Public Health Approach to Combating HIV/AIDS

The HIV epidemic continues to take its toll in the SEA Region. Yet countries have demonstrated that implementing an effective response is feasible, both to halt and reverse epidemics and to provide services to those in need. To date, efforts to scale up HIV/AIDS programmes have involved a variety of different service delivery models, guidelines and tools for multiple HIV/AIDS interventions. Countries seeking to scale up HIV/AIDS health services to achieve universal access will benefit by adopting a service delivery model that brings together the best of these approaches and helps to compensate for the significant health systems challenges that many of them face.

Accordingly, WHO promotes a public health approach to the delivery of health services for HIV/AIDS, drawing upon the successful experiences of other health programmes. A public health approach is one that is directed to address the health needs of a population, or the collective health status of the people, rather than just individuals. This paper discusses the four steps of the approach:

- Define the problem and the risk factors;
- Find out what works to control the disease;
- Scale up effective interventions in a wide range of settings; and
- Monitor/evaluate the impact and cost-effectiveness of these interventions.

The key lessons for a public health approach to HIV include:

- The health sector’s role is central in the overall national response to the epidemic;
- A scaled-up integrated package of prevention, treatment, care and support services is necessary to halt and reverse the epidemic and mitigate its impact;
- Implementing a scaled-up response to the HIV epidemic requires effective programme management, trained human resources and robust health systems.

The points for discussion on how the public health approach to HIV can be strengthened further are proposed in this paper.

The views and recommendations of the Meeting of the Advisory Committee (ACM) on this agenda item will be submitted to the Sixty-first Session of the Regional Committee for its consideration.
1. **Background**

1. The human immunodeficiency virus (HIV) continues to be a major public health problem in the South-East Asia (SEA) Region. With an estimated 3.6 million people living with HIV/AIDS (PLHA), the Region is the second most affected region in the world. An estimated 260 000 new HIV infections and 300 000 HIV-associated deaths occurred in 2007. Five countries – India, Indonesia, Myanmar, Nepal and Thailand – account for over 99% of the regional burden. The incidence of HIV is the highest among sex workers and their clients, men who have sex with men (MSM), and injecting drug users (IDUs).

2. An effective approach to such a massive public health problem must address HIV as both a preventable communicable disease and a manageable chronic infection. Global commitments to achieve the Millenium Development Goals (MDGs) and Universal Access (UA) targets clearly mandate such a dual approach – to halt and reverse epidemics while extending the benefits of care, support and treatment to those affected. Efforts to achieve both these objectives must be informed by reliable epidemiologic data and based on sound public health principles.

3. While combating HIV requires a multi-sectoral approach, the health sector must spearhead the response, not only technically but also in implementing critical interventions that are unique to the health sector. The role encompasses surveillance, blood safety, STI management and control, counselling and testing, prevention of mother-to-child transmission, care and treatment.

4. Significant progress has been made in recent years in treating AIDS and opportunistic infections. As a result, HIV is increasingly seen as a manageable chronic disease where morbidity and mortality can be reduced and life expectancy and quality of life improved. The challenge is to extend HIV-related services – from HIV counselling and testing to prevention of mother-to-child transmission (PMTCT) and antiretroviral treatment (ART) – widely to those in need, working through existing health services and strengthening them in the process.

5. Yet, such efforts alone would do little to control or reverse HIV epidemics. Without controlling epidemics, treatment efforts will never keep pace with new infections. In some countries, up to eight new HIV infections occurred last year for every one person started on life-saving ART, despite progress in scaling up treatment services.

6. A balanced response is clearly needed – to curb the growth of HIV epidemics while expanding access to needed HIV services for those affected. Where this has been done, countries have been better able to meet needs and targets for PMTCT, ART and other HIV services. Real progress towards universal access can be made only when the incidence of new infections decreases.
7. As the directing and coordinating authority on international health, the World Health Organization (WHO) takes the lead within the UN system in the global health sector response to HIV/AIDS. WHO provides evidence-based, technical support to the Member States to help in scaling up treatment, care and prevention services with public health approach and ensure a comprehensive and sustainable response to HIV/AIDS.

2. A public health approach to combating HIV/AIDS

8. To date, efforts to scale up HIV/AIDS programmes have involved a variety of different service delivery models, guidelines and tools for multiple HIV/AIDS interventions. Countries seeking to scale up HIV/AIDS health services to achieve universal access will benefit by adopting a service delivery model that brings together the best of these approaches and helps to compensate for the significant health systems challenges that many of them face. Such a model should ideally be standardized as much as possible so that it can meet the needs of large numbers of people and be implemented in a wide range of settings.

9. Accordingly, WHO promotes a public health approach to the delivery of health services for HIV/AIDS, drawing upon the successful experiences of other health programmes. A public health approach is one directed to addressing the health needs of a population, or the collective health status of the people, rather than just individuals. A public health approach involves a collaborative effort by all parts of the health sector, working to ensure the well-being of society through comprehensive prevention, treatment, care and support.

The approach consists of four steps:

- Define the problem through the systematic collection of information about the magnitude, scope, characteristics and consequences of the disease and the causes and correlates of the disease, the factors that increase or decrease the risk for infections, and the factors that could be modified through interventions.
- Find out what works to control the disease by designing, implementing and evaluating interventions.
- Scale up effective interventions in a wide range of settings.
- Monitor/evaluate the impact and cost-effectiveness of these interventions as part of the programme.
2.1 **Defining the problem and the risk factors**

10. Defining the problem would involve surveillance and screening so that the magnitude and distribution of HIV/AIDS in different populations are known and can be monitored over time to measure the success or failure of interventions.

11. The HIV epidemiology shows clearly that transmission does not occur uniformly across populations. Rather, epidemics are driven by high incidence and rapid spread in networks of IDUs, sex workers and MSM, while incidence is much lower in the general population.

12. It is by secondary transmission – from clients of sex workers to their regular partners, for example – that epidemics extend into the general population. The challenge here is to effectively target disease control efforts ‘upstream’ to prevent infection and interrupt the chain of transmission.

13. The presence of other STIs augment the rapid transmission of HIV. An estimated 40% of the 340 million new STIs taking place globally occur in the SEA Region. The highest rates continue to be among sex workers. In Mumbai and Pune, India, genital ulcer disease was found to be common among sex workers and MSM. A high proportion of STIs associated with increased HIV prevalence was also reported from transgenders in Jakarta, Indonesia and India. In Nepal, prevalence of STIs was 19.4% among migrants and 11% in their wives. Early sexual debut and risky behaviours among the large youth population in the Region are contributing to increases in HIV and STI transmission.
14. Strategic information including sentinel surveillance and research data can help in identifying risk factors, making estimations and projections, evaluating impact and creating advocacy.

15. In addition to individual behavioural risk factors, various social, cultural and economic factors increase vulnerability to HIV. Gender disparities remain common in the Region with women having few rights regarding marriage, inheritance or protection against violence. Unfavourable legal environment and policing attitudes are also fuelling the HIV epidemic in the SEA Region by driving sex workers, IDUs and MSM underground and beyond the reach of prevention services. HIV discrimination is considered to be one of the major socio-structural determinants of the epidemic in South-East Asia. Across the Region, migration and mobility create favourable conditions for transmission of HIV and other STIs, and wide dissemination from migrant destination to source communities.

Populations at greatest risk

- HIV infection rates among female sex workers are very high in India, Myanmar and Indonesia, ranging from 11% to 50%.
- HIV among MSM are being increasingly reported from Thailand (28%), India (1% to 40%), and other countries.
- HIV epidemics among IDUs in the SEA Region often appear early and spread rapidly. High HIV prevalence among IDUs ranges from 5% to 77% in Bangladesh, Indonesia, Myanmar, Nepal and Thailand.

2.2 Develop effective prevention and care strategies: what works?

16. There are a number of examples of successful HIV programmes in the Region. Many are described in WHO strategies1 and build on established scientific evidence – for example, that effective STI case management lowers HIV viral load; that antenatal HIV testing and ART reduces rates of mother-to-child transmission; that provision of ART can reduce morbidity, mortality and hospital admissions and prolong and improve quality of life.

17. Based on this experience and evidence, strategies, guidelines and tools have been developed and adapted for use in the Region. Essential packages of interventions have been

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described for sex workers, IDUs and MSM, and for populations with mixed risk profiles such as migrant and mobile men. In addition, guidelines and tools exist for a range of HIV-related clinical services from STI case management to ART.

18. Once strategies are adapted, planning should focus on piloting of interventions and services in a limited number of priority areas, as the basis for wider scale-up. Sufficient technical assistance and resources should be provided to ensure a successful implementation of adapted strategies under field conditions. This was a key step in successful implementation of 100% condom promotion in Thailand, HIV/STI control through community mobilization in Sonagachi, West Bengal, India and for ART and PMTCT scale-up in several countries.

19. It is also important to learn from the experience that will inform subsequent decisions about how to scale up. Simple monitoring and operations research can be conducted to evaluate the experience and capture lessons for subsequent programme expansion.

20. Introducing HIV-related services within the health system involves different challenges. Compared to targeted interventions that focus on relatively small populations, many more people in the general population are potentially affected and may need access to services. Perhaps the overriding challenge is how to decentralize and integrate services sufficiently to meet the needs of widely dispersed populations affected by HIV and STIs. Another common constraint is the lack of sufficient human resources to support the scale-up of new services. Physicians, nurses and other health staff frequently complain about taking on new tasks when they are already overstretched.

21. Solutions to these and other potential implementation problems should be worked out in a limited number of sites before attempting to roll out activities/services on a national scale. Experience from the Region suggests that this approach leads to better outcomes.
Successful Regional Interventions

1. Targeted interventions guided by reliable surveillance can reverse epidemics
   - The successful 100% condom programme in Thailand led to a sharp reduction in HIV cases (measured in sex workers, military recruits and pregnant women) as a result of increased condom use in sex-work settings, implemented through a nationwide network of STI clinics. By 2002, an estimated 5.7 million HIV infections had been averted.

2. HIV and other STIs can be controlled by scaling up STI services, promoting 100% condom use in sex work and involving target populations in programme implementation
   - In West Bengal, India, peer involvement decreased HIV vulnerability, increased sex worker empowerment, and stalled HIV take-off; condom use in Sonagachi, India, increased from 3% in 1992 to 87% in 2007 while syphilis among sex workers declined from 25% to 4%. India and Myanmar, like Thailand, have begun to report a decrease in STIs and HIV since they scaled up targeted interventions with sex workers and migrants.
   - Sri Lanka has been successful in averting an HIV epidemic to date despite a longstanding civil war and absence of male circumcision; data from sentinel STI clinics document sustained reductions in curable STIs. HIV cases are rare even among high-risk populations.

3. Prevention of mother-to-child transmission is a crucial area
   - In India, every district in the six high-HIV burden states and >90% districts in the low-HIV burden states have at least one PMTCT centre. In Myanmar, the PMTCT programme currently covers 89 of 325 townships. Thailand has reached universal access targets for PMTCT and reports a decrease in the number of paediatric AIDS cases.

4. Scaling up ART and improving survival is possible
   - Remarkable progress has been made in the Region on scaling up HIV antiretroviral treatment since November 2003 when the WHO “3 by 5” initiative was launched. Over four years, the number of people started on treatment increased eighteen-fold to 320,000.
   - However, there are wide variations in coverage rates among countries and overall still less than 25% of those who need treatment have access to it. ART has been successfully scaled up in Thailand. In India, scale-up of the ART programme has been exemplary. Survival on first-line drugs was high and comparable to other countries and opportunistic infections reduced over time.
2.3 Achieving broad coverage: scaling up interventions

22. A high coverage – 80% condom use in commercial sex, 60% for harm reduction – is probably required to have an impact on halting or reversing HIV epidemics. Coverage is also key to controlling STIs, reducing mother-to-child transmission and improving survival in ART programmes.

23. Achieving high coverage presents a different set of challenges. Systems need to be built to support the scale-up from a limited number of sites towards coverage targets. The contributions of a range of donors and implementing partners require direction and coordination. An important element of success is effective programme management.

24. In addition, a functional capacity building mechanism is essential to support the scale-up of both targeted interventions and clinic-based services. This may take the form of a technical support unit in or allied to the National AIDS Programme with sufficient technical expertise to standardize approaches (guidelines, tools, etc.), organize trainings and conduct regular monitoring and supervision.

- The National AIDS Programme (NAP) should be in the driver’s seat. It should set standards for interventions and services, coordinate activities of implementing partners and monitor key outcomes.
- The NAP manager trainings have been conducted in the Region. In addition, the SEA Region organizes annual meetings of NAP managers to share experience and set regional priorities (see 2008 recommendations below).

25. Coordination is also needed at district level. District medical offices or AIDS control committees should be supported to map epidemic “hotspots”, targeted interventions and clinical services. They should use this information to facilitate district-level planning and coordination involving local health-care facilities and other implementing partners.

26. At local level, support is needed for decentralization of HIV-related services to health facility and community levels, and their integration into other priority health interventions. WHO has developed a Model Essential Package of integrated health sector interventions for HIV/AIDS to guide countries. It provides a wide range of tools and technical support to assist countries with its implementation. Implementation support should include plans to relieve human resource constraints – including task-sharing, co-management and integration of services at different levels of health facilities.
27. As countries scale up their national HIV/AIDS programmes towards the goal of universal access to prevention, treatment, care and support programmes by 2010 and achieving the Millennium Development Goals (i.e. to “halt and reverse the spread of HIV” by 2015), it is increasingly important to strengthen monitoring and evaluation systems to inform policies and programmes, improve the effectiveness of interventions and promote accountability.

2.4 Monitoring programme and evaluating the impact of scaled up interventions

28. The monitoring and evaluation (M and E) system should be customized to suit the type and level of the epidemic. The essential ingredients of the M and E package should include: a national M and E plan in line with the national strategic plan, a central M and E unit, key indicators and standard data collection forms, and regular data analyses and dissemination. A standard set of indicators should be identified at the national level to measure the availability, coverage and impact of interventions in the health sector namely prevention of sexual HIV transmission and transmission through injecting drug use; prevention in the health-care setting; HIV testing and counselling; PMTCT; and treatment and care. It is also important to measures progress in strengthening key components of the health system to support the scale-up of priority interventions, e.g. procurement and supply management, human resources, financing and information systems. Trained human resources with the required skills are needed to ensure timely collection, analysis and use of information. Adequate funds (7-10% of total national HIV programme budget) should be allotted for monitoring and evaluation activities.

29. To assess the achievements of national AIDS programme, its relevancy and adequacy in the national response especially in health sector, and to provide recommendations for improving strategies and interventions, the Regional Office carried out National AIDS Programme evaluation/review in five countries, namely Indonesia, Myanmar, Nepal, Sri Lanka and Thailand during the period 2005 – 2008. Additional countries: Bhutan, DPR Korea, and Timor-Leste have planned this review in 2009-2010.
3. Current challenges and opportunities

30. To make real progress towards MDGs and UA targets, a stronger response is needed to prevent new infections and care for those already affected. The measure of this progress is the percentage of people with HIV in the Region who have access to key prevention, treatment, care and support services.

31. While access to services has increased since 2001, it is low for VCT, PMTCT and for IDUs, MSM, sex workers and prisoners. Coverage levels are still low for care and treatment services. Less than half (47%) of the SEA Region’s population receives the “essential package” of care and treatment described by WHO and UNAIDS. There is an obvious gap in implementation, i.e. low coverage of services, low percentage of health spending, and poor allocation and utilization of existing funds and coordination of donors. Also, unfavourable policies – prohibiting methadone, needle exchange programmes, condoms and clean needles in prisons – despite evidence of benefit, are amplifying the epidemic.

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<th>The challenge of coverage</th>
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<td>• The coverage of prevention programmes for IDUs and MSM in the Region is only 3% and 2% respectively.</td>
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<td>• Prevention programmes reach only 20% of 1.6 million sex workers.</td>
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<td>• HIV testing and counselling is offered only to 5% of pregnant women in the Region.</td>
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<td>• Despite the rapid scale up of ART in the past few years, it is available only to 23% of the 1.2 million who need it.</td>
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32. There are opportunities to strengthen the public health approach to HIV in the Region. National AIDS Programme Managers set priorities for 2008 at their annual meeting in November 2007 in Bali, Indonesia. Commitments were made to achieve progress in the following areas:

• Unblock critical prevention. Initial focus is on addressing barriers to scaling up (i) targeted condom and STI interventions to slow sexual transmission; and (ii) proven harm reduction interventions to prevent injection-related transmission. Specific attention to achieving high coverage, ensuring sufficient quality and intensity to have impact, and creating an enabling environment.

• Rational ART provision reduces morbidity and mortality, slows the development of HIV drug resistance and reduces cost. It involves effective first-line treatment, adherence support, and close monitoring with early warning indicators.
• Increase implementation capacity, with focus on human resources. Scaling up interventions and services requires investment in primary health care and human resources for health. Improved health systems, sustained finances and increased capacities of human resources are critical for a successful response.

• Strengthening of strategic information (surveillance and M and E) is a crucial component of national response. All countries agreed to implement the Working Group’s recommendations with technical assistance by WHO, UNAIDS and other partners.

4. Roles of WHO

33. WHO takes the lead role in health sector response to HIV/AIDS. WHO is strongly committed to work with national AIDS programmes in scaling up HIV/AIDS prevention, care and treatment. Roles of WHO include:

• Advocacy and resource mobilization: WHO works with international development agencies and with private sector and donors in advocating for evidence-based policies and in mobilizing resources to support the implementation of national programmes;

• Strategic planning and programme review: WHO supports national AIDS programmes in conducting in-depth programme reviews which form the basis for developing national strategic plans in countries;

• Normative guidance and technical support in prevention, care, treatment and surveillance, monitoring and evaluation. WHO’s support to health sector response is supplemented by various other health programmes which are mainstreaming HIV/AIDS with their ongoing activities. These include TB, blood safety, clinical technology, reproductive health, adolescent health, nursing and health promotion, etc.

• Capacity building: WHO assists in strengthening of health systems that support implementation of HIV/AIDS interventions. These include human resources, service delivery, strategic information, procurement and supply management, health care financing and leadership and governance. Training modules have been developed and training courses conducted, including training on AIDS programme management.

• Research and development: by promoting and supporting HIV/AIDS operational research and development to provide successful models to be applied by Member countries.

• Documenting and sharing experiences: Documentations on lessons learned and technical updates are routinely developed and distributed. WHO continues to organize annual meetings of National AIDS Programme Managers, as well as
supporting international conferences and meetings to facilitate the sharing of information.

5. Points for discussion

34. How can the public health approach to HIV be strengthened further?

- How to adapt quickly and scale up for impact? We know what works - there are examples of highly successful interventions in the Region. Yet low coverage limits impact. In many places, targeted interventions are weak or absent, and HIV-related clinical services are frequently overstretched. How can interventions and services be strengthened? Are the barriers technical or system-related or are they related to lack of resources?

- How to make money work better? Unprecedented levels of funding are now available through the Global Fund to Fight AIDS, TB and Malaria (GFATM) yet many countries have limited absorptive capacity. Spending bottlenecks, human resource caps and lack of technical capacity frequently result in low implementation performance.

- How to use HIV resources to build systems? Access to many HIV services can be improved by investing in primary health care. Decentralization requires district mapping, planning with local implementing partners and regular monitoring. How can this process be supported better?

- How to improve managerial capacity? National AIDS programmes are responsible for leading the response to HIV and coordinating efforts by other sectors and partners. NAPs should thus develop strategy and set standards, support capacity building, and monitor the response. Systems, technical assistance and adequate human resources are needed to make the best use of new resources such as from the GFATM. How can NAPs be supported in this work? What is WHO’s role in supporting NAPs?

- How to strengthen regional collaboration? Migrant workers returning home have been identified as high-risk populations for HIV in many countries. Risk usually takes place in migrant destination communities beyond the reach of national programmes. How can regional efforts facilitate cross-border prevention work with migrant and mobile populations? How can treatment adherence be supported while migrant workers are away from home?

6. Conclusions

35. The HIV epidemic continues to take its toll in the SEA Region. Yet countries have demonstrated that implementing an effective response is feasible, both to halt and reverse epidemics and to provide services to those in need. Strategic information systems are being
strengthened and increasingly used to guide programmes. Key lessons for a public health approach to HIV include:

- The health sector’s role is central in the overall national response to the epidemic.
- A scaled-up integrated package of prevention, treatment, care and support services is necessary to halt and reverse the epidemic and mitigate its impact.
- Implementing a scaled-up response to the HIV epidemic requires effective programme management, trained human resources and robust health systems.

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