

## Health Roadmap input report (September 2008): ACCELERATING THE IMPLEMENTATION PLAN TO COMBAT HIV & AIDS AND TB

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## GAUGING PROGRESS TOWARDS MILLENNIUM DEVELOPMENT GOALS 2015 (MDG)

*Note: More complete registration of deaths over the past ten years may exaggerate the extent of changes. However, it is clear that HIV & AIDS has substantially and negatively impacted on each MDG presented below: (See earlier Roadmap text for details)*

### **MDG 4: Reduce child under-5 mortality by two thirds**

- 94% increase in *reported* under-5 mortality between 1997 and 2005
- Likely under-5 mortality rate 69-76 per thousand (cf. Target of 31 per 1000)

### **MDG 5: Reduce maternal mortality rate by 75%**

- MMR has likely doubled since 2000
- MMR in the order of 500 per 100,000 births (MDG target 38 per 100,000 births)

### **MDG 6: Halt and reverse the spread of HIV, malaria and other major diseases by 2015**



## DEFINING THE PROBLEM

### **Magnitude**

- One in nine South Africans (> 2 yrs) has HIV.
- One in six adults (15-49 yrs) has HIV.<sup>1</sup>
- Almost one in three women attending public clinics has HIV.<sup>2</sup>
- TB-HIV co-infection was approximately 55% in 2002<sup>3</sup>
- The number of people diagnosed with TB trebled between 1996 and 2006 (from 269 to 720 cases of TB per 100,000)<sup>4</sup>
- Multi-drug resistant TB occurs in 2.6% of TB cases in the Western Cape and Gauteng (with likely under-reporting in other provinces)<sup>5</sup>
- 900 cases of Extensive Drug Resistant TB were reported between 2004 and 2007.

### **Impact**

- About 1,000 people die each day from HIV – reducing life expectancy to 50.0 years in 2007<sup>6</sup>.
- Over half of today's fifteen year olds are not expected to reach 60 years of age<sup>7</sup>
- About 1.5 million children are maternal orphans as result of Aids.<sup>8</sup>
- Co-infection of HIV and TB has increased morbidity and mortality significantly – and heightened the risk of multi-drug resistant TB

### **Adequacy of response**

- Each year, about 60,000 babies are infected by mother-to-child transmission during birth or through breastfeeding. Only half the babies born to HIV positive mothers receive the full anti-retroviral prevention during and following birth.<sup>9</sup>
- At best, 40% of the population has sustained access to community-level HIV prevention.<sup>10</sup> Modelling of program impact shows that community-level coverage should be much higher for maximum impact<sup>11</sup> – at least 65-70%<sup>12</sup>
- At most, 50% of people eligible for anti-retroviral treatment currently receive it<sup>13</sup>
- Studies show that a high number of people still die before accessing ART<sup>14</sup>
- The successful completion rate for TB treatment is 71%, while the cure rate varies from 45% in KwaZulu-Natal to 71.9% in the Western Cape (average 57.7%)
- Care and support programme data shows that many orphans and vulnerable children (~30%) still do not have access access social security and drop out of school<sup>15</sup>

<sup>1</sup> O Shisana, T Rehle, L Simbayi, W Parker, K Zuma, A Bhana, C Connolly, S Joost and V Pillay et al, *South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey*, HSRC Press, Cape Town, 2005

<sup>2</sup> Department of Health (2008). National Antenatal HIV and Syphilis Prevalence Survey, South Africa 2007

<sup>3</sup> Medical Research Council (2003). Drug Resistance Surveillance 2001-2002

<sup>4</sup> Department of Health (2007). Tuberculosis National Strategic Plan 2007-2011

<sup>5</sup> Department of Health (2007). Tuberculosis National Strategic Plan 2007-2011

<sup>6</sup> Statistics South Africa. Mortality and Causes of Death Statistical Release in South Africa, 2005. Findings from Death Notification. P0309.3. Pretoria

<sup>7</sup> Dorrington R, Johnson L, Bradshaw D and Daniel T (2007). The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators for 2006. Cape Town: Centre for Actuarial Research, Medical Research Council and Actuarial Society of SA.

<sup>8</sup> Dorrington R (2007) Op cit

<sup>9</sup> Health Systems Trust (2007). District Health Barometer 2006/7, Durban, 2007

<sup>10</sup> Pettifor A, Rees H, Steffenson A, Hlongwa-Madikizela L, MacPhail C, Vermaak K, Kleinschmidt I (2004). *HIV and sexual behavior among young South Africans: a national survey of 15-24 year olds*. Reproductive Health Research Unit, University of the Witwatersrand, 2004

Shisana O (2005). Op cit

<sup>11</sup> J. Stover, N. Walker, G.P. Garnett, J.A. Salomon, K.A. Stanecki, P. Ghys, N.C. Grassly, R.M. Anderson and B. Schwartländer (2002). Can we reverse the HIV AND AIDS pandemic with an expanded response? *Lancet* (2002) Vol. 360 (9326), p73

<sup>12</sup> Kahn J, Marseille E, Kramer S (2005). Assessment of the potential economic impact of South Africa's loveLife national HIV prevention program. Analysis commissioned by the loveLife Trust, September 2005

<sup>13</sup> Mail & Guardian August 4, 2008. Quoting Deputy Minister for Social Development Jean Swanson-Jacobs.

<sup>14</sup> <http://www.mg.co.za/article/2008-08-04-510-000-south-africans-on-antiretroviral-treatment>. Accessed 24 September 2008

<sup>15</sup> Brinkhof MW, Dabis F, Myer L, Bangsberg DR, Boule A, Nash D, Schechter M, Laurent C, Keiser O, May M, Sprinz E, Egger M, Anglaret X; ART-LINC, IeDEA, Early loss of HIV-infected patients on potent antiretroviral therapy programmes in lower-income countries, *Bull World Health Organ*. 2008 Jul;86(7):559-67.

In sum, the above suggests that the national response to date is at best half adequate – providing the basis for scale up and opportunity for significant new gains if we can achieve levels of 90% adequacy of response over the next three years. The National Strategic Plan 2007-2011 provides a comprehensive action plan in response to HIV & Aids and STI. This report provides a strategic approach to accelerating its implementation to achieve major impact in reducing HIV and mitigating its impact.

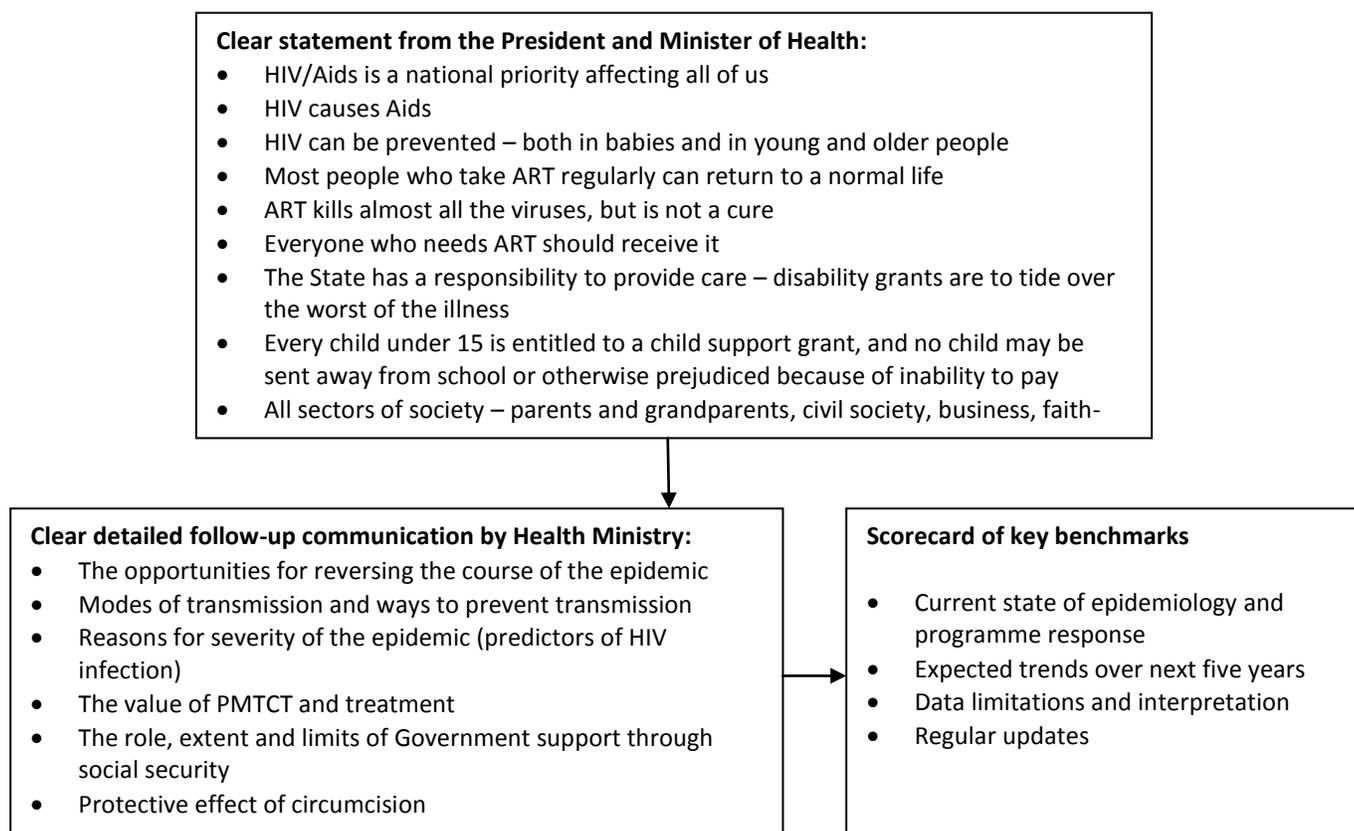
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<sup>15</sup> loveLife goGetter programme baseline analysis September 2008 (preliminary analysis)

## 1. TOPLINE STRATEGIES TO ACCELERATE RESPONSE

### 1.1 COMMUNICATION PRIORITY: Unequivocal statement from the President and Minister of Health

Figure 1 Outline of core communication in first 100 days



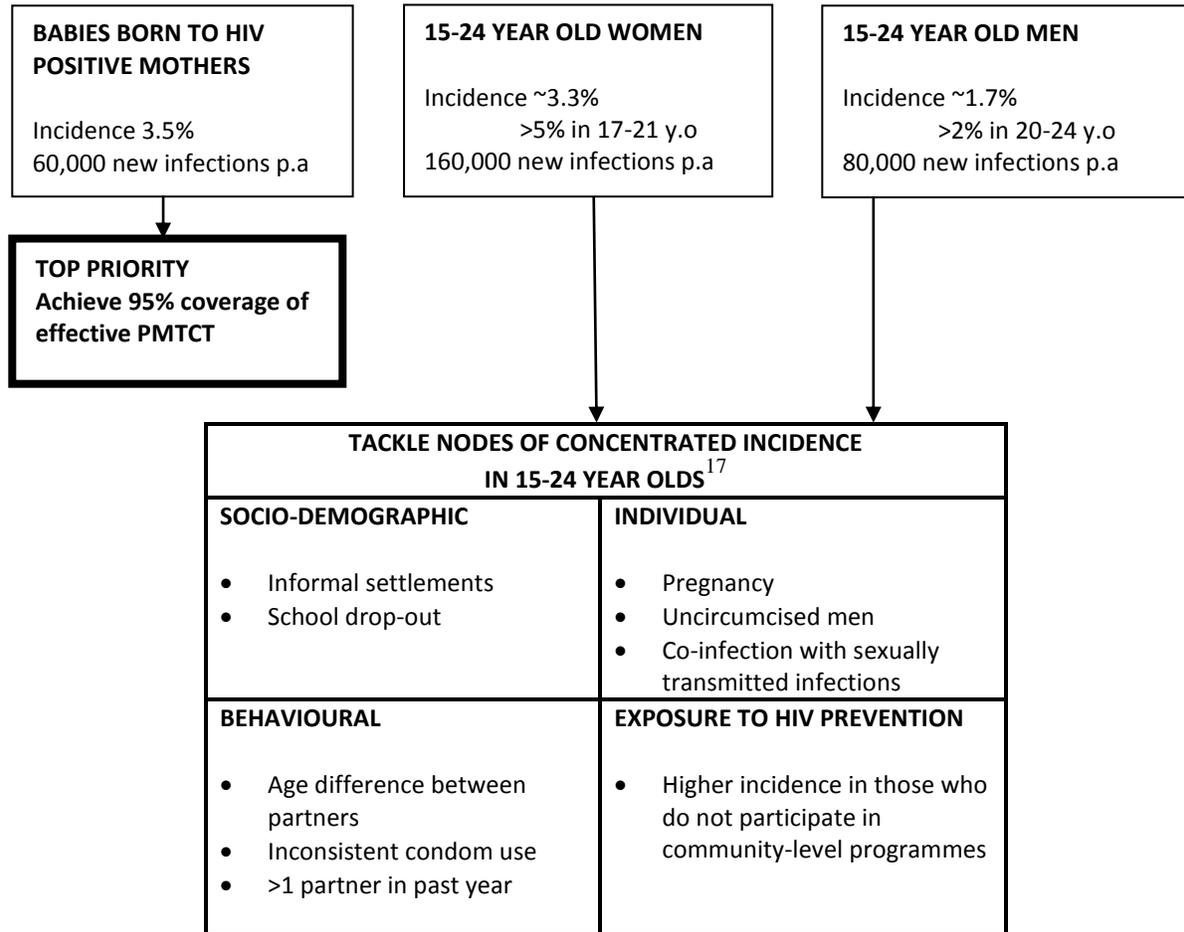
### 1.2 PREVENTION PRIORITY: Tackle the nodes of concentrated incidence of HIV

The HIV epidemic experienced by South Africa is generalized and hyper-endemic. The average incidence of HIV in South Africa is 1.2%. But it is heavily concentrated in specific groups – defined in the first instance by age and gender.

About 45% of the approximately 1,450 new infections a day occur in women under 25 years of age and their babies. Almost three fifths (57%) of new infections occur in babies (11.5% of total), 15-24 year old women (31% of total) and 15-24 year old men (15% of total). These groups constitute the priorities for intervention.<sup>16</sup> Given that almost all infections in newborns can be stopped by effective administration of anti-retroviral therapy, improving the coverage of PMTCT must constitute the single biggest priority.

<sup>16</sup> Dorrington R, Johnson L, Bradshaw D and Daniel. The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators for 2006. Cape Town: Centre for Actuarial Research, Medical Research Council and Actuarial Society of SA.

**Figure 2 Tackle the nodes of concentrated incidence of HIV**

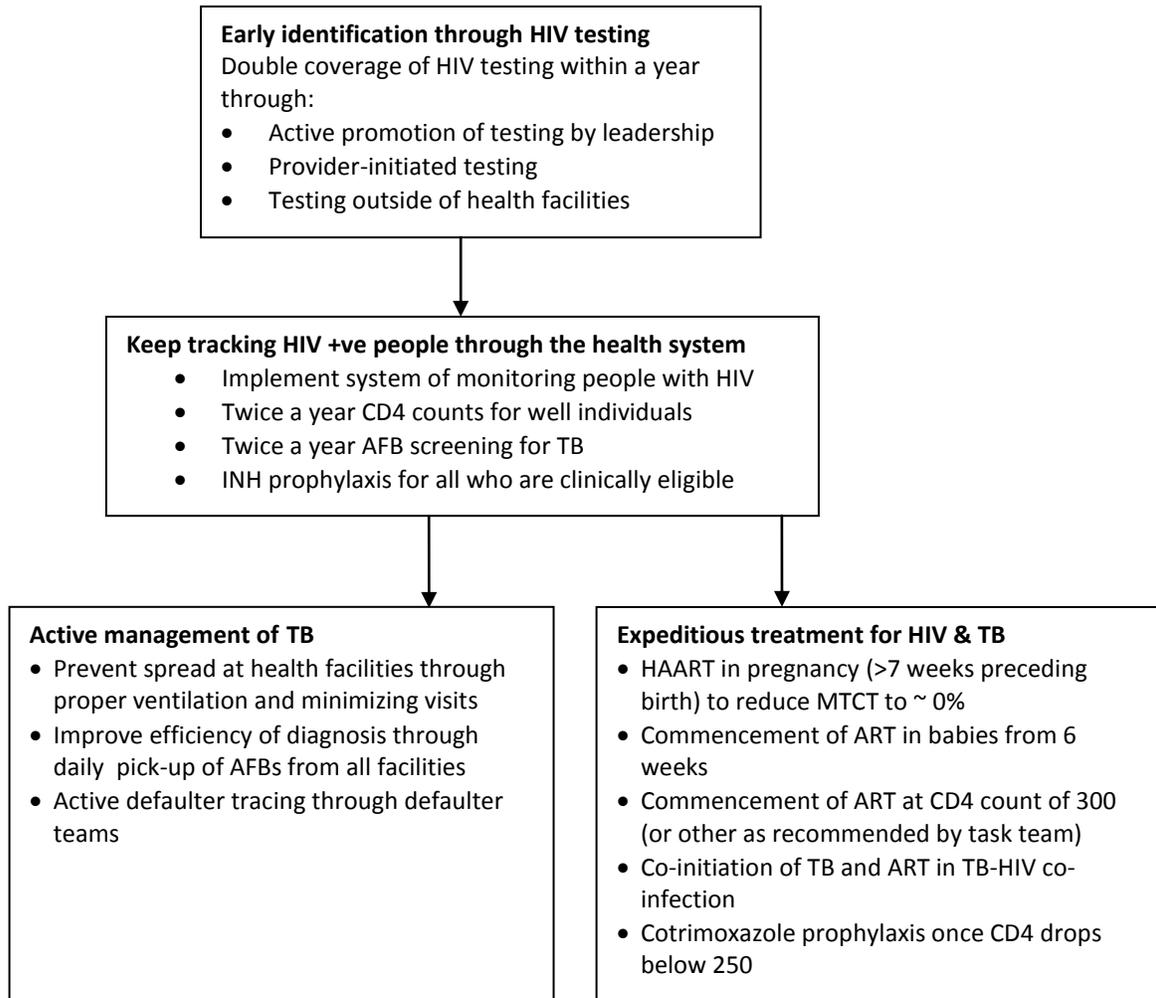


### 1.3 TREATMENT PRIORITY: Initiate early treatment of STIs, HIV and TB treatment

The two main reasons why HIV + people die from Aids is that: i) ART is not available to all who need it; and ii) ART is started too late. The priorities for AR treatment must be expand effective coverage as rapidly as possible and ensure early enough anti-retroviral treatment.

<sup>17</sup> Pettifor A, Rees H, Kleinschmidt I, Steffenson A, MacPhail C, Hlongwa-Madikizela L, Vermaak, Padian N. Young people's sexual health in South Africa: HIV prevalence and sexual behaviours from a nationally representative household survey. *AIDS* 2005, **19**:1525-1534

**Figure 3 Expedite anti-retroviral and TB treatment**

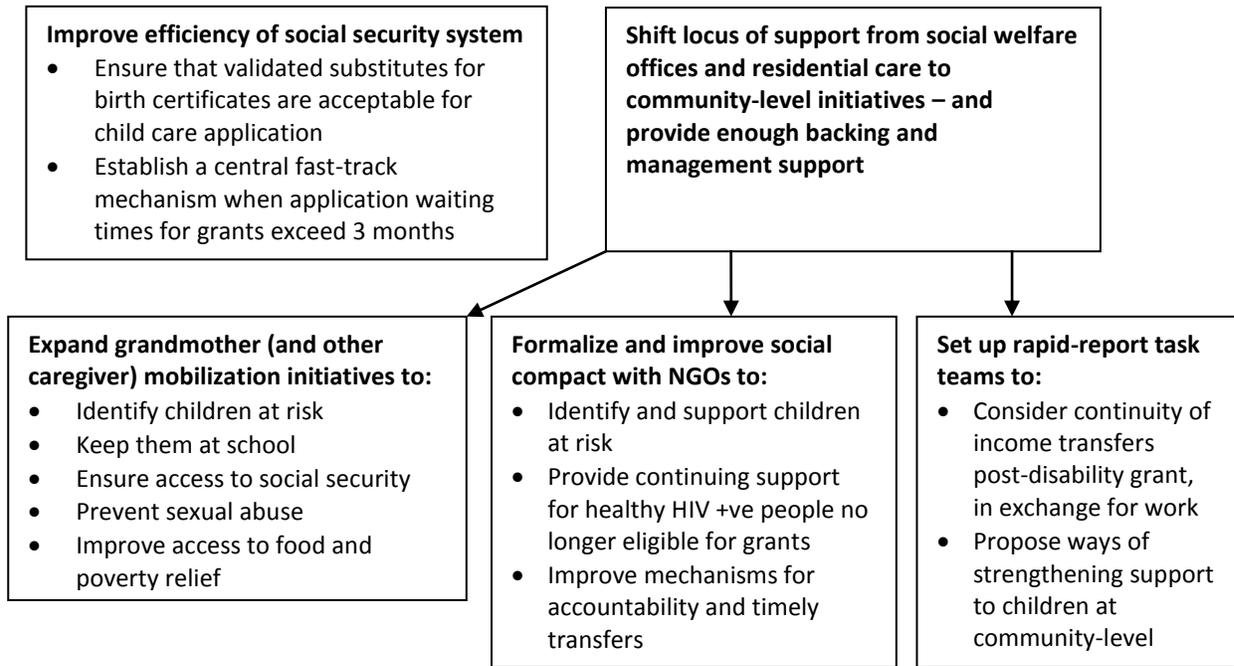


#### **1.4 CARE AND SUPPORT PRIORITIES:**

- **Improve efficiency and coverage of social security**
- **Shift primary support at local level from state social services to non-government and community-level support – and provide efficient backing and management oversight**

The role of the State in care and support should be to provide an efficient social safety net for disability and child care, and systematic financial support to community-level programmes implemented by NGOs.

**Figure 4 Improve care and support**

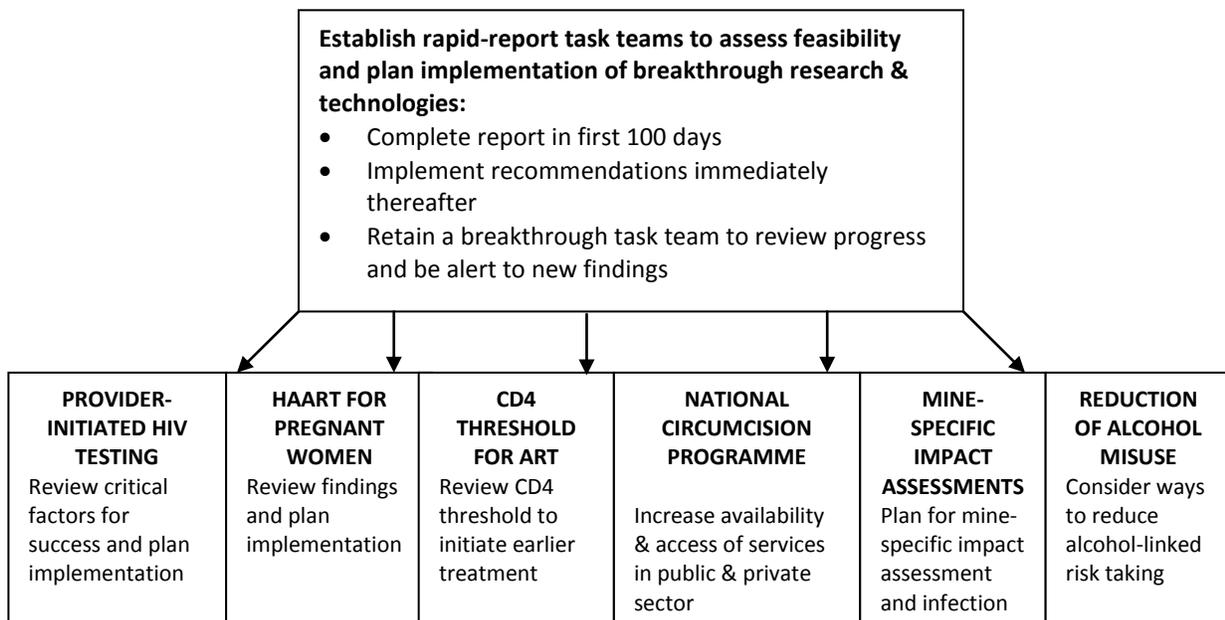


**1.5 RAPID RESPONSE TO RESEARCH AND TECHNOLOGICAL BREAKTHROUGHS**

**PRIORITIES:**

- **Provider-initiated HIV testing with opt-out**
- **HAART for pregnant women**
- **Earlier commencement of ART at higher CD4 count**
- **National circumcision programme**
- **Mining impact assessment and mitigation strategies**
- **Reduction of alcohol-linked high risk behaviour**

**Figure 5 Set up mechanisms for rapid-response to research & technological breakthroughs**

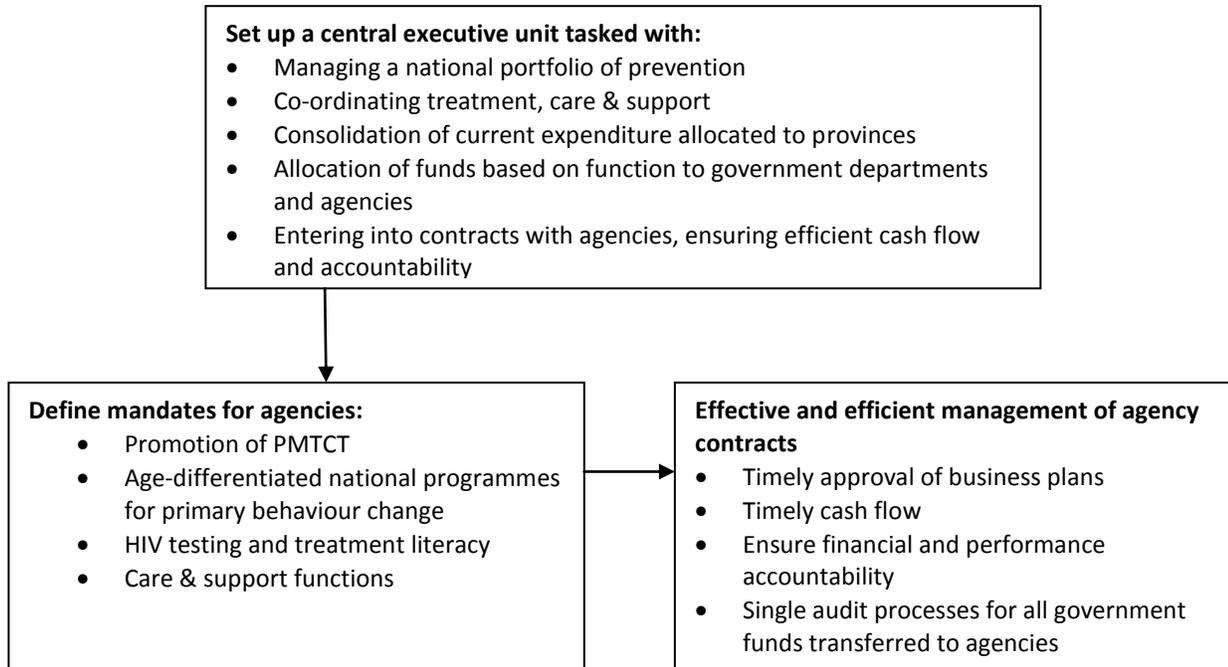


## 1.6 CONSOLIDATE ORGANIZATION AND FINANCING TO ACHIEVE EFFICIENCY

### PRIORITIES:

- Set up a central executive unit for co-ordinating the national response to HIV/Aids & TB
- Define mandates based on function (as opposed to administrative level)
- Consolidate funding for primary behaviour change and treatment literacy programmes
- Establish clear social compacts with agencies tasked with implementation

Figure 6 Expeditious management of programmes



## 2. STRATEGIC FRAMEWORK FOR ACCELERATING RESPONSE

Table 1 Strategic framework for accelerating national response

	Key strategies	Critical success factors	What needs to change?
<b>COMMUNICATION</b>	<p>Clear communication that HIV &amp; AIDS is a national priority and a call to all sectors of society to act accordingly</p> <p>Clear communication about modes of transmission, determinants of high risk behaviour, PMTCT, ART, State responsibilities and limits in care and support</p> <p>Public benchmarks of progress expected and attained</p>	<p>Leadership from the President down</p> <p>A simple common statement (see Annexure A for core content)</p> <p>Simple, easy-to-understand scorecard</p>	<p>Ambivalent messaging from political leadership</p> <p>National treatment literacy programme needs to be more visible</p>
<b>PREVENTION</b>	<p>Task every district to identify and address the obstacles to 95% uptake of PMTCT (in line with current guidelines in the immediate term)</p>	<p>Every district health office must understand that PMTCT is the most urgent priority</p>	<p>Missed opportunities from point of entry into health system</p>
	<p>Commission agencies tasked with primary behaviour change – defined by target age group – to achieve sufficient intensity and scale for maximum effect</p>	<p>Age-group specific prevention objectives and strategies</p> <p>Enough resources to achieve coverage targets for impact</p> <p>Agencies with specialist capacity mandated for long enough (5 year mandate linked to performance)</p>	<p>Current allocation of resources is wasteful and not cost-effective – provincial health departments are not well placed to provide specialist behaviour change programmes.</p> <p>Allocations to provinces for ‘behaviour change programmes’ should be consolidated and re-allocated to specialist agencies to achieve efficacy and efficiency</p>
	<p>Implement a national HIV testing campaign</p>	<p>Active participation by political and faith leadership</p> <p>Provider initiated testing</p> <p>Outreach through non-health service vehicles</p>	<p>Missed opportunities for testing in health facilities</p> <p>Testing is still too ‘medicalized’ – needs to be taken into communities</p>
	<p>Reduce opportunities for TB</p>	<p>Full implementation of</p>	<p>Frequent health facility</p>

	<b>Key strategies</b>	<b>Critical success factors</b>	<b>What needs to change?</b>
	infection by minimizing close contact in public places and improving bactericidal measures	<p>DOT system and minimize client visits for TB treatment collection</p> <p>Rigorous application of ventilation policies in health facilities</p> <p>Urgent investigation of bactericidal efficacy of ultra-violet light in high concentration areas like mine shaft lifts</p>	visits by TB clients for medicines (with potential for infection on public transport and at facilities)
	Expand access to high quality, well integrated sexual and reproductive health services	<p>Focus on improving access &amp; quality of STI treatment in public and private sectors</p> <p>Provision of dual contraception and increasing availability of male and female condoms</p> <p>Expansion of youth friendly services in public facilities</p>	Many STIs among men are treated in cash practices in the private sector. Private practitioners must be involved.
<b>TREATMENT</b>	Implement a national treatment literacy campaign	Sufficient scale and visibility, supported by easy-to-grasp publications	Treatment literacy has virtually no national visibility
	Prioritize the roll-out of anti-retroviral treatment to exceed NSP targets (55% by end 2009)	Every district must prioritise the provision of ART to exceed targets	Management accountability must be heightened. ART and TB related targets must be key performance measures
	Improve the efficacy of the ART programme	<p>Identify and keep healthy HIV positive people in contact with health care</p> <p>Early commencement of ART</p> <p>Initiation of TB and antiretroviral therapy simultaneously in co-infected individuals</p>	<p>Late presentation of people with Aids-related illness</p> <p>Late commencement of ART once they are already ill</p> <p>Time lag in commencement of ART in TB-HIV co-infected individuals</p>
	Improve the efficacy of TB programme	Active screening of all HIV positive people for TB	Low levels of screening (<40%) for TB among HIV

	Key strategies	Critical success factors	What needs to change?
		High coverage of cotrimoxazole and INH prophylaxis for people with HIV (clinically eligible)	positive individuals  Low levels of anti-bacterial prophylaxis (<40%)
<b>CARE &amp; SUPPORT</b>	Coverage of programmes mobilizing grandmothers should be increased to provide cost-effective community-level support to orphans and vulnerable children	One or more agencies should be tasked with programme implementation drawing on existing expertise and experience	Inadequate social worker case management and patchy institutional support is currently the primary form of state support.  Community-level support should become the primary program, supported by social services and institutional care where necessary
	The system of state support to local NGOs should be formalized and vastly improved to enable NGOs to: <ul style="list-style-type: none"> <li>Identify and support families at risk</li> <li>Provide follow-up support to people on ART who are no longer eligible for disability grants</li> </ul> Set up a task team to develop system of support for children (including nutrition) (include UNICEF and ARK in review)	National co-ordination of provincial systems of NGO support  Systematic assessment of adequacy of coverage of needs in districts  Efficient social compacts: timely systems of payment to NGOs in return for effective programmes and accountability	Patchy coverage at present  NGOs hamstrung by late payments  Uncertain accountability
	Set up a task team to examine feasibility and make recommendations regarding work-linked disability grant extensions and/or continuing nutrition support for people living with Aids	Urgent action needed to ensure high compliance with ART	Perverse incentives exist to stop ART to retain disability grants
<b>RAPID RESPONSE TO TECHNOLOGICAL ADVANCEMENT AND RESEARCH</b>	Plan for implementation of provider-initiated HIV testing (with opt out)  Plan for implementation of HAART	Reports completed within 100 days  Implementation of feasible	Delays in implementation of new technologies

	<b>Key strategies</b>	<b>Critical success factors</b>	<b>What needs to change?</b>
<b>FINDINGS</b>	<p>for HIV positive pregnant mothers (in addition to dual therapy for babies)</p> <p>Establish beneficial (therapeutic &amp; cost) CD4 thresholds for commencement of ART</p> <p>Plan for implementation of a national circumcision programme (elements of which to be determined)</p> <p>Plan for requirement of HIV/Aids &amp; TB impact assessments on mines (and other heavy industry) with clear infection mitigation strategies</p> <p>Consider ways of preventing alcohol misuse, linked to high-risk sexual behaviour</p> <p>Retain rapid response team to assess future breakthroughs as they occur</p>	<p>recommendations immediately after report</p>	
<b>RE-ORGANIZE CO-ORDINATION AND FINANCING</b>	<p>Central <u>executive</u> co-ordinating unit with both co-ordinating and executive responsibilities with respect to:</p> <ul style="list-style-type: none"> <li>• Defining mandates for implementing agencies</li> <li>• Contracting with non-government agencies with specific programmes mandates</li> </ul>	<p>Ability to co-ordinate across Government departments</p> <p>Reallocation of existing funds for primary behaviour change and literacy programmes to achieve efficiencies</p> <p>Efficient systems for accountability for performance and finances</p> <p>Efficient systems for timely payment</p>	<p>Ill-defined governance and accountability of SANAC structures</p> <p>Diffuse and patchy behaviour change programmes as a result of: Programme divisions along administrative (as opposed to functional lines)</p> <p>Late payments to NGO agencies compromising performance</p> <p>Multiple audit processes where NGOs receive funding from several departments</p>

### **3. PHASED PLAN TO ACCELERATE IMPLEMENTATION OF THE NATIONAL STRATEGIC PLAN**

- In the **next hundred days**, South Africa must make further bold strides against HIV & Aids and TB by: demonstrating leadership; fully mobilizing all sectors of society; setting clear benchmarks for programme coverage and impact; applying new knowledge boldly and proactively; and re-organizing/restructuring the systems of health management and finance to improve efficiency and responsiveness.
- In the **next year**, South Africa must achieve significant new gains by filling the large gaps in existing programmes; tackling nodes of high concentration of the epidemic; and implementing recommendations of rapid-report task groups.
- In the **next three years**, South Africa must reduce the incidence of HIV and TB, ensure full access to anti-retroviral treatment and significantly expand care & support to households directly affected by Aids by improving health and social system.

Following is an outline of a phased plan to accelerate the implementation of the National Strategic Plan over the next three years.

#### **3.1 THE FIRST 100 DAYS**

In the **next hundred days**, South Africa must make further bold strides against HIV & Aids and TB by: demonstrating leadership;

- fully mobilizing all sectors of society;
- setting clear benchmarks for programme coverage and impact;
- applying new knowledge boldly and proactively; and
- re-organizing/restructuring the systems of health management and finance to improve efficiency and responsiveness.

##### **3.1.1 Give clear and unequivocal leadership**

###### **3.1.1.1 Public statement of priority and action**

The first task is to position HIV & Aids and TB as national priorities, requiring urgent action by all sectors of society.

The objectives of the first communication should be to:

- State Government's unequivocal commitment to preventing HIV and TB;
- State Government's unequivocal commitment to treating and caring for people living with HIV & AIDS and TB, and mitigating the impact on their families
- Recognize the massive impact that HIV & AIDS and TB have had, and continue to have, on South African society, in terms of suffering, morbidity and mortality, orphanhood, increasing pressures on health workers and teachers, increasing pressure on the elderly, and loss of national productivity
- State clearly that HIV causes Aids, and that it can be prevented and treated.
- State that TB is preventable and curable, even if you are HIV positive.

This communication should be followed up with fuller communication explaining:

- The opportunities for reversing the course of the epidemic
- Modes of transmission and ways to prevent transmission
- Reasons for severity of the epidemic (predictors of HIV infection)

- The value of PMTCT and treatment
- The role, extent and limits of Government support through social security
- Protective effect of circumcision

(See core communication as Annexure A)

### **3.1.2 Mobilize all sectors of society**

#### **3.1.2.1 Make it clear that preventing transmission from mothers to babies is a national priority**

Data from the District Health Barometer for 2006/7 indicates that less than one in two babies born to HIV+ mothers received anti-retroviral prophylaxis.<sup>18</sup> One way of improving uptake is to heighten the demand for testing and PMTCT by prospective mothers by giving them greater knowledge about its effects and effectiveness.

#### **ACTION:**

- Public statement that no baby should get HIV because medicines weren't available to stop mother-to-child transmission.
- Task an agency to implement a PMTCT literacy programme aimed at increasing demand from mothers and commitment from health workers to avoid missed opportunities.

#### **3.1.2.2 Implement a national treatment literacy campaign**

Similarly, while the majority (60%) of South Africans knew about ART by 2005, there is still uncertainty among a significant proportion about the role of ART.<sup>19</sup>

**ACTION:** We recommend that a national anti-retroviral *literacy* programme be put in place: Every South African should know that she or he is entitled to anti-retroviral treatment if they need it; that ART can prolong life significantly but is not a cure; that mother-to-child transmission of HIV can be prevented in most cases; and that treatment is most effective combined with a healthy lifestyle and protective sexual behaviour.

#### **3.1.3.2 Implement a national HIV testing campaign**

Participation by the country's leadership in a national HIV testing campaign would show commitment and actively engage all sectors of society (religious organisations) in HIV prevention. Presently research indicates that only a third of adults have had an HIV test and know where they stand with HIV, yet those who do, use condoms more consistently. This is especially true of people living with HIV who know their status<sup>20</sup>. By increasing couple counselling and HIV testing uptake, HIV transmission amongst couples could be further reduced.

If the proportion of people who know their status could be doubled within a year, it could trigger a move to safer sexual behaviour. The effect size is difficult to estimate, as people who had tested for HIV are more likely to be motivated to protect themselves. Even if the elasticity of condom use related to testing is relatively small, expansion of testing will be cost-effective for high levels of coverage given that rapid-test infrastructure is in place in almost all health facilities.

<sup>18</sup> Health Systems Trust (2007). District Health Barometer 2006/7, Durban, 2007

<sup>19</sup> O Shisana, T Rehle, L Simbayi, W Parker, K Zuma, A Bhana, C Connolly, S Joost and V Pillay et al, *South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey*, HSRC Press, Cape Town, 2005

<sup>20</sup> O Shisana, T Rehle, L Simbayi, W Parker, K Zuma, A Bhana, C Connolly, S Joost and V Pillay et al, *South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey*, HSRC Press, Cape Town, 2005

The testing campaign should have three objectives, namely to:

- Increase demand for HIV testing through leader role-models and heightened social acceptability;
- Increase access to HIV testing using existing community outreach mechanisms (NGOs & mobile clinics)
- Reduce missed opportunities for HIV testing at health facilities.

**ACTION:**

- i. An extensive testing campaign led by prominent national and community figures to be initiated within two months.
- ii. In order to fast-track implementation, an existing agency or agencies should be tasked to spearhead it by co-ordinating a coalition of Government, non-government and corporate implementers.
- iii. Non-government organisations must utilise their comprehensive capacity for testing in community settings outside of health facilities. This capacity must be capitalized upon to reach people who may not visit a health facility in the next year.
- iv. In health facilities, the places to start are in antenatal clinics where a third of women attending are not tested for HIV and in people receiving treatment for sexually transmitted diseases. In this regard, the commitment and involvement of doctors in independent practice is critical, as many women and men attend these services (prefer receiving anonymous STI treatment at cash practices (see below).

**3.1.2.4 Assert the role of parents in HIV prevention**

Open communication, fostered by leaders and carried into the home, is critical to reducing stigma and dealing effectively with the drivers of HIV infection. Over 80% of 15-24 year olds regard parents as an important source of information about HIV<sup>21</sup>, yet only about half of all parents talk to their children about sexuality and dealing with the pressures of relationships.<sup>22</sup> The influence of parents is probably the single biggest factor in determining the age of sexual debut and condom use at sexual debut<sup>23</sup> - and the latter is the strongest predictor of subsequent condom use.<sup>24</sup>

**ACTION:** Contract an agency to implement a campaign focused specifically at parents.

**3.1.2.5 Mobilize SAMA, DENOSA and other health care associations**

Sexually transmitted infection (herpetic and ulcerative in particular) facilitates HIV transmission – and the incidence in South Africa is high (~5% p.a among adults)<sup>25</sup>. TB is often not diagnosed until late presentation with complications.

**ACTION:**

- i. Focus on key biomedical interventions that could make a big impact.
- ii. Request the South African Medical Association & Democratic Nurses Organization of South Africa to run a national campaign aimed at both health practitioners and the public, stressing the importance of early treatment of STIs (particularly ulcerative disease) as well as dual method use and VCT.
- iii. Implement a policy of TB testing (AFB screen) for everyone with a cough for longer than two weeks.

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<sup>21</sup> Henry J. Kaiser Family Foundation and the South African Broadcast Corporation (2007). *Young South Africans, Broadcast Media and HIV Awareness: results of a national survey*

<sup>22</sup> Africa Strategic Research Corporation (2001). National probability sample survey of 2204 12-17 yr olds, Johannesburg. Commissioned by the Henry J. Kaiser Family Foundation (USA)

<sup>23</sup> Kirby Douglas (2001). *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. The National Campaign to Reduce Teen Pregnancy, Washington DC

<sup>24</sup> Hendriksen E, Pettifor A, Lee S, Coates T, Rees H, Predictors of condom use among young adults in South Africa: The Reproductive Health and HIV Research Unit National Youth Survey, *American Journal of Public Health*, 2007. Vol. 97 (7), pp.1241-1248

<sup>25</sup> Health Systems Trust (2007). *South African Health Review 2007*, Durban

### **3.1.2.6 Assert the role of faith-based organisations in HIV prevention**

The experience of Uganda points to the importance of clear and unambiguous commitment by South Africa's leaders, at national, provincial and local level. Apart from clear political leadership, other sectors of South Africa's society should be fully mobilized.

Despite professed religious affiliation by 80% of the population, only 40% regards faith-based organisations as an important source of information about HIV.<sup>26</sup> Faith-based organisations could play a particularly important role in promoting openness between parents and children about HIV, relationships and sexuality.

#### **ACTION:**

The leadership of faith-based organisations should be approached to play an active role in the testing campaign, not least by being tested themselves and promotion of PMTCT.

### **3.1.2.7 Assert the role of business and trade unions in HIV prevention, treatment, care and support**

The positive potential of business and trade unions in mitigating the negative effects on HIV should be reinforced publicly.

#### **ACTION:**

All corporate boards and associated trade unions should be requested to review its HIV prevention and management strategies. In addition to workplace programmes, they should review whether:

- Any of their existing policies (HR, housing, transport etc) are exacerbating HIV infection. (A checklist of factors exacerbating HIV should be provided)
- Expansion plans may exacerbate HIV infection (especially mining and expansion of large industry in new communities).
- They are contributing to HIV prevention within the workplace through apprentice and workplace HIV prevention programmes, employees-as-parents programmes and promotion of HIV testing.
- They are contributing to HIV prevention outside the workplace by supporting initiatives in communities associated with their operations; or national or regional programmes.

### **3.1.2.8 Renew the national commitment to school attendance**

School-going is protective against HIV and teenage pregnancy – and school-leaving puts young people at risk.<sup>27,28</sup> The likely reason is that school-going creates a sense of aspiration, security and participation in society that dissipates when young people leave school. School is also an important source of knowledge for young people, cited by close to 90% of 12-14 year olds as providing valuable information about HIV.

The pressures leading to secondary school drop is both social and economic<sup>29</sup>, and are intensified in families affected by Aids<sup>30</sup>. In this context, the 'norm' is to drop out before Grade 12. Over a third of 14 year olds drop out

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<sup>26</sup> Shisana et al (2005) Ibid

<sup>27</sup> Hargreaves J, Morison L, Kim J, Bonell C, Porter J, Watts C, Busza J, Pronyk P, Phetla G (2007). The association between school attendance, HIV infection and sexual behaviour in rural South Africa. *Journal of Epidemiological Community Health*; 000;1-8;doi.10.1136/jech.2006.053827

<sup>28</sup> H Rees, C MacPhail and A Pettifor, HIV, Contraceptive Use and Pregnancy Among 15-24 Year Old South African Women: The Need for Greater Synergy, XV International AIDS Conference, 11-162004 July 2004, 15, abstract no. TuPeC4870.

<sup>29</sup> Sibanda A (2004). Who drops out of school in South Africa? The influence of individual and household characteristics. *African Population Studies* Vol.19(1). Pp 99-116

<sup>30</sup> Steinberg M et al (2002). Hitting home: How households cope with the impact of the HIV/AIDS epidemic. A survey of households affected by HIV/AIDS in South Africa. Health Systems Trust

of school before completion.<sup>31</sup> In the face of pressure from principals for school fees and uniforms, which persists despite policy to the contrary, many young people from poor families drop out of school.

**ACTION:**

- i. There should be a clear statement that learners should not drop out of school, but should continue to qualify for further education.
- ii. Non-government organisations and grandparents should be mobilized to prevent children being forced out of school for reasons of poverty. This will be achieved through engagement with civic and human rights organisations and lobby groups.
- iii. Research should be conducted to monitor reasons for school drop out across provinces and to identify and report schools which exclude or otherwise prejudice learners who are unable to pay for school fees or uniforms. A register of offending schools should be maintained.
- iv. The implications of condom distribution in secondary schools should be assessed with a view to policy decision within the first 100 days.

### **3.1.3 Set clear benchmarks of progress**

Without clear benchmarks of progress, the process of heightened mobilization risks shooting itself in the foot as the expectation for change will be high. Even if the above opportunities are fully exploited, it will take at least five years to see a substantial drop in the total prevalence of HIV. For example, with successful treatment, total prevalence could stay high for several years even as the rates of new infection decline. Similarly, if we judge success only by antenatal surveys - a sub-set of the population that has by definition had unprotected sex – we could miss important signs of progress among most teenagers and men.

This is not to say that gains cannot be demonstrated in the short-to medium term. Certainly, we should be able to show the expansion of programme coverage within six months. We must set clear benchmarks of progress – understood by the general public - in terms of epidemiological trends, self-reported sexual behaviour and programme coverage. These benchmarks should become part of a public scorecard as part of evidence of heightened commitment to tackling the epidemic.

**ACTION:**

- i. Publish a set of targets and anticipated trends with respect to key indicators of progress. This will show clear commitment and help ensure more sophisticated media coverage of implementation.
- ii. Institute regular population surveys (HIV & Aids and TB) commissioned by a Government research agency
- iii. Relate the surveys more explicitly to programme implementation to increase monitoring and evaluation of key prevention campaigns and other programmes.
- iv. Publish an annual update on the state of response to HIV & AIDS and TB in South Africa.

### **3.1.4 Apply new knowledge boldly and proactively**

The task teams listed below may be able to address more than one issue. For purposes of explanation, each function is presented separately.

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<sup>31</sup> Statistics South Africa 2003. Primary Tables, Census 2001 (Education)

#### **3.1.4.1 Commission a task group to institute provider-initiated HIV testing**

Provider initiated testing has been shown to increase the uptake of testing and reduce missed opportunities in health facilities<sup>32</sup>. Given an average of 2.1 visits to a primary care practitioner per year, provider-initiated testing could increase the coverage of testing significantly at low marginal cost.

**ACTION:** In health facilities, we recommend the urgent adoption of provider-initiated HIV testing - with opt-out mechanisms – to improve the efficiency of HIV testing. This strategy should be implemented in line with the World Health Organization’s guidelines on provider-initiated testing.

#### **3.1.4.2 Commission a task-group to plan implementation of ART for pregnant women with HIV**

There is evidence that provision of ART to pregnant women with HIV – together with dual prophylaxis for their infants – reduces the transmission of HIV to almost zero. At Johannesburg Hospital, among women who received more than 7 weeks of HAART during pregnancy, transmission was 0.3%.<sup>5</sup> As a result of the success of the ANC ARV at Johannesburg Hospital, 4 additional sites have been opened in the surrounding area, including 2 programmes managed by midwives within primary health care clinics.

Initiating pregnant women on ART is feasible, safe, and effective. ART-related complications were low, and in the subset of women on whom follow-up CD4+ cell counts and HIV viral loads were available, most had an excellent response to therapy with good short-term immune reconstitution and successful viral suppression.<sup>6</sup>

**ACTION:** Commission a task team to plan the urgent implementation of ART for pregnant women with HIV, supplementing the current regimen.

#### **3.1.4.3 Commission a task team to recommend CD4 threshold for ART commencement**

Mortality soon after commencement of ART is strongly related to the CD4 count. Expanding eligibility by increasing the CD4 threshold limit could reduce morbidity and related health-service costs.<sup>33</sup>

**ACTION:**

- Establish beneficial (therapeutic & cost) CD4 thresholds for commencement of ART
- Assess costs and make recommendations

#### **3.1.4.4 Commission a task group to make recommendations for a national programme of circumcision**

Circumcision has been shown to provide partial protection against female-to-male transmission of HIV. It has not been shown to have a strong effect in preventing infection in women or the receptive male partner in homosexual relationships.<sup>34</sup>

**ACTION:**

- i. Implementation of a national programme of circumcision should be carefully yet urgently assessed, with regard to acceptability, cultural and other sensitivities, and logistical implications.

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<sup>32</sup> World Health Organization (2007). Guidelines on provider-initiated HIV testing and counseling in health facilities. Geneva

<sup>33</sup> Walensky RP, Wood R, Weinstein MC, Martinson NA, Losina E, Fofana MO, Goldie SJ, Divi N, Yazdanpanah Y, Wang B, Paltiel AD, Freedberg KA; CEPAC-International Investigators. Scaling up antiretroviral therapy in South Africa: the impact of speed on survival. *J Infect Dis.* 2008 May 1;197(9):1324-32

<sup>34</sup> UNAIDS (2008) Safe, Voluntary, Informed Male Circumcision and Comprehensive HIV Prevention Programming. Guidance for decision-makers on human rights, ethical and legal considerations. UNAIDS/08.19E

- ii. The feasibility and implications of a mass circumcision programme aimed at achieving high (>50%) levels of coverage should be considered, with due regard to its potential benefits.
- iii. In the meantime, the role of circumcision in HIV prevention should be clearly communicated as part of the national communication strategy.
- iv. The circumcision programme should consider:
  - o Circumcision at no cost to clients requesting it at both public and private facilities
  - o Inclusion of circumcision as a prescribed minimum benefit in medical aid schemes
  - o Involvement of private practitioners and surgeons in providing circumcision services at significantly reduced fees.

#### **3.1.4.5 Commission a task-group to consider national policy for HIV & Aids & TB impact assessment for industry**

The mining industry is associated with particularly high rates of HIV infection. Expansion of mining operations will continue to drive higher incidences of HIV infection, unless large-scale comprehensive prevention programmes are put in place. The rapid expansion of mining in Limpopo and the Northern Cape are of particular cause for concern, in that these provinces have relatively low prevalence rates. Coalescence of 'hot spots' of infection around mines may cause acceleration of incidence of HIV in these provinces over the next five years until extensive preventive strategies are put in place

##### **ACTION:**

- i. Review and make recommendations regarding the value and feasibility of HIV & Aids & TB impact assessments specific to each existing and prospective mine.
- ii. Formulate tools for impact assessment, including guidelines for infection mitigation strategies and deadlines.

#### **3.1.4.6 Commission a task group to recommend ways of reducing alcohol misuse**

Alcohol use is associated with HIV infection because alcohol stimulates sex drive and diminishes self-control. The misuse of alcohol is recognized as a key determinant of risky sexual behaviour such as having multiple sexual partners and greater experience of condom failure<sup>35, 36</sup>.

##### **ACTION:**

Commission a task group to consider effective ways of reducing the misuse of alcohol in South Africa, making recommendations on issues including the following: Changes in minimum legal purchase age, government monopoly on retail sales, restrictions on hours/days of sale, outlet density restrictions, Increase excise taxes on alcohol and banning/ restricting the marketing of alcohol.

<sup>35</sup> Medical Research Council (2003). First National Adolescent Risk Survey. Cape Town: MRC

<sup>36</sup> Simbayi L, Kalichman S, Jooste S, Mathiti V, Cain D, Cherry C (2004). Alcohol use and related risks of HIV infection among men and women receiving sexually transmitted infection clinic services in Cape Town, South Africa. *Journal of the Study of Alcohol* 65:434-442

### 3.1.5 Re-organize systems of management and finance to improve efficiency and responsiveness

#### 3.1.5.1 Set milestones for prevention and scaling up of programmes

The National Strategic Plan sets targets for most, but not all programmes. In particular, coverage targets for primary behaviour change programmes are not adequately defined: they need to be defined in terms of the proportion of people in each age-category reached by sustained face-to-face interventions.

For greatest effect, primary behaviour change programmes should be differentiated by age (6-11, 12-17, 18-24, >25 years) and structured to address the key drivers of HIV of each age group.<sup>37</sup> Media campaigns help shape attitudes, but sustained personal interaction seems to trigger behaviour change. In this regard, multi-level approaches aimed at couples, families, sexual networks, and communities are required to reinforce normative changes.<sup>38</sup> Another critical success factor is scale: If we don't reach enough young people enough, we are unlikely to have enough impact.<sup>39</sup>

Although media coverage has now reached targets of close to 90% - and should be sustained at those levels – community-level mobilization is still inadequate. At best, the combined efforts of HIV prevention campaigns in South Africa only reach 40% of young people, with even fewer older adults participating in face-to-face interaction.<sup>40, 41</sup> To date, there are only two cost-effectiveness analyses based on empirical impact data of national HIV prevention programmes in South Africa.<sup>42, 43</sup> These studies suggest that interventions to reduce incidence are cost-effective over a wide range of coverage and intensity of interaction. In other words, it makes economic sense to scale up and intensify HIV prevention both through the media and community-level interventions. Doubling the coverage of community-level programmes could significantly increase impact.

#### **ACTION:**

- i. Specific, time-bound objectives and targets should be set for all programmes.
- ii. With respect to behaviour change, these targets should be related to coverage, as opposed to outputs like numbers of events.

#### 3.1.5.2 Ensure adequate resourcing of HIV and TB programmes

Three fundamental problems risk constraining the ability to accelerate implementation of the NSP, namely:

- financial allocations to programs which do not keep up with the demand;
- inefficient allocation of funds; and
- poor capacity to manage the flow of funds.

The first relates to the ability of the HIV & TB budget allocations to match the scale and cost of programme demands, without compromising funding for the rest of the health system. Although early detection, early

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<sup>37</sup> Albarracin D et al (2005). A test of major assumptions about behaviour change: A comprehensive look at the effects of passive and active HIV prevention interventions since the beginning of the epidemic. *Psychological Bulletin* Vol 131 (6): 856-897

<sup>38</sup> Coates T, Richter L, Caceres C (2008). Behavioural strategies to reduce HIV transmission: how to make them work better. *The Lancet* DOI: 10.1016/S0140-6736(08)60886-7

<sup>39</sup> Auerbach J, Hayes R, Kandathil S, Overview of effective and promising interventions to prevent HIV infection. In Ross D, Dick B and Ferguson J (Eds), *Preventing HIV/AIDS in young people: a systematic review of the evidence from developing countries*, 2006, World Health Organization technical report series no. 938,

<sup>40</sup> A E Pettifor, H V Rees, A Steffenson, L Hlongwa-Madikizela, C McPhail and I Kleinschmidt, *HIV and Sexual Behaviour among Young South Africans: A National Survey of 15 – 24 Year Olds*. Johannesburg, Reproductive Health Research Unit, University of the Witwatersrand, 2004

<sup>41</sup> O Shisana, T Rehle, L Simbayi, W Parker, K Zuma, A Bhana, C Connolly, S Joost and V Pillay et al, *South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey*, HSRC Press, Cape Town, 2005

<sup>42</sup> Kahn J, Marseille E, Kramer S (2005). Assessment of the potential economic impact of South Africa's loveLife national HIV prevention program. Analysis commissioned by the loveLife Trust, September 2005

<sup>43</sup> Kincaid DL, Parker W, Johnson S, Schierhout G, Connolly C, Pham V (2008). Aids Communication Programs, HIV prevention, and living with HIV/Aids in South Africa 2006. Paper presented at the 58<sup>th</sup> Annual Conference of the International Communication Association, Montreal, Canada. May 2008

treatment and defaulter follow-up will in time prove cost-effective, it will place an initial cost burden on the health service.

The second relates to inefficient allocation of funds, particularly for primary behaviour change programmes and between TB and HIV programmes at district level.

The dispersion of allocations for behavioural programmes by province (as opposed to age group) is highly inefficient, resulting in unspent and ill-spent funds. Returns for behavioural programmes are likely to be higher if programmes are clearly age-differentiated. Funds already budgeted over the medium-term should be reallocated to properly resource agencies with the capacity and responsiveness to implement national programmes.

At district level, the injection of funding for HIV-related programmes has often left TB control programmes out. Yet there are compelling reasons to integrate many aspects of TB and HIV management within districts, including treatment of co-infection, promotion of adherence and defaulter follow-up.

The third relates to deficiencies in systems and human capacity which prevents timely flow of funds. Often this results in under-spending in some areas, over-spending (and often fruitless spending) in others, and programme disruption. Common problems include slow and/or late disbursement of funds to implementing agencies both within and outside of government; inability to scale up programmes effectively and measure effectiveness of existing funding. For agencies receiving funds from multiple Government departments, audit processes by different Government departments are often duplicative and unnecessarily time-consuming.

#### **ACTION:**

- i. Rapid assessment of current funding versus spending needs, in relation to sustaining existing initiatives as well as accelerating implementation of the NSP and TB control programmes.
- ii. Rapid assessment at national, provincial and district level of major financing flows for HIV & Aids and TB, with a view to coordinate donor and government flows
- iii. Review of financial management capacity within Ministry of Health to manage priority HIV & Aids and TB programmes, delegate effectively and streamline systems of accountability for rapid response
- iv. Centralise management of mandated agencies to improve accountability and payment systems. A central agency contracting unit – preferably in the Presidency - should be established to ensure integrated programme implementation and monitoring and timely payment of non-government agencies.
- v. Consolidate funding for behaviour change and treatment literacy programmes currently transferred to provincial Departments of Health into national agencies focused on programmes for 6-11 yr olds, 12-17 yr olds, 18-24 yr olds and 25yrs and above.
- vi. Key non-government agencies, academic agencies and health sector groupings should be identified and tasked with the implementation of:
  - PMTCT, HIV testing and ART literacy campaign
  - Primary behaviour change programmes (other than life-skills in curriculum); where possible building on interventions with established success.
  - Parents and grandparents' mobilization programme
  - Monitoring of educational drop out
  - Monitoring of prevalence
  - Monitoring of key programme implementation (primary behaviour change programmes, PMTCT, ART, and home-based care programmes)

#### **3.1.5.3 Restructure SANAC to ensure effective oversight**

The functions of SANAC include the following:

Advising government on HIV and AIDS and STI policy and strategy, and related matters;

Providing leadership and creating and strengthening partnerships for an expanded national response to HIV and AIDS in South Africa;

Receiving and disseminating information on sectoral interventions in respect of HIV and AIDS and considering challenges; and  
Overseeing continual monitoring and evaluation of all aspects of the NSP.

SANAC is a national three-tiered multi-sectoral advisory body. Both government and civil society participate and are represented at all tiers. The present form of SANAC is not optimal, for the following reasons:

- It is an advisory body, yet there is an expectation of State accountability to the structure.
- It includes government departments, as well as non-government agencies that receive public funds. In consequence, lines of accountability and responsibility are blurred
- Its monitoring and evaluation function is uncertain.

Options for SANAC and implications:

There are three key functions of co-ordination that are required, namely:

- Joint strategic planning with a wide range of stakeholders
- Inter-departmental government coordination
- Managing implementation and ensuring accountability

The first two are compatible with a joint co-ordinating structure that includes civil society and government. The third is not compatible, in that conflict of interest would arise too easily with respect to commissioning of non-government agencies. Without clear lines of accountability, the authority of SANAC will continue to be unclear. There are three options:

- SANAC could be an advisory body including a wide range of stakeholders – in which case executive functions and accountability should be removed from its responsibility, and it should be seen as representing the perspectives (rather than mandate) of civil society structures
- SANAC could be an executive structure – responsible for co-ordinating the State response and commissioning non-government partners. In this case, it should be a Government structure.
- SANAC could serve as the co-ordinating structure (with advisory powers). A central executive management unit could be established to define mandates and agencies to implement specific programmes. This unit would need to be located centrally – either in Presidency or an adequately powered Health Department, accountable to line management in the Presidency or Health Department. We recommend this third option.

**ACTION:**

- i. Reposition SANAC as a multi-sectoral structure within the Presidency
- ii. Review SANAC powers and responsibilities
- iii. Review SANAC organogram in line with above, and ensure proper financing and staffing

**3.1.5.4 Establish a set of national registers**

In addition to the programme monitoring, a set of registers should be established to facilitate rapid response to new technologies and systemic problems identified.

We do not recommend declaring HIV a notifiable disease. The purpose of notification is to identify cases which require active case management or community prevention through health service intervention. It is also used to monitor the magnitude of the problem when population-based surveys cannot be used. It would not contribute to the response to HIV and may exacerbate stigma.

Specific registers include:

- Priority review and registry of AIDS-related drugs within the Medicines Control Council (already in place)
- Register of current vaccine and biomedical research into HIV & AIDS underway

- Schools experiencing high rates of teenage pregnancy put these in keeping children in schools
- Schools reported for excluding (or otherwise prejudicing) children on the basis of inability to pay put these in keeping children in schools

## 3.2 THE FIRST YEAR

In the **next year**, South Africa must achieve significant new gains by:

- filling the large gaps in existing programmes;
- tackling nodes of high concentration of the epidemic; and
- implementing recommendations of rapid-report task groups.

### 3.2.1 Fill the gaps in existing programmes

#### 3.2.1.1 Achieve 95% coverage of PMTCT

50% of babies born to mothers with HIV are put at unnecessary risk. Opportunities are being missed are key points in the service chain, including:

- About 10% of primary care facilities that do not yet offer PMTCT<sup>44</sup>;
- A third of women attending public antenatal clinics who are not tested for HIV
- Two-fifths of pregnant women eligible for anti-retroviral prophylaxis who do not receive it
- Half of babies born to HIV + mothers who did not receive Nevirapine within 72 hours

These systems inefficiencies should be addressed as a matter of urgency to double the effectiveness of the current PMTCT programme<sup>45</sup>.

In addition, it is important to ensure that the opportunities created by women's attendance in antenatal clinics is used to prevent HIV infection, improve knowledge and understanding of PMTCT and the trade-offs between breast- and formula-milk feeding. There is some evidence that pregnancy and lactation heightens transmissibility of HIV.<sup>46</sup> Condom use during pregnancy is just as important to prevent HIV infection – a critical point for HIV prevention communication.

#### **ACTION:**

- i. Every district should be required to achieve the coverage target of 95% within a year.
- ii. Districts should be supported to systematically assess and address systems deficiencies to improve uptake, in line with national guidelines for PMTCT.
- iii. The recommendations of the rapid-report task group regarding provision of HAART to pregnant mothers should be implemented as soon as they are available.
- iv. Ensure that condom use during pregnancy is actively promoted in antenatal clinics.
- v. Ensure availability of easy-to-use information resources regarding PMTCT

<sup>44</sup> Dept of Health (2008). Policy and guidelines for the implementation of the PMTCT programme

<sup>45</sup> Health Systems Trust (2007). District Health Barometer 2006/7, Durban, 2007

<sup>46</sup> Gray RH et al (2005). Increased risk of incident HIV during pregnancy in Rakai, Uganda: a prospective study. *The Lancet* 2005; 366:1182-1188. DOI:10.1016/S0140-6736(05)67481-8

### **3.2.1.2 Reach enough people with behaviour change programmes**

Probably less than half of young people are reached face-to-face with sustained behaviour change programmes. There is no programme specifically focused on 18-25 year olds.

#### **ACTION:**

- i. Scale up behaviour change interventions to achieve face-to-face coverage higher than 67% in the first year. Primary behaviour change programmes should be:
  - Differentiated by age (6-11, 12-17, 18-24, >25 years)
  - Structured around the key drivers of HIV, which differ in different age groups:
    - 6-11 yr old is primary prevention aimed at basic information and education and shaping norms
    - 12-17 yr old should focus on normative and attitudinal strategies
    - 18-24 yr olds must focus on changing perception of opportunity, ensuring safest sexual practice and reproduction, and 'positive prevention'
    - >25 yr should focus on parenting and 'positive prevention' and married women.
- ii. In the short-term, programme coverage for 6-11 yr olds and 12-17 yr olds may be gauged using programme implementation in schools as proxies. Based on prior experience of scale-up and replicability, coverage of 67% within the first year, 80% coverage in the second year and 90% coverage in the third year are feasible. Many schools still don't have adequate lifeskills programmes in place and the combined community-level coverage by national campaigns such as Soul Buddyz, loveLife and Khomanani is still below 50%.
- iii. Coverage targets for 12-17 yr olds at schools should include: educator-facilitated (lifeskills curriculum) and peer-facilitated programmes. Both are necessary.
- iv. Although the content of the life skills curriculum is generally very good, coverage is hampered by the lack of trained teachers, among other factors. Non-government agencies with requisite capacity should be contracted to assist in up-skilling of teachers across the country.

### **3.2.1.3 Expand access to essential sexual and reproductive health and prevention services**

The high prevalence of STI infection in South Africa is very high.<sup>47</sup> High quality, well-integrated sexual and reproductive health services may contribute to preventing HIV transmission by improving access to dual method contraception, early treatment of STIs and expanding circumcision services.

#### **ACTION:**

- Rapid implementation of youth friendly service programme in public clinics to improve management systems and quality of care of essential sexual and reproductive health. (See three year plan for scale up)
- Increase access to male and female condoms
- Involve SAMA and DENOSA and other health sector bodies in improving STI treatment and awareness in the private sector – with specific focus on cash practices

### **3.2.1.4 Improve the coverage and effectiveness of anti-retroviral treatment**

ART is a remarkably effective intervention in decreasing mortality and morbidity. Once patients are started on ART, retention in care in South Africa is generally high. Prospects for influencing the outcome of ART after its initiation are relatively small as they are largely determined by the CD4 count and clinical state at the point of initiation. On the other hand, there is significant opportunity to reduce disease and death by earlier diagnosis and more rapid initiation of ART. Supported by better retention in care strategies and less toxic anti-retrovirals, these

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<sup>47</sup> Johnson L, Bradshaw D, Dorrington and the South African Comparative Risk Assessment Group (2007). The burden of disease attributable to sexually transmitted infections in South Africa. South African Medical Journal 97:658-662

strategies would significantly improve South African HIV programmes, and have a knock on effect on public health prevention programmes such as TB.

Currently, about one-third to one-half of people living with HIV and Aids who are eligible for highly active antiretroviral treatment (HAART) receive it. Rapid extension of this programme could achieve new gains in terms of reduced morbidity and mortality, maintaining the integrity of families, and possibly reducing the rate of HIV transmission.

A Cape Town study has demonstrated that mortality before commencing ART is exceedingly high, for clinical, systemic and social reasons<sup>48</sup>. Clinical reasons include:

- Late presentation with HIV, often when the patient is ill, or has a low CD4 count.
- Co-existence of TB. Approximately 50% of patients have a prior or current history of TB, at initiation of ART. Current guidelines suggest delaying ART for at least a few weeks after TB treatment is initiated.
- Delay in initiation of ART in severely ill patients. ART is often deferred while opportunistic illness treatment is initiated and completed, again causing needed delays. Illnesses also tend to be more severe at lower CD4 counts.
- Concomitant therapy, especially TB and cryptococcal meningitis (the two most common serious opportunistic infections in South Africa) carries with it significant drug interactions with several anti-retrovirals, often making the treatment of these illnesses complex, and often leading clinicians to defer ART initiation.
- Compromised adherence counselling as a result of severe illness. Adherence counselling is essential to ensure the long-term taking of medication. However, patients with compromised mental capacity, often subtle due to significant loss of weight or fever, may not be able to experience counselling.

Systemic reasons include:

- Expedited discharge or deferred admission to hospital, due to a lack of beds. This often means patients are not exposed to staging, referral or ART initiation sites.
- Poor referral networks to staging and ART initiation sites from key areas, such as TB treatment and antenatal sites.
- Poor access to HIV testing and CD4 staging.
- Difficulty accessing ART sites. In some provinces, this is due to large distances from ART sites; in others, waiting lists, long initiation times, and perceived poor clinical care, delay or stop timeous initiation.
- Low levels of opportunistic prophylaxis pre-ART, especially of TB.

Social factors include the high levels of stigma, denial and ambivalence within the community concerning the perceived benefits of ART.

Childhood HIV is almost completely preventable through adequate anti-retroviral treatment of mothers. All the factors above apply to children, as well as the fact that they often are raised in households with sick or absent caregivers, making them very vulnerable to the factors listed above.

Studies conducted in both developed and developing world settings suggest a high M&M immediately after initiation of ART<sup>49, 50</sup>. Several of these studies suggest a normal or near-normal life expectancy after several years of successful ART, making addressing this mortality important. M&M after ART initiation is driven by several factors:

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<sup>48</sup> Walensky RP, Wood R, Weinstein MC, Martinson NA, Losina E, Fofana MO, Goldie SJ, Divi N, Yazdanpanah Y, Wang B, Paltiel AD, Freedberg KA; CEPAC-International Investigators. Scaling up antiretroviral therapy in South Africa: the impact of speed on survival. *J Infect Dis*. 2008 May 1;197(9):1324-32

<sup>49</sup> Brinkhof MW, Dabis F, Myer L, Bangsberg DR, Boulle A, Nash D, Schechter M, Laurent C, Keiser O, May M, Sprinz E, Egger M, Anglaret X; ART-LINC, IeDEA. Early loss of HIV-infected patients on potent antiretroviral therapy programmes in lower-income countries. *Bull World Health Organ*. 2008 Jul;86(7):559-67.

<sup>50</sup> Antiretroviral Therapy Cohort Collaboration. Life expectancy of individuals on combination antiretroviral therapy in high-income countries: a collaborative analysis of 14 cohort studies. *Lancet*. 2008 Jul 26;372(9635):293-9.

- Opportunistic infections that occur if ART is initiated late as effective reconstitution may take months or even years, and is less complete if the CD4 count is very low at initiation
- Immune reconstitution syndromes (IRIS). This occurs in 10-20% of cases, and may require hospitalization, as the immune system improves, causes inflammation, and leads to a paradoxical worsening of symptoms. IRIS is more common in patients with very low CD4 counts.
- Other chronic illnesses, such as kidney and liver disease, appears to be far more common in HIV-positive people, especially if their CD4 count falls low or if they have unsuppressed virus.
- Drug interactions, as discussed above, although this has been less of an issue than predicted.
- Antiretroviral toxicity, largely driven by d4T (stavudine), in the state sector.
- ART interruption, due either to perceived health, or, more commonly, due to a breakdown of support or referral systems when patients move job or residence.

All of the above are minimized with earlier diagnosis and better health referral systems. Initiating ART early means better reconstitution of the immune system, less illness and IRIS, and more time to explore adherence issues.

Identifying HIV early on, ensuring early opportunistic infection prophylaxis and adequate ART adherence counselling when the CD4 count is preserved, and initiating ART while they are healthy, will ensure that morbidity and mortality is kept to a minimum. Currently, most people present with CD4 counts of 80 – 150. To reduce morbidity and mortality, two strategies are essential:

- Expanded HIV testing in healthy populations.
- Meaningful retention-in-care programmes of healthy HIV-infected people, with rapid and timely initiation of opportunistic illness prevention, adequate counselling and expedited safer ART.

The SAPIT (Starting anti-retrovirals at three points in tuberculosis) trial conducted by CAPRISA has recently reported that mortality among TB-HIV co-infected patients can be reduced by 55% if anti-retroviral and TB therapy are provided simultaneously.<sup>51</sup>

**ACTION:** Prioritise the scale-up of anti-retroviral treatment programme.

Put in place a system of monitoring and management of all HIV positive people presenting to health services – including:

- i. Implement the recommendations of the rapid-report task team on the CD4 threshold for initiating ART.
- ii. Initiate TB and ART simultaneously in TB-HIV co-infection requiring ART.
- iii. Screen all HIV+ve people presenting to health service for TB (AFB every six months)
- iv. INH prophylaxis for six months for all HIV positive people with reactive skin tests (>4 mm) in absence of TB disease
- v. Cotrimoxazole prophylaxis when CD4 count drops <250

### **3.2.1.5 Establish a National Reference Laboratory for TB**

Currently, there is marked variation in the systems and quality of TB testing and surveillance across districts.

#### **ACTION:**

The recommendation of the National Strategic Plan to establish a National Reference Laboratory should be implemented. Its role is to maintain high proficiency of all the TB laboratory tests, train TB laboratory personnel, and implement quality assurance for smear microscopy and conduct research and surveillance. An urgent task is to standardise the system of TB recording and reporting across all districts.

<sup>51</sup> CAPRISA Press release, 19 September 2008. Important new findings on treatment of TB-HIV co-infection. [www.caprisa.org/joomla/index.php/memberaccess/95](http://www.caprisa.org/joomla/index.php/memberaccess/95) (Accessed on 24 September 2008)

### **3.2.1.6 Better integrate HIV and TB control programmes at district level**

The extent of donor funding and focus on HIV has often been to the detriment of TB control, as health workers have left to join higher paying donor funding initiatives. This, and other factors within the health system, has resulted in a serious lack of TB control capacity at district level.

The priorities for TB control include:

- Prevention of spread of TB related to access to health care – including spread to passengers in public transport and in health facilities
- Speeding up of results from screening (Many laboratories only collect AFBs twice a week)
- More efficient defaulter tracing

#### **ACTION:**

- i. Extend and improve the DOT system so that DOT providers support both TB and ART adherence, and receive medications on behalf of TB-infected clients from all health facilities
- ii. Limit attendance by TB-infected clients to visits for clinical review
- iii. Ensure that defaulter teams are active in all primary health facility catchment areas – and support both TB and ART adherence
- iv. Extend frequency of collection of AFB specimens to daily (unless not warranted by number of specimens)

### **3.2.1.7 Improve the efficiency of care & support**

At least one in six (15.9%) South Africans between 2 and 18 years of age have lost a parent (5.3% maternal; 12.4% paternal orphans). These estimates translate into at least 400,000 double orphans, over 1.5 million maternal orphans<sup>52</sup> and nearly two million children without a father. Of these, two thirds (63%) are aged 15-18 years and a third 2-14 years of age. Many of these children are being looked after by grandmothers. Spatial patterns of orphan hood are consistent with the distribution of AIDS-related mortality.<sup>53</sup> Older orphans are particularly vulnerable to sexual abuse, perpetuating the cycle of HIV infection, particularly in households without adults. This situation is worsened by high rates of school dropout, especially among girls, and difficulties in accessing social grants.<sup>54</sup>

Greater mobilization of grandparents presents significant new opportunity to keep young people in school, access child and foster care grants, reduce sexual abuse and improve household food security. However, this mobilization will be futile unless it is fully supported by schools and local offices of home affairs and social development.

A database of over 5,000 orphans and vulnerable children supported by grandmothers across South Africa shows that close to 30% of children eligible for child care grants do not receive them, while 25% have dropped out of school.<sup>55</sup>

Major bottlenecks include:

- Absence of birth certificates and reluctance of officials to accept substitute affidavits
- Insistence by officials on the whereabouts and income of fathers
- Delays in processing disability and child care grants
- School pressure for school fees and school uniforms

<sup>52</sup> Dorrington R, Johnson L, Bradshaw D and Daniel. The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators for 2006. Cape Town: Centre for Actuarial Research, Medical Research Council and Actuarial Society of SA.

<sup>53</sup> Shisana O. et al (2005). Ibid

<sup>54</sup> Steinberg M et al (2002). Hitting home: How households cope with the impact of the HIV/AIDS epidemic. A survey of households affected by HIV/AIDS in South Africa. Health Systems Trust

<sup>55</sup> loveLife goGogetter programme baseline analysis September 2008 (preliminary analysis)

## **ACTION:**

### i. Social security grants

- The role of the disability grant for people living with AIDS and TB should be clearly communicated – namely to tide them over the worst of their illness.
- The CD4 threshold access to disability grant should be increased in line with the recommendations of the rapid-report task team; and/or objective evidence of AIDS-related illness.
- National Treasury and the Social Security Agency should review the cost and feasibility of enabling individuals to retain the grant once they recover in exchange for work/ community service.

### ii. Social compact with NGOs:

In addition to existing contracts for home-based care and support, accredited local NGOs should be contracted to provide continuing support for people who are no longer entitled to disability grants, including making provision for:

- Linkage to EPWP or continued grant provision in exchange for work
- Food security – through direct food provision and encouraging household food production

### iii. Grandparent mobilization

A national programme to enlist grandparents' (and other caregivers') assistance should be initiated:

This programme should equip grandparents to:

- Communicate with their grandchildren and other young people about HIV/Aids, relationships and sex
- Ensure that children do not drop out of school
- Ensure that all children under 14 yrs have access to the child care grant, and all people living with AIDS have access to a disability grant.
- Prevent sexual predation of children in child-headed households by older men
- Strengthen household food security through household-level production, access to social support and improved efficiency of use of money for food.

A national agency should be commissioned to provide technical support and oversight to provincial agencies.

### iv. Prevention of educational drop out

- An independent group should be contracted to monitor reasons for school drop out across provinces and to identify and report schools which exclude or otherwise prejudice learners who are unable to pay for school fees or uniforms.
- A register of offending schools should be maintained.

### v. Regular dissemination of information

The SA Social Security Agency should publish bi-annual statistics on:

- Number of people accessing disability grants
- Number of people no longer eligible because they have recovered.
- Number of people no longer eligible, because they have died

The provincial Departments of Social Development should publish bi-annual data on:

- Number and distribution of NGOs contracted to provide home-based care & support
- Number of households reached through home-based care & support.

### 3.2.2 Focus on critical nodes of high incidence

The generalised nature of the epidemic requires large-scale intervention with general levels of coverage exceeding 60-70%. The nodes of high incidence described below are critical to the success of HIV prevention. They represent some of the key priorities, but are not exhaustive. In some communities, the prevalence of HIV may be particularly high among widows as a result of customary practices of widow inheritance. In older married women, the prevalence of HIV is high relative to unmarried women. These examples point to the need for community-specific contextualization of behaviour change programmes.

#### 3.2.2.1 Tackle the spike of infection in 17-21 year old women

At the current rate of infection, the probability of the present cohort of 15-year-old South Africans dying before the age of 60 years (45q15) is approximately 51% for women and 62% for men.<sup>56</sup> Yet half the lifetime probability of HIV infection is crammed into just five years after leaving school. If the incidence of HIV among 18-21 year olds could be substantially reduced - and sustained at lower levels – the epidemic would rapidly contract.

Among women, declines in condom use seem to be related to school leaving. In the main, this sharp decline cannot be explained by a desire to have a baby, changes in condom self-efficacy, duration of relationship nor beliefs about marriage.<sup>57</sup> Changes in condom use seem to be linked to the new set of circumstances that face young women when they leave school, characterized by severely constrained choices and a sense of social exclusion. In this environment, they comply with the day-to-day pressures and expectations that provide short term security and protection, yet put them at high risk for HIV infection. At an individual level, the key trigger is a sense of very limited personal opportunity – social, educational and economic. The fall-off in condom use among older men may reflect the tail-end of an older cohort who are less likely to use condoms. Or, it could imply lower incentives to use condoms among older men, who had formally protected themselves.

These findings point to the need for HIV prevention strategies that focus on creating real incentives for behaviour change, rather than simply messaging about high risk sexual behaviour. Specifically, strategies should seek to change perceptions of day-to-day opportunity. This involves building personal initiative, strengthening the ability to negotiate daily pressures and social expectations, and creating new links to opportunity for personal growth and development.

The structural drivers of vulnerability must be addressed through strategies for:

- Economic empowerment for women.
- Completion of secondary education to provide protection from HIV
- Prevention, enforcement of action and monitoring of action against gender-based violence

These new generation HIV prevention strategies should be supported by communication promoting:

- Safer sexual behaviour
- HIV testing
- Importance of condom use in pregnancy
- Regular clinic attendance and knowledge of PMTCT (see Annexure A)

**ACTION:** Commission an agency to develop a programme focused specifically on 18-25 year olds, specifically recognizing and developing social and economic incentives for safer sexual behaviour.

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<sup>56</sup> R E Dorrington, D Bradshaw, L Johnson, D Budlender, *The Demographic Impact of HIV AND AIDS in South Africa. National Indicators for 2004*. Centre for Actuarial Research, South African Medical Research Council and Actuarial Society of South Africa, Cape Town, 2004.

<sup>57</sup> Harrison D, Richter L and Desmond C (2007). Changing Perceptions of Opportunities: Hope for Young People in High HIV- Risk Environments. Paper prepared for presentation at the 3<sup>rd</sup> Global Conference on Hope: Probing the Boundaries, Mansfield College, Oxford, 17-19<sup>th</sup> September 2007

### **3.2.2.2 Concentrate more effort in the thirty largest informal settlements**

The prevalence of people (>2 yrs) living in informal settlements is about 18%.<sup>58</sup> Intensive behaviour change intervention in 30 of the largest informal settlements in South Africa could give new impetus to HIV prevention and give particularly high returns, as:

- One in six (16.7%) 15-24 yr old South Africans live in informal settlements; in provinces such as Gauteng, the proportion is much higher (>30%)<sup>59</sup>
- HIV infection among 15-24 yr olds in informal settlements is twice as high as in other geotypes<sup>60</sup>
- High population densities in informal settlements permit diminishing marginal costs of implementation over a high range of coverage (probably > 90%).

#### **ACTION:**

- Assess areas of highest prevalence (using national survey data)
- Task behaviour change programmes to concentrate effort in the thirty largest informal settlements to achieve coverage targets exceeding 70%.

### **3.2.2.3 Identify and address problems in schools for high risk in teenage pregnancy**

Schools are generally protective against HIV, but there are a number of schools characterized by high incidence of teen pregnancy. In these schools, HIV transmission is likely to be high as well.

Typically, school-going protects against teen pregnancy and HIV infection, with sexually active schoolgirls twice as likely to use condoms as their out-of-school age counterparts. But some schools are danger zones with up to 70 teen pregnancies in a year. No national campaign will succeed without eliminating these hot spots associated with gangsterism, endemic violence, poor school discipline and substance abuse.

#### **ACTION:**

- i. Focus on schools reporting 5 pregnancies per year or more.
- ii. Task the agencies implementing age-defined programmes to implement an accelerated programme in these schools in particular.
- iii. Ensure that provincial Departments of Education commit to prioritizing resolution of structural and systemic problems which may identified through the programme design process.

### **3.2.2.4 Intensify HIV prevention among sex workers**

Sex work represents a concentration of high-frequency partner change, often without condom use. For these reasons, HIV prevention focused on sex workers should continue to be one of the priorities – despite the generalized nature of South Africa’s epidemic.

A study in Hlabisa in KwaZulu-Natal found that among sex workers:

- 77% had at least one STI and 33% had multiple infection (compared to 52% and 18% respectively among pregnant women)
- the prevalence of HIV infection was 50% (compared to 24% of women attending family planning clinics sex workers reported an average of 20 clients each week and only 10% reported using a condom in more than half of all episodes of intercourse)

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<sup>58</sup> Shisana et al, 2005

<sup>59</sup> Statistics South Africa (2005). Stages in the life cycle of South Africans, Report No. 03-02-46 (2001)

<sup>60</sup> Pettifor et al, op. cit., p. 32

- symptoms and signs associated with STIs (lower abdominal pain, burning urine, vaginal discharge, genital itch, genital ulceration) were frequently not recognised or not acted upon
- infection was frequently asymptomatic or unrecognised: 60% of infected women in the family planning clinic were asymptomatic and 14% of sex workers had unrecognised genital ulcers.<sup>61</sup>

Similarly, a study in Hillbrow found an HIV prevalence of 45% in 2000 (compared with 29% among women attending antenatal clinics in Gauteng in that same year).<sup>62</sup>

**ACTION:** Use best-practices developed in sex-worker support programmes such as Esselen Clinic (Hillbrow) and others to extend sex worker HIV prevention programmes.

### 3.3 THE NEXT THREE YEARS

In the **next three years**, South Africa must reduce the incidence of HIV and TB, ensure full access to anti-retroviral treatment and significantly expand care & support to households directly affected by Aids by improving health and social system. This will be achieved by building on the strategies described above.

Implementation of these initiatives should commence immediately, recognizing that full implementation may only be accomplished in three years.

#### 3.3.1 Implement a national youth friendly service programme in every clinic

Youth friendly services increase utilization by young people, providing opportunity for testing, counselling and early treatment of STIs. In addition, the quality improvement programme helps improve general management systems and facilitates the implementation of treatment programmes<sup>63</sup>. The National Adolescent Friendly Clinic Initiative of loveLife and the Reproductive Health Research Unit, now integrated into the youth friendly clinic initiative of the Department of Health, has developed all resources needed for implementation.

#### **ACTION:**

- Implement a national and provincial training programme within six months. Implement the programme in 1,000 clinics within the first year; 3,000 within two years and 4,500 within three years.
- Make use of existing expertise and materials (National Adolescent Friendly Clinic Initiative in partnership with Dept of Health).
- Place peer motivators (on 2 year tenure) in every public clinic as an innovative and constantly renewed community health worker programme
- Youth friendly outreach programme to schools. In time, this could be linked to administration of the HPV vaccine if approved as part of the immunization schedule in the public sector.

#### 3.3.2 Contract an agency for a national nutrition programme

Improving nutrition is a critical part of the response to HIV & Aids, including:

- household security and reducing sexual vulnerability of children and young people
- adherence to TB and ARV medication.

<sup>61</sup> Wilkinson D, Ramjee G, Sturm A, Abdool-Karim S. Reducing South Africa's hidden epidemic of sexually transmitted infections. Medical Research Council. [www.mrc.ac.za/genital/1polbrief1997.htm](http://www.mrc.ac.za/genital/1polbrief1997.htm) (accessed 25 September 2008)

<sup>62</sup> Rees H, Beksinska M, Dickson-Tetteh K, Ballard R, Htun Y (2000) Commercial sex workers in Johannesburg: risk behaviour and HIV status. *South African Journal of Science*, 96, 283-284.

<sup>63</sup> Ross, D, Dick B, Ferguson B (2006). Preventing HIV/Aids in young people. A systematic review of evidence from developing countries. Geneva: UNAIDS and WHO

A national nutrition programme should be re-established, focused on local food production.

Its purpose will be to:

- Encourage local and household food production
- Ensure micronutrient supplementation of medications
- Increase access to food for people living with HIV & Aids
- Encourage their participation in food production (in exchange for sustaining a disability grant equivalent)
- Increase the number of viable projects that could re-invigorate the Primary School Nutrition Scheme.

Co-ordination of this programme should be tasked to a specific agency.

**ACTION:**

- i. Implement recommendations of task teams reviewing a) nutrition support for people on ART and no longer eligible for disability grants; and b) nutrition support for orphans and vulnerable children
- ii. Establish or contract an existing agency to implement a national nutrition programme aimed at household food security; local food production and development of small enterprises
- iii. Review and improve efficiency of Primary School Nutrition Programme

**3.3.3 Promotion of research**

i.

In South Africa's Comprehensive Plan for HIV and AIDS published in 2003, a commitment was made for R50 million Rands to be dedicated to HIV research. To date these funds have not been forthcoming. Funding for the South African AIDS Vaccine Initiative, the largest basic science HIV research commitment made with South African support, was recently massively reduced rendering the programme almost ineffective. While HIV and TB research is now the largest area of medical research in South Africa, funding rests almost entirely on grants from the United States and Europe. There are more than twenty large HIV and TB research institutions across the country, but much of their work relies on research funds sourced from outside South Africa. Research studies and research outputs are largely developed by and attributed to developed country scientists.

In many cases South African research partners are merely data collectors who receive token acknowledgment for their contribution from their Northern colleagues. This imbalance in global research partnerships has meant that we have failed to develop significant numbers of independent scientists capable of driving South Africa's scientific and research agenda themselves. The sad fact that there are more African researchers working in the United States than in Africa remains an unremedied global scandal. SANAC and the Research sector need to identify research priorities and local sources of funding for this work, and a strategy to support local investigator driven research in the field of HIV and TB. More research is required in the fields of new prevention technologies and interventions, new and better approaches to treatment, and new diagnostics and laboratory procedures. A specific operations research agenda should be identified to improve the delivery, quality and monitoring of services relating to HIV and TB.

A second priority area is the need to strengthen the monitoring and evaluation of the National Strategic Plan for HIV, AIDS and STIs. Integral to the Plan are a comprehensive set of objective indicators designed to allow each sector to report on its performance. To do this the plan describes the establishment of an independent monitoring and evaluation unit, responsible for reporting to SANAC on the performance of all sector activities as reflected by agreed indicators. To date this independent monitoring centre has not been established and this needs to be urgently corrected.

The third area requiring attention is the closer alignment of research with changes in policy and practice. At present there is no clear process to ensure that new research evidence is rapidly reviewed and integrated into guidelines, and the SANAC structures that should be doing this are frequently frustrated by the slow pace of

government committees and departments. In the case of treatment and prevention interventions, there are examples where this unnecessary delay has meant the difference between life and death. New arrangements must be made that allow for planning ahead of the release of research findings, and which respond rapidly to new evidence.

The last area requiring more research is the need to improve the delivery and impact of social development grants and nutritional support to those infected and affected by HIV and TB.

#### Action

- i. The SANAC Research Sector should make detailed recommendations on research priorities for the country. The Treasury should set aside 50 million Rand each year, as outlined in the Comprehensive Plan for HIV and AIDS, to support this research agenda. Research should be commissioned by the SANAC secretariat or other appropriate entity based on national priorities, or on a non commissioned basis to encourage local innovation and local investigator driven research. Annual national workshops to identify TB and HIV research priorities should be coordinated by a relevant agency under the auspices of SANAC.
- ii. Prioritisation should be given to strengthening South Africa's research agenda in the field of HIV prevention technologies including microbicides, Pre exposure prophylaxis, Vaccines and other biomedical technologies. Better approaches to HIV and TB treatment should be identified incorporating both behavioural, clinical and operations research. Clinical trials to develop new TB drugs are a priority. Evaluation of new rapid and lab based diagnostic tools which could assist in rapid diagnosis of HIV and TB in the clinical setting should be prioritised. Pilot models to integrate HIV and TB services including the involvement of the private sector should be evaluated. A social science research agenda should be developed to examine the current nutritional support and grants system with a view to improving their delivery and impact.
- iii. The Monitoring and Evaluation department outlined in the NSP should be urgently appointed. This department should be part of the SANAC secretariat and not part of the DoH's Chief Directorate as research, monitoring and evaluation, as the mandate for the monitoring of the NSP is across sectors and not limited to the DoH. Economic modelling for new interventions should be part of the mandate of this new monitoring and evaluation department.

#### Priorities for surveillance:

- a. HIV and TB prevalence surveys should continue and be expanded as required, and results be interpreted by expert committees drawn from within government and the academic sector.
- b. TB and ARV drug resistance surveys should be ongoing and the results interpreted and responded to by the appropriate expert treatment guideline committee.
- iv. Under the auspices of SANAC an annual national research dissemination conference aimed at informing new research priorities and policy opportunities should be introduced.

## **4. REALISTIC TARGETS AND CHALLENGES WITHIN THE NEXT THREE YEARS**

The National Strategic Plan 2007 – 2011 set a target of a 50% reduction of the incidence of HIV by 2011.

Part of this reduction will inevitably reflect the natural progression of a mature epidemic with high mortality from 25 years of age. According to the Actuarial Society of Southern Africa, the incidence among women aged 25-34 years and men aged 35+ will decline significantly from 2008 to 2011<sup>64</sup>. Among men and women aged 15-24 years of age, and men aged 25-34 years of age, the incidence will remain high unless behavioural intervention has a significant impact.

On the other hand, the expansion of the anti-retroviral treatment programme will reduce mortality among 25-34 years of age. There is still debate as to the sexually transmitted infectiousness of people on ARVs.<sup>65</sup> Assuming a significant reduction in HIV transmission among people on anti-retrovirals, the overall incidence may be unaffected or even decline as a consequence of ART. On the other hand, significant behavioural disinhibition among risk-taking individuals could result in an increase in incidence over time.

These permutations in outcome mean that changes in prevalence must be interpreted with great care. As the reliability of incidence testing improves, it will become a key measure of progress. Changes in incidence by age-group will be particularly important, indicating areas of progress and intractability. In this regard, the tentative evidence that HIV rates among teenagers are declining should be carefully monitored.

Antenatal measures of HIV are relatively inelastic to population trends as pregnant women have, by definition, had unprotected sex. For this reason, it will be important to increase the frequency of population-based surveys for age groups associated with the steepest trajectories of infection (15-29 year olds).

The strong associations between socio-economic variables and HIV infection among 18-25 year olds suggest that the incidence of HIV in this age group will be particularly resistant to intervention. The effectiveness of health services will play a critical role in reducing rates of infection in this age group, especially among women.

Nevertheless, we must recognize that the incidence of HIV infection among 18-25 year old men and women will remain high unless specific interventions are introduced to tackle the impacts of unemployment and aimlessness in this age category. Given that new infections among 15-24 year olds account for nearly half the total incidence, the target of 50% reduction in overall incidence by 2011 is unlikely in the absence of massively accelerated youth empowerment initiatives over the next three years.

Mother-to-child transmission currently contributes 11% to total incidence – and 95% coverage with effective (dual therapy + HAART for pregnant mothers) prophylaxis should reduce its contribution to less than 2%.

The goal of a 50% reduction in incidence is ambitious, but still possible. The odds of succeeding are just about even, provided that the strategies for accelerating the National Strategic Plan are put in place immediately. Failure to achieve coverage targets and to improve the efficiency of interventions will tip the odds against our succeeding. The first 100 days must start now.

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<sup>64</sup> Dorrington R, Johnson L, Bradshaw D and Daniel T (2007). The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators for 2006. Cape Town: Centre for Actuarial Research, Medical Research Council and Actuarial Society of SA.

<sup>65</sup> British Columbia Centre for Excellence in HIV/AIDS Canada (2008). Summary of the Geneva's Closed Hearing on HIV Transmission Under ART. [www.kaisernetwork.org/health\\_cast/hcast\\_index.cfm](http://www.kaisernetwork.org/health_cast/hcast_index.cfm) (accessed 25 September 2008)

