1 Introduction

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The objective of this handbook is to enhance awareness and familiarise health care providers with different clinical presentations of human immunodeficiency virus (HIV)-related disease so that they can recognise the possibility of HIV infection and recommend testing where appropriate.

According to the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) estimates, about 4.9 million people were living with HIV in Asia in 2007 including 440 000 people who newly acquired the infection in the past year. In the Pacific region, an estimated 75 000 people are living with the virus with 14 000 having acquired the infection in 2007. In this region, Papua New Guinea (PNG) has the largest burden of disease having over 70% of the total number of people living with HIV in the Pacific.[1]

A large proportion of individuals with HIV infection are not aware of their HIV status and present to the health care system at an advanced stage of the disease, when treatment response is less favourable.[2,3] Late presentation may partly be due to low levels of awareness of the personal risk of HIV infection or concern about discrimination and stigmatisation, both of which can deter people from undergoing testing. On the other hand, there could also be lost opportunities for early diagnosis of HIV infection when patients present to health care providers due to lack of provider experience with common clinical scenarios in people with HIV infection at different stages of their disease.

Early detection of HIV infection is important for many reasons. Counselling and interventions can be implemented to prevent subsequent transmission of HIV to others.

Risk reduction measures that can be reinforced include consistent use of condoms, avoidance of needle sharing and use of antiretroviral drugs to prevent mother-to-child transmission. A patient presenting with early stage HIV infection can be closely monitored so that combination antiretroviral therapy (cART) can be started at the appropriate time to prevent disease progression.

Knowledge about the prevailing epidemiology of HIV infection in each locality would be helpful to enhance the awareness of health care workers. In Asia, the epidemic was initially recognised through sporadic cases involving sexual contact with foreigners or use of contaminated blood products. By 1988, a rapid surge in HIV infection was noted among injecting drug users and later female commercial sex workers in a number of Asian countries. Currently, the prevalence rates of HIV infection among these two groups in many Asian countries have reached more than 10% and, in some cities, the rates are higher than 60%.[1] HIV has thus become established within Asia and continues to spread throughout the region.

The HIV epidemic in the Asian and Pacific regions reflects the broad diversity in ethnicity, cultural expectations, religious practices and socio-economic profile, as well as levels of health care infrastructure. With heterosexual transmission being the predominant mode of infection, there is a greater proportion of women among those with the infection than in Western countries and many countries are seeing increasing numbers of children born with HIV. As a result of infection among clients of female commercial sex workers and their regular partners, HIV infection has also spread beyond the traditionally recognised risk groups to the general population.

In the past few years, the regions have also witnessed a surge in the numbers of HIV infections among men who have sex with men.[4] As an illustration, the United Nations General Assembly Special Session (UNGASS) country progress report by Thailand showed that the majority of new HIV infections in Thailand occurred among spouses of individuals with HIV as well as men who have sex with men.[5]

The majority of notifications for HIV in the Pacific are from PNG where the main mode of HIV transmission appears to be heterosexual intercourse, with high rates of unsafe anal and vaginal sex with multiple partners, and the frequent failure to use condoms.[1]

It is important to recognise that the majority of people with HIV remain asymptomatic during a long incubation period which averages up to 10 years. Health care workers should include questions about possible HIV risk behaviours in the routine clinical assessment of their patients. This assessment should involve obtaining a history of: sexually transmissible infections, unprotected sexual contact with a partner of the same or opposite gender with unknown HIV status, or re-use of drug injecting equipment. The risk is higher with multiple or casual partners. For those with a regular partner, obtaining information about the behaviour of their partner may also be relevant.

Once HIV risk has been identified, the patient should be encouraged to undergo HIV testing with adequate counselling and support. It should be emphasised that HIV risk assessment should be undertaken in a sensitive and non-judgmental manner, so that patients are encouraged to openly discuss their concerns with their health care providers. In addition, sensitive information is confidential and the HIV risk behaviour or infection status should not result in any discriminatory treatment to the patient.

Primary HIV infection may present with the clinical picture of a febrile illness approximately 2–4 weeks after exposure. The symptoms may include skin rash, myalgia, fatigue, sore throat, diarrhoea, lymphadenopathy, hepatosplenomegaly and, rarely, neurological symptoms. While this seroconversion illness may occur in up to 70–80% of individuals, it is often not viewed as serious or related to HIV infection, due in part to its self-limited course.

Primary HIV infection seldom results in presentation to health care settings. Patients with any combination of the above symptoms should be asked about a history of recent unprotected sexual activity or injecting drug use. It is crucial to try and identify patients with acute HIV infection, as they have very high HIV viral loads and are extremely infectious. Management may include general supportive measures for physical, psychological and social issues. The role of antiretroviral therapy in acute HIV infection remains controversial.

When the immune system becomes progressively damaged by HIV, reflected by a steady decline of the CD4 lymphocyte count to 200 – 350 cells/μL, the patient may develop symptoms that are commonly associated with HIV disease. These include persistent fever, night sweats, significant weight loss, oral thrush, herpes zoster and chronic diarrhoea. Thrombocytopenia and lymphopenia may be present on blood testing. When these are present in combination without any other underlying cause, the possibility of HIV infection should be considered and HIV testing recommended. Another clinical scenario when HIV infection should be suspected is when a person presents with an infection commonly seen in that setting, but the clinical course is exceptionally severe or resistant to standard therapies. In recent years, it has also been recognised that HIV infection can predispose to renal and cardiovascular disease as well as malignancies at CD4 lymphocyte counts over 200 cells/μL. HIV can also affect the nervous system directly causing cognitive impairment.

With further decline of the CD4 lymphocyte count to below 200 cells/μL, the patient will become prone to a number of opportunistic infections which rarely occur in individuals with intact immune function. It is important to recognise that the pattern of opportunistic infections in Asia is frequently different from that seen in Western countries, with a predominance of tuberculosis followed by *Pneumocystis jirovecii* pneumonia. Cryptococcal meningitis is the most common opportunistic infection affecting the nervous system. Specific to part of the region is disseminated disease caused by *Penicillium marneffei*, a fungus endemic in Thailand and part of southern China.[6] On the other hand, it is possible that some opportunistic diseases are under-diagnosed due to inadequate access to diagnostic testing.

It should be noted that any organ system can become involved in opportunistic infections and the clinical presentation of acquired immunodeficiency syndrome (AIDS) is therefore highly variable. Health care providers in various clinical specialties may have patients with HIV infection in their practices and should be aware of the possible clinical presentation.

With the move to early HIV diagnosis and the instigation of antiretroviral treatment programs in the Asia and Pacific regions, there are a number of other issues that are beyond the scope of this handbook that need to be addressed. Doctors and nurses will require appropriate training to be able to manage treatment side effects and to support drug adherence.

Access to timely CD4 lymphocyte count and viral load testing is crucial to monitor the response to cART and detect treatment failure at an early stage. The greatest challenge lies in reaching patients living in remote rural areas, as clinical expertise tends to be concentrated in big cities. Collaboration with non-government organisations and patient empowerment programs is a key element to ensure the successful initiation of antiretroviral treatment.

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