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Scaling Up Antiretroviral Therapy in Developing Countries

Definition of terms used

Human Immunodeficiency Virus (HIV): Is a retro virus that infects cells of the human immune system, destroying or impairing their function.

In the early stage of infection, the person has no symptoms.

HIV in its most advanced stage is called acquired immunodeficiency syndrome (AIDS).

Transmission: HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles or other sharp objects, and between a mother and her infant during pregnancy, child birth and breastfeeding.

Antiretrovirals (ARVs): These are the drugs that are used to treat HIV so as to improve ones immunity and slow down the destruction of the immunity too. They do not cure HIV i.e. they do suppress the virus but cannot eliminate it from the body.

Highly Active Antiretroviral Therapy (HAART): Is the recommended combination of antiretroviral drugs from at least two different classes of antiretrovirals.

Introduction

Human Immunodeficiency Virus (HIV) is an important public health problem and remains a major cause of morbidity and mortality. The introduction of Highly Active Antiretroviral Therapy (HAART) in 1996 restored hope in HIV/AIDS patients. HAART represents the single most important advance in the treatment of HIV infection since the onset of the HIV/AIDS pandemic. Within the short time since its introduction, HAART had dramatic effects in reducing the viral load of persons with HIV, improving their immunologic status, physical health and often quality of life, and has contributed directly to unprecedented declines in HIV related morbidity and mortality[1].

Magnitude of the problem

The Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO) have estimated that 33.2 million people world wide were living with HIV in 2007. In that year, an estimated 2.5 million became newly infected with HIV and 2.1 million lost their lives to AIDS. It is estimated that nearly 68% of the adults and nearly 90% of children infected with HIV live the Sub- Saharan Africa , and more than 76% of the deaths in 2007 occurred there illustrating the unmet need for antiretroviral in Africa [2].

HIV and HAART

With the introduction of Highly Active Antiretroviral Therapy (HAART) in 1996, there has been restoration of hope in HIV/AIDS patients[3].

Though not a cure, HAART suppresses the HIV virus to undetectable levels and has returned many debilitated and dying patients to relatively health and productive life. These drugs were initially very expensive but with world wide political commitment, they have become more easily available.

Scaling up of antiretroviral therapy

In 2001, UNAIDS, WHO and other partners estimated that under optimal conditions, 3 million people living in developing countries could be provided with HAART and access to medical services by the end of 2005. However treatment enrollment in the affected countries continued to be slow and on September 22, 2003, the then Director general of WHO, the executive Director of UNAIDS and the executive Director of the Global Fund to fight AIDS, Tuberculosis and Malaria, joined to declare the lack of access to HAART to be a global emergency [4].

In response to this, WHO and UNAIDS released the “3 by 5” initiative in December 2003, a strategy that was aimed at providing antiretroviral treatment to three million people living with AIDS in developing countries and those in transition by the end of 2005 [5].

This was a very important step towards the aim of providing antiretroviral therapy to all those who need it. In December 2003, 6 million people were urgently in need of antiretroviral therapy in developing countries and less than 8% of them were receiving it [4].

However by the end of June 2005 this target was unlikely to be met but the number of people receiving HAART had more than doubled from 400,000 in December 2003 to approximately 1 million in June 2005 [6, 7] and later to 1.3 million in December 2005[8].

The “3 by 5” target was based on what could be achieved if countries, donors, and international agencies were fully successful in expanding political will, mobilizing funding resources, and building health infrastructure and systems.

The WHO devised a five pillar plan that included:

- Develop global leadership, alliances and advocacy,
- Provide urgent, sustained country support,
- Simplify standardized tools and assure quality,
- Create an effective, reliable supply of medicines and diagnostics, and
- Rapidly identifying and reapplying new knowledge and successes.

Challenges and how they were overcome

At the international level:

Political and financial commitment: In order to achieve sustainable scaling up of ART, both high-level political and financial commitment are

necessary. Initially many of the countries with high burden of HIV/AIDS were not committed to the 3 by 5 strategy. There was lack of funds at the initiation of this strategy both at the international and country levels.

With the continued advocacy from WHO/UNAIDS, treatment activists and civil society organizations, support of the 3 by 5 program has been achieved both at the global and country level.

Governments have increased budgets allocated to prevention, testing and treatment of HIV.

International donors like, the United States President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis and Malaria, and the World Bank's Multi country HIV/AIDS Program for Africa and Caribbean Multi-Country HIV/AIDS Prevention and Control Adaptable Lending Program have joined hands and are contributing a great amount of funds needed to achieve scaling up of HIV prevention, testing and treatment. Between 2003 and 2005, more than 200 organizations were willing to work with WHO in order to attain the "3 by 5" target. There has been growth in cooperation among trade unions, employer's associations and technical agencies to address the scourge of HIV/AIDS. Collaboration between faith based organizations, donors and technical agencies has emerged too. At the initiation of the "3 by 5" target there was no organized coordination of activities globally, but in 2005, the Collaborative Fund for HIV Treatment Preparedness, a joint venture of 20 international donors, WHO, the International Treatment

Preparedness Coalition and the Tides Foundation provide technical and financial support to more than 200 community groups around the world to undertake treatment literacy activities[8].

In 2005, leaders of the G8 countries (France, Germany, Italy, Japan, United Kingdom, United States, Canada and Russia) agreed to work with WHO, UNAIDS and other international bodies to develop and implement a package for HIV prevention, treatment and care, with the goal of as close as possible to universal access to treatment for all those who need it by 2010. This goal was endorsed by United Nation Member States in September 2005. In June 2006, United Nations Member States agreed to work towards the broad goal of “universal access to comprehensive prevention programmes, treatment, care and support” by 2010. This goal is a big challenge and requires the commitment and involvement of all stakeholders, including governments, donors, international agencies, researchers and affected communities through and evidence-based Model Essential Package using a public health approach[9]

At the country level:

Many challenges were faced too in the countries where scaling up was to take place and these included:

Large numbers of patients to care for: When the population learnt that there were drugs to treat them, they started coming in large numbers both for HIV care and testing. This overwhelmed the already overstretched health workers in developing countries.

Lack of infrastructure: With the enormous turn up of patients, the infrastructure was no longer enough to meet the needs of the people. Out patient clinics, laboratories and counseling facilities were stretched to the limit.

Lack of enough trained medical personnel: Definitely with this growing number of patients a need for more medical personnel to counsel, test, treat and follow up of these patients was inevitable.

Lack of enough drugs: Some treating centers ran out of antiretroviral drugs due to the large number of patients who were in need of them. Procurement, storage and supply of the ARVs became a big challenge[10, 11].

Maintenance of adherence: The HIV medicines have to be taken daily and for life. An adherence of at least of 95% is required for one to be able to suppress the HIV virus below undetectable levels. With many patients starting treatment, it might be difficult to track all the patients who are on treatment to monitor adherence, toxicities and development of resistance to the ARVs[10]. This necessitates designing of additional new strategies to ensure that the required level of adherence is maintained.

Decline in preventive measures: Some HIV care centers reduced the emphasis of HIV prevention and concentrated on treatment and the population too started ignoring preventive measures once they learnt that there are drugs available to treat HIV[11].

Loss to follow up: Despite many patients being enrolled onto ART programmes, many are lost to follow up and it is very hard to track them. It requires a very good tracking system to do this otherwise many of these patients may end up spreading drug resistant HIV strains and even end in death.

Failure to provide ARVs to those who are actually in need of them: This is due to barriers such as; fear of stigma, long distance from service centers, asking of users' fees, non-availability of services, and lack of health workers who can correctly select those who qualify to be on ARVs. Most times the people initiating ART are at very advanced levels of AIDS and end up dying soon after ART initiation[12, 13]. Continuous counseling of the patients and giving them health education, training more health workers and opening up more centers that provide HIV care in rural areas will help in addressing this challenge.

Low access to HIV care by children: In many countries access to pediatric HIV care has been scaled up. Prevention and treatment have been achieved especially in the United States and other developing countries but this is not the case in developing countries despite the WHO call to scale up ART provision. Many children continue to be infected and die. There is therefore need for:

- training of health care workers in managing children with HIV/AIDS

- Provision laboratory equipments that can detect HIV at the earliest possible time so as management to be instituted early enough since most deaths for those infected before or at birth die within their first year of life.
- Pediatric partnerships are encouraged with centers that have expertise in pediatric HIV
- Pediatric ARV friendly formulations are urgently required

Training of relatives caring for the children is crucial to avoid missing ARV doses since the children depend on adults to take their medication on time[14].

Successes

Despite the challenges faced in achieving the “3 by 5” target, many successes have been attained. This has been greatly through partnerships and community involvement. It is approximated that faith-based organizations provide up to 40% of the medical infrastructure in Sub-Saharan Africa.

Some countries were able to attain the country specific “3 by 5” targets by the December 2005 [8].

In Uganda, many patients were started on HAART and this dramatically reduced the medical admissions with HIV related problems yet before the initiation of the scaling up of ART provision 50- 60% of hospital admissions were due to HIV related illnesses. Accelerated training programmes were put into place by the ministry of Health and other

partners. Doctors, counselors, nurses, pharmacy and laboratory personnel were trained. Rehabilitation of existing infrastructure and construction of new ones across the country was done by the Ministry of Health with the help of other stake holders, there was strengthening of the procurement systems and a reduction of drug prices and other related costs[10].

There was introduction of home based and Mobile HIV voluntary counseling and testing, and home based HAART provision to cope with the increased demand from the population, reduce on transport and stigma limitations[15, 16].

In Kenya, Scaling up of HAART provision has seen similar challenges like those seen else where in developing countries, but with innovative programs like partnerships both internationally and locally, there has been an increase in the number of people accessing HIV care[17].

This has resulted into significant and persistent clinical and Immunological benefit[18].

In Zambia, access to HAART initially was limited and available only to the country's affluent population through private medical practices. In early 2002, the Ministry of Health in Zambia piloted public – sector HAART programs at the country's two largest hospitals and there was an immediate positive impact. In 2004 there was formation of collaborative effort to support government facilities. This collaboration or partnership

consisted; the Lusaka Urban Health District, the University teaching Hospital, the Zambia National AIDS Council and the center for Infectious Disease Research in Zambia (a local non governmental organization affiliated with the University of Birmingham). Additional technical support came from the Elizabeth Glaser Pediatric AIDS Foundation, the University of California at San Francisco, and the local mission of the U.S Center for Disease Control and prevention.

Funding from the US PEPFAR and the Global Fund to Fight AIDS, Tuberculosis and Malaria supported training and continued medical education, pharmaceutical procurement, stock management and forecasting, improvement of laboratory capacity, development of electronic patient tracking and outcomes monitoring system and payment of overtime shifts to increase clinic staffing levels. This resulted in increase in the number of HIV/AIDS patients accessing good quality care and follow up resulting into good clinical and immunological outcomes[19]. In Malawi, collaboration between the Ministry of Health and Population, and an international non government organization called Medecins Sans Frontiers (MSF) started an HIV program in 1997 and HAART was begun free of charge at the district Hospital in 2001. Starting in August 2002, key steps were taken to ensure scaling up of HAART provision. HAART was initiated after decentralization by the mobile HIV team during their bimonthly visits in the health centers and

peripheral hospital. This has seen increase in the number of people accessing HAART over the years[20].

In rural Haiti, Partners in Health and Zanmi Lasante, both non- profit organizations affiliated with Harvard Medical School, began providing HAART to a small number of patients in rural Haiti in 1998. With funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria, this project is being scaled up. There is involvement of the community with use of treatment supporters (accompagneurs) to provide directly observed treatment (DOT) so as to ensure good adherence to HAART. This has seen tremendous increase in the number of people accessing HIV care[21]

What works and conclusion

In the scaling up of Antiretroviral Therapy in the developing countries, success or programs that have managed to achieve this goal (what has worked), have done it through:

- Partnerships and both internationally and locally
- Establishing networks both internationally and locally
- Involvement of governments (politicians) so as to get political commitment.
- Involvement of the local (country specific) experts and communities who know the dynamics of their geographical areas.

Whenever policies and programs or interventions are being developed it should be expected that challenges will come along the way. Such unforeseen eventualities should be addressed immediately and be used as learning lessons in developing and implementing other programs, and over coming similar obstacles. This should be same principle as we target the broad goal of “universal access to comprehensive prevention programmes, treatment, care and support” by 2010.

For more information visit:

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