Adherence is Key to HIV Treatment

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A n HIV infected person can possibly live a normal lifespan today, provided she or he takes highly active antiretroviral therapy (HAART) and takes it regularly. The widespread uptake of highly active antiretroviral therapy since mid-1996 has resulted in a dramatic decline in the number of AIDS-related deaths. High levels of adherence to antiretroviral drugs are a prerequisite for a successful and durable virological and immunological response. Nurses play a vital role in initiation and monitoring of adherence of the patient on antiretroviral.

The use of HAART since 1996 has substantially changed the evolution of HIV infection, with a dramatic reduction in morbidity and death rate. These advantages have to be counterbalanced by important limitations such as the complexity of regimens and considerable short and long term toxicity. The lack of adherence is considered the main cause of virological failure.

Factors Governing Adherence

Patient factors include assessing patient's motivation, commitment to and understanding of taking therapy, behavioural skills and ability to adhere to therapy, the role of environmental and social factors in influencing adherence, and the patient's overall mental health. Provider factors include ensuring a multidisciplinary, multi-intervention approach, providing support to patients both when starting and changing therapy, providing medication alerts and appropriate containers and ensuring continued professional development and skill based training. Regimen factors relate to issues around the drugs, such as dosing frequency, pill burden, drug interactions and side effects and the extent to which lifestyle factors, such as sleeping, eating and working may impede adherence to the proposed regimen.

The guidelines acknowledge that adherence is a process, not a single event, and that adherence support must be integrated into clinical follow-up for all patients who have been prescribed HAART.

Pre-requisites

Treatment decisions for an individual patient is based on three factors: HIV RNA (viral load); CD4 T cells and clinical condition of the patient. In general, treatment should be offered to individuals with T-cell count of less than 350 or plasma HIV RNA levels exceeding 55,000 copies/mL (Panel, 2000).

Steps for ART Initiation

Establishing patient medical history and understanding of HAART: The aim of these sessions is to give enough information to enable patients to make an informed decision about whether to start/change/interrupt therapy and how best to do this. The patients' medical history, their knowledge of HIV and HAART and their expectations of therapy in general is taken.

Lifestyle and psychosocial assessment: In order to establish the regimen options best suited to the patient, all advisors carry out a lifestyle and psychosocial assessment. This includes a discussion of the behavioural determinants of adherence, such as daily routine, e.g. eating, sleeping and working patterns; recreational activities (e.g. recreational drug use); familial/social relationships; and travel plans. It sometimes involves a discussion of social factors relevant to adherence, such as relationship status and accommodation issues, and it establishes the presence of any psychological issues, such as depression or anxiety. For example, the observations reveal that some people work in shift duties...
rather than from 09:00 hours to 17:00 hours. This often means that eating habits are erratic and set meal times problematic. It is crucial that these individuals have a regimen best suited to this way of life, rather than one that requires food at set time intervals. All patients need to have a regimen tailored to fit in around their lifestyle very beneficial. Depression and severe anxiety are variables that predict non-adherence.

Most people with HIV, at some time in the course of their illness, experience a psychiatric disorder (Buhrich & Judd, 1997) and depression and/or anxiety which are reported in up to 70% of patients with symptomatic HIV-disease (Hayman & Buhrich, 1994). Poor social relationships, living alone and lack of support have been associated with an increase in non-adherence (Besch, 1995; Williams & Friedland, 1997) and social isolation is predictive of non-adherence (Besch, 1995; Williams & Friedland, 1997).

Not living alone, having a partner, social or family support, peer interaction, and better physical interactions and relationships are characteristics of adherent patients. Alcohol use or alcoholism has been associated with poor adherence (Chesney, 1997).

A drug picture chart and real pills are used to demonstrate the options available to each patient, and they find this interactive and practical aspect of the session particularly beneficial.

Side effects are to be discussed in detail. The most important factor is to help patient know the side effect and how to cope with it.

**Follow-up Visits:** In the first two weeks of initiating therapy, some patients are asked to call the advisor or the advisor contact the patient at regular intervals to check progress, and patients find this initial telephone support invaluable. The perceived benefits are that it removes feelings of isolation for those who do not have support from partners, and provide adherence support and reassurance about side effects. Being a good listener is really good because it's a stressful time and necessary support is to be given to the patient while experiencing side effects.

**Improving Adherence**

Our understanding of the barriers, facilitators and adherence is low. In terms of HIV interventions which have led to improvements in adherence include providing information and education about HIV and treatment along side skill building and counselling and more practical adherence tools and aids, such as reminder alarms, beeper boxes, telephone reminders. In practice, many HIV drug adherence programmes combine various elements of different interventions and both clinicians and patients share the burden of taking steps to enhance and maintain adherence. The advisors addressed adherence indirectly through establishing simple regimens tailored to patients' lifestyles, and directly through providing adherence tools, such as daily and weekly pill boxes and adherence counselling. Patients found that knowing what to expect and knowing that most side effects subsided helped them to cope better with adhering to their medication.

**Rates Of Adherence**

Non-adherence to treatment regimen is not unique to people living with HIV/AIDS (PLWHA). From the literature it is clear that non-adherence is ubiquitous. Estimated rates of non-adherence in the non-HIV population range from 10% - 92% with an average of 50% (Eraker, Kirsch & Becker, 1984). In people with HIV-infection, reports of adherence (usually defined as taking 80% or more of the prescribed regimen) range from 25% - 85% (Chesney, 1997; Singh, et al., 1996; Bachiller, Arrando, Liceago, Iribarren & Olloquegii, 1998).

In recently published data on 924 PLWHA in Australia 87.4% had not missed a dose from their HAART regimen in the two days prior to completing the survey. In HIV-infected patients on HAART, 80% - 90% adherence has been associated with failure to achieve complete viral suppression in 50% of patients (Paterson, et al., 1999).

**Nurses’ Role**

It is clear that adherence to
HAART is a multidimensional phenomenon comprising multiple interrelated factors and as such requires a multi-disciplinary approach. Adherence (or the lack of) to treatment is an interaction between the patient, the regimen, the providers of therapy, and the environment in which this occurs. This interaction is the context in which adherence does or does not occur. The issue of adherence is one that requires expertise, collaboration, and coordination of services within primary care, specialist care, social service settings and the broad multidisciplinary team. Most or not all of the variables that impact upon a patient's ability to adhere are amenable to meaningful intervention.

It is abundantly clear from the literature that adherence is an equal partnership between the patient and his or her health care provider's adherence. Apart from adherence, nurse also plays a major role in monitoring the toxic side effects of these drugs. Side effects include peripheral neuropathy, myopathy, cardiomyopathy, lactic acidosis, pancreatitis, osteopenia and osteoporosis. Nurses are called upon to provide physical and emotional support to patients and families with HIV. Counseling regarding healthy life style practices, safe sexual behaviour, partner testing are inevitable part of HIV care.

**Conclusion**

High levels of adherence to antiretroviral drugs is a prerequisite for a successful and durable virological and immunological response to HIV. Treatment guidelines acknowledge that adherence is a process, not a single event, and that adherence support must be integrated into clinical follow-up for all patients receiving these drugs.

**References**