

# HATIP

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## Highlights from the 2009 HIV Implementers' Meeting

By Carole Leach-Lemens

### More information on causes of death needed to fine-tune ART services in Africa

Knowing the causes of death as well as mortality rates among patients on antiretroviral therapy in Rwanda may help improve service delivery. Innocent Turate and colleagues reported in a study presented at the HIV Implementers' Meeting in Namibia last month.

Loss of patients to follow-up continues to be a significant problem for treatment programmes in many parts of Africa, but measures to improve patient retention in care require a better understanding of why patients are lost to follow-up, and in particular, the number of deaths and the causes of death among those who start treatment.

A retrospective analysis from 2003 to 2008 was undertaken and included a chart review of 11,785 patients on antiretroviral therapy (ART) in 29 Family Health International (FHI)-supported sites in Rwanda, where Family Health International is involved in the delivery of treatment and care funded by the US PEPFAR programme.

During the period under review 592 patients died (5.8% of all those treated). The cause of death was determined by medical file and chart review and post-mortem interview with relatives. Data collected included date of starting ART, baseline CD4 count, baseline WHO clinical stage, cause of death if known and place of death (home, health centre, hospital).

With increased coverage (from two sites in 2003 to 29 in 2008) the number of deaths appears to have stabilised at around 150 for each of the last three years, whereas the numbers lost to follow-up increased from three in 2003 to 143 in 2008.

The median time between beginning ART and death was two months. Death registration forms with additional information were available for 73.3% (434). Of these, close to half died at home with CD4 counts available for over 90%. Just under 80% of those had CD4 counts below 200 cells/mm<sup>3</sup> (the median was 109 cells/mm<sup>3</sup>) at the time of treatment initiation, compared to 52.4% for all ART patients. The vast majority (83%) were identified as having WHO clinical stage 3 or 4 HIV disease at baseline.

Cause of death was determined for 66.4%. The most frequent known cause of death was tuberculosis and non-tuberculosis confirmed pulmonary disease (28%) followed by chronic diarrhoea at 8.5%. Eighty per cent of all deaths with unknown causes occurred at home.

Close to 80% of patients died within the first six months of starting treatment and death was strongly associated with a low CD4 count.

The death rate of 5.8% is similar to rates seen in Europe and North America. In contrast to such high-income countries non-HIV-related causes of death, for example, cardiovascular disease and diabetes, drug-related toxicity and cancers did not appear to be a major cause of death in Rwanda.

Limitations of the study cited by the author include the retrospective nature of a study that relied on a recording and reporting system that lacked codification and classification of

causes of death, and the absence of documentation for the high proportion of deaths that occurred in the home.

The authors suggest that in light of the number of deaths due to non-TB confirmed pulmonary disease, and the high proportion of patients with low CD4 counts, an Immune Reconstitution Inflammatory Syndrome (IRIS) diagnosis is relevant and recommend strengthening clinician skills enabling them to identify and manage IRIS as well as other critical conditions in patients with low CD4 counts.

With TB identified as the leading cause of death, maintenance and reinforcement of the integration of TB/HIV activities was also recommended. In addition, strategies are required to enable earlier initiation of ART and intensive follow-up of those with low CD4 counts to help address unknown causes of death as well as improve service delivery (FHI has just implemented a new strategy for the latter called Acuity Case Management).

With increased life expectancy due to ART, assessment of non-AIDS defining diseases is suggested. The authors also recommended that the Ministry of Health consider making the systematic reporting of causes of death standard policy at the health facility level, together with the institution of a national death registry.

### Reference

Turate I et al. *Causes of death in HIV-infected patients receiving HAART in Rwanda*. HIV Implementers' Meeting, Windhoek, Namibia, abstract 1793, June 2009.

### 'Know your CD4' campaign improves knowledge of HIV status, treatment initiation in Tanzania

A large-scale drive to improve knowledge of CD4 cell counts among people receiving HIV care in a Tanzanian district resulted in increased uptake of CD4 testing, an increase in treatment initiation and an improvement in patient retention, Tanzanian researchers reported at the HIV Implementers' meeting last month in Namibia.

Late initiation of treatment remains a major challenge in developing countries, despite a WHO recommendation that treatment should be initiated before the CD4 cell count falls below 200 wherever CD4 counting is available and resources permit.

Treatment providers in Tanzania identified lack of CD4 testing and lack of knowledge of CD4 count by clinicians and patients as a barrier to timely initiation of treatment, and developed an intervention to improve the use of CD4 counts in clinical decision-making and raise awareness of the value of knowing one's CD4 count among patients.

AIDSRelief Tanzania launched a "Know Your CD4 Campaign" to counter the absence of CD4 counts. Treatment providers estimated that around 3,000 people eligible for treatment were not on treatment. These were the target population for the campaign.

The campaign took place over a period of three weeks in the Tanga Region which has nine hospitals, 12 health centres and three CD4-counting machines. Eighteen sites were covered and three additional CD4 counting machines provided.

The organisation comprised 17 people (nurses, adherence support, and pharmacy (two staff); Laboratory (two staff); Doctors (5); Programme staff (4) and community-based health workers (4)). The primary objectives were to improve clinical systems and care; improve staff education and training (emphasising national guidelines that require CD4 counts, laboratory testing and staging), and increase patient ownership with an emphasis on participation in their own healthcare.

The campaign consisted of a multi-disciplinary approach to address the challenges:

- Triaging – a patient was sent for CD4 count if it was not in their chart
- Pharmacy – assurance of adequate drugs on-site to treat newly identified, eligible people.
- Community mobilisation efforts included sensitisation campaigns with a focus on stigma reduction and the importance of disclosure; understanding what a CD4 count meant and encouragement to request testing; promotional t-shirts and pens; training people living with HIV and community volunteers as CD4 ambassadors (a buddy system); health education sessions in clinic; support group meetings.
- Distribution of brochures at VCT/TB centers emphasising the importance of referring HIV-positive patients to a clinic for follow-up and staging.
- Clinic staff were re-educated on the importance of CD4 counts.
- Laboratory: Inventory of laboratory equipment; revised laboratory policies and procedures including joint meetings between laboratory personnel and administration to educate them about procedures. Coordination meetings at each hospital and among all hospitals took place at which the daily capacity of the CD4-counting machine was discussed, the number of samples per site was quantified, and planning for the best utilisation of available laboratory capacity and sample transportation was discussed, with the allocation of specific days on which particular sites would send samples.
- Better communication with the laboratories and flagging of patient files alerted clinicians to the availability of CD4 results.

Outcomes included improved flow of patients through the clinic. Regular meetings between Care and Treatment Clinic staff with laboratory personnel improved communication and teamwork. Patients became more knowledgeable about their care, and the introduction of a buddy system served to reinforce patient involvement in their own care.

Within the laboratories instruments were used to maximum capacity, specimen handling improved and the number of specimens from each site increased. Cooperation among laboratory staff from different sites also improved.

The number of CD4 samples increased by 114% from May (3,585 samples) to October 2007 (7,698 samples). Test results prior to the campaign took two to three days, whereas now results are received on the same day. Patient retention increased from 69% in December 2007 to 72% in February 2008. ART enrollment increased by 62% between June and September 2007.

The campaign resulted in clinicians beginning ART earlier and more closely monitoring their patients who in turn were more involved and knowledgeable about their own care. The number of CD4 tests and people on ART increased considerably. The CD4 campaign has been replicated successfully in Zambia and Kenya.

Next steps include looking at the referral system and the network of support to improve adherence support programmes as well as better integration with other services such as TB, prevention of mother to child transmission and voluntary counselling and testing; and improved use of data.

#### Reference

Aidi M et al. *Know your CD4 Campaign: an approach to increase numbers of people on treatment and enhancing patient*

*empowerment*. HIV Implementers' Meeting, Windhoek, Namibia, abstract 1318, June 2009.

### Scale up of early infant diagnosis in rural Ethiopia successful

Establishing and scaling up early infant HIV diagnosis (EID) programmes is feasible in even the most remote parts of Ethiopia, reported Berhanu Gudetta and colleagues in a study at the HIV Implementers' Meeting, held in Windhoek, Namibia in early June.

Renovation of two regional laboratories making DNA PCR testing possible, coupled with the successful use of dried blood spot (sometimes referred to as DBS increased the numbers of infants receiving early diagnosis and consequently improved early initiation of antiretroviral therapy (ART) for infants aged 0-18 months.

The 2008 WHO guidelines recommend all infants infected with HIV under 12 months of age begin ART. Without ART 50% of children with HIV will die before the age of two. HIV DNA testing is necessary to make a definitive diagnosis in children below 18 months due to the persistence of maternal antibodies up until this age. The use of dried blood spots has simplified sample collection as it is less invasive in infants and facilitates storage and transportation to laboratories equipped to carry out DNA testing using polymerase chain reaction (PCR) testing.

Ethiopia has an estimated 1.7 million people infected with HIV, approximately 80% of whom live in rural areas. Free antiretroviral treatment began to be provided in 2005. Currently 20,522 children are estimated to be in need of ART while 7,399 are on treatment.

Johns Hopkins University Technical Support for the Ethiopian ART Initiative (JHU TSEHAI) is funded by PEPFAR-Ethiopia to provide technical assistance to 20 ART hospitals with the aim of eventually doubling this number. Currently JHU TSEHAI supports 55 ART sites and 70 PMTCT sites across four regions in Ethiopia serving approximately 19.3 million (total population 77 million).

Challenges common to other resource poor countries included: limited access to early infant diagnosis; a lack of trained staff; no sample collection, transportation and storage system; a lack of dried blood spot and DNA PCR supplies; no linkage for HIV-infected infants to ART clinics, and a limited number of laboratories capable of performing DNA PCR.

In January 2006 JHU TSEHAI supported the start up of EID programmes in five hospitals in Addis Ababa. Prior to scale up at the end of January 2008 692 infants had been tested with DNA PCR.

As part of the national plan to scale up EID programmes JHU TSEHAI in collaboration with the Centers for Disease Control and Prevention (CDC)-Ethiopia, EHNRI (Ethiopian National Laboratories), the Clinton HIV/AIDS Initiative (CHAI) and the regional laboratory staff renovated two laboratories, one in the capital (Addis Ababa) and one in the South (Hawassa), to perform HIV DNA PCR testing.

The national laboratory programme owns and maintains the two laboratories. Johns Hopkins University together with its partners supported the establishment of the following systems: dried blood spot collection and storage; sample referrals for surrounding hospitals and health centres; laboratory standard operating procedures and guidelines; and on-site training.

Dried blood spot samples were transported by laboratory courier service in Addis Ababa and by clinical mentors in remote areas. Future plans are to send dried blood spots through intra-Ethiopian priority mail.

Infants from PMTCT and ART clinics were tested as per the national algorithm for infant diagnosis. Samples were collected and transported weekly to the national laboratory and the regional laboratories for DNA PCR testing and results were then sent back to each hospital.

An analysis for the period from December 2006 until April 2009 (using fiscal years) reviewed infant age at sample collection, results of DNA PCR testing, turnaround time, EID coverage and changes in PMTCT regimens.

By January 2009 EID programmes had begun in 58 hospitals and 23 health centres. Health workers trained on dried blood spot sample collection and early infant diagnosis protocols increased by 300% (from 85 to 257). The number of infants tested almost doubled (from 692 to 1340). Dried blood spots were used to test all infants referred from PMTCT and ART clinics over six weeks of age and below 12 months and at some sites all aged below 18 months.

Changes in PMTCT regimens from single dose nevirapine to combined prophylaxis for mother and infants happened over the period under review and resulted in a decreased HIV DNA-positive rate, from 19.7% in 2006 to 11.5% in 2007 and 10.9% in 2008 (seven months of data).

HIV DNA-positive rates varied by age: 0-6 month age group 12.6% (65 infants); 6-12 month age group 29.8% (39) and for those over 12 months of age, 33.3% (7). Average turnaround time was two to four weeks. Testing of older children was due to testing of symptomatic children early in the programme.

Successful scale up of EID programmes depended upon partnerships between government institutions and external partners with specific and complementary areas of expertise. DBS enabled infants in remote areas to access DNA PCR (EID) services. The authors conclude that "successful use of DBS will optimize early infant diagnosis, thus increasing ART use in infants and decreasing overall morbidity and mortality".

## Reference

Gudetta B et al. *EID scale-up and partnership with regional laboratories for sustainability*. HIV Implementers' Meeting Windhoek, Namibia, abstract 1286, June 2009

## High Risk Express Care reduces mortality, improves retention in Kenya

Nurse-based rapid assessment clinics in Western Kenya may improve survival and clinical retention of very sick patients beginning combination antiretroviral therapy (ART), Paula Braitstein and colleagues reported at the HIV Implementers' Meeting in Namibia last month.

Launched in 2001 the USAID-Academic Model Providing Access to Healthcare (AMPATH) has provided services to over 90,000 men, women and children with HIV in 18 parent and 10 satellite clinics in urban and rural areas throughout Western Kenya.

High Risk Express Care began as a pilot project in March 2007 in four high-volume clinics. Reducing mortality and loss to follow up in HIV-infected adults with CD4 counts below 100 cells/mm<sup>3</sup> when beginning ART, as well as increasing clinic capacity without additional costs, were the primary goals.

By June 2008 the project had been rolled out to 18 clinics.

Routine care for patients beginning ART involves a clinical officer seeing the patient at every visit and prescribing ART. Monthly visits are scheduled unless clinical indications determine otherwise.

High Risk Express Care for patients beginning cART involves a clinical officer seeing the patient and prescribing ART. The patient is then referred to Express Care (EC) upon ART initiation. The clinical officer will see the patient on a monthly basis. In the interim weeks over a period of three months a nurse will either see the patient in the clinic or talk to them over the phone. Vital signs are taken and a rapid symptom assessment is done each time, with immediate referral to a clinical officer if symptoms call for it.

To assess the comparative impact of High Risk Express Care and routine care on clinical outcomes a retrospective observational study was undertaken. Criteria for inclusion included: beginning ART, having a CD4 count below 100 cells/mm<sup>3</sup> and being 14 years of age and over. Endpoints were mortality and loss to follow up defined as absent from the clinic for at least 3 months without evidence of patient death.

Over a period of 10.5 months (March 1, 2007 and January 15, 2008) 2601 patients with a CD4 count below 100 began cART. A total of 14 out of the 28 clinics had begun HREC with a corresponding total of 378 (14.5%) eligible patients enrolled. Median cell count at initiation for the routine care group was 44, compared with 47 in the HREC group. The probability of remaining alive after 300 days was 95% for those in express care and 91% for those in routine care. The probability of remaining alive and in care after 300 days was 86% for those in express care and 75% for those in routine care. In both cases the results were statistically significant.

Concern over selection bias in terms of clinics and patients selected for express care, use of cotrimoxazole (Septrin) and provider bias regarding adherence to protocols prompted the researchers to perform a sub-analysis which was restricted to clinics which had initiated express care. Eligibility criteria for patients in this sub-analysis included: initiation of ART after express care was initiated in the clinic and being eligible for express care (a CD4 count of  $\leq 100$  cells/mm<sup>3</sup>).

A total of 715 patients were included, 336 (46.9%) in express care and 379 (53.1%) in routine care. A lower proportion was on TB treatment and a higher proportion attended urban clinics than in the initial analysis. 98% (EC) versus 91% (RC) were using cotrimoxazole at initiation of cART.

Ninety-six per cent of patients in express care and 89/90% in RC were alive after 300 days; 85% in EC and 76% in RC were alive and in care after 300 days. Adjustment for all factors (gender, age, CD4 at cART initiation, treatment for tuberculosis at cART initiation, clinic, use of cotrimoxazole or dapson at ART initiation, WHO clinical stage at ART initiation, and time taken to get to clinic) showed a 60% decrease in mortality for those in EC. Adjustment for the same factors indicated that those in express care were half as likely to become lost to follow up (AHR 0.45, 95% CI:0.27-0.77).

Those in express care were seen by a dedicated nurse team at the clinic, helping ease clinic congestion. No cost-effectiveness analysis was undertaken.

The authors note that study limitations include the fact that the data are observational, and determination of outcomes is incomplete. They also note that just because clinical protocols exist, they may not be fully implemented, which could lead to an underestimate of the impact of express care when fully implemented. Adherence to other protocols, for example cotrimoxazole prophylaxis, may also affect outcomes.

High risk express care appears to improve clinical retention and reduces mortality, but there is uncertainty as to whether outcomes are due to early identification, improved adherence or the dedication of nurses.

Paula Braitstein of AMPATH said that paying close attention and dealing with issues rapidly contributed to the outcomes. Symptoms were identified within days, adherence barriers readily identified, and referral took place immediately when problems arose. No shows are followed-up, and there is an active outreach programme led by HIV-positive people. In this specific setting nurses were underutilised, she noted, so their time so could be dedicated to express care, and consequently their workload was not affected, but this is not the norm in Kenya. She concluded that this model of care is “possibly generalisable and intuitively makes sense”.

#### Reference

Braitstein, P et al. *High Risk Express Care: a novel care model to reduce early mortality among high risk HIV-infected patients initiating combination antiretroviral treatment*. HIV Implementers' Meeting, Namibia, abstract 1556, June 2009.

### Family-centred approach improves uptake of testing and care in Rwanda

A family-centered approach tailored to children's needs in Rwanda increased the number of children receiving HIV, testing care and treatment according to findings presented at the HIV Implementers Meeting held in Namibia in June.

In October 2007 Intrahealth's HIV/AIDS Clinical Service Program (HCSP) began training providers in family-centered counselling and testing (CT) at 14 of their sites. The target population was families of women identified as HIV-positive during antenatal care. Counselling and testing sessions were held on weekends and holidays and all families in the area were invited so as not to draw attention to or stigmatise the target population. Children were invited through youth groups to ensure confidentiality.

Prior to the initiation of the programme 3,000 children had been tested. At the end of the first year of the programme (September 2008) there was a sevenfold increase in children tested, to more than 22,000. In the rural areas there was a doubling of numbers of children tested.

Before the programme began children represented 9% of all HIV-tested individuals in HCSP's sites and at the end of the first year of the programme this increased to 30% (16,494). Of the 1,371 HIV-positive clients identified 134 (9.8%) were children. The HIV prevalence rate in Rwanda is 3%.

Comparison of sites at the end of the first year showed considerable variation. At Mukono and Gisika, children represented 55% and 51% of all tested clients, with 10.7% (11) and 29.2% (7) respectively identified as HIV positive. At Rwesero and Tanda children represented 42.4% and 27.8% of all tested clients with 18.6% (15) and 2.3% (1) respectively identified as HIV positive, while at Rokomo children represented 23.4% of all tested clients of which 8.4% (24) were children.

Children who tested positive were immediately enrolled on treatment. Health care facilities managed their own funds through sub-grants that gave them the necessary freedom to run and manage weekend clinic sessions in collaboration with the local community. Services for the entire family are thus provided in a single visit reducing costs and facilitating care and treatment.

Challenges included the difficulty of following up children identified as HIV-positive once they returned to school; clarification of parents' roles and providing adequate information for the care of their HIV-positive children, as well as the fears parents expressed for their children and their ability to cope.

Testing and counselling programmes that are tailored to the specific needs of children within a family-centered approach will allay fears and contribute to identifying children who are HIV-positive leading to earlier (and more effective) treatment and care, the study researchers concluded

#### Reference

Ngendahimana G. et al. *Promoting a family-centered approach in scaling-up treatment services for children in Rwanda*. HIV Implementers' Meeting, Namibia, abstract 1049, June 2009.

## HIV and TB in Practice: encouraging data on IPT

By Theo Smart

*This regular feature on HIV/TB integration is kindly supported by the Stop TB Department of the World Health Organization.*

Isoniazid preventive therapy (IPT) to prevent active tuberculosis (TB) can be successfully delivered in two different – though limited – clinical contexts in sub-Saharan Africa, according to two studies presented at the HIV Implementers' Meeting in Windhoek, Namibia, in June.

In the first study, Dr Gilbert Tene of the International Center for AIDS Care and Treatment Programs (ICAP) in Rwanda, described how the country has systematically scaled up the provision of IPT to the childhood contacts of adults with active TB. Meanwhile, another ICAP-supported project in Mozambique that is providing IPT to people with HIV attending an urban ART clinic, found that while adherence to IPT was initially poor, adherence to clinical visits could be dramatically improved with strengthened counselling.

Although neither project addressed outcome data such as a reduction in the burden of TB, and falls short of offering IPT for all HIV-positive people without active TB, they did provide some useful information about how to start to put an IPT programme in place. Even so, how and whether to prioritise IPT delivery as a service for people with HIV in resource-constrained settings was a much debated topic at the conference, with one leading South African clinician even asking whether IPT is really worth all the effort.

### Background on IPT

Taking a course of IPT as directed reduces the risk of TB in people with HIV by about a third (and 64% in those known to have been exposed to TB) but the benefit may only last a couple of years in settings where people are frequently re-exposed to TB.

Since 1998, the WHO and UNAIDS have recommended six to nine months of isoniazid preventive therapy (IPT) as part of the essential package of care for people living with HIV – once active TB has been safely excluded. According to the policy, information about IPT should be made available to everyone living with HIV. The policy does not require that people have a tuberculin skin test (TST) to show whether they have been exposed to TB, but it does recommend a mandatory chest x-ray for TB.

More recently, the Core Group of the TB/HIV Working Group of the Stop TB Partnership began to strongly advocate for the roll-out of IPT as a public health intervention for people with HIV. And at the

3 I's Meeting last year, it was recommended that the WHO release a new clearer policy statement on IPT, which would drop the requirement for a chest x-ray, and co-package IPT with intensified case finding (ICF) (or TB screening) as a part of the same intervention. The idea is that all people with HIV should be routinely screened for TB and that anyone with HIV who is not identified as a TB suspect would immediately be offered IPT. However, a formal policy is yet to be released, and as the last HIV and TB column reported, debate persists about whether chest x-ray is a necessary screening tool to exclude TB for IPT programmes.

Countries have responded to WHO policy by adopting IPT as policy, but most have been reluctant to scale up implementation because of the absence of successful models, lack of operational guidance and other concerns.

"There are many challenges with IPT. It is not yet part of many national programmes," said Wafaa El-Sadr of ICAP at the Implementers' Meeting. She noted concerns including its effectiveness, the need to provide adherence support, the difficulty to exclude TB disease in people with HIV and the chance it might lead to isoniazid (INH) resistance if active TB cases are treated with mono-TB therapy.

But even before IPT was recommended for people with HIV, it was widely recommended for child contacts of TB cases. Yet very few countries in resource-constrained settings actually practice this intervention. In fact, a couple of years ago at the Union World Conference on Lung Health in Paris, Dr Hans Rieder, a leading TB expert, said that programmes shouldn't even think of offering IPT to adults with HIV until they had begun to provide IPT to child contacts of known pulmonary TB cases:

"I tell the national programme, implement first where it is simple, and if that works we go to the next [stage]... For example, we recommend preventive therapy for children under the age of five who live in the same household as a newly diagnosed smear-positive case. That is the easiest group to do. Everybody agrees, it's simple, you give it to the patient, who gives it to the kid. Toxicity is minimal, they are under five, even if you miss a lymphadenopathy it's safe. It's in every manual of the national TB programmes in Africa – I've seen it – but I have not seen a single country where they have systematically implemented it," he said.

Which is why the report from Rwanda is so significant, because it clearly can be done.

### Scaling up IPT for kids in Rwanda

Children under five years of age are at a much greater risk of developing tuberculosis, especially those with HIV. Globally, there are about one million paediatric TB cases each year, and half of them lead to death.

Rwanda is a country of 10 million, 83% of the population is rural and 57% lives below the poverty line. The pulmonary TB case detection rate is relatively low (compared to southern African countries) at about 48 per 100,000, in 2008. In the same year, there were 349 cases in children (4.4% of the total TB cases). About a third of Rwanda's TB cases are also HIV-infected.

"The Rwandan Ministry of Health (MOH) has included IPT in the national TB guidelines for many years but until 2006, this intervention had not been systematically implemented," said Dr Tene.

In 2005, the TB unit of the MOH collaborated with the Association of Pediatricians in Rwanda, ICAP and other international partners to revise the TB programme guidelines and training materials to include a chapter on paediatric TB, contact tracing and

IPT. Tools were also revised to include information on IPT (including TB treatment cards, IPT registers, quarterly report forms) and information education and communication (IEC) materials were developed and distributed to the districts.<sup>1</sup>

Contact tracing was done through actively asking adult TB patients about their contacts and inviting them in for consultation, and through home visits to smear-positive pulmonary TB patients by the TB nurse, and referral of any children under five to the local health facility.

At the health facility, an algorithm was designed for nurses to identify and diagnose latent TB infection in these children based on a symptom-screen for TB and physical examination. This algorithm does not include systematic chest X-ray nor tuberculosis skin testing (TSTs), unless the child has symptoms suggesting that further evaluation is necessary to exclude active TB disease.

The algorithm asks whether the child has had fever or cough for more than 15 days (in spite of an empiric course of antibiotics, and if malaria has been excluded). TB treatment is started in children with persistent cough or fever if they are smear-positive, have an x-ray suggestive of TB or a positive TST. Children with persistent cough or fever but without these signs of TB might also be started on a full course of TB treatment if they are both household contacts of a pulmonary TB patient and HIV-infected or suffering from severe malnutrition.

Any child contacts of a pulmonary TB patient who are found to be free of signs and symptoms suggestive of TB or in whom active TB has been ruled out are treated with IPT for six months. IPT is given daily to the child by their parent, with monthly follow-up at the health facilities. Any child who has an HIV-infected parent is also offered an HIV test and if infected, enrolled for HIV care and treatment.

To ensure that IPT is scaled up country-wide, a TB training curriculum was developed and implemented at all districts between 2006 and 2008. The national programme officers provided intensive supervision and mentorship to districts and sites nationally, with quarterly evaluation meetings at the district level.

### Rwandan results

Since 2006, all 187 of the country's TB Detection and Treatment Centres and all 30 districts have begun implementing IPT for kids and are collecting and reporting IPT data. IPT uptake has increased nationwide from 815 children in 2006 to 1507 in 2007 and 1349 in 2008. In 2007 and 2008, 14-15% of the parents were found to be HIV-positive – uptake of HIV testing among the children was very high (around 97%). In 2008, 38% (513/1349) of children overall on IPT were tested for HIV and 6% (32/513) of those tested were found to be infected.

Dr Tene stressed that outreach has to be "constantly improved" to be certain that they are reaching all the children who need IPT. The country also needs to collect data on adherence and completion of IPT, and to assess the impact of the programme.

"In Rwanda, national implementation of IPT for childhood contacts of adults with smear-positive TB is feasible," he concluded. "Nevertheless, further evaluation is required to know better its impact on childhood mortality and morbidity."

Even so, getting a nationwide programme off the ground is no small feat.

"The implementation of IPT for child contacts globally has been very very dismal, so hearing this presentation is very encouraging," said Dr Haileyesus Getahun of WHO's Stop TB Department.

However, Rwanda is still resisting offering IPT to adults with HIV.

## Mozambique starts offering IPT to patients on ART

Dr Anna Scardigli, also with ICAP, described some of the challenges to beginning an IPT programme in Mozambique. The country has a high HIV prevalence (~16%) (though it is around 23% in Maputo), a high TB incidence: 431 cases per 100,000 population and a high burden of co-infection — about 60% of TB patients tested for HIV in 2008 were HIV-positive. Mozambique began to scale up TB/HIV collaborative activities in 2006. Last year, it began to pilot an IPT programme.<sup>2</sup>

“There were various constraints getting the programme started, first of all the availability of isoniazid as a single drug (rather than coformulated with other TB drugs), and then the coordination between the TB services and ART facilities,” she said. TB services and ART facilities are often physically separated, with the TB service storing isoniazid. On top of this, there were the traditional concerns about the ability to rule out active TB and that well patients would not be adherent to IPT.

“As most PLWH who start IPT are in good health and do not require frequent visits, strategies to improve adherence to monthly follow-up visits for a preventive therapy are needed,” said Dr Scardigli.

They decided to limit the size of the initial programme to the amount of isoniazid that was available, and to store it at the pharmacy of the health unit. But the programme was first piloted in one ART facility (at Mavalane Hospital in Maputo) supported by ICAP after using a TB screening checklist that ICAP had also helped develop.

In July 2008, a workshop was held for all 20 staff members at the ART clinic that focused on IPT eligibility (how to rule out active TB), isoniazid delivery, IPT register completion and follow-up of patients. The nurse designated as the TB/HIV focal point was responsible for coordination of the IPT programme.

The clinic had already had experience using the symptom checklist to screen for TB in all the patients enrolled at the ART facility. With the launch of the IPT programme, doctors began prescribing IPT for all eligible patients who screened negative for TB, and monthly follow-up was performed by nurses. Patients were told to return to the clinic monthly for follow-up visits and to pick up their next month’s supply of isoniazid (rather than for their next ART consultation).

Almost all of the patients had stage one or two HIV disease. All were on ART (which is because doctors who prescribe isoniazid only see patients on ART rather than pre-ART patients).

During the first six months of implementation, 109 HIV patients initiated IPT. No patient discontinued due to toxicity, and only two quit drug because of pregnancy.

But as Dr Scardigli anticipated, adherence was not great. After the first month, only 13/34 (38%) patients who had started IPT returned for their follow-up visit and to get their supply of isoniazid.

When many of the patients who defaulted on IPT returned for their ART consultation, they reported that they had ‘forgotten’ about their IPT appointment. Dr Scardigli said that one possible reason for this was that the ART consultation was with the clinician, but the IPT consultation was with a nurse in another room.

So they decided to strengthen the counselling at IPT initiation to emphasise the importance of adherence. In addition, IPT was also

recorded on the patient card and file envelope, in addition to the IPT register, so that IPT patients could be tracked better and more healthcare staff such as the receptionist and pharmacist could be involved in patient follow-up and remind the patient of the importance of adhering to the programme.

Gradually, adherence improved. By month three, 78% returned for their follow-up visits — although about 42% came in about a week late. The team worked more on strengthening counselling and staff commitment to the programme. By month six, the proportion returning for follow-up reached 91% (99/109) and only 32% came in somewhat late. This was more likely to occur when they had another hospital consultation scheduled soon afterwards.

Overall, 92 (84.4%) are believed to have completed six months of IPT. There were 15 (13.8%) who were defaulters to some point of follow-up.

“So IPT implementation in an ART facility (or HIV/AIDS consultation) is feasible, but commitment of the whole staff involved in the care of the patient — and not just one person — is needed to increase adherence and keep better track of the patient, and of course intensive counselling and education of patients especially prior to initiating IPT,” she said.

She said that getting patients to come back to the first follow-up visit is the most challenging, but after that point they rarely miss further visits. Even so she stressed that “combining IPT visits with other visits and ART pick-up can reduce missed visits and avoid delays.”

They now plan on expanding TB screening in all people with HIV (at all entry points to care). They plan to strengthen follow-up even beyond six months on IPT to evaluate the effectiveness of the programme.

During the question and answer session, Dr Scardigli was asked about the timing of starting IPT in people on ART. “It’s important to consider the risk of interaction between ART and IPT and the risk of toxicity,” she said, “and recent studies suggest waiting about four months on ART before starting IPT. In our case, most of the patients had already been on ART for a long time. But it was the clinician’s decision rather than a criteria. Now they are thinking to give a clear recommendation to wait for six months before starting on IPT.”

She was also asked about the limited roll-out of the programme at one ART facility.

“The TB screening tool is now used in all the supported facilities,” she said, “but IPT has only been started in one facility which was also the first to begin using the TB screening tool. I think it is important because we can’t just start to implement IPT at any site. We had to select sites with the appropriate condition, both in terms of human resources and in the uptake of the TB screening tool. There are provinces in Mozambique where they have decided that they won’t start IPT yet, because they want to make sure that they are doing better at TB screening before starting IPT.”

## Limited scale up of IPT in other settings

Indeed this continues to be the pattern in most countries.

“There are still restrictive national policies on IPT in many countries,” said Dr Getahun during an informal session on TB/HIV. “Although IPT is policy in many countries, the countries that actually report providing it are very, very few.”

He presented an example from Uganda that he said “Suggests that the only institutions that should provide IPT should be very high tech; it should only be given by medical doctors; there should be laboratory assistants, trained counsellors, pharmacy technicians, etc, so it really makes it a highly sophisticated intervention.”

## Other key issues

If an organisation has a TB default rate of greater than 5%, it will not be eligible to provide IPT

Other speakers at the meeting described similar constraints on rolling out IPT.

Dr Endris Mohammed, described the experience in Ethiopia, which began TB/HIV collaboration activities in earnest in 2004.

“To decrease the burden of TB in PLHIV: the 3 I’s [(IPT, Intensive Case Finding (ICF) and infection control] are being practiced. All patients with HIV are screened for TB using a screening tool during each visit, and those who are not showing signs and symptoms of TB can be provided with INH prophylaxis,” he said. But although monitoring and evaluation data show that screening and diagnosis of TB has improved over the last few years — the number put on IPT nevertheless remains low (and even seems to be falling).

“There is a low uptake of IPT. IPT is mostly provided at hospitals, it is not provided in health centres,” he said, though his slides indicated that IPT provision requires a chest x-ray to rule out active TB. “There should be clear guidance from WHO on how to rule out active TB and in whom to initiate IPT — that has been the bottleneck to scale up IPT.”

Dr Fadare Omoniyi from WHO said that in Nigeria, they had concluded there was little point in scaling up IPT “to protect somebody from getting TB when we are still exposing the patient through poor infection control to TB. So one of the criteria we have put in place is that before any facility can expand to offering IPT, there must be TB infection control measures in place. We really must do it comprehensively so that patients are not exposed to TB.”

Kenya is one of the most progressive countries in terms of implementing TB/HIV collaborative activities, and at the Implementers’ Meeting this year, Dr Bernard Langat of the Division of Leprosy TB and Lung Disease in Kenya described how the country has started implementing the 3 I’s to reduce the burden of TB among people with HIV.

But as in many other countries, the IPT policy is limited to the provision of IPT to children under five years of age in contact with someone with pulmonary TB, to research settings and to facilities with the capacity to offer adherence support and to rule out active TB (comprehensive care clinics with adequate capacity to diagnose TB and provide follow-up).

“IPT scale up calls for caution and adequate resource allocation. If you are going to start on isoniazid preventive therapy (IPT), you should be able to follow that patient until he completes it, and in case he fails, you should be able to start him on TB treatment,” said Dr Langat.

Recently there has been some expansion in IPT access in Kenya, however. Two HIV programme partners currently implementing IPT in 23 sites, in over 12,000 clients, are reporting treatment completion rates of 70%. “These are programmes that have resources for defaulter tracking and screening [including chest x-ray],” he said.

There is also an ongoing national IPT study looking at providing IPT to all the household contacts of pulmonary TB index cases at the community level.

But in addition to resources to track defaulters, he believes that the capacity to diagnose TB in people with HIV has to be improved.

Of note, Dr Amy Bloom of USAID sounded a similar note of concern and said that PEPFAR was prioritising support to intensified case finding (ICF) and laboratory strengthening for TB/HIV.

“There’s been a lot of talk about IPT. There have been a lot of pilot programmes, some of which have been more successful than

others, but I don’t think that many of them have been that successful,” she said. “There are a number of countries who are concerned about implementing IPT because of very real fears that their labs and screening won’t pick up active cases, which makes it very hard to say, ‘oh, we’re going to be giving single drug therapy to people who may have active disease.’ These are very real concerns, so it really behoves us to make sure that we have really good intensified case finding from the clinical and laboratory side, so that we can move forward on things like IPT. That’s not to say that you have to wait and wait before doing IPT, but we have to think about these things.”

## Is IPT really worth all the trouble?

Dr Francois Venter of Johannesburg Hospital said he thinks that there has been a lack of critical thinking about IPT.

“Why is it that IPT is reaching so few people with HIV? Is it maybe because it was a badly thought-through programme?” he said. “One of the major themes of this meeting has been making sure that we get the most bang for our bucks in our programmes, and I have to ask about IPT, what is the bang for your buck?”

Dr Venter described how his unit developed an IPT programme and implemented it in a region of Johannesburg.

“I’ve realised that when it comes to TB activities, if my academic unit, a group of very dedicated people, don’t do it, it just doesn’t get done. We screened I don’t know how many people with HIV for TB to get people onto IPT, and we finally got a thousand people on it. Almost every single person on IPT in the area was in the four clinics that we worked in. Nobody else did it; it was only us. And the experience that I have had is that it is always these dedicated PEPFAR-funded projects that are doing all the work to get people onto IPT in these tiny programmes. We designed these really pretty posters, piloted ICF material, trained until we were blue in the face. But, if you ask me how much benefit it is, I’m not sure.”

He also noted that there is still a huge amount of resistance on the part of the nurses, and said that the minute his unit stops supporting the nurse, “I guarantee they will stop giving IPT.”

“We worked out that we had to screen 40 people with HIV before we put one on IPT — not stopped an infection or finished IPT, but merely to put one person on IPT. You might argue that you got all those people screened and into the system: I can do that in my sleep with a much more cost-effective programme.”

IPT should be given to the well — people without symptoms or signs of TB. But Dr Venter isn’t sure how programmes can really keep these people in care:

“Our wellness programmes are so shocking, not just in developing countries but in developed countries. We cannot retain people in the system unless we have them on antiretrovirals. We all know that. But we take these people, we test them, and we try to insert them into a system where all we are offering them is INH prophylaxis. But outside of very highly specialised programmes, every single large-scale programme I see seems to haemorrhage people out of the system if you don’t give them antiretrovirals. We need to engage with that before we start offering INH in my opinion. And the reason is because these programmes do not sit naturally within the healthcare system. Healthy HIV positive people do not have an easy place to go within the public healthcare system.”

Dr Venter believes that operational interventions and greatly intensified case finding may work better by getting people with HIV and TB into care sooner.

“You don’t have to convince me of the science, you have to convince me that putting in the amount of effort into trying to put

people onto IPT is actually worth it. If we put a whole lot of counsellors into the front in casualty and just pulled out all of the coughing patients and got their sputums to the lab quicker, I bet you that would be money better used," he said.

His comments during the informal TB/HIV session caused considerable controversy among the participants.

"When it comes to the 3 I's, focusing on the 3 I's is important from the patient's point of view, and also from the health system point of view," said Dr Yared Kebede Haile of TB CAB – who stressed that people with HIV are at very high risk of dying of TB before receiving a diagnosis. "If a family member of mine is HIV-positive, and they have been exposed to TB, but don't have active disease, I would put that family member on IPT, and I think everyone would do that. So that's really a requirement from the patient point of view – it is an important strategy to prevent the development of TB. Now how can we translate that into programmes?"

"The major problem with IPT, is that it is being planned to be delivered as an isolated intervention. And that's wrong. It needs to be an integral part of TB control," he said.

Dr Christian Gunneberg of WHO said that one of the key reasons to stress IPT is to get nurses to routinely screen for TB.

"A positive example from Botswana's national IPT programme: the IPT programme there led to HIV-positive people who were just diagnosed being immediately screened for TB – and if they were referred, those with TB being immediately put on TB treatment. IPT cannot be disconnected from ICF; IPT is just an extension of case detection in people with HIV, particularly in southern Africa. We have to do IPT in order to encourage intensified case finding," he said.

Concerns may only be allayed once programme data from Botswana – where chest x-rays are not required for IPT – and other settings begin to report on the effectiveness of the IPT programmes in field settings as well as whether they have led to an increase in isoniazid resistance.

More data should be coming soon. Despite the persistent concerns, the number of countries reporting data on IPT to the WHO has quadrupled in the last four years, and within the last year, there has been a dramatic increase in the number of people with HIV put on IPT (outside of Botswana).

Dr El-Sadr said that she was beginning to be more optimistic about IPT – and that even though they may be a lot of work, the importance of small vanguard programmes may be greater than is immediately apparent.

"I do see some rays of hope that IPT may become an option, she said. "Finally, I think that the passion of people who are really committed to HIV/TB, establishing these programmes and really seeking quality is pushing the envelope to strengthen components of the system. It actually may pull up the rest of the healthcare system along the way."

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# Unprecedented focus on TB at HIV Implementers' Meeting

By Theo Smart

"There's been a lot on tuberculosis at this meeting, and I think it is pretty exciting," said Dr Bess Miller, Associate Director for TB/HIV Prevention and Care for the US Centers for Disease Control (CDC). "Not only in several designated sessions on TB, but also in many of the HIV treatment sessions, TB has been front and centre in terms of mortality, morbidity and the delivery of services."

In the opening plenary address, Dr Kevin De Cock of WHO's HIV Department highlighted the importance of tuberculosis as the leading cause of death of people with HIV. Immediately following his address, Zahedul Islam, of the HIV/AIDS Alliance described conditions in the Ukraine, where 65% of the reported HIV deaths are caused by TB. Then, during one of the first HIV treatment sessions of the conference, Turate et al reported that 30% of people dying on ART in Rwanda have concomitant TB.<sup>1</sup>

There were also three dedicated TB sessions that focused on improving monitoring and evaluation (M&E) of TB/HIV collaborative activities, the Three I's (intensified case finding (ICF), isoniazid preventive therapy (IPT) and infection control (IC)), and improving the clinical management of TB in people with HIV – as well as an informal session which was devoted mostly to discussion.

## Improving monitoring and evaluation

In the session on monitoring and evaluation, Dr Christian Gunneberg of WHO introduced the revised and harmonised WHO / PEPFAR / UNAIDS indicators for TB/HIV collaborative activities that should help countries and funding partners to better understand the burden of TB/HIV, plan accordingly and measure the implementation and impact of their interventions ([see this report](#)).<sup>2</sup> The guidelines can be downloaded at the WHO website [here](#).

WHO has also produced "Three Interlinked Patient Monitoring Systems for HIV care/ART, MCH/PMTCT and TB/HIV" with TB indicators integrated into tools, materials and registers that countries can adapt to support patient tracking, and improve the quality of data collecting for cohort analysis and quality improvement at the facility levels (this is available online [here](#)).

Presentations from Ethiopia and Malawi illustrated how TB/HIV monitoring can be integrated into registers and reporting systems.<sup>3 4</sup>

"Integrating TB/HIV will enable us to reach the ambitious targets of halving the prevalence of TB and TB deaths by 2015. A reliable and timely monitoring and evaluation system is vital for the effective management of TB and HIV programmes," said Mrs Mtemwa Nyangulu, a clinical officer working for the MOH in Malawi.

Recently, WHO has published a monograph, documenting the best practice of TB/HIV M&E in Malawi and that shows how an integrated TB/HIV M&E system can function, has also recently been made available.

Integrating these TB/HIV indicators into the registers and the patient management system can improve the uptake of collaborative activities. Even so, simply adapting these tools doesn't guarantee uptake, or that staff will record, report or compile the

data – which in turn makes it difficult to analyse or interpret the data.

“It can be difficult to distinguish whether missing data means that the activity was not done or whether there was a problem with recording,” said Dr Wafaa El-Sadr of the International Center for AIDS Care and Treatment Programs.<sup>5</sup>

So at the same time that new M&E systems are introduced, “supportive supervision and training of healthcare workers on M&E must be intensified,” said Dr Endris Mohammed of WHO in Ethiopia.

## Improving the management of TB in people with HIV

Another session addressed the clinical management of TB – which includes screening for HIV and offering care and treatment including ART to people who are coinfected. The need to aggressively diagnose HIV and improve its management was underscored by a study from Uganda, which found that people with HIV were significantly more likely to default on treatment (Lwanga) and a study from Namibia, that found that HIV-infected TB patients were more likely to die on treatment – because of late presentation, delays in diagnosis and delays in starting ART (Zvavamwe).<sup>6 7</sup>

Fortunately, “there’s been a remarkable scale up of HIV testing of TB patients in Africa, so much so, it appears that scale up to testing all TB patients is possible,” said Dr Gunneberg.<sup>8</sup>

Likewise in Asia “the rapid expansion of provider-initiated testing and counselling in TB clinics is feasible,” said Dr Nguyen Viet Nhung of Vietnam’s National TB programme. However, he continued “low rates of successful referrals, CD4 testing and ART suggest that improvement of collaboration, between TB and HIV programmes at all levels, is urgently needed in parallel with testing.”<sup>9</sup>

“We will probably win the battle against HIV but it is not certain that we will win the one on TB unless there is more integration of HIV and TB programmes at all levels,” said Dr Reynold Grand Pierre of GHESKIO (the Haitian Group for the Study of Kaposi’s Sarcoma and Opportunistic Infections).<sup>10</sup>

In particular, he noted that laboratory and X-ray equipment capacity would have to be improved throughout the country. However, with the assistance of Partners in Health and PEPFAR, a multidrug resistant (MDR) TB care centre has been established to improve the quality of care and diagnosis for HIV/TB, and MDR-TB (about 3% of the TB cases are believed to be multidrug resistant). Because of the new centre (and the capacity to screen for MDR-TB), Haiti now qualifies for assistance from the Green Light Committee to obtain drugs for MDR-TB treatment.

During the informal session, Dr Haileyesus Getahun of WHO’s Stop TB Department reported that there will also be some changes this year in WHO policy regarding the treatment of TB. One change regards the recommended first line of treatment: The WHO will now recommend that all new TB cases (pulmonary and extrapulmonary) should be treated with two months of isoniazid, rifampicin, pyrazinamide and ethambutol (2HRZE), and then with a four month continuation phase of isoniazid/rifampicin (HE). Note that this will require putting in place adherence support mechanisms to cover the entire course of TB treatment. An alternate regimen (with 2HRZE induction, followed by 6 months isoniazid and ethambutol should be phased out. Optimal dosing is daily, throughout the course.

During the discussion, some meeting participants raised concerns about phasing out the six-month continuation phase of HE regimen, given that the main reason for it had been to offer an option for settings that could not provide four months of directly

observed therapy (since it is a rifampicin-containing regimen). But Dr Getahun said that with updated patient-centred methods of adherence support, this shouldn’t be an issue.

“Since the Stop TB Strategy, we are no longer aiming at or promoting the policing type of supervision. It has to be patient-centred treatment support, not really supervised treatment. This is clearly stated in the policy,” he said. “But I know the implementation of this policy in some countries will present problems so whenever we get the opportunity in country reviews or in country missions, we try to pass along the message that treatment has to be supported, and it has to be supported in the interest of the patient, with a patient-centred adherence strategy.”

However, in areas with high isoniazid resistance, it will be recommended to add ethambutol to the continuation phase. In addition, “culture and DST needs to be expanded (particularly for patients who were previously treated), and whenever there is a likelihood of a patient having drug-resistant TB, we should consider using an empiric MDR regimen depending on the national guidelines.” said Dr Getahun.

Also last year, WHO added rifabutin 150 mg to the essential medicines list as TB treatment in HIV-infected patients who are taking a ritonavir-boosted protease inhibitor (PI)-containing ART regimen. Since it has little effect on PI serum concentrations, rifabutin can be substituted for rifampicin – and even though rifabutin is considerably more expensive, when used in combination with standard doses of boosted-PIs, it turns out to be cost-effective.

## The Three I's

Several studies and posters described the growing uptake of the 3I's to reduce the burden of TB in people with HIV, especially intensified case finding.<sup>11 12</sup>

“In terms of intensified case finding, it’s very encouraging that we see many activities happening in many countries. HIV implementers now seem to have embraced this activity. We are still lagging behind what we need to do, but we are on the right track.” said Dr Getahun.

He reported that currently WHO and the CDC are working on a meta-analysis of primary data for TB screening (including twelve data sets and over 30,000 people). The primary question: What is the most sensitive clinical algorithm to screen for culture-confirmed pulmonary TB in people living with HIV? The objective is to develop a standardized evidence-based approach and guidelines for TB screening and prevention (IPT) among PLHIV.

The guideline will contain an algorithm that identifies an individual as a TB suspect, who should then be referred for diagnosis. If they are not a suspect, they should be put on a course of IPT. WHO plans to finalise this analysis in the next two or three weeks at a meeting in Geneva.

One issue raised by several speakers is that scaling up intensified case finding cannot be done successfully without also scaling up TB laboratory capacity.

According to Dr Bernard Langat of the Division of Leprosy TB and Lung Disease in Kenya, to support ICF, his country needs to expand diagnostic capacity (especially fast liquid culture to diagnose smear-negative TB in patients with HIV). “We need to decentralise and it costs money”, he said. Plus there are issues of workload. “For every patient found with active TB, ten are screened with very good screening tools. So the number of smears will be going up and human resources in the lab are definitely an issue.”

Dr El-Sadr agreed that if programmes begin using screening tools that are highly sensitive, but with low specificity, “The amount of work-up that will need to be done on all of our suspects will increase

tremendously. We need to think about how we are going to balance using highly sensitive but not specific tools with laboratory capacity to diagnose.”

PEPFAR is willing to provide assistance with laboratory scale-up, according to Dr Amy Bloom of USAID: “ICF is very high up on our radar – then looking at laboratory services to support it.”

Another option might be to simply offer TB treatment to suspects with advanced disease and symptoms of TB. Dr El-Sadr described a study that is in development that would randomise people with advanced HIV disease entering care with very low CD4 cell counts at the time of initiating ART to immediate empiric TB treatment, versus the standard approach of work-up and diagnosis of TB, then followed by treatment. The outcome will be mortality.

But Dr Francois Venter of Johannesburg Hospital stressed that finding TB suspects is not enough, “It’s what you do with them after you’ve found them. We spend a huge amount in South Africa, diagnosing people with TB and then not retaining them in care or rapidly initiating them on therapy. At Baragwanath Hospital in Johannesburg, 50% of the hospitalised patients diagnosed with TB don’t make it to a TB clinic. These are diagnosed patients with fully susceptible TB and they still can’t get to the clinic. The system is failing these patients.”

He complained about all the money being invested in expensive diagnostics and new drugs, saying that there are fairly simple cost effective solutions to these problems.

“Asking for new drugs and new diagnostics is useless. If instead, we had somebody phoning these patients, or actually escorting them to the TB clinics, I bet we would save a hell of a lot more lives,” he said.

The uptake of IPT is still limited (and discussed in a related article in this edition of HATIP); but “of all the Three I’s, infection control still seems to be the most neglected,” said Dr Getahun.

“We’re all well aware of how far behind we are,” said Dr Bess Miller, who is also the chair of the Infection Control subgroup of the TB/HIV Working Group of the STOP TB Partnership.

Dr Miller noted that the WHO is also in the process of finalising TB Infection Control Policy for Health Facilities (a draft copy was finally available for distribution at the meeting). She also said the working group has put together a work plan to address a number of areas.

“The area we’ve been most successful in is training, and human resource development. Between TB CAB and WHO, there have been numerous trainings in every region of the world to train people at the national level in TB infection control. In addition to that, we are developing training materials for health care workers. We also need to have some M&E tools – surveillance of TB among workers in facilities is part of that. Another area we are working on (ICAP has taken some of the lead on this) is developing facility-level materials. We are in the process of developing a manual.”

Dr Miller believes that the responsibility for infection control will ultimately fall on nurses.

“We have hired an infection control nurse, and want to work with the International Confederation of Nurses, and the Association of Practitioners of Infection Control to try to work on nurse behaviours, on an ongoing basis, to monitor infection control.” While the complete package is in development, Miller shared a tool with a basic checklist for nurses to use to monitor basic infection control practices at a facility.

Dr Venter is sceptical this approach will work.

“You try to tell a nurse in Johannesburg that she has to work with open windows in the winter. Even in Africa, it does get cold. Their opposition is rational, because it is an unpleasant place to work in.

And they keep telling me that I have to move coughing patients to another area. Seventy per cent of the admissions in my hospital are there for respiratory infections. My sense is that we should just build another hospital for the patients who *aren’t* coughing. I have yet to visit a hospital in Southern Africa where coughing patients are put in another place. I think we need to take three steps back and think about what is going to work in this situation.”

He cited the TB infection control projects that MSF has pioneered, “but it takes the dedicated passion of a large group of people to implement them in just one area in South Africa, if we have to demand this from the system across the board, it is very difficult.”

Dr Venter believes that an emergency response that includes teams with infection control engineers are needed to make site visits to get facility managers on board, and enforce infection control.

“I agree that infection control is important, but the leadership behind it has been lacking. Recently, 30 healthcare workers died in one year in a hospital north of Tugela Ferry, of MDR TB. If they all died in car accidents we would make compulsory driving lessons for healthcare staff. It just happened quietly and was swept under the carpet. So where is the action? Where is the emergency that WHO declared a few years ago?”

Dr El-Sadr noted that infection control issues do go beyond the scope of the HIV programme. “Facilities have to buy into infection control (even though there are some activities that fall square on the HIV department, like ICF and IPT), but without advocacy and buy-in at the facility level, it is going to be hard for the HIV programme to push a specific agenda.”

Nevertheless, as is so often the case if the HIV programme does not push for infection control, it isn’t clear who will.

Overall, Dr Venter voiced frustration with the implementation of the Three I’s.

“We have to scale beyond the believers. We wouldn’t come to a PEPFAR Implementers’ meeting and talk about how we put 120 patients on antiretrovirals and these are the lessons learned. We’d be laughed out of the room. But we do this for TB quite often but that’s not scale, that’s a joke,” he said. “We need more research on operational interventions to make these programmes work, rather than biological or treatment approaches.”

Dr El-Sadr was more upbeat however:

“I always feel like [after] meetings on TB/HIV, that we walk out feeling depressed, but I want to fight this. We’ve really achieved a lot. A few years ago, nobody was being tested for HIV in TB clinics, now in some countries, all the people are being tested and linked to HIV care. I think that even starting to think about screening for TB routinely is great, and the efforts being put into place to improve laboratory capacity, and talking about TB in kids and trying to do IPT in kids [too]. We really should walk out of here encouraged,” she said.

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## about HATIP

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The newsletter is edited by Theo Smart (Cape Town) and Keith Alcorn, NAM's Senior Editor (London).

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