NEPAL 2007 ESTIMATIONS OF HIV INFECTIONS: KEY MESSAGES – *embargoed until 18th April 2008*

1. Background on estimations of HIV infections, globally

The *precise* numbers of people living with HIV, people who have been newly infected or who have died of AIDS are not known. Achieving 100% certainty about the numbers of people living with HIV in Nepal and globally, for example, would require testing every person in Nepal for HIV every year—which is logistically impossible and poses ethical problems. But we can estimate those numbers by using other sources of data.

UNAIDS/WHO estimates are based on all pertinent, available data—including sentinel surveillance among populations at higher risk of HIV infection, surveys of pregnant women attending antenatal clinics, population-based surveys (conducted at the household level), case reporting, vital registration systems (the official recording of births and deaths), as well as other surveillance information.

Different sets of data are used to calculate estimates of HIV prevalence for different types of epidemics – *In low level and concentrated epidemics,* HIV is concentrated in groups with behaviours that expose them to a high risk of HIV infection and HIV prevalence is above 5% in some of these groups. In *generalized* epidemics -adult HIV prevalence in the general adult population is at least 1% and transmission is mostly heterosexual and driven by concurrent sexual partnerships. The data used for estimations covers a combination of relevant sources, including sentinel surveillance data, HIV prevalence and the size of different population groups.

For countries with low-level or concentrated epidemics, like Nepal- HIV estimates are based on studies among key populations who are at higher risk of HIV exposure—such as injecting drug users (IDU), female sex workers (FSW), men who have sex with men (MSM), and migrants.

Better data from country surveillance and steady improvements in the modelling methodology are enabling countries and UNAIDS/WHO globally, to develop more accurate estimates.

2. Methodology used for Nepal's 2007 estimations of HIV infections

- Methods and tools used in 2007 Nepal estimates are based on the WHO/UNAIDS workbook and are similar to those used previously in Nepal in 2005.
- Nepal's estimates are based on all pertinent, available data, which includes: surveillance data among populations at higher risk of HIV infection (such as the Integrated Biological and Behavioural Surveys (IBBS) among FSW and clients, IDUs, MSM and migrant workers), data from pregnant women attending antenatal clinics, population-based surveys (such as the Nepal DHS), case reporting and other surveillance information.
- In 2007, Nepal has more and better quality surveillance data available for high-risk groups (3 data points at 2 year interval for FSW and IDUs and 2 data points at two year intervals for MSM and migrants). Better data from country surveillance and steady improvements in the modelling methodology enable countries to develop more accurate estimates.
- Following a technical training held in Kathmandu in August 2007, a number of improvements were made to develop more accurate estimates. The 2007 estimations of HIV infections attempt to reflect the contribution to HIV infections of sub-groups not included in the past. As a result, the 2007 estimates now include the following groups:

For further information on the national estimations of HIV infections in Nepal, please contact:

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- Individuals who formerly engaged in high-risk sexual or injecting behaviours may have retired and are no longer at risk but have been infected and are now part of the general population (eg. ex-FSW, ex-IDUs and ex-migrant workers)

- Trafficked girls and women who return to Nepal and have been infected but were not previously reflected in the overall numbers.

- Data from Antenatal Care (ANC) services can provide a surrogate indication of HIV prevalence in the general population. In Nepal, data on Ante-Natal Care services (ANC) is becoming available now. However, caution is required when applying data from the prevention of mother to child transmission programme (PMTCT) to the entire population of women at low risk. There are insufficient grounds to extrapolate HIV data from Antenatal clinics to areas where ANC coverage is low as it is in some areas of the country. HIV "Prevalence" data from the PMTCT programme is only applied to the population covered by ANC services.

- Children infected through Mother to child transmission are now more reliably estimated from SPECTRUM as they have been derived using country specific demographic data such as Nepal's reported population projections, life expectancy and fertility rates.

- With more consistent and accurate country estimates, the numbers of orphans and children estimated are more reliable as they also use Nepal-specific population data (eg. fertility rate).

3. Preliminary results

- In 2007, the total number of infections in Nepal is estimated to be 69,790 with 92% of infections occurring among the 15 to 49 age group (64,585). This is equivalent to a prevalence of 0.49%. There are three males infected for every female (sex ration:3:1).

Population groups	HIV Infections
Total HIV population (adults and children)	**69,790**
Children living with HIV (0-14)	1,857
Adults living with HIV (15-49)	64,585
Adults living with HIV (50+)	3,348

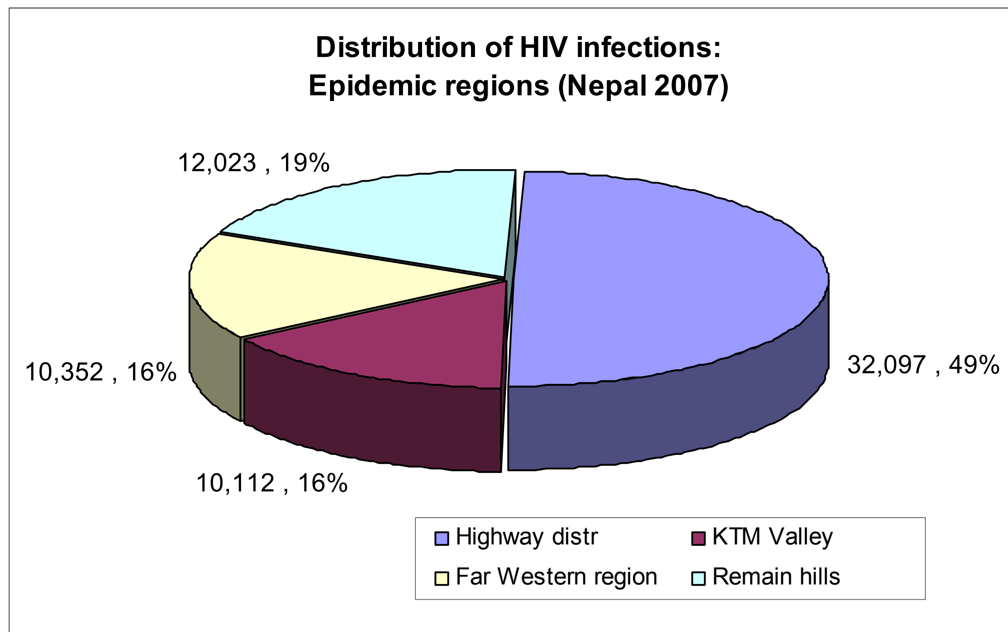
Number of women (15-49) LWH	16,387
Adult (15-49) prevalence (%)	**0.49%**
Percent of PLWH who are female (%)	29.5%
Percent of PLWH who are current IDU (%):	7.4%

- The stabilisation of prevalence among FSW observed in 2004 is confirmed in 2006 (New ERA/FHI/USAID, IBBS 2006)

- A drop in HIV prevalence among IDUs is observed from 52% in Kathmandu in 2005 to 34%in 2007 (New Era/FHI/USAID, IBBS 2007)

- The impact of "retired" high-risk groups on overall estimates of HIV infections is included but nevertheless limited.
- The total number of HIV infections has remained relatively stable over the past two years with a consistent distribution across regions.
- A total 4,238 AIDS deaths are estimated to have occurred in 2007, of which 84 were reported to the NCASC.

Estimated adult HIV Infections
by Epidemiological Region, 2007



Region	N	%
Kathmandu	10,112	15.7%
Terai	32.097	49.7%
Far West	10,352	16.0%
Remaining hills	12,023	18.6%
Nepal	**64,585**	**100%**

- Approximately 6,900 new HIV infections occurring in 2007 could have been averted, largely due to heterosexual transmission (5,046 among males and 1,862 among females). During the period, 456 new HIV infections occurred among children under the age of 14.
- As of 2007; 1,811 women were in need of antiretroviral therapy to prevent mother to child transmission (PMTCT).
- In 2007, an estimated 19,366 People living with HIV were in need of Antiretroviral therapy. The larger number is mostly due to factors such a the increased numbers of patients already on ART, the general increase in life expectancy in Nepal and evidence globally of longer survival and disease progression than previously estimated.

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4. Implications and next steps:

- The lower overall number of infections is largely due to the availability of better quality data, especially among migrants. Although targeted prevention programmes providing a range of services to groups at highest risk have expanded over the recent years, caution is required before attributing these lower numbers to interventions.
- The focus of interventions and prevention programmes should intensify to target groups where the risk of HIV transmission is highest (namely FSW and clients, IDUs, MSM and migrants) -Nepal has a concentrated epidemic and needs to maintain the focus of prevention on these groups.
- Awareness and knowledge in the general population also need to be improved, especially among young people. Quality prevention services such as STI management treatment should also be widely available and accessible.
- Almost 50% of all estimated HIV infections are in the Terai highway districts and 20% in the Far Western hills. New estimations data will be used to inform national-level planning processes such as the 2008-2010 National Action Planning. The figures will help in setting targets for prevention, treatment and care of PLHIV.
- The data that now exists will support the analysis of trends in new infections among high-risk groups required to track progress on Millennium Development Goals (MDG). This kind of analysis provides a measure of the impact of prevention programs in these populations. Moreover, it will inform the country in updating country-agreed targets towards universal access to prevention, care and support.
- The turnover in high-risk groups and number of “retired individuals” has an impact on interventions that will be required to address people living with HIV who may not be targeted for intervention with traditional outreach programs.

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Understanding HIV Epidemics

- **Low level epidemic**

1. Infections not spread to significant levels in any sub-population (HIV prevalence has not consistently exceeded 5% in any sub-population.
2. Recorded infections confined to individuals with higher risk behaviours
3. Networks of risk are rather diffuse or the virus has been recently introduced

- **Concentrated Epidemic**

1. HIV has spread rapidly in a defined sub-population (HIV prevalence consistently over 5% in any defines sub-population)
2. Not well established in the general population
3. Active networks of risk within sub-population
4. Future course of the epidemic is determined by frequency and nature of links between highly infected sub-groups and the general population

- **Generalised Epidemic**

1. HIV is formally established in the general population (HIV prevalence over 1% in pregnant women)
2. Sexual networking in general population is sufficient to sustain an epidemic independent of sub-populations at higher risk of infection

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