

Literature review on ARV price determinants and interviews with BMoH representatives have complemented the analysis.

**Results** From 1999 to 2003, thanks to local generic production and repeated compulsory licencing threats, total ARV expenditure fell by 56%, despite patient increase of 72%, which led to a 74% decrease in the cost per patient per year. Following the inclusion of third-line ARVs, in 2005, total expenditure peaked at about US\$ 460 million (2011 US\$) for the treatment of nearly 160,000 patients. Although the compulsory licencing of Efavirenz, in 2007, together with assertive price negotiations on patented drugs led to a significant drop in costs, most recently, as the number of patients continues to increase, local production remains highly uncompetitive, and, new-generation patented drugs are further being incorporated, mean annual cost has recovered speed, reaching values 35% higher than 2003.

**Conclusion** The downward trend in mean ARV costs reached an inflexion point in 2003, after when limited savings from generic production and originator firm discounts were no longer able to compensate for the incorporation of highly expensive second and third-line ARVs. This finding reinforces patent protection being a major barrier to quality and longterm treatment in developing countries. In the case of Brazil, it further calls for higher efficiency on local production capacity.

**009.3 A SUCCESSFUL MODEL IN REACHING OUT MOBILE POPULATION TO CONTROL THE SPREAD OF STI/HIV/AIDS: EXPERIENCE FROM LINK WORKER SCHEME IMPLEMENTED IN 200 VILLAGES MOSTLY INHIBITED BY MOBILE POPULATION IN WEST BENGAL, INDIA**

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The fact is that over 57% of the 2.9 million HIV positive people in India live in rural areas. India still has a rural base with 69% of its population living in rural areas. Young migrant workers and other highly mobile population essentially come from villages. Due to rural-urban continuum, rural population is also not lagging behind its urban counterpart in adopting high-risk behaviours.

To face the challenge of HIV/AIDS in rural India is even more difficult due to poor literacy rates resulting in poor awareness, mostly engaged in unorganised sector and stigma associated with it.

Link Workers Scheme (LWS) implemented in 100 villages each at Purulia & Murshidabad targeting youth, vulnerable and high risk population for prevention of STI/HIV/AIDS and improve service delivery linkages. Murshidabad & Purulia is a vulnerable district due to high migration, interstate border, trafficking, poverty, illiteracy and poor health care. Link Workers have been accepted as frontline development functionaries and are proving to be successful in reaching out to the target population.

LWS successfully reached out 4861 HRGs and 146079 vulnerable young men and women in last two years. Referral services to ICTC, STI and TB have increased significantly and a total of about 18500 cases referred to health facilities for testing of HIV, 79% cases actually turned up for testing; more than 7800 STI cases identified, 64% reported; 2700 TB cases identified, 52% reported and utilised the services. About 3860 pregnant women identified in the project area and referred for HIV testing.

The link-worker, through a due diligence process, keeps on motivating the person to access HIV/AIDS related services such as HIV testing, treatment of STIs, ART, treatment of opportunistic infections and minimise the gap between beneficiary and service delivery. This need to scaled up to arrest the spread of STI/HIV/AIDS in rural setting.

**009.4 MOBILIZATION FOR HIV, SYPHILIS AND HEPATITIS B AND C TESTING DURING BRAZIL'S CARNIVAL**

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**Introduction** Testing campaigns (entitled "Get to know") during high-traffic public events have been conducted in Brazil since July 2008. On these occasions, people are offered information about health and prevention and rapid tests (RTs), as well as condoms and lubricating gels. Initially, only rapid HIV testing was conducted; RTs for syphilis screening was included in 2010 and hepatitis B and C screening in 2012. Twenty-two national mobilizations were organised between 2008 and 2012, with approximately 26,300 RTs performed.

**Methodology** A large number of people attend the carnival celebrations in the cities of Recife and Salvador and are the focus of Ministry of Health campaigns. In 2013, for the first time, the "Get to Know" campaign in these cities offered RTs for HIV, syphilis, and hepatitis B and C. Testing was conducted in health centres near places where large numbers of people congregated and at temporary centres at the carnival venues. In cases with RT reactive results, patients received the test results and were referred to qualified services for follow-up and healthcare.

**Results** More than 8,000 tests were performed during the four days of carnival in Recife and Salvador. In Salvador, 5,280 tests were conducted in three locations, and 1,458,984 condoms were distributed by eleven mobile teams. Of those tested, 16 were reactive for HIV, 84 for syphilis, 7 for hepatitis B, and 14 for hepatitis C. In Recife, 5,527 RTs were performed in 3 locations, and 800,000 condoms were distributed. Twenty people were reactive for HIV, 60 for syphilis, 2 for hepatitis B, and 4 for hepatitis C.

**Conclusion** The "Get to Know" campaign has been proven efficient in scaling up access to early diagnosis and reaching large numbers of people with information about the importance of getting tested and with awareness-raising activities about prevention.

**009.5 OPTIMIZING CARE EFFICIENCY AT THE STI CLINIC: USING CHLAMYDIA HOME COLLECTION KITS**

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**Background** To study the efficiency of Chlamydia home collection kits for young people, in order to optimise care at the Amsterdam STI clinic.

**Methods** Since 2012, young people under the age of 25 with a low risk profile for STIs are only tested for Chlamydia. Tests for other STIs are indicated after testing Chlamydia positive. From September-November 2012, young people using the online intake were offered two different ways of Chlamydia testing: receiving a home collection kit, or coming to the clinic. The collection kit is sent to the client by mail and is used to collect a swab or urine sample. This sample is send back to the laboratory for testing. The client can retrieve the results online by using the provided login.

**Results** In the study period, 523 online requests were done. Of these, 388 (74%) opted for the home collection kit and 135 (26%) preferred an appointment at the clinic. Of the requested kits, 86% were send back. All clients checked their test result online. Chlamydia was diagnosed in 5.5% of the clients receiving a home kit and in 2.9% of those tested at the clinic. Women were more likely to request a home collection kit (77% versus 60% of men,  $p < 0.001$ ) as were young people aged 20–24 years (76% versus 64% aged < 20

years,  $p < 0.05$ ). None of the Chlamydia-positive clients tested positive on the subsequent STI tests. Testing at the clinic takes three times more time of the nurse.

**Conclusions** Young people prefer a home collection kit to a test at the clinic. Furthermore, offering home collection kits is time and cost saving. Because clients who test negative are not seen at the clinic, more time is left for high-risk groups. In conclusion, Chlamydia home collection kits optimise care efficiency at the STI clinic.

#### 009.6 CD4 BELOW 500: INCREASE OF ART PATIENTS AND THE FINANCIAL IMPACT IN BRAZIL

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**Background** In 2012 the Brazilian Ministry of Health began discussing early treatment for patients with CD4 from 350 to 500. This recommendation aimed to increase the quality of life for PLVIH in Brazil. One of the concerns was the financial impact and the increased number of patients that would access the health system.

**Methods** To identify the number of PLVIH eligible we extracted from SISCEL's (a Brazilian centralised Laboratory Exams Control System) databank data of the patients with at least one CD4 test (in 2010, 2011 and 2012) between 350 and 500. SISCEL only includes patients on follow up within the public network of laboratories (currently 100 CD4 Laboratories). Around 75% of patients are on follow up in SISCEL. Additionally, to remove patients already on ART we crossed 2 databanks - the SISCEL with the SICLOM (a Brazilian centralised Drugs Control Logistic System). On the other hand, to identify the cost of initial ART, from the total of 1.395 currently dispensed, we selected the seven most used (AZT/3TC+EFV; AZT/3TC+LPV/r; TDF+3TC+EFV; AZT/3TC+ATV+RTV; AZT/3TC+NVP; TDF+3TC+ATV+RTV; TDF+3TC+LPV/r) that represent 91.5% of the initial treatment regimens.

**Results** There is a cumulative number of approximately 35.221 patients that are eligible for the new recommendation that are being monitored with a potential increase of up to 25% of the patients that are not in SISCEL. The proportional increase in the annual expenditure of ARVs would be of around 43 million dollars (10% increase in the total annual budget for ARVs of around 415 million dollars).

**Conclusion** From the data above we can conclude that a 10% increase in budget is a small expenditure in comparison to the potential benefits of early ART such as avoiding opportunistic infections, improving quality of life, diminishing costs of hospitalisation, increasing survival rate and diminishing risk of transmission.

## 0.10 – HPV: genital tract malignancy and vaccination

#### 010.1 AGE SPECIFIC ROUND 1 RESULTS OF A CERVICAL CANCER SCREENING TRIAL: HPV FOCAL

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**Background** HPV FOCAL Study is a randomised trial evaluating the efficacy of high risk-HPV DNA (hr-HPV) testing, with Liquid Based Cytology (LBC) triage testing of hr-HPV positives, compared to LBC testing alone (with triage hr-HPV testing for ASCUS positives) in an organised screening programme. Round 1 age specific results comparing differences in screen detection rates between women < 35 yrs vs ≥ 35 yrs are presented.

**Methods** Between January 2008 and May 2012, 25,243 consented women aged 25 to 65 were randomised to receive either: primary hr-HPV testing (HPV arms) or primary LBC testing (Control arm). Samples obtained with ThinPrep® LBC. HPV testing performed with Qiagen Hybrid Capture 2® High-Risk HPV DNA Test.

**Results** Data is presented for 21,985 participants enrolled as of July 1, 2011 who had completed Round 1 follow-up procedures by February 20, 2012. Overall, detection rates for CIN3+ were not statistically different between the HPV arm (7.3/1000; 95% CI: 6.1, 9.6) and the control arm (4.9/1000; 95% CI: 3.3, 6.5) when women of all ages were evaluated. In women ≥ 35yrs, the overall detection rate for CIN2+ and CIN3+ were both significantly higher in the HPV arm compared to the control arm (CIN2+: 9.9/1000 vs. 5.1/1000 respectively)(CIN3+: 4.4/1000 vs. 2.0/1000 respectively). For women < 35 yrs, HPV testing detected more CIN2+ and CIN3+ than LBC, but this did not achieve statistical significance. Overall, colposcopy referrals were higher in the HPV testing arm vs. control arm (59.1/1000, vs. 31.5/1000). HPV testing in < 35 yrs referred significantly more women to colposcopy than cytology (153.2/1000 vs. 73.3/1000).

**Conclusion** HPV screening with cytology triage detects significantly more CIN2+ lesions in women ≥ 35 years than LBC alone in the first round of screening. In women < 35, there was no difference in detection rates, but overall, HPV primary screening resulted in higher colposcopy rates.

#### 010.2 A COMMUNITY-RANDOMISED PHASE IV HUMAN PAPILOMAVIRUS (HPV) VACCINATION TRIAL OF VACCINATION STRATEGY

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High-risk human papillomavirus (hrHPV) is the 2nd leading cause of cancer in women. Bivalent Cervarix™ vaccine is highly efficacious against hrHPVs and associated precancers. Mathematical models disagree about the best vaccination strategy. Thus, we established a community randomised phase IV trial (CRT) to assess effectiveness of different vaccination strategies. During two school years (2007–8 and 2008–9) 80 000 1992–1995 born boys and girls were invited to participate in a CRT in a total of 33 communities in Finland. In 11 arm A communities 90% of girls and boys received HPV16/18 vaccine, in 11 arm B communities 90% of girls received HPV16/18 vaccine and boys received hepatitis B-virus (HBV) vaccine, and in 11 arm C communities both girls and boys received HBV vaccine. Effectiveness of the vaccination strategies in terms of reduction of hrHPV rates was assessed in vaccinated and unvaccinated 18.5 year-old girls. Recruitment resulted in equal enrolment of four birth cohorts (born 1992–95) comprising altogether 32 176 (approximately 40% response) adolescents, including 22 514 girls (> 50% response per birth cohort and arm) and 11 651 boys (20–30% response per birth cohort and arm). Already completed follow-up of 3 614 and 3 256 1992 and 1993 born girls at the age of 18.5 years prove that cervical samples from 350 vaccinated and 85 unvaccinated girls by community will be available. Assuming 80%–95% vaccine efficacy and 30%–50% effectiveness we have 80%–90% power to identify differences between vaccination strategies. In conclusion, this phase IV CRT augments decision making how to implement HPV vaccination programmes.

#### 010.3 PREDICTORS OF WOMEN'S INTENTIONS TO RECEIVE CERVICAL CANCER SCREENING WITH PRIMARY HPV TESTING

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