Monitoring and evaluation and research on HIV/AIDS in Africa:

What do tell us and what more is needed?

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Key points M & E tells us:

- Epidemic in Africa is stabilizing
  - why?
  - Future?
- prevention and care must be inextricably bound together
- better surveillance, research and M & E is needed for definitive (or clearer) answers
Global Distribution of 42 million People Living with HIV in 2002
The Global Distribution of Prevalence (Old + New) is still very similar to the Global Distribution of Incidence (New)
Trends in Number of People Living with HIV infection 1980 - 2002 by WHO Region
What is future if epidemic is stabilizing?

- Reasons for stabilization
- Treatment may increase the number of people living with HIV/AIDS
- prevention must not be neglected and even increased
  - pool of young people (likely to be infected) is large
Projected population structure with and without the AIDS epidemic, Botswana, 2020

Source: US Census Bureau, World Population Profile 2000
What do M & E tell us about prevention efforts?

- Estimates of additional needs in prevention
- Example of further needed synergy between prevention and care
Estimated global need for testing and counseling, 2003

- For prevention of mother to child transmission: 46 million
- For access to treatment: 37 million
- For prevention: 101.1 million
- Grand total: 184.1 million
Four-pronged Strategy for MTCT Prevention

Prong 1: Prevention of HIV in women, especially young women

Prong 2: Prevention of unintended pregnancy in HIV infected women

Prong 3: Prevention of transmission from HIV infected woman to her infant

Prong 4: Care for infected women, their infants and families
UNGASS goal

By 2005, reduce the proportion of infants infected with HIV by 20%

By 2010, reduce the proportion of infants infected with HIV by 50%
Problems inherent in UNGASS goals

- Implied emphasis on Prong 3
- Little attention to Prongs 1 and 2
- Simple modelling shows the difficulty of reaching the goals with Prong 3 alone
Reaching the goal with Prong 3

- To reach goal for 2005 (20% decrease)
  - a. ANC coverage must be 90%
  - b. acceptance of VCT must be 70%
  - c. acceptance of NVP must be 75%

- To reach goal for 2010 (50% decrease)
  - a-c must be 100%

(since effectiveness of NVP is 47%)
Condom use among men with non-regular partners over time in selected sub-Saharan African countries: 1994-2000

Source: Macro International (1994-2000) Demographic Health Surveys; Measure Evaluation
HIV prevalence and reported consistent condom use among female sex workers, Abidjan, Côte d'Ivoire, 1992-1998

Source: Ghys PD et al. (2002). AIDS
Casual sex and condom use by educational status, Mozambique

Respondents reporting the behaviour (%)

- casual sex in the past year
- condom use at last casual sex

Number of years respondent spent in school

Percentage of sexually experienced girls in South Africa who say …

“I have been forced to have sex.”

- Yes 39%
- No 61%

“I am afraid of saying no to sex.”

- Agree 33%
- Disagree 67%

“There are times I don’t want to have sex but I do because my boyfriend insists on having sex.”

- Agree 55%
- Disagree 45%
Number of reported rapes and convictions in Botswana, 1984 to 1997

Source: Emang Basadi Women’s Association, Botswana, 1998
Condom gap in sub-Saharan African countries in 1999

Average condom procurement of top 6 countries = 16.9

Additional condoms needed to get all countries to the level of 16.9 = 1.9 billion per year

Global estimates for adults and children end 2002

- People living with HIV/AIDS: 42 million
- New HIV infections in 2002: 5 million
- Deaths due to HIV/AIDS in 2002: 3.1 million
Adults and children estimated to be living with HIV/AIDS as of end 2002:

- **North America**: 980,000
- **Caribbean**: 440,000
- **Latin America**: 1.5 million
- **Western Europe**: 570,000
- **North Africa & Middle East**: 550,000
- **Sub-Saharan Africa**: 29.4 million
- **Eastern Europe & Central Asia**: 1.2 million
- **East Asia & Pacific**: 1.2 million
- **South & South-East Asia**: 6 million
- **Australia & New Zealand**: 15,000

Total: 42 million (3.2 mln children)
HIV Prevalence (% of adults 15-49) by Sex and Region in 2002
Estimated number of adults and children newly infected with HIV during 2002

- Western Europe: 30,000
- North Africa & Middle East: 83,000
- Sub-Saharan Africa: 3.5 million
- Eastern Europe & Central Asia: 250,000
- East Asia & Pacific: 270,000
- South & South-East Asia: 700,000
- Caribbean: 60,000
- Latin America: 150,000
- North America: 45,000
- Australia & New Zealand: 500

Total: 5 million (0.8 mln children)
Global Distribution of 5 million Newly HIV Infected People in 2002

- **Sub-Saharan Africa**
- **South & Southeast Asia**
- **East Asia & Pacific**
- **Latin America**
- **Eastern Europe & Central Asia**
- **Caribbean**
- **North America**
- **Western Europe**
- **North Africa & ME**
Estimated **adult and child deaths** from HIV/AIDS during 2002

**Total: 3.1 million**
Global Distribution of 3.1 million Adult and Child Deaths from HIV/AIDS in 2002

- Sub-Saharan Africa
- South & Southeast Asia
- East Asia & Pacific
- Latin America
- Eastern Europe & Central Asia
- Caribbean
- North America
- Western Europe
- North Africa & ME
About 14 000 new HIV infections a day in 2002

- More than 95% are in developing countries (70% are in Africa)
- 2000 are in children under 15 years of age (9 out of 10 are in Africa)
- About 12 000 are in persons aged 15 to 49 years, of whom:
  — almost 50% are women
  — about 50% are 15–24 year olds
Strategies for reaching UNGASS goals

- Rapid scaling up of ANC, VCT, NVP
- Exploration of other prongs
Projected new adult HIV infections with and without a timely implementation of a comprehensive interventions package.
Projected new HIV adult infections according to timing of implementation of a comprehensive interventions package, 2002-2010

- No intervention
- Timely intervention
- Delayed intervention

Total Infections (millions), 2002-2010
Percentage of women who are mothers or pregnant by the end of their teens, 1990-1998

Source: Demographic and Health Surveys, various countries
HIV prevalence rate among teenagers by age in Kisumu, Kenya

Leading causes of disease burden in Africa, 2000

- HIV/AIDS: 20.6%
- Lower respiratory infections: 10.1%
- Diarrhoeal diseases: 8.6%
- Maternal conditions: 6.3%
- Measles: 6.1%
- Tuberculosis: 4.5%
- Pertussis: 3.6%
- Other unintentional injuries*: 2.8%
- Perinatal conditions: 1.9%
- Malaria: 1.8%

* Unintentional injuries aside from traffic accidents, poisoning, falls, fires and drowning

Estimated and projected deaths at ages 15-34, with and without AIDS in South Africa: 1980-2025

Source: UN Department of Economic and Social Affairs (2001). World Population Prospects, the 2000 Revision.
HIV prevalence rate among 13 to 19-year-olds
Masaka, Uganda, 1989 to 1997

Source: Kamali et al. AIDS 2000, 14: 427-434

Source: Ministry of Health, Zambia, 1999
Prevalence in 15-24 years old first time testers
Kampala, Uganda

HIV Prevalence (%)

Source: Uganda National AIDS Programme