

HEALTH AND HIV/AIDS FINANCING IN SOUTH AFRICA

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The context :

➤ **Abolition of apartheid and election of the government of National Unity in 1994 with adoption of the Reconstruction and Development Plan.**

-The most important reforms are those of social sectors, namely health: render health care unified and accessible to all South Africans

- District health system and free primary health care

➤ **Mid' 90s: HIV/AIDS reach epidemic proportion**

-5.300.000 people were living with HIV/AIDS in the country at the end of 2003

-Almost 40% of all deaths in the country in 2002 were attributable to the virus



The context (cont'd) :

End 2003: Adoption of a national roll-out plan to provide free ARV to all people in need.

837,000 people in need, but only 104,600 were receiving treatment by March 2005.

South Africa is still dealing with infectious diseases, infantile mortality and malnutrition. Thus, despite the gravity of HIV/AIDS, it is only one of the many public health issues in South Africa

The questions we are trying to ask in this paper is:

-How does HIV/AIDS financing fit into the overall health policy in South Africa?

- Are the resources allocated to the fight against HIV/AIDS in the country used efficiently?



Overview

- South African health system
- HIV/AIDS financing
- Efficiency of HIV/AIDS financing



South African Health System

➤ Post-apartheid health reforms

-Free primary health care: cost-effective means of improving population's health, care is also offered free to pregnant women, nursing mothers and children under 6.

-District health system: services in each district are based on local conditions and health problems. Financed through conditional grants and equitable shares.



South African Health System

➤ Health financing

-Public sector is 40% of total expenditure on health and accounts for 80% of population. Financed through tax collection and user fees (Beveridge health system).

-In 2000, private sector was spending € 91 per patient, opposed to € 6,75 in the public sector. Financed through prepaid plans (Bismarck health system) and out-of-pocket expenditure.



Table 1: Health and economic indicators in South Africa and comparable countries (2002).

(GDP ≈ \$ 10000)

Country	Life Expectancy (years)	GDP (\$PPP)	Per Capita Health Expenditure	GDP(%) on Health	Physicians for 100000 people	TUBERCULOSIS new Cases (per 100 000)	HIV/AIDS Prevalence	Infant Mortality Rate	HDI rank
South Africa	48.4	10346	689	8.7	69	341	21.5	66	120
Costa Rica	78.2	9606	743	9.3	173	18	0.6	10	47
Seychelles	72.7	10232	557	5.2	132	65	na	15	51
Chile	77.9	10274	642	5.8	109	17	0.3	9	37
Croatia	75	11080	630	7.3	237	68	<0.1	7	45
Mauritius	72.2	11287	317	2.9	85	136	na	18	65
(IMR ≈ 66 years)									
Guyana	63.1	4230	227	5.6	48	178	2.5	69	107
Bolivia	64	1850	179	7.2	267	237	0.1	66	113
Mongolia	67.7	1510	128	6.6	269	177	<0.1	68	114
Namibia	48.3	6180	331	6.7	30	477	21.3	65	125
Bangladesh	62.8	1770	54	3.1	23	490	na	69	139

Data from Human Development Report 20003, UNDP.

Table 2: Indicators of health expenditure in South Africa (1998- 2002)

I - SELECTED INDICATORS OF EXPENDITURE ON HEALTH	1998	1999	2000	2001	2002
Total expenditure on health as % of Gross domestic product	8,4	8,8	8,4	8,7	8,7
General government expenditure on health as % of Total expenditure on health	44,8	41,1	42,4	41,2	40,6
Private sector expenditure on health as % of Total expenditure on health	55,2	58,9	57,6	58,8	59,4
General government expenditure on health as % of General government expenditure	11,5	10,8	11,0	11,0	10,7
Social Security funds as % of General government expenditure on health	4,0	3,5	3,3	3,1	3,8
Prepaid and risk-pooling plans as % of Private sector expenditure on health	74,7	77,4	75,6	76,7	77,7
Private households' out-of-pocket payment as % of Private sector expenditure on health	23,6	21,0	22,8	21,8	20,9
External resources on health as % of Total expenditure on health	0,2	0,1	0,4	0,4	0,3
Total expenditure on health per capita at exchange rate	261	266	244	224	206
Total expenditure on health per capita at international dollar rate	585	628	625	673	689
General government expenditure on health per capita at exchange rate	117	109	103	92	84
General government expenditure on health per capita at international dollar rate	262	258	265	277	280

II - MACRO VARIABLES					
Gross domestic product (Million National Currency Units)	738926	800769	888454	983450	1120895
Exchange rate (National Currency Units per US\$)	5,53	6,11	6,94	8,61	10,54
International dollar rate (National Currency Units per international \$)	2,47	2,58	2,71	2,87	3,16
Total population (in thousands)	42956	43513	44000	44416	44759

Source: World Health Report 2004, annex by country.

➤ National sources of financing :

- Conditional grants (10%): ring-fenced funds allocated to health, education and social development sectors. Allow to ensure that national priorities will be sufficiently resourced in provincial budgets.

- Equitable shares (86.5%): mean found by the government to correct distortion due to differences provincial tax revenues. Allow discretionary spending by the provinces.



Table 3: Provincial differences in population, poverty and HIV/AIDS prevalence.

1999	Population	Poverty rate	HIV %	HDI	HPI	Share of total poverty
KwaZulu Natal	8,924,643	63	36.2	0.602	21.12	21
Eastern Cape	6,658,670	74.3	20.2	0.596	23.34	22
Limpopo	5,337,267	77.9	13.2	0.531	28.34	18
Gauteng	7,807,273	32.3	29.4	0.712	10.45	10
North West	3,562,280	60.9	22.9	0.63	18.37	9
Mpumalanga	3,003,327	63.9	29.7	0.628	21.71	8
Free State	2,714,654	54.1	27.9	0.65	15.01	6
Western Cape	4,170,971	29.1	8.7	0.702	9.68	4
Northern Cape	875,222	57.5	11.2	0.632	17.95	2

External sources of financing

➤ **The Global Fund : 4 projects funded in South Africa**

- LoveLife initiative (2003): \$12,000,000. Promotion of healthier sexual practices among adolescents
- Institute for Health and Development Communication (2003): \$2,354,000. Production of the new series of Soul City (multimedia series for adults) and Soul Buddyz (multimedia series for children)
- "Enhancing the Care of HIV/AIDS infected and affected patients in resource-constrained settings in KwaZulu-Natal" (2003): \$12,873,456
- "Strengthening and expanding the Western Cape TB and HIV/AIDS prevention, treatment and care" (2004): \$8,282,075

➤ **NGOs and international aid**



- PEPFAR, G7, OECD, DFID, EU, USAID, foundations, business,

Efficiency of HIV/AIDS financing

➤ **Crowding-out effect on health sector: public health issues**

- Decomposing resources allocation
- Burden on health facilities: the case of Kwa-Zulu Natal provincial health services
- Millennium Development Goals and major public health issues

➤ **Justification for HIV/AIDS financing**

- Evolution of health indicators
- Cost-effectiveness
- Absorption capacity



Table 6: Trends in expenditure by functional area (R million, real 2003 prices)


	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06 (MTEF)	Change	Change annual (%)
Hospitals	21 958	22 857	22 861	21 572	22 606	23 217	23 580	1 622	1.2
PHC	4 906	4 961	5 295	5 701	5 955	6 183	6 346	1 440	4.4
HIV/AIDS	83	74	104	750	680	813	880	797	48.2
Nutrition	617	619	673	760	834	841	833	215	5.1
EMS[1]	911	955	942	1 362	1 471	1 485	1 507	595	8.7
Admin	1 244	1 187	1 377	1 427	1 593	1 540	1 574	329	4
Training	654	621	757	899	920	969	995	341	7.2
	32 212	32 730	34 589	35 117	36 881	38 016	38 702	6 491	3.1

Table 12: Health and HIV/AIDS expenditure as shares of budget and GDP.

Health and HIV/AIDS shares (%)	2000/1	2001/2	2002/3	2003/4	2004/5
Health as % of total budget	11.56%	11.60%	11.66%	11.35%	11.33%
Health as % of GDP	2.96%	3.03%	3.04%	3.07%	3.06%
HIV/AIDS as % of total budget	0.09%	0.13%	0.29%	0.39%	0.49%
HIV/AIDS as % of total health budget	0.67%	0.87%	1.88%	2.94%	3.86%



Table 7: Average cost of drugs, laboratory investigations and radiology investigations (outpatients)

	PHC Clinics (n=434)	District Hospitals (n=575)
Drug costs		
Non-HIV	p=0.09 R8.62	p=0.02 R25.74
HIV (all)	R9.35	R13.74
HIV (Stage 1 & 2)	R12.30	R10.15
HIV (Stage 3 & 4)	Small sample size	R17.06
Laboratory costs		
Non-HIV	Small sample size	p=0.00 R9.35
HIV (all)		R45.90
HIV (Stage 1 & 2)	Small sample size	R39.99
HIV (Stage 3 & 4)		R66.96
Radiology costs		
Non-HIV	R0.00	p=0.18 R24.98
HIV (all)	R0.00	R34.94
HIV (Stage 1 & 2)	R0.00	R35.36
HIV (Stage 3 & 4)	R0.00	R49.50
Consultation time (actual)		
Non-HIV	p=0.03 6.6min	p<0.01 5.0min
HIV (all)	7.5min	6.7min
HIV (Stage 1 & 2)	7.2min	5.9min
HIV (Stage 3 & 4)	Small sample size	7.4min



Source: Veenstra.2005

Table 8: Average cost of drugs, laboratory investigations and radiology investigations (inpatients)

	District Hospital (n=38)	Regional Hospital: Ugu (n=87)	Regional Hospital: Dbn (n=155)
Average length of stay			
Non-HIV	p=0.13 7.4 days	p=0.12 7.7 days	p=0.78 17.2days
HIV (all)	10.0 days	10.1 days	17.5 days
Drug costs (total stay)			
Non-HIV	p=0.06 R28.01	p=0.10 R112.73	p=0.05 R298.17
HIV (all)	R86.35	R154.68	R334.26
Drug costs (per day)			
Non-HIV	R3.79	R14.64	R17.44
HIV (all)	R8.64	R15.31	R19.10
Lab costs (total stay)			
Non-HIV	p=0.45 R108.87	p=0.54 R312.54	p=0.02 R348.32
HIV (all)	R132.96	R319.22	R451.96
Radiology costs (total stay)			
Non-HIV	p=0.46 R100.56	p=0.08 R139.79	p=0.20 R722.61
HIV (all)	R118.25	R226.79	R343.69

Source: Veenstra. 2005



Table 9: Cost of reaching full coverage immunization against measles and tetanus for children aged 0-18 months

Years	Recorded live births*	Infant Mortality Rate*	1 year-old survivors	Population aged 1-2	Immunization coverage (measles)**	Children non-vaccinated against measles	Immunization coverage tetanus**	Children non-vaccinated against tetanus	Total costs to vaccinate against measles°	Total costs to vaccinate against tetanus°	Total costs for both vaccines°
1999	1 363 800	0.5%	1295610								
2000	1 407 833	0.5%	1337441	2633051	77%	2612777	60%	563133	4 180 443	957 326	5 137 769
2001	1 433 432	0.56%	1353160	2690601	72%	2671229	60%	573373	4 273 966	974 734	5 248 700
2002	1 517 671	0.52%	1438752	2791912	78%	2770135	52%	728482	4 432 216	1 238 420	5 670 636
2003	1 677 415	0.53%	1588512	3027264	83%	3002138	52%	805159	4 803 421	1 368 771	6 172 191

Source: Author's calculation

Table 10: Cost of treating and avoiding diarrhoea.

Years	Diarrhoeal incidence**	Population aged 0-4	Population infected with diarrhoea	Number of total episodes	Cost of treatment for one child°	Total cost of providing ORT°	Cost of providing clean water per child°	Total cost of providing clean water°	Total Cost Per Child°	Total cost for having no casualty from diarrhoea°
2001	212.7	4 449 816	946475	14197125	7.90	7474786	5.76	5 455 482	13.66	12 930 268
2003	185.9	4 436 683	824780	12371700	8.28	6828519	6.34	5 229 435	14.62	12 057 954
2004	128.7	5 064 000	651736	9776040	9.11	5935438	6.71	4 371 938	15.82	10 307 376

Source : Author's calculation
 * Data from Statistics South Africa
 ** Data from WHO
 *** Data Health System Trust
 ° All costs are expressed in current dollars



Table 11: Top ten health problems in 1996, 2000 and 2001

Condition	Congress rank (1996)
Injury (All causes)	1
TB	2
Nutrition	3
HIV/AIDS	4
STIs	5
Cancer	6
Diarrhoea	7
Respiratory infections	8
Mental health	9
Malaria	10

Condition	Percentage in total deaths in 2000	Years of life lost (YLL) in 2001
HIV/AIDS	29.8	39
Stroke	5.8	2.8
Ischaemic Heart disease	5.6	2.5
Homicide/violence	5.3	6.8
Tuberculosis	5.1	4.7
Lower respiratory infections	4.3	3.7
Diarrhoeal diseases	3.2	4.2
Hypertensive heart disease	3.1	
Road traffic accidents	3.1	3.9
Diabetes mellitus	2.6	
Low respiratory infections		3.7
Low birth weight		1.7
Protein-energy malnutrition		1.5



Cost-effectiveness of ART

Primarily assessed from pilot studies, as the national roll-out, implemented in 2004 is too young to yield results to date

Comparison of ART to the status quo (treatment for opportunistic infections only) in Khayelitsha .

ART is efficient in economic terms :

- costs R13 754 per QALY versus R14 189 per QALY for patients who do not receive ART
- ART leads to an average gain in life expectancy of 6.06 years.

- Several reports confirm good outcomes of ARV use in the public health sector



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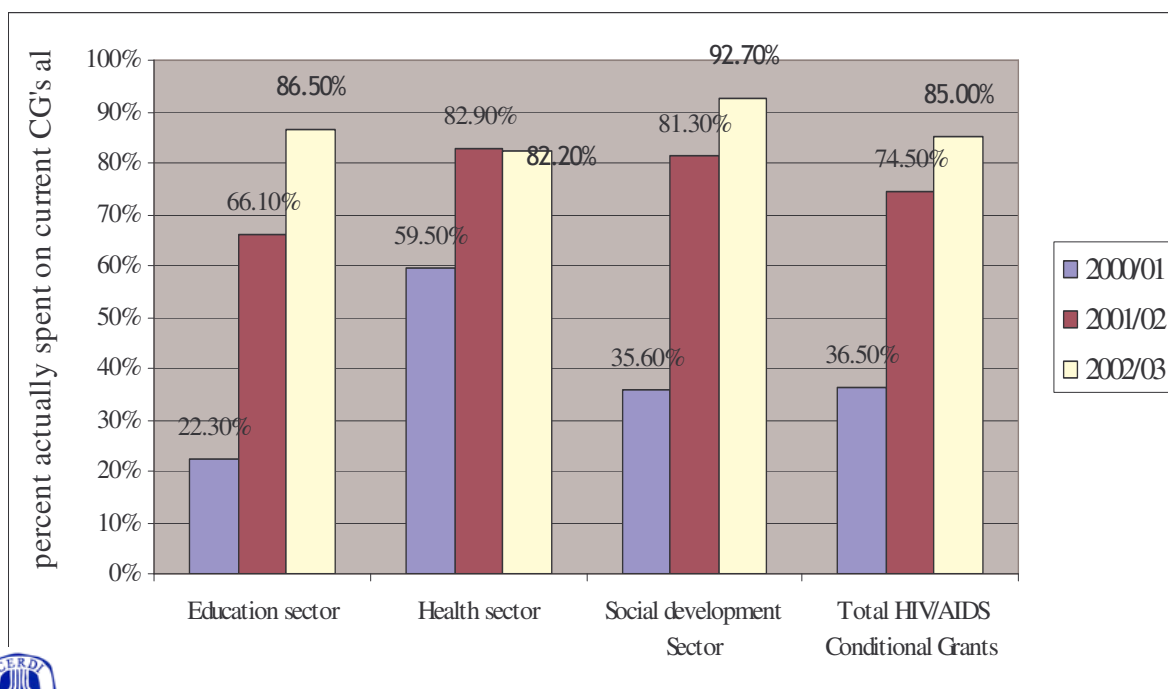
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Figure 3: Percent spent from 2000 to 2003 on HIV/AIDS, conditional grant allocation, by province (not including expenditure on rolled over funds)



Conclusion

Overall, HIV/AIDS financing differs from health policy in South Africa in three points:

- ARVs, which are not included in the PHC package are offered free in the public sector
- HIV/AIDS financing is not confined to the health sector
- external funding account for a greater part of financing in the case of HIV/AIDS.

Evidence that HIV/AIDS is highly affecting health system in South Africa

- In terms of resources allocated
- In terms of utilization of facilities
- In terms of crowding out of public health issues



Conclusion and recommendations (cont'd)

Evidence that amount spent on HIV/AIDS financing is justified

- HIV/AIDS has become the top single cause of death in the country
- ARVs allow to gain 6 years over the baseline scenario
- Provinces are increasing their ability to spend HIV/AIDS funds

Recommendations :

HIV/AIDS is striking people in their most productive years, thus undermining human capital, a development pillar. This alone justifies the amount of money devoted to the epidemic. Yet, other public health issues, cheaper and more cost-effective deserve attention and should be resolved before such amount of money are spent on HIV/AIDS

