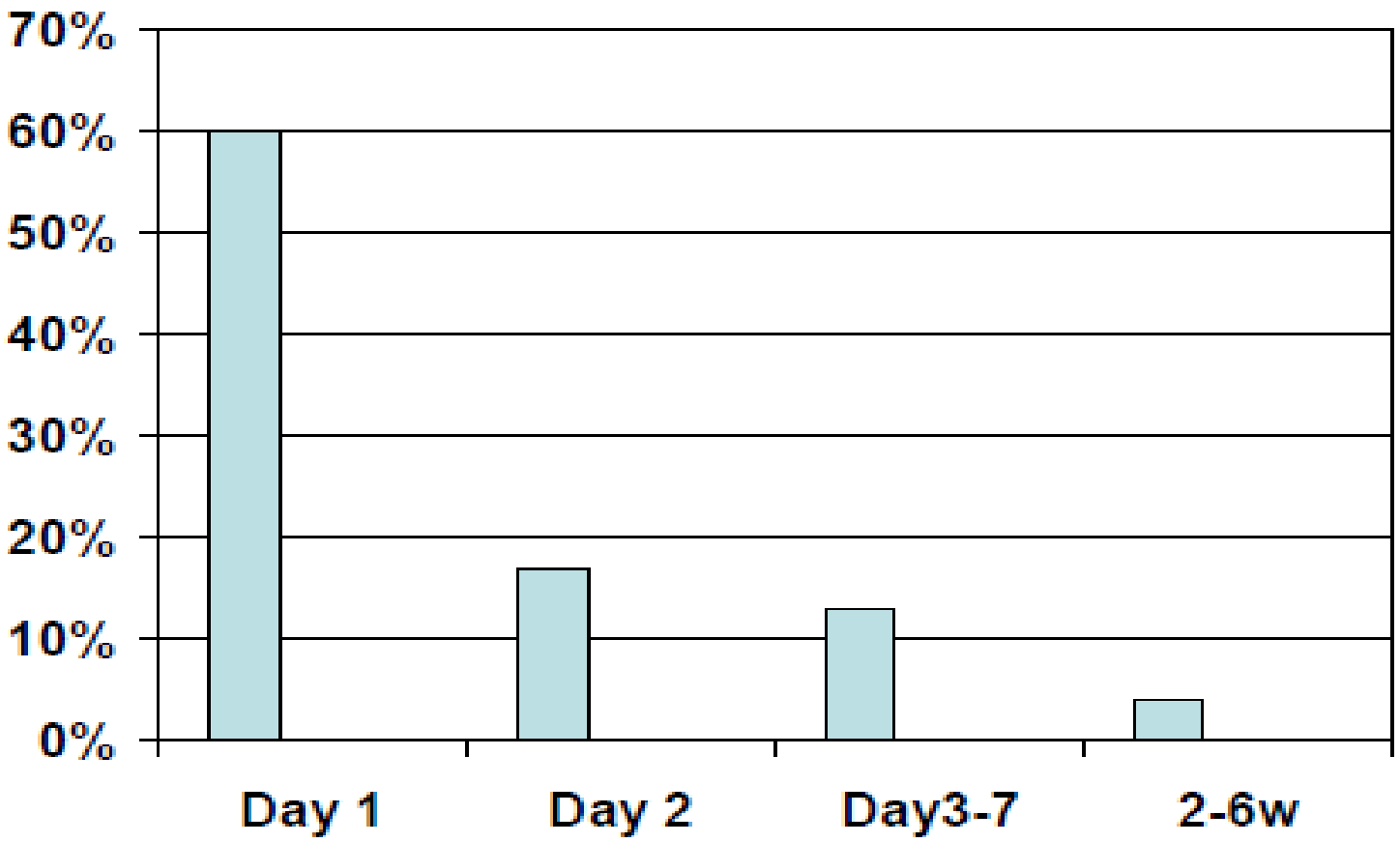
Maternal Mortality Rate in Kenya

- Kenya has a high Maternal mortality ratio: (488 maternal deaths per 100,000 live births)
- Kenya also has a high Neonatal mortality rate: (31/1000 live births)
- Most of these deaths occur in the post natal period

Proportion of maternal deaths by days post partum



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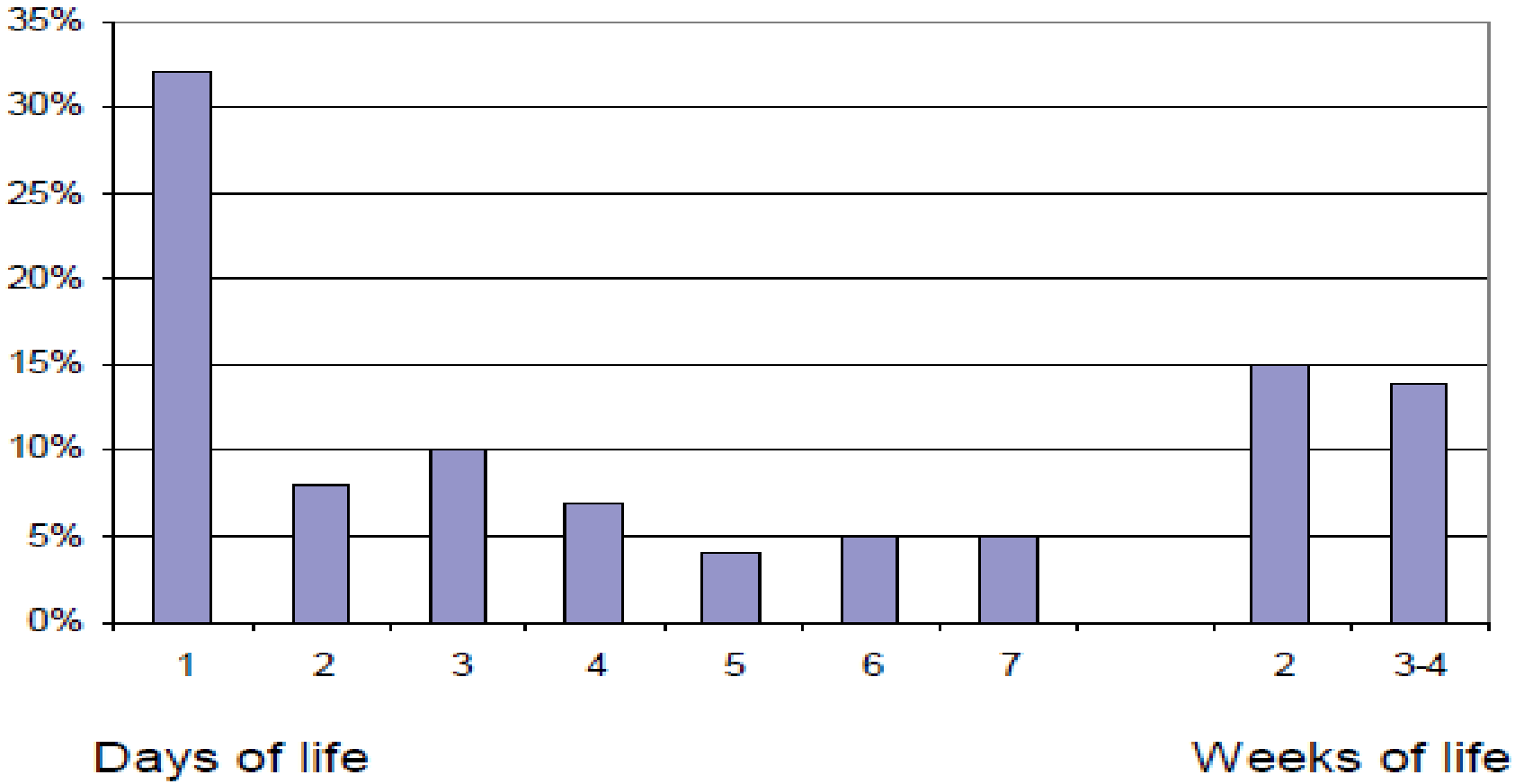
Proportion of newborn deaths by days post natal



Risk of dying in postnatal period – by day and cause

Mother	Day 1	Day 2-4	Day 5-7	Day 8 - 14	Day 15 - 42
PPH					
PIH					
Sepsis					
Newborn	**Day 1**	**Day 2-4**	**Day 5-7**	**Day 8 - 14**	**Day 15 - 42**
Asphyxia					
Trauma					
LBW/small					
Sepsis					
Tetanus					

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Justification for PNC

- Providing a continuum of care from ANC, delivery, PNC and beyond results in reduced maternal and neonatal morbidity and mortality

- It has been estimated that if routine PNC reached 90% of babies and their mothers, 10 to 27% of newborn deaths could be averted.

- However 58 % of women who deliver in Kenya **DON'T** come for postnatal care (KDHS, 2009)

Targeted Postnatal Care

- This describes a comprehensive postnatal package that is now recommended as a key strategy in reducing maternal and neonatal deaths
- This type of PNC focuses on supporting and maintaining maternal and newborn/infant well-being throughout the postnatal period
- It is goal oriented, timely, friendly and simple
- It comprises four focused personalised visits or assessments after the birth to at least 6 months postnatal
- It should be given to every mother and her newborn baby

Elements of targeted postnatal care

- Assisting the mother and family to develop a personalised postnatal care plan
- Provision of care to mother and baby by skilled attendant
- Emergency preparedness and Complication readiness for the mother and baby
- Early detection and treatment of problems such as TB, Eclampsia, haemorrhage etc; and referral as necessary
- Counselling for HIV and testing; Family planning, Breast feeding, personal hygiene, nutrition; etc
- Health promotion using health messages

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When Does Postnatal Care (PNC) Begin?

Start postnatal care during ANC

- The main aspect of PNC provided during the ANC period is to assist the mother and her family to have a postnatal care plan

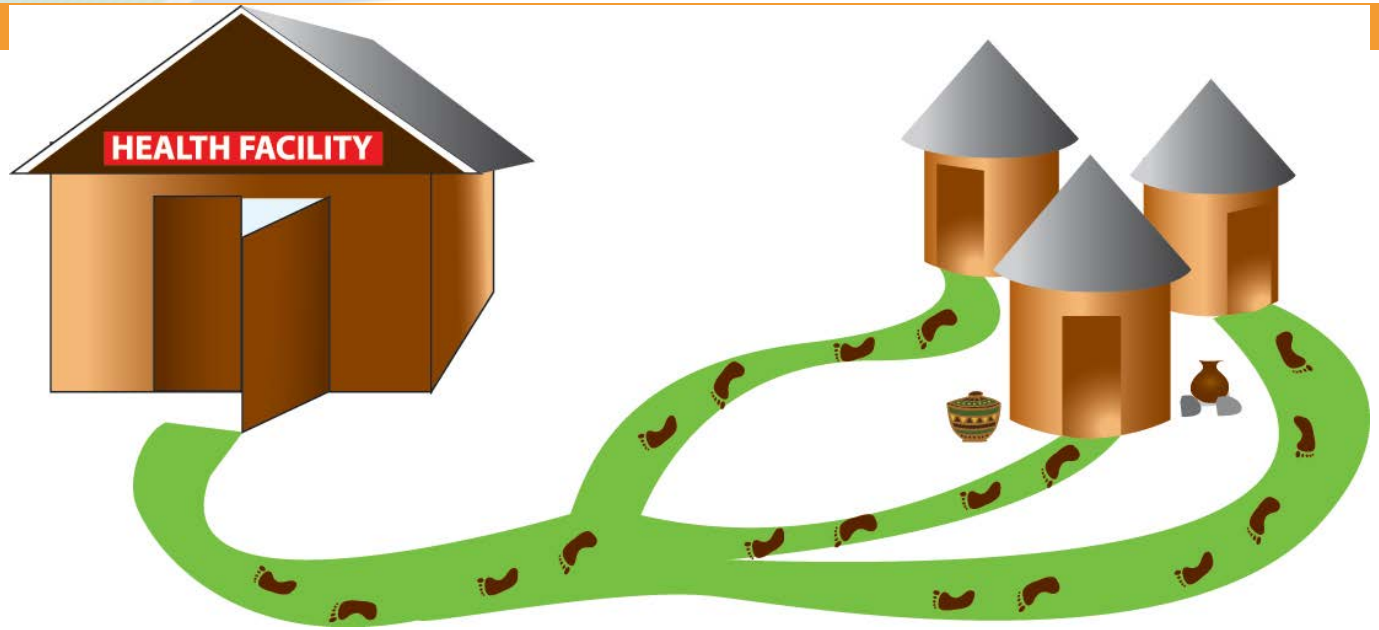
A postnatal plan ensures that the client and her family:

- Can identify danger signs in the mother and baby and action to take
- Identifies a health facility in case of an emergency
- Identifies a decision-maker in case of an emergency
- Have money set aside to use in case of an emergency
- Has a transport plan in case of emergency
- Can identify a blood donor
- Knows that **Birth Registration** for the baby is a child's right

Review this plan with mother and her partner During each PNC visit

Four (4) Targeted PNC Assessments

- The following are the recommended timings for PNC for mother & baby
  - Within 48 hours after birth
  - Within 1-2 weeks
  - Within 4-6 weeks
  - Within 4- 6 months



All women who deliver at home should visit the health facility and be reviewed by a trained health provider as soon as possible after delivery- within 48 hours

Factors contributing to maternal and newborn death:

The three delays
1st delay : Women and families are not aware of the danger signs in pregnancy, childbirth and postnatal period ; There is delay in making decisions at home
2nd delay : No plans for transport have been made and how to pay for any emergency referral within the home, community or facility
3rd delay : There is delay in receiving care in the health facility

PNC services within 24 - 48 hours

Mother	Baby
Check / perform: •Mental status assessment •Physical assessment: Pallor, Temperature, Blood Pressure, uterine involution, •Inspection of the C/S wound- if present- for bleeding •Assess lochia and blood loss •Breast examination for establishment of lactation, •Calf tenderness •Record in PNC register and mother Child booklet	**Check / perform:** •Apgar scoring •Take temperature •Take and record birth weight •Head to toe examination •Assess for danger signs for baby •Observe a breast feed •Record in PNC register and mother Child booklet

PNC services within 24 - 48 hours

Mother	Baby
Provide: Pain management Screening for TB and treat as appropriate Vitamin A (200 000 iu) Iron/folic acid supplements LLITN Treat or refer if any complications are detected Appropriate FP method If HIV positive give ARV's for prophylaxis or treatment	**Provide:** Ensure warmth and put hat on baby Delay baby's first bath for the first 24 hours If pre term encourage skin-to-skin care Encourage early initiation of, and exclusive breastfeeding Tetracycline eye ointment 1% Vitamin K Immunization (BCG & birth Polio) Infant prophylaxis for HIV as indicated Treat or refer the infant if any complications are detected Encourage and facilitate birth registration

PNC services within 24 - 48 hours

Mother	Baby
Counsel on: •HIV Counselling and testing /re-testing •FP Counselling (healthy Timing & spacing of pregnancy) **Advice on;** •Danger signs for mother •Personal hygiene and hand washing, •Breast care •Exercises •Care of the perineum •Harmful practices •Maternal nutrition •Use of Insecticide Treated Nets. •Return date	**Counsel on:** •Cord care •Hand washing for care giver •Return date 

PNC services within 1-2 weeks

Mother	Baby
Check /perform: •Mental status •Pallor, BP, temperature, pulse rate •Lochia loss- (colour, amount, smell) •Assess for calf tenderness •Infection /pus from C/S site or perineal wound •Breast condition •Uterine involution •Observe a breast feed •Record in PNC register and Mother Child booklet	**Check /perform:** •Growth monitoring; chart weight •Head to toe examination •Assess for danger signs for baby •Check eyes for discharge •Immunisation status •Observe a breast feed •Record in PNC register and Mother Child booklet

PNC services within 1-2 weeks

Mother	Baby
Provide: •Vitamin A supplementation (if not yet given) •Haematinics •LLITN (if not yet given) •Treatment for any complications detected •Referral as appropriate	**Provide:** •Vitamin A if not yet given •Immunisations if not yet started •INH prophylaxis as appropriate •Treatment of any complications detected •Referral as appropriate •Birth registration if not yet done

PNC services within 1-2 weeks

Mother	Baby
Counsel on: •Danger signs for mother •CT for HIV •Family Planning / HTSP •Maternal Nutrition •Personal hygiene and hand washing for caregiver •Breast care and Exclusive breast feeding •Harmful practices •Cervical cancer screening •Return date	**Counsel mother on:** •Danger signs for Baby •Exclusive breast feeding •Hand washing for caregiver •Keeping baby warm •Cord care •Adherence to ARV prophylaxis as appropriate •Return date

PNC services within 4 -6 weeks

Mother	Baby
Check: •General condition of mother •Mental status •BP, Weight, temperature •Uterine involution •Lochia (amount /colour) •Observe a breast feed •Record in PNC register and Mother Child booklet	**Check:** •Growth monitoring; chart weight •Head to toe examination •Assess for danger signs for baby •Immunisation status •Record in Integrated register and Mother Child booklet

PNC services within 4 -6 weeks

Mother	Baby
Provide: FP method of choice CT for HIV Screening for cervical Clinical breast examination Screening for STI/ RTI Screen for TB Treatment for any complications detected Referral as appropriate	**Provide:** Immunizations as per schedule INH prophylaxis as appropriate Treatment of any complications detected Referral as appropriate Early infant diagnosis (EID) for HIV Management of HIV positive infant Birth registration if not yet done

PNC services within 4 -6 weeks

Mother	Baby
Counsel on: •Danger signs for the mother •Exclusive breast feeding and Breast care •Family Planning (HTSP) •Maternal nutrition •Harmful practices •Personal hygiene and hand washing for the caregiver •Return date	**Counsel mother on:** •Danger signs for Baby •Exclusive breast feeding •Hand washing for caregiver •Hygiene •Return date

PNC services within 4 - 6 months

Mother	Baby
Check: •General health of mother **Provide:** •FP method of choice •Screening for RTI /STI •Screening for cervical cancer –if not done •Screening for TB •Clinical Breast examination •CT for HIV •Treat any complications that are detected •Refer as appropriate •Record in PNC register and Mother Child booklet	**Check:** Growth monitoring; chart weight Head to toe examination Assess for danger signs for baby Immunisation status **Provide:** Vitamin A supplementation Immunizations as per schedule INH prophylaxis as appropriate Treatment of any complications detected Referral as appropriate Birth registration if not yet done Record in Integrated Register and Mother Child booklet

PNC services within 4 - 6 months

Mother	Baby
Counsel on: Continued breast feeding Complimentary feeding Maternal Nutrition Harmful practices Family Planning /HTSP Hygiene and hand washing for the caregiver	**Counsel mother on:** Danger signs for Baby Hand washing for caregiver Continued breast feeding Complementary feeding Treatment adherence for HIV positive infant

What opportunities exist for increasing demand for Targeted postnatal care?

- Focused Antenatal Care
- During Labour and Childbirth
- Community involvement/male support
- Supportive policies and management
- Supportive health system
- IEC materials available for mothers to take home

Postnatal Family Planning

Objectives

- Define postnatal care FP
- Overview of PNC-FP
- Discuss timing, method & principles of PNC-FP
- Discuss PNC-FP in the context of HIV & AIDS

Definitions

- **Post partum family planning** - is the initiation and use of family planning methods during the first year after delivery. The timing may be as follows:
  - Post-placental – within 10 minutes after placenta delivery
  - Immediate postpartum – delivery to 1 week
  - Postpartum – 1 week up to 6 weeks
  - Extended postpartum – 6 weeks to one year after delivery

Introduction

- Family planning unmet need is high among women during the first year after childbirth.
- Postpartum contraceptive programmes are convenient, cost-effective and meet the needs of women.(Vernon 2008)
- It is advised to wait for two years after the last birth before trying to conceive
  - This reduces risks of adverse maternal, perinatal and infant outcomes (WHO 2005, Conde-Agudelo et al 2006).

Introduction

- On resumption of sexual relations women can conceive as early as one month after delivery, unless on a FP method
- Immediate postpartum FP is more cost-effective than after six-weeks post-delivery
- Postpartum FP results in increased CPR (Vernon 2008)

Factors affecting timing and choice of FP

- Timing and choice of family planning method depends on;
  - Breastfeeding status
  - Method of choice
  - Reproductive health goal/fertility desires
  - Medical Eligibility Criteria (MEC)
- Women not breastfeeding may use any method of FP but need to conform to the MEC for that method.

FP Services in the Postnatal Period

- The foundation for postpartum FP should be established during the antenatal period
- Between four and six months women should be counselled on transition to another FP method if they have been practicing LAM
- Service provider should counsel clients on return to sexual activity and fertility, and introduced to the concept of Healthy Timing and Spacing of Pregnancies (HTSP).

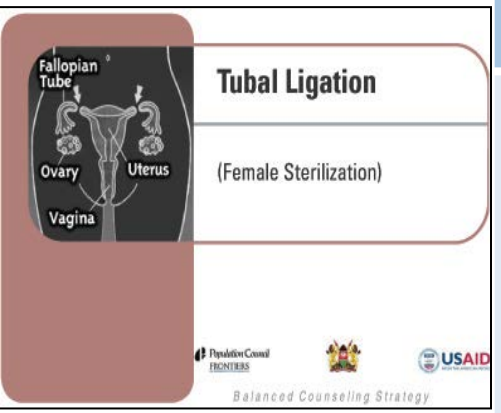
Timing of visit	FP services for the mother
Antenatal	Counseling on all methods
Intrapartum	Advise on LAM Counseling on intrapartum female sterilization (FS) and IUCD insertion during caesarean section
Within 48 hours after birth	Focused physical exam Counseling on LAM; postpartum FS and IUCD
Within one or two weeks (preferably within one week) after birth	Focused physical exam Counseling on: LAM and HTSP, return to sexual activity, return to fertility and condoms, when to initiate FP methods based on breastfeeding status

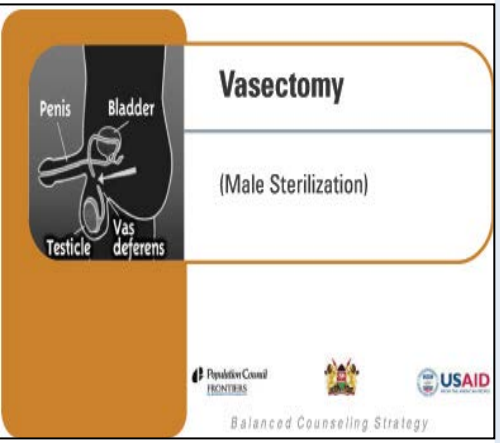
Timing of visit	FP services for the mother
At four to six weeks after birth	Focused physical exam For LAM users: supportive counseling on transition to other FP methods, HTSP messages, return to fertility, and sexual activity Counseling and provision of, or referral for, all other FP methods as appropriate (based on breastfeeding status, other eligibility criteria, and woman's choice); counseling on dual method use
Between four and six months	Reassess fertility desires For LAM users: supportive counseling on transition to other FP methods (preferably initiated before LAM expires) Counseling and provision of, or referral for, all other FP methods based on breastfeeding status

Methods of Postpartum Family Planning

Method	Principle
Lactational Amenorrhoea (LAM)	• The woman must be exclusively breastfeeding on demand • The infant should be less than six months old • Menstrual Periods should not have resumed
Intra uterine Contraceptive Device (IUCDs)	Can be inserted immediately after birth or delayed for later insertion • Immediate post placental insertion - within 10 minutes after a vaginal delivery or during a C/Section • Post partum within 48 hours of delivery • Interval insertion at 4-6 weeks postpartum

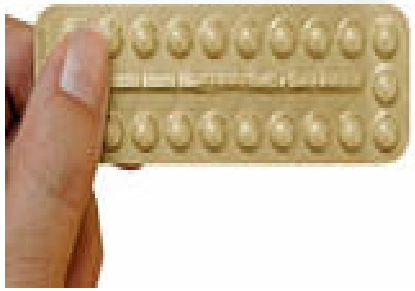
Permanent Methods





Method	Principle
Voluntary surgical contraception (tubal ligation and vasectomy)	•Offers permanent protection against pregnancy in a single procedure •Tubal ligation can be performed immediately following delivery (Ideally within 48 hours of delivery) or during C/Section •Can be performed within 7 days or delayed until after 6 weeks. •Vasectomy or male sterilization, is the surgical process performed under local anesthesia of cutting and tying the vas deferens in order to prevent spermatozoa from mixing with semen.

Methods of Postpartum Family Planning



Method	Principle
Barrier Methods	•Prevent sperm gaining access to the upper reproductive tract to make contact with the egg. Effectiveness depends on consistent and correct use •Condoms should be used with ALL methods to protect against STIs including HIV/AIDS.(Dual protection)
Hormonal contraceptives	•Contains synthetic hormones i.e. combination of oestrogen and progestin (COCs), or progestin alone • Works primarily by preventing ovulation; makes cervical mucus too thick for sperm to penetrate •Breastfeeding women can use Progestin-only contraceptives (POPs) 4 weeks post partum •*Note: COCs - can reduce the woman's milk supply*

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FP Services for People Living with HIV & AIDS (PLWHA)

- In Kenya the unmet need for contraception among PLWHA is >60% (KAIS 2007)
- PLWHA have as much need for FP services as the non-infected persons
- FP is the second prong for prevention of PMTCT
- Service providers must ensure that safe and effective contraception is accessible to PLWHA
- The service provider should refer to MEC for use of different FP methods

Special Cases for Consideration

- Fertility awareness-based methods may be unreliable for PLWHA or taking ARVs due to changes in the menstrual cycle and higher body temperature
- Women with HIV should not use **spermicides** or **diaphragms with spermicides**

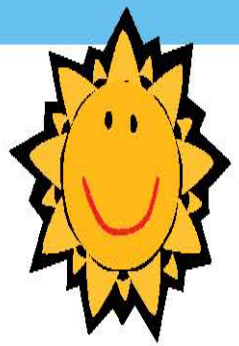
FP in PLWHA

- Women with HIV and TB, using Rifampin for TB treatment, or on Ritonavir should **NOT** use COCs
- Those with completed desired family size should be counsel on use of permanent methods
- PLWHA should be encouraged to use **dual protection**

Practicum/ skills review

- Humanistic training:
  - Counselling for PPFP
- Practice filling the FP register

Postpartum Family Planning Timeline



Ante Natal

FP/Child Spacing intentions

Intra Partum

LAM
IUCD
BTL

Postpartum

48 hours

LAM
IUCD
BTL
Vasectomy
Condoms
Progestin- only (if not BF)

1- 2 weeks

LAM
Vasectomy
Condoms
Progestin- only if not BF
Plan for combined hormonals at 3 weeks if not BF

4 -6 weeks

LAM
IUCD
BTL
Vasectomy
Hormonals, (prefer progestin-only if BF)
Condoms & other barriers
Natural FP methods (non BF) once menses pattern established

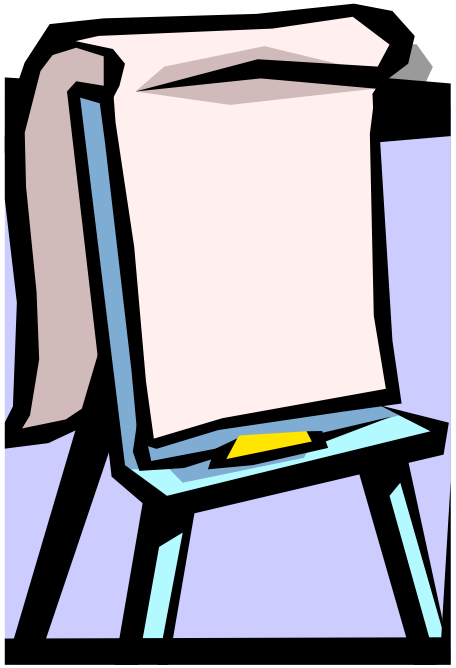
4 - 6 months

LAM transition
IUCD
BTL
Vasectomy
Hormonals
Condoms& other barriers
Natural FP methods once menses pattern established

Relationship between FP and PPH

Birth spacing helps improve the mother's nutritional status thus reducing iron deficiency

PPH



ACTION PLAN