SOCIAL SCIENCE

GRADE 7

PROJECT 2

HIV AND AIDS IN PAPUA NEW GUINEA

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INTRODUCTION

Dear Student,

This is Project 2 of the Grade 7 Social Science course. In this Project you will study HIV and AIDS in Papua New Guinea. This project will enable you to examine important aspects of HIV and AIDS in more detail.

Therefore you will:

- identify the basic information on HIV and AIDS
- compare HIV AIDS and the immune system
- know how the virus spreads
- explain the treatment and prevention of the virus
- identify how HIV and AIDS is spread in PNG and the issues concerning the care giving and support.

This project comprises of six topics. They include

Chapter 1: Basic HIV and AIDs Information

Chapter 2: HIV and AIDs and the Immune System

Chapter 3: How HIV is transmitted

Chapter 4: Treatment and Prevention

Chapter 5: HIV and AIDs in Papua New Guinea

Chapter 6: Care and Support for people living with HIV and AIDS

We hope you will learn more about HIV and AIDS in Papua New Guinea by reading through this project book.

Your teacher

Chapter 1: Basic HIV and AIDs Information

What is HIV and AIDS

HIV stands for Human Immunodeficiency Virus

H ***Human*** – because the virus lives in and causes disease in people only.

I ***Immunodeficiency*** – because the immune system which normally protects a person from diseases is damaged by this virus.

V ***Virus*** – This means that this infection is caused by a virus, a very small germ.

AIDS stands for Acquired Immune Deficiency Syndrome

A ***Acquired*** – This means that the virus comes from outside your body. To become infected, a person has to do something.

I **Immune** - Because it affects the immune system

D ***Deficiency*** – This means that the body's immune system is broken down so it can no longer fight diseases.

S ***Syndrome*** – This means AIDS is not one disease. AIDS is a group of illnesses that a person infected with HIV becomes sick with.

STI stands for sexually transmitted Infections

S ***Sexually*** – This means that the virus, bacteria or germ that causes the STI is passed from one person to another through sexual activities.

T ***Transmitted*** – This means that the infection is passed from one person to another.

I ***Infection*** – This means that the infection causes an illness in the body.

What is the difference between HIV and AIDs and STIs?

HIV is the virus that causes AIDS. HIV attacks the body's immune system. Most people in Papua New Guinea who are living with HIV do not know they are infected with the virus and continue to pass it on. People can be infected with HIV for many years and feel healthy. You cannot tell if someone is infected with HIV just by looking at them.

Ok! I will tell you about AIDs. **AIDS** is the group of diseases that an HIV infected person become sick with. HIV attacks the body's immune system. Over time, the body's immune system is no longer able to defend the body from infections and illnesses. These illnesses are called ***opportunistic infections*** because they take advantage of the broken immune system. The most common opportunist infections are tuberculosis (TB), pneumonia and diarrhoea.

So that means, HIV is one of the most dangerous STIs, but there are many other STIs in Papua New Guinea. The number of people infected with STI is growing each year. Common STIs in Papua New Guinea include gonorrhea, syphilis, herpes and Chlamydia. Some STIs do not have any signs, and people with STIs may not know they are infected. People infected with STIs have a higher risk of becoming infected with HIV and passing it on.

The signs of AIDs are like the signs of other illnesses. These signs are; rapid weight loss, continuous cough and diarrhea, fever and sores that will not heal. The only way to know if you are infected with HIV or not is through blood test.

Where did HIV come from?

Medical scientists believe that HIV came from simian (monkey) Immunodeficiency Virus (SIV) found in chimpanzees in Africa. SIV is very closely related to HIV. In the 1930s SIV crossed to humans when hunters killed chimpanzees that were infected with SIV. The hunters ate infected meat, or blood from the chimpanzees got into the cuts and wounds of the hunters. Once SIV was inside the human body, it quickly changed to HIV. Now HIV spreads from human to human.

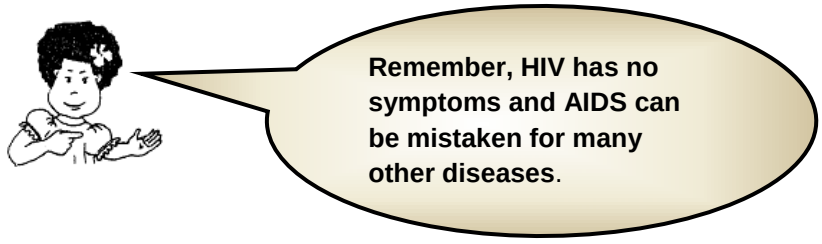
When was HIV first discovered?

In 1981, the first HIV infection was detected in USA. Doctors found that healthy men were developing diseases that only happen when the immune system is weakened. These diseases were opportunistic infections. Researchers believe now that in 1981, there were between 100 000 to 300 000 people living with HIV around the world who did not know that they were infected.

How did HIV spread from Africa to the rest of the world?

After the first case of HIV was detected in 1981, the number of cases reported around the world increased very quickly. Researchers believe that **travel** was the biggest factor that contributed to the spread of HIV around the world.

Throughout the last 100 years, national and international travels have increased in all parts of the world. With many people now travelling on planes, a person living in one city or country can be in a different city or country in the same day.



SUMMARY

- The word HIV stands for Human Immunodeficiency Virus and the initial AIDS refers to Acquired Immune Deficiency Syndrome.
- STI refers to Sexually Transmitted Diseases.
- The main difference between HIV and AIDS is that HIV is a virus that causes AIDS and AIDS is a group of diseases that the HIV infected person become sick with.
- HIV came from Africa through contact with the blood of monkeys.
- The disease was first detected in the United States of America in 1981.
- One main contributing factor to the spread of virus was through travel.

Chapter 2: HIV and AIDS and the Immune System

HIV and AIDS

Being affected with HIV and being diagnosed with AIDS are two separate things. HIV infection will eventually lead to AIDS. This could happen in 2 to 10 years.

After becoming infected with HIV most people show no signs of disease for many years. They may look and feel healthy and will probably be unaware that they are infected. Because of this, they never take themselves to the clinic for a blood test. This means that there will be many people in the community with HIV who do not know they have it. Most people only have HIV blood test when they start to see signs and symptoms of AIDS.

As HIV progresses, the virus destroys the immune system to such an extent that the infected person becomes ill. AIDS is the late stage of infection with HIV. It is characterised by a range of signs and symptoms of AIDS defining illnesses. Some people recover from AIDS defining illnesses and return to relatively having good health. They may be said to have HIV and not AIDS once their health returns. Other peoples' health may get worse very quickly.

The Immune System

Your immune system defends you from germs and other things that make you sick. White blood cells and other chemical weapons of the immune system rush to find and destroy the germ. Special white blood cells and chemical "watchdogs" called antibodies stand guard. Sometimes antibodies grab onto a germ that shows up. White blood cells called T cells attack germs directly.

Your immune system works hard to keep out infections such as: virus (flu or HIV), bacteria (TB or syphilis), parasites (malaria/worms) and fungi (thrush or ringworm). These infections can infect people and cause disease and death.

The white blood cells in the immune system are always alert and react quickly to destroy any of the infections mentioned above. The white blood cells quickly produce small particles called **antibodies** in the blood system. The antibodies then attack viruses and help your immune system to find and destroy the virus. This allows your body to get rid of infections and helps you avoid illnesses. Your body produces a different antibody for each different kind of infection.

For example, when a cold virus attacks, your body fights back. Your body sends special white blood cells up to your nose. These cells are part of your immune system. The cells in the immune system kill the virus. After a few days, you get over your cold.

The immune system cannot kill every kind of virus. Some viruses can kill people. The AIDS virus and other germs can kill people. There are no drugs that can cure a disease

caused by a virus. Antibiotics do not kill viruses. Antibiotics only kill other kinds of germs called bacteria.

Your immune system is made up of white blood cells scientifically known as CD4 T Cells

HIV and the Immune System

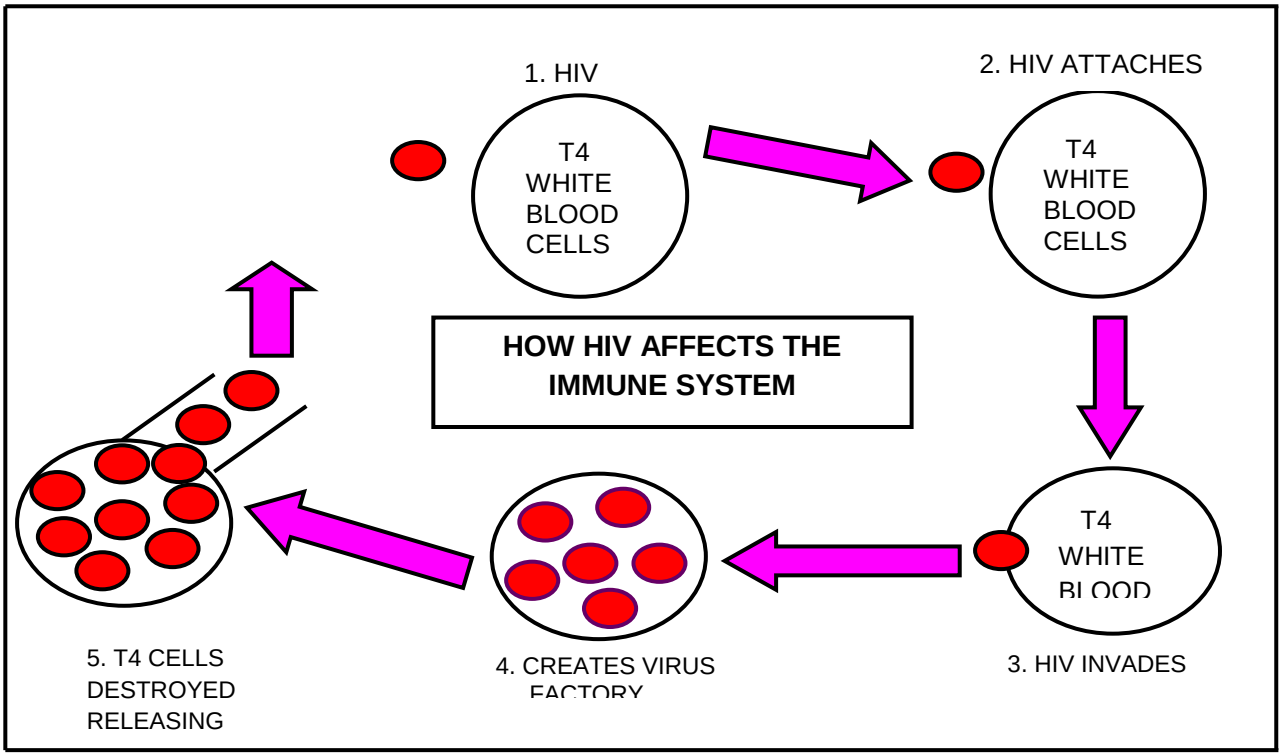
As soon as HIV enters the body, it attacks the immune system. It starts to destroy the defense cells. The virus makes its home in the cell and multiplies. Soon the number of viruses increase until the cell wall breaks open. This means the viruses are now out in the blood stream and able to find and invade more defense cells and that the original defense cells are destroyed.

As these special cells are destroyed, the body produces more to replace them, so the person remains healthy. After some years the body can no longer keep producing enough new defense cells to replace all those being destroyed by HIV.

When this happens the number of defense cells drop to a low level, so the body can no longer defend it from infections. At this time any infections that affect the body become very dangerous. Often many infections affect the body at the same time and the person becomes very sick because the immune or defense system is no longer working.

People with HIV are killed by other diseases such as pneumonia, TB, malaria and diarrheoa etc.

This diagram shows how the HIV virus enters the body and affects the immune system.



When HIV enters the body;

- The virus looks for T4 cells (white blood cells)
- HIV attacks the cells and enters them
- The virus multiples
- The new viruses leave the cells and enter other T4 cells
- HIV will control many of the body's T4 cells. The T4 cells decrease.
- The immune system cannot fight the HIV virus

Finally, the immune system becomes so weak that the body can no longer defend it from common illnesses.

How long does it take for HIV infection to lead to AIDS?

There is no one straight forward answer. A lot depends on your health and strength of your immune system. Stress from discrimination, poor diet and unhealthy lifestyle and environment weaken the immune system very quickly.

In the developing world, most HIV positive people can live between 6 to 8 years before they get ill. But this might be less, especially if a person gets sick or cannot get medicines.

It may also be longer. Some people have lived well over 10years with the virus and not got sick. It is possible to fight the infection if you look after yourself well and medicines to keep your immune system strong.

Opportunistic Infections

Opportunistic infections are infections that take advantage of a person's weakened immune system to cause illnesses, such as TB, pneumonia and diarrhea. Bacteria, fungi, viruses and parasites take the opportunity to affect the weak immune system. When this starts to happen a person is said to have developed AIDS.

It is important to know that all of us, whether we have HIV or not, carry around a whole set of germs (bacteria, fungi, viruses and parasites). These are kept under control by the immune system. Opportunistic infections can cause pain, discomfort and often lead to death.

There are simple treatments for some of these opportunistic infections. When they are treated early they respond well to treatments. Managing opportunistic infections is an essential part of caring for people with HIV. Some home care providers in Papua New Guinea have developed home care packs for people with HIV. They usually contain anti-malarial drugs and some other medicines, e.g. to treat diarrhoea and simple skin infections.

People are advised to start taking the right medicines as soon as they feel sick. It is important that they do not wait until they are very ill to seek medical assistance.

It is important to remember no one, not even a doctor can tell if a person has HIV by looking at or observing him or her. HIV is only detected by a special blood test. There are NO signs and symptoms of AIDS.

The Window Period

When blood is taken to be screened for HIV, the test is not looking for the actual virus. It detects the presence of antibodies to HIV. Antibodies are substances produced by the body in response to the presence of infection. The anti-HIV antibodies are produced when HIV is present in the body. But the body does not produce these antibodies immediately. It may take several weeks for individuals to produce enough antibodies for the **blood - screening** test to detect them.

The period between the time a person becomes infected and when the blood test becomes positive, is called the **window period**. During this time the blood test will be negative, but the virus may still be present and the person can still transmit it to another during sexual intercourse.

If the blood test shows ‘negative’, this means that the person did not have HIV, several weeks (plus the test waiting time) ago. If the person has had at-risk sexual contact since then, they could have the virus. If someone has a negative result of the HIV blood test, the test should be repeated in 1-2 months and the person should have no unprotected sexual contact in the meantime.

There are signs of the infections that occur when the person has AIDS. The signs of people who have HIV and AIDs are just the same as those with any other illnesses. Therefore, we should never say a person has HIV or AIDS because of the way they look or the health problems they are experiencing.

What are the signs and symptoms of AIDS?

AIDS is when the immune system cannot protect the body from other illnesses. People with AIDS are very sick and finally die of these illnesses:

The signs and symptoms of AIDS include:

- rapid weight loss
- sores that will not heal
- constant diarrhea
- oral thrush
- TB
- constant fever
- pneumonia
- fatigue

The most important point is that, the only way to know if a person has AIDS is to have an HIV blood test. People who have HIV can look and feel perfectly healthy for many years. You cannot tell someone is infected with HIV just by looking at them. That is why;

an HIV epidemic is so dangerous. Most people in Papua New Guinea who are HIV positive do not know they have the virus and continue to pass it on.

You have come to the end of the Chapter. Below are the main points of the chapter.

SUMMARY

- The immune system of the body defends against germs and other things that make you sick.
- The white blood cells in the immune system are always alert and destroy any infections.
- The role of the white blood cells is to produce antibodies.
- The fact is that immune system cannot kill every kind of virus.
- As soon as HIV enters the human body, it attacks the immune system.
- It depends on the health and strength of a person's immune system for HIV infection to lead to AIDS.
- Illnesses such as TB, pneumonia and diarrhea are known as opportunistic infections and they take advantage of a person's weak immune system.
- The window period refers to time when a person is infected and when the blood test becomes positive.
- The main signs or symptoms of AIDS are; rapid weight loss, sores that do not heal, constant diarrhoea, oral thrush, TB, pneumonia, fatigue.

Chapter 3: How HIV is Transmitted (Spread)

HIV is passed only through these body fluids;

- blood
- semen
- vaginal fluid
- breast milk

When these fluids from an HIV positive person enter someone else's body, they can be infected with HIV. These bodily fluids enter your blood stream you can be infected by the HIV virus. This can happen through tiny unseen tears in the tissues of the vagina, anus or penis.

The three (3) main ways of getting HIV are through:

1. Sex

Having sex with someone who is infected with HIV is the most common way that HIV is transmitted in Papua New Guinea. HIV can be transmitted through anal and vaginal intercourse.

2. Contact with infected blood

This can occur through sharing of sharp instruments such as needles, razor blades and other skin-cutting instruments.

In Papua New Guinea, blood used for transfusions is tested for HIV, so HIV is not transmitted through blood transfusions.

Injecting drug use is not common in Papua New Guinea, but where it does happen, sharing needles can transmit HIV.

Tattooing, circumcision and other cutting of the skin are common practices in Papua New Guinea. Sharing razor blades and other cutting instruments can lead to transmission of HIV.

3. Parent to Child Transmission (**PTCT**)

An HIV infected mother can pass the virus to her child during pregnancy, labour and delivery and through breast feeding. The risk of a mother passing HIV to her child is between 15 – 40%. There is 1 in 3 chances that an HIV infected mother will pass HIV to her child.

Parent to Child Transmission (PTCT) was previously known as **mother to child transmission (MTCT)**. Children of HIV positive parents will have higher risk of low birth weight, pre-maturity, still-birth and pre-natal mortality (Aiken, 1992).

How is HIV virus passed on from the mother to the unborn baby?

It is highly dangerous for an unborn baby because the mother's HIV antibodies cross the placenta. It is hard to find HIV infections in infants up to 18 months of age. This is because HIV antibodies from the mother may be present in the child's blood stream even if the child is not HIV positive.

Children who develop signs of HIV infection in their first year of living are less likely to survive and most die within 3 years. In Port Moresby general Hospital in 2003, 80% of HIV positive babies died within the first 5 – 8 months of life.

Research suggests that transmission rates are different between the developed and the developing countries.

Of all the babies born to HIV positive (+) mothers:

- 20% are infected during pregnancy (across the placenta)
- 45 - 50% become infected at time of delivery through blood/secretions
- 30 – 35% become infected after birth through breastfeeding

A pregnant mother

Why does HIV pass from only some mothers to their babies?

1. The viral load of the mother is the most important determent of transmission. High viral load occurs in the weeks after infection and then years later when the immune system is damaged and the woman develops an HIV related illness. Therefore the risk of transmission to the baby is increased if the mother becomes infected with HIV during pregnancy, or if the pregnancy occurs late in her HIV infection when viral loads are high.
2. When HIV positive mothers have not had enough of the right foods to eat, they risk transmitting the infection to their baby. For the same reason, if a mother has other infections and her immune system is weakened, the amount of virus in her blood stream will be high. This will increase the risk of parent to child transmission.
3. If the mother has a difficult time delivering the baby where she is torn or cut to allow the baby to come out, then the chance of transmission is greater.
4. The child may not be infected during pregnancy or delivery, but may become infected through breastfeeding. The risk is higher when the mother's viral load is high. This would be just after HIV enters the body or much later in her HIV infection when she is heading towards AIDS.

About breastfeeding


A mother breast feeding her baby

The first six months of breastfeeding are the most beneficial as babies benefit from most of the antibodies passed from the mother's breast milk. Exclusive breastfeeding is recommended during the first 4 months of the baby's life. It is believed that exclusive breastfeeding keeps the mucosa (the lining of the mouth, throat and esophagus, etc.) and other barriers intact, which reduces the chance of the baby being infected.

Exclusive breastfeeding means that the only food that the baby receives is breast milk.

When mothers or parents are tested HIV positive, they will need to be informed about the risk of transmission through breast feeding. It is important that the mother understands her options (choices). Information and support is needed to help mothers or parents make the right choice for them. Due to expense of store bought baby formulas (baby milk), exclusive breast feeding is often going to be the best option.

HIV infected mothers must exclusively breast feed for 4 months. After 4 months, the mother must stop feeding breast milk and start the baby on other foods and drinks.

Important information for all mothers

The majority of women do not know their HIV status. Therefore steps should be taken to target all pregnant women.

These include:

- promotion of exclusive breastfeeding for all for the first 4 – 6 months, then quick weaning. A HIV positive mother should breastfeed for only 4 months. After this time, she must stop altogether. She must substitute breast milk for other nutritional foods and drinks. The mother will need support from her family.
- improving general health and nutrition.
- effective management of sexually transmitted infections before and during pregnancy.

The most common features of HIV infections in children are:

- failure to live longer.
- re-current bacterial infections, especially pneumonia.
- re-current diarrhoea.
- oral thrush (sores around the mouth).
- itchy rashes.
- chronic cough
- developmental delay (growth delay).

Having contact with HIV positive people

It is safe to work, study, play and live with people infected with HIV. It is also safe for children to be in school with children who are infected with HIV. HIV is only transmitted through the different ways stated above. Other body fluids like saliva, sweat, tears, urine, faeces or vomit do not transmit HIV.

You ***cannot*** get infected with HIV by:

- taking care of people living with HIV and AIDS
- shaking hands
- coughing and sneezing
- touching the sweat of an infected person
- sharing food or drinks
- sharing cups, plates, spoons and other eating utensils
- swimming in a pool, river or the sea
- wearing second-hand clothing
- sharing toys
- sharing toilets
- changing nappies
- using PMVs or telephones
- hugging and kissing
- giving blood and getting blood transfusions
- mosquitoes and other insects or animals
- sharing buai or cigarettes

Who can get HIV?

Anyone who has unprotected sex is at risk of becoming infected with HIV.

Anyone who shares sharp skin-cutting or piercing instrument is at risk of becoming infected with HIV.

People are not protected from HIV because they are young, old, a woman, a man or living in a rural area.

People get infected from HIV because of their behaviours that put them or their partner at risk.

Below are the main points to chapter 3

SUMMARY

- Blood, semen, vaginal fluid and breast milk are body fluids that HIV is passed through.
- The three main ways of getting HIV are sex, contact with infected blood and parent to child transmission.
- HIV virus can be passed from the mother to the unborn baby.
- The viral load of the mother determines the rate of transmission as well as improper diet, difficult time in delivery or through breast feeding.
- The HIV positive mothers may breast feed for four months and then introduce food and other drinks.
- HIV cannot be passed through activities like taking care of HIV positive person, shaking hands, coughing and sneezing, sharing food and drinks, sharing toilets and etc.
- HIV AIDS can be transmitted through unprotected sex, sharing of skin cutting or piercing instrument with a HIV positive person and behavior of people.

Chapter 4: Prevention and treatment

How can we prevent ourselves from acquiring HIV and AIDS?

Acquired Immune Deficiency Syndrome (AIDS) is caused by the Human Immunodeficiency Virus (HIV). AIDS severely damages the immune system, and it is ultimately a **terminal illness** (terminal illness is a permanent illness that will eventually lead to death). This disease strikes people of all backgrounds and ages, from newborns to the elderly. AIDS is a **communicable illness** (*communicable illness is an illness that can be passed on to others*) that can be usually be prevented by taking appropriate precautions. Below are some measures you can take to protect yourself from contracting HIV.

1. **Abstain From Sex**

Abstaining from any sexual activity that would give you contact with someone's vaginal fluid, pre-seminal fluid or semen is the most effective way to avoid getting AIDS through sexual contact.

2. **Have one Sexual Partner**

Having one sexual partner who is having sex only with you can help prevent AIDS. Both partners must have been tested and found to be HIV negative. Keep in mind that HIV antibodies do not show up immediately, and retesting must be performed in some cases. For example, both partners can be tested and then, after a period of abstinence or condom use, retested. If all test results are negative and both partners remain monogamous, HIV infection should not occur. A physician can determine what period of time should pass between the first test and the second.

3. **Use an Appropriate Condom**

Using a latex or plastic (polyurethane) condom each time you have sex. This includes oral sex, intercourse and any other sexual acts that give you potential contact with blood, vaginal fluid, pre-seminal fluid or semen. A dental dam should be used to keep vaginal fluids from going into the mucous membranes of the mouth. A female condom can be used when needed, and a new condom must be used for each sex act.

4. **Water-Based Lubricant**

Health workers recommend the use of water-based lubricant instead of oil-based lubricant during sexual activity, as oils can weaken the condom.

5. **Avoid Aggressive Sexual Contact**

Avoid aggressive sexual contact that can cause small tears in the vagina, anus or rectum; such tears give the virus an opening into the bloodstream. Aggressive sex is also more likely to rupture the condom.

6. Do Not Share Needles

Do not share needles with anyone, ever. This includes needles with illegal drug use and also the administration of prescription drugs at home. Do not engage in any activity that puts you in contact with someone else's blood.

7. Be Alert When Performing Health Care

Health care workers are in danger of contracting AIDS. To lower the risk, a health care worker should follow protocol when dealing with needles or other sharp instruments. She should also wear gloves, goggles, a mask and other protective gear when anticipating contact with blood or other bodily fluids. Caregivers in the home should also avoid contact with blood or bodily fluids of anyone who could have HIV/AIDS.

8. Avoid Sharing Personal Items

Avoid sharing items like toothbrushes and razors, as they can contain traces of blood. Do not use an item if you are not certain it is new or has been used only by you.

9. Seek Reputable Health and Personal Care

Seek reputable professionals for dental work, medical care, surgery, medical testing, hair cutting and tattooing. Your health is vulnerable unless workers use new disposable equipment and appropriately disinfect their tools.

10. Avoid Breast Milk

According to the U.S. Department of Health and Human Services, breast milk can contain HIV. You should not allow breast milk to come in contact with the mucous membranes of your mouth or any open sores.

Can AIDS be cured?

At this time, there is no cure for AIDS, but medications are effective in fighting HIV and its complications. Treatments are designed to reduce HIV in the body and keep the body’s immune system as healthy as possible and decrease the complications that may develop.

Antiretroviral (**ART**) drugs are medications for the treatment of infection by HIV. Different classes of antiretroviral drugs act at different stages of the HIV life cycle. Combination of several (typically three or four) antiretroviral drugs is known as **Highly Active Anti-Retroviral Therapy (HAART)**.

Doctors work together with their patients to develop a treatment plan that best meets their needs. Three main factors will be considered when designing the treatment plan:

- the willingness and readiness to begin therapy

- The stage of the disease
- Other health problems

The U.S. Food and Drug Administration (FDA) has approved a number of drugs for treating HIV and AIDS. It's important that patients take their medications exactly as prescribed. This is a crucial part of the treatment success.

Most medications have side effects, which the doctor often discusses with their patients. Individuals respond differently to medications and side effects may vary. Doctors, nurses and pharmacists help patients manage these side effects.

Our country through the National Department of Health and the World Health Organisation (WHO) has developed Guidelines for HIV Care and Treatment in Papua New Guinea. This was done in 2009 and is in use by health workers around the country.

Some of the drugs mentioned above have been in use in this country through the guidelines that have been developed.

Below are the main points to chapter 4

SUMMARY

- HIV and AIDS can be prevented where appropriate precautions can be taken.
- Some ways to prevent HIV and AIDS are; abstain from sex, have one sexual partner, use condom, use water based lubricants, avoid aggressive sexual contact, do not share needles, avoid sharing personal items, seek reputable health and personal care and avoid breast milk.
- HIV AIDS cannot be cured however; treatments are used to reduce HIV in the body.
- Health workers work with the patients to develop a treatment plan that meets their needs. There are three main factors that need to be considered when designing a treatment plan. These factors are willingness and readiness to begin therapy, the stage of the disease and other health problems.

Chapter 5: HIV and AIDS in Papua New Guinea

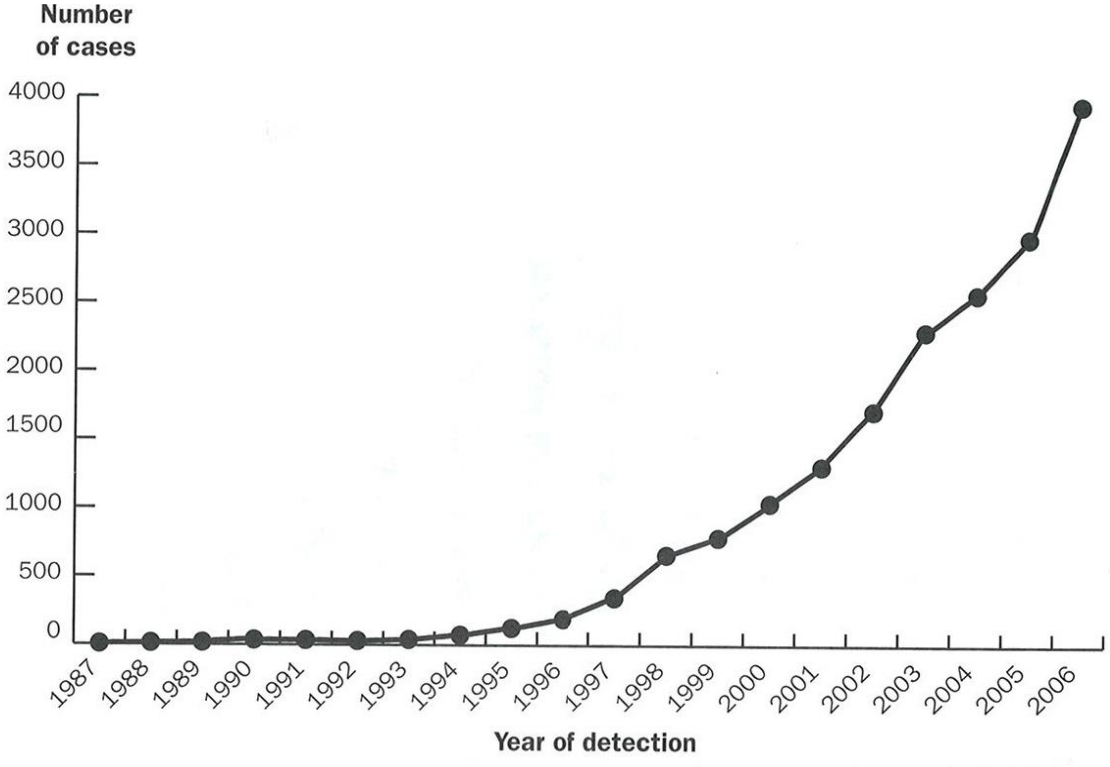
The HIV epidemic in Papua New Guinea is very serious and is growing very quickly. Papua New Guinea can learn a lot from other countries that have experienced this epidemic and terrible effects on the people. Their experiences can help people in Papua New Guinea prevent HIV and care for those who are already infected and affected by the virus.

Take note of the facts below.

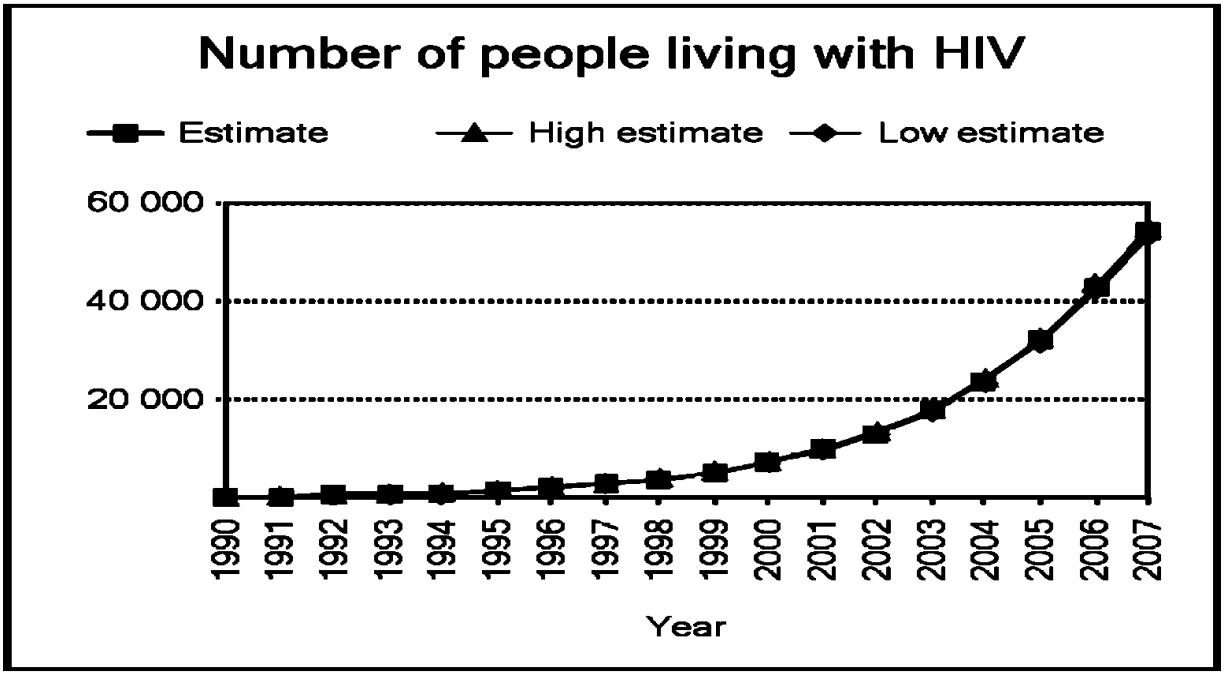
- Almost (90%) of HIV infections reported in the Pacific Region are in Papua New Guinea.
- More than 1% of adults in Papua New Guinea are infected with HIV (at least 45 000 people).
- An equal number of men and women are infected.
- Since 1987, the number of HIV infections detected in Papua New Guinea has increased each year.

The line graph below shows increasing number of cases since 1987. The graph presents the total number of people who became infected with HIV in Papua New Guinea between 1987 and 2006.

HIV INFECTIONS IN PAPUA NEW GUINEA, 1987 - 2006



The graph below (Fig.11) shows the estimated figures of number of people living with HIV in Papua New Guinea from 1990 to 2007.

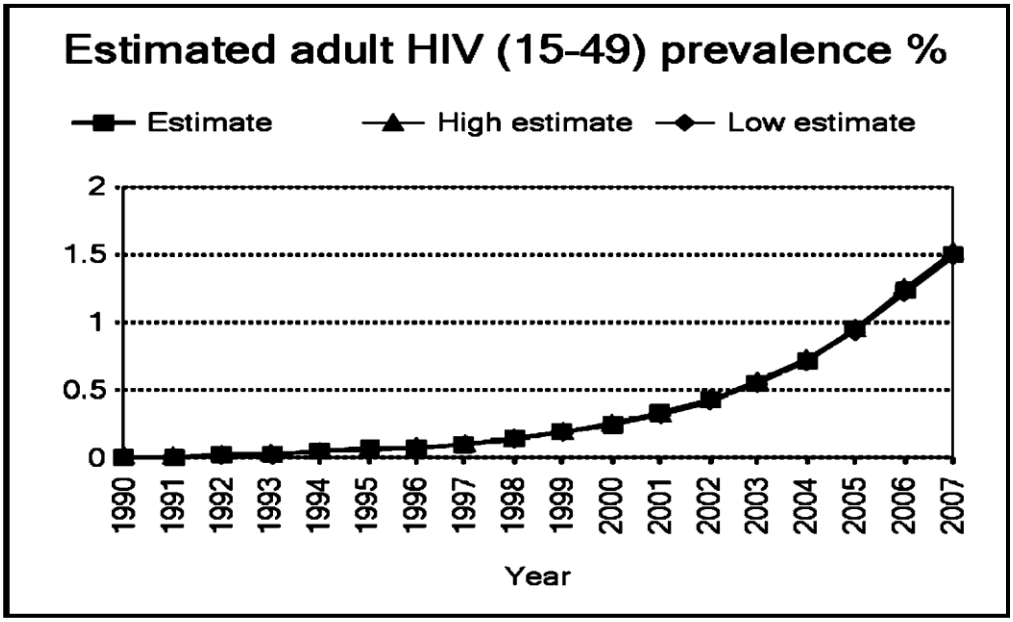


Source: UNAIDS/WHO, 2008

There are thousands of people in Papua New Guinea who are infected with HIV but do not know this because they have not been tested. Researchers believe that there are actually more than 60 000 people living with HIV in Papua New Guinea.

The next graph (Fig.12) shows the estimated adult HIV prevalence expressed in percentage, between the ages of 15 to 49.

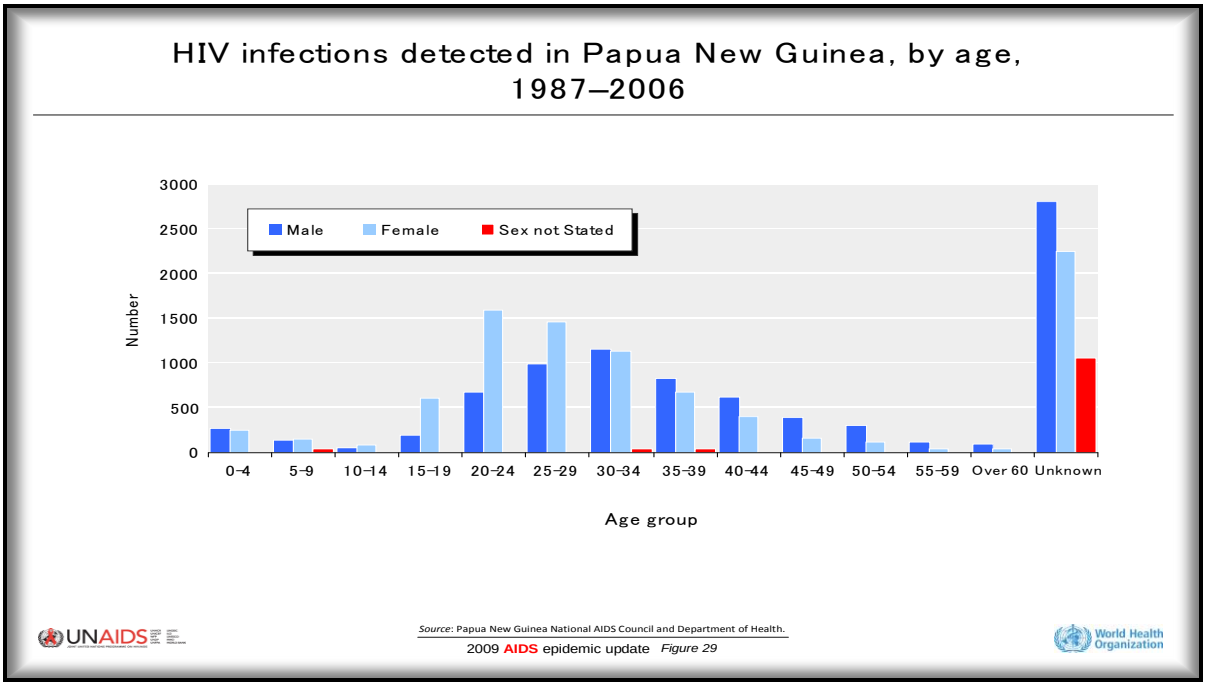
Figure 12



Source: UNAIDS/WHO, 2008

Remember, these are only infections that have been detected with an HIV blood test.

The graph presents the total number of people living with HIV according to whether they are male or female.



Some interesting information can be learned from the graph above:

- Generally, women become infected with HIV at a younger age than men (15 to 34 years of age).
- Generally, men become infected with HIV at an older age than women (25 to 49 years of age).
- The numbers suggest that young women are having sex with older men.

Why is the HIV epidemic increasing in Papua New Guinea?

HIV and other STIs are growing problems in Papua New Guinea. Some reasons for these include:

- ***Poverty and unemployment*** – This can lead to people having sex in exchange for money and goods as well as other risky sexual behaviours.

- ***Domestic violence, rape, pack rape and sexual abuse*** – Forced sex increases the risk of becoming infected with HIV.
- ***Cultural practices*** – Tattooing and cutting using unsterilised or shared equipment. It also includes the practice of men marrying more than one wife called polygamy.
- ***Taboos*** – In Papua New Guinea, it is often a taboo to discuss sex. Communities do not want sex education to be taught in their schools.
- ***Mobility*** – Papua New Guinea populations are traveling more than ever from villages to provincial towns, then to Port Moresby and overseas for work, school and personal reasons.
- ***Stigma and Discrimination towards people with HIV and AIDS*** – This makes people scared to get tested for HIV, or to get treatment when they are sick.
- ***High Rates of STIS and Teenage Pregnancies*** – This shows that many people are having unprotected sex with multiple partners. This also shows that young people are having unprotected sex.
- ***Low condom use and opposition to condom*** – This means that people don't protect themselves and others.
- ***Alcohol and drug abuse*** – This can lead to risk-taking and poor decision-making.

Findings on HIV and AIDS in Papua New Guinea

a. Epidemic level and trend and gender data

The first case of HIV infection in Papua New Guinea was detected in 1987. By June 2005, 12 341 people had been reported to be living with HIV/AIDS. The country is facing a generalized epidemic with rapidly increasing prevalence in a difficult socio-economic context. ***National epidemiological consensus meetings*** in November 2004 estimated an average prevalence rate of 1.7%, and between 25 000 and 69 000 people between 15-49 years were living with HIV/AIDS. Prevalence rates among women attending antenatal care services are estimated to vary between 1% and 4%. Available data suggests that the epidemic is predominantly transmitted through ***heterosexual*** contact (84%), fueled by high-risk behaviour including widespread commercial and casual sex. Approximately 93.1% of current reported cases are adults. The epidemic is concentrated in Port Moresby and other towns, along major transport routes, and around mines and plantations. Reported HIV cases indicate that men and women are equally affected overall, with more women reported as infected among people younger than 30 years and more men among people older than 30 years.

b. Major vulnerable and affected groups

The spread of HIV in Papua New Guinea is affected by a variety of factors, ranging from individual risk behaviour such as low levels of condom use in casual partnerships to the wider socio-economic and political context that has created an environment in which high-risk behaviour is widespread. A high incidence of sexual aggression and other forms of violence against women appears to be fueling the growth of the epidemic.

c. Policy on HIV testing and treatment

Voluntary counselling and testing for HIV is currently available in clinical and non-clinical settings. In clinical settings, voluntary counselling and testing sites are mostly located in clinics treating sexually transmitted infections. The HIV Prevention and Management Act of 2003 stipulate the provision of pretest and post-test counselling. Access to voluntary counselling and testing services in Papua New Guinea is limited. The National Strategic Plan on HIV/AIDS for 2004–2008 plans to expand access to such services in the country, especially at the provincial and district levels, with the aim of establishing at least two easily accessible sites for voluntary counselling and testing services in each province by 2008. Guidelines on voluntary counselling and testing for HIV are being updated in accordance with international standards. The National Strategic Plan on HIV/AIDS for 2004–2008 also acknowledges the importance of ensuring the clinical management of opportunistic infections and providing anti-retroviral therapy to people living with HIV/AIDS, and its objectives include increasing the capacity of public and private hospitals, developing training tools and improving laboratory diagnostic capacity to expand access to antiretroviral therapy. Guidelines on anti-retroviral therapy have been developed in accordance with international standards, and a plan for scaling up care and treatment is being developed.

d. Assessment of overall health sector response and capacity

The health system in Papua New Guinea faces many challenges, especially in rural and remote areas. The country’s health status steadily improved during the 1980s, but has been declining since the early 1990s. In 2000, life expectancy at birth was estimated to be 52.5 years for men and 53.6 years for women, with a healthy life expectancy of 45.5 years according to WHO. About 50% of all mortality is due to communicable disease, with malaria being the leading cause of all outpatient visits and the second leading cause of hospital admissions and deaths. HIV is now the leading cause of adult mortality at Port Moresby General Hospital. The Government of Papua New Guinea has made a formal commitment to facilitate an integrated and coordinated response to the HIV/AIDS epidemic. A National AIDS Council was established in 1997, and the National Strategic Plan on HIV/AIDS for 2004– 2008 is being implemented. The Plan focuses on seven priority areas of intervention: treatment, counselling, care and support; education and prevention; epidemiology and surveillance; social and behavioural change research; leadership, partnership and coordination; family and community; and monitoring and

evaluation. An integrated and multi-sectoral approach has been adopted to effectively address the socioeconomic and gender dimensions of the epidemic and its impact at the individual, family, organizational and community levels. A National Action Plan for Scaling up Care and Treatment, based on the National Strategic Plan on HIV/AIDS for 2004–2008, is being developed. Recently, Papua New Guinea adopted the WHO Integrated Management of Adult and Adolescent Illness (IMAI) strategy as training approach to scale up the human resources required for HIV treatment. Through WHO support, health care workers from public, private and faith-based organizations have been trained to provide HIV care and treatment. Financial commitments from the Global Fund to Fight AIDS, Tuberculosis and Malaria and from other donor partners will also help address the lack of adequate capacity. An anti-discrimination act was adopted in 2003 to protect the fundamental rights of people living with HIV/AIDS.

The Government of Papua New Guinea works closely with churches and non-governmental organisations' to implement the national response.

e. Issues And Major Challenges

The main barrier to scaling up care and treatment in Papua New Guinea is the lack of trained human resources. Capacity-building for scaling up care and treatment is required in both managerial and technical areas and will require the support of and coordination of many different partners. Moreover, the country lacks health infrastructure and financial resources, especially outside major cities, to adequately address the growing epidemic. Rapid expansion of HIV/AIDS care and treatment will require special attention and innovative solutions to ensure that services reach the predominantly rural population, especially in remote areas. Close to 87% of the population live outside urban areas, which have limited infrastructure and face significant logistical constraints in terms of both transport and procurement systems. Community-based service models need to be developed to ensure maximal access. Voluntary counselling and testing facilities need to be expanded further, and issues related to stigma and discrimination and lack of awareness about HIV need to be urgently addressed. Political instability, socioeconomic unrest and the prevalence of sexual violence also fuel the spread of the epidemic.

Treatment and prevention coverage

- In 2005, WHO/UNAIDS estimated that the total treatment need in Papua New Guinea was 2000 people.
- Access to services for prevention, treatment, care and support remains very limited. Available services are often difficult to access, are often inadequately equipped in term of staffing and diagnostic supplies and medications, and user charges are generally required for diagnosis and treatments other than antiretroviral drugs. There are few examples of effective interventions for prevention reaching out the most vulnerable communities such as sex workers or mobile populations.

- In March 2004, the National Department of Health developed a pilot care project to expand access to antiretroviral therapy in the country with support from the Asian Development Bank and WHO. Treatment is currently provided free of charge in four centers: two are part of a national pilot care project and the other two are managed by a faith-based organization. As of December 2005, 320 people were reported to be receiving antiretroviral therapy and 550 were on a waiting list and are being monitored in the country. A very small number of people living with HIV/AIDS are also accessing treatment through private providers both within Papua New Guinea and in Australia. The National Strategic Plan on HIV/AIDS for 2004–2008 aims to make antiretroviral therapy available and accessible to at least 10% of the people in need of treatment by 2005 and 25% by 2008.
- The Global Fund Round 4 proposal aims to provide antiretroviral therapy to 3000 people by the end of the second year of implementation of the project and 7000 people by the end of the fifth year.
- Few testing and counseling centres are operating. Of the 62 voluntary testing and counseling sites, few provide testing services and the remaining provide counseling and refer clients to sites where testing can be done. The demand for testing is low due to stigma, lack of HIV awareness and the lack of availability of treatment. A wide-reaching voluntary counseling and testing programme was launched in 2005. It is designed to encourage participation and to provide anonymous, confidential testing and treatment services.

Implementation Partners Involved in Scaling Up Treatment and Prevention

a. Leadership and management

The National Department of Health is responsible for the overall coordination and management of activities, including the national antiretroviral therapy programme.

The National AIDS Council, which includes members from non-governmental organizations, faith-based organizations and the private sector, coordinates the multi-sectoral response. Provincial AIDS committees have also been established in each of the 20 provinces to coordinate HIV/AIDS activities at the provincial level. WHO, UNAIDS, the Asian Development Bank, the Australian Agency for International Development and other donor partners support the National Department of Health in planning and coordinating activities.

b. Service delivery

The National Department of Health provides leadership in HIV/AIDS prevention, treatment and care. The Central Public Health Laboratory is the reference laboratory for HIV confirmatory tests. The Procurement Center of the National Department of Health is responsible for procuring drugs and medical supplies. The Australian Agency for International Development provides support for building laboratory capacity, training, voluntary counselling and testing and treatment of sexually transmitted infections. The Japanese International Cooperation Agency provides support for building human resource capacity. WHO provides normative guidance for expanding care and support,

including the provision of antiretroviral therapy, and also supports the training of health workers and procurement of drugs and diagnostics. UNICEF provides support for preventing mother-to-child transmission.

c. Community Mobilisation

A range of non-governmental organisations, including faith-based organisations (FBOs) and organisations of people living with HIV/AIDS, work alongside the government to provide health services to communities, especially in rural and remote areas. International non-governmental organisations such as *Family Health International*, *the*

Red Cross/Red Crescent, *Save the Children Fund* and *HOPE Worldwide* support community-based programmes.

d. Strategic information

The National Department of Health provides leadership for surveillance with support from WHO. UNAIDS provides support for coordinating the overall national monitoring and evaluation plan.

Staffing Input for Scaling Up HIV Treatment And Prevention

a. WHO's response so far

- Supporting the development of a drug procurement and supply management plan and the procurement of antiretroviral drugs for the national pilot care project
- Facilitating the development of a national plan for scaling up HIV/AIDS care and treatment
- Providing technical support for the development of national guidelines for antiretroviral therapy, including first-line and second-line treatment and antiretroviral therapy for children
- Supporting planning for building national human capacity, including developing a training plan and supporting the training of health care workers
- Providing support for strengthening laboratory services
- Providing support for developing the Global Fund proposal and for implementing activities
- Supporting the development of a funding proposal to Japan's Trust Fund for Human Security and the Asian Development Bank to support the national HIV/AIDS response
- Establishing an HIV/AIDS team in the WHO Country Office to support the government and other partners

b. Key areas for WHO support in the future

- Providing support for implementing the national plan for scaling up HIV/AIDS care and treatment
- Providing technical support for developing national guidelines for HIV/AIDS care and treatment for different levels of the health care system, includes preventing

- mother-to-child transmission, treating opportunistic infections and post-exposure prophylaxis
- Providing support and technical assistance for training health care workers guided by the WHO Integrated Management of Adult and Adolescent Illness strategy and for coordinating other various training
- initiatives to ensure harmonization with the national plan for scaling up HIV/AIDS care and treatment
- Providing continuing support for procuring antiretroviral drugs, reagents and other supplies related to HIV/AIDS treatment
- Supporting the development of a national monitoring and evaluation system for HIV/AIDS, including antiretroviral therapy
- Providing support for strengthening laboratory services and blood safety
- Providing support for implementing the Global Fund grant
- Providing support for increasing community participation in HIV care, treatment and prevention

Below are main points for chapter 6

SUMMARY

- In the Pacific Papua New Guinea has about 90 percent of the cases of HIV reported.
- There are thousands of people in Papua New Guinea who do not know their HIV status.
- There are more younger women infected with HIV than men.
- HIV and STI are growing problems in PNG due to poverty and unemployment, gender inequality, domestic violence, rape and sexual abuse, cultural practices, taboos, mobility, stigma and discrimination towards people with HIV and AIDS, high rate of sexually transmitted infections and teenage pregnancies, low condom use and opposition to condom and alcohol and drug abuse.
- HIV transmitted mainly through heterosexual activities.
- More women are vulnerable to the disease due to sexual aggression and other forms of violence against women.
- There is voluntary counselling and testing for HIV currently available in clinical and non-clinical settings.
- An adoption of integrated and multi-sectoral approach to addressing the epidemic.
- The major challenges in care and treatment is lack of trained manpower.
- Treatment, care and support remains limited but the National Department of Health has initiated pilot projects to address these issues with assistance from Asian Development Bank and WHO.

- The implementation in scaling up treatment and prevention depends on leadership and management, service delivery, community mobilization and strategic information.
- The World Health Organisation has a responsibility in supporting, providing and establishing staffing input for scaling up HIV treatment and prevention.

Chapter 6: Care and Support

The National Response

Although many people living with HIV are living in the continent of Africa, the Asia Pacific region has large numbers of people who are infected with HIV. Papua New Guinea is said to have the worst epidemic in the Pacific region.

The National AIDS Council (NAC) was established in 1997 through an Act of Parliament. The NAC is the national government body that supports HIV work throughout Papua New Guinea. It is supported by donor organisations.

The HIV/AIDS Management and Prevention Act

The HIV/AIDS Management and Prevention Act (HAMP Act) was passed by the National Parliament in June 2003. Every member of the National Parliament voted in favour of the Act.

This legislation is a very important tool in response to the HIV epidemic in Papua New Guinea. It gives power to the courts to protect the rights of people living with HIV and rights of everyone in the general community in regards to their protection from HIV.

The HAMP Act covers:

- discrimination and stigma towards people living with HIV or individuals or families thought to have HIV.
- ensures access for everyone to the tools that will protect them from getting HIV.
- HIV testing- that is voluntary, confidential and only done with consent.
- management of information relating to HIV statistics.
- privacy and confidentiality.
- partner notification.
- people who create a risk to others.
- pathways to take action under the HAMP Act.

Responding to HIV/AIDS in Papua New Guinea

The spread of HIV is one of the biggest development challenges facing Papua New Guinea.

Key challenges

- predictions that by 2012 over 208 000 will be living with HIV
- over 500 new HIV cases were reported in 2009
- rising numbers of babies born with HIV and AIDS
- drug and alcohol abuse, concurrent and multiple sexual partnerships and gender-based violence contribute to the spread of the disease

What is being done?

Australia and Papua New Guinea are working together to address this challenge through the Partnership for Development. The Partnership sets out mutually-agreed priorities towards reducing poverty and increasing the quality of life for all Papua New Guineans. A HIV and AIDS schedule to the Partnership is being developed.

Since 2007, through the PNG-Australia HIV and AIDS Program, Australia has provided AUD $178 million for counselling and treatment, education and prevention, social research and family support.

Papua New Guinea and Australia have agreed to achieve the following targets:

Treatment, counselling, care and support—improve access and availability of services, by working with churches, community and non-government groups.

Education and prevention—review and update education and awareness activities that take into account challenges and situations of the local people.

Monitoring and evaluation—strengthen monitoring and reporting activities to provide better evidence-based services.

Leadership, partnership and coordination—work at the various levels of government to ensure that activities are well planned, coordinated, and resourced.

Results

- more than 6000 people are receiving life-saving anti-retro viral treatment
- an estimated 1500 people living with HIV have joined advocacy and support networks
- counselling, testing and treatment services have been expanded from 61 sites nationally in 2006 to 201 sites in 2009 with over 180 000 people tested
- 108 million condoms were procured during 2009

- 184 000 people including school children received formal HIV training and benefited from awareness programs through non-government organisations

Working with partners

As well as working with the Papua New Guinea government and its National AIDS Council, Australia also funds community groups working on-the-ground. Groups funded include: Catholic Diocesan HIV Program, Volunteer Services Organisation, Save the Children Fund, Family Health International, Anglicare, Stop AIDS, World Vision, Baptist Union PNG and International Education Agency.

Australia also partners with the Clinton Foundation to provide HIV treatment to children, and the PNG Business Coalition on HIV and AIDS to work with the private sector to address awareness and safer work practices.

In 2009:

- Catholics AIDS Office tested 12,324 men and 22,767 women at 84 sites
- 4,959 women accessed antenatal testing across 14 sites
- 10 centres delivered anti-retro viral treatment
- the National HIV and AIDS Training Unit provided 300 courses and trained 800 health workers in voluntary counselling and testing. They also delivered peer education training to 200 teachers and in-service training to 204 trainers
- Tingim Laip provided prevention and treatment services at 39 high-risk sites across the country

Prevention of parent to child transmission

Australia is providing funds to groups working at a grass roots level to help reduce the number of babies born with HIV.

We are supporting the Catholic Church's program to prevent parent to child transmission at the Mt Hagen General Hospital. In total for 2009, 36 babies born to HIV positive mothers tested negative. However the results for May–October 2009 were particularly encouraging, with all 20 babies older than six weeks born to HIV positive women testing negative to the virus.

Susu Mamas provides care to HIV positive mothers and babies. The free service helps up to 10,000 clients per month by supporting nutrition, breast feeding, infant feeding, hygiene, antenatal and postnatal care, family planning and voluntary counselling and testing. AusAID funding will support expansion of the program into Mt Hagen and Lae from Port Moresby, all areas of high HIV prevalence.

Through the Clinton Foundation, the Australian Government is also supporting the Well Baby Clinics in Port Moresby, with a specialist service to care for mothers and babies with HIV. An outreach service is also provided to villages to counsel couples and their

extended families where a mother and baby have the virus, providing correct information on how the disease is contracted, options for care and future prevention.

Read the summary below to recap the main points in this chapter.

SUMMARY

- The government has passed the HIV/AIDS Management and Prevention Act which protects the rights of the person living with HIV and protects the general community from HIV.
- There are predictions that HIV/AIDS cases are increasing at a rapid rate every year with new cases reported and rising number of babies born with HIV/AIDS.
- The partnership has been set between PNG and Australia in funding, education and prevention, social research and family support.
- Treatment, counselling, care and support, education and prevention, monitoring and evaluation, leadership, partnership and coordination were the targeted areas to achieve by the two countries in the partnership.
- There are both governmental and non-governmental organisations involved in giving care, support, testing, voluntary counselling and treatment services.

YOU HAVE COME TO THE END OF PROJECT 2 OF YOUR GRADE 7 COURSE. NOW COMPLETE ALL YOUR TOPIC TESTS ON PROJECT 2 IN YOUR ASSIGNMENT BOOK. CROSS CHECK YOUR ANSWERS AGAIN AND ONCE YOU ARE SATISFIED, SEND YOUR COMPLETED ASSIGNMENT BOOK TO YOUR PROVINCIAL COORDINATOR FOR MARKING.

Glossary

Word	Meaning
Abstinence	Choosing not to have sex.
Adolescent	The period between puberty and the completion of physical growth, roughly from 11 to 19 years of age.
Community mobilization	Involving the people in the community.
Diagnosis	The act or process of identifying or determining the nature and cause of a disease or injury through evaluation of the patient's history examination, and review of laboratory data.
Epidemic	An outbreak of a disease or illness spreading rapidly and extensively by infection and affecting many individuals in an area or a population at that time.
Epidemiology	The branch of medical science that deals with the study of incidence, distribution and control of a disease in a population.
Gender	Refers to the socially constructed roles, behaviors, activities, and attributes that, a given society considers appropriate for men and women.
Heterosexual	A person sexually attracted to persons of the opposite sex.
HIV-infected	Evidence of HIV has been found through an HIV blood test.
Immune System	The body system which fights infections.
Infection	A person becomes sick when a virus, bacteria or fungi enters the body.
Mobile populations	Areas to live in towns and cities and even overseas for work, school and personal reasons, thus increasing the risk of spreading HIV.
Multi-sectoral	Involvement of all sections of the community, that is, the government, businesses, NGOs and the people to fight against HIV/AIDS.
Opportunistic infections	Infections that take advantage of a person's weak immune system to cause illnesses, such as TB, pneumonia and diarrhea.
People Living With HIV/AIDS	Makes reference to people who are infected with HIV. However, in general terms it also refers to people affected by HIV/AIDS like spouses, children and close relatives.

Prevalence	The total number of cases of a disease in a given population at a specific time.
Prophylaxis	Preventative therapies given to at risk individuals to prevent a first infection such as OI, post – exposure prophylaxis such as needle stick injury and rape.
Sexually Transmitted Infection (STI)	Also called venereal disease (VD), an older public health term, or sexually transmitted Diseases (STDs). Sexually Transmitted Infections are spread by the transfer of organisms from person to person during sexual contact**.**
Sex worker	A person who works in the sex industry, specifically, a person who commercially trades in sex for money.
Stigma	The shame or disgrace attached to something regarded as socially unacceptable.
Symptom	A sign of an infection, disease or disorder.
Syndrome	A group of symptoms used to define an illness.
Virus	Tiny germs that can cause many infections.
Voluntary counseling	The process of providing counseling to an individual to enable him or her to make an informed choice about being tested for HIV.

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