

8th International AIDS Conference on HIV Pathogenesis, Treatment and Prevention meeting report (19–22 July 2015)

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I was truly honoured and privileged to receive the prestigious Travel Fellowship from BHIVA/Janssen to attend the 8th International AIDS Society meeting in Vancouver, Canada. This is made more special personally as it has not gone unnoticed that it has been harder for UK-based HIV physicians to obtain travel grants and educational fellowships to attend international medical meetings. This is mostly reflected in stricter Association of the British Pharmaceutical Industry (ABPI) guidelines whereby corporate ‘big pharma’ are offering reduced sponsorships for healthcare workers attending meetings. This, along with reductions in NHS study leave bursaries and funding, is clearly reflected in the vastly reduced UK delegate presence and UK-based submission of original data. Personally I am worried that this could have an adverse effect on young trainees creating and submitting original and innovative research ideas as well as considering HIV medicine as a career. I suspect other nations have similar problems as just over 6,000 delegates attended, which is much fewer than previous IAS meetings, and this is likely to be further fuelled by the recent global recession.

My last visit to Vancouver was in 1991 as a medical student elective in the prestigious St Paul’s hospital. This was around the time the esteemed HIV/AIDS Centre for Excellence was being developed at the hospital by the conference host, Dr Julio Montaner, and the location of the CONCORDE study [1] which was conducted and presented in 1996 in the landmark 1st IAS meeting. That meeting boldly introduced the concept of highly active antiretroviral therapy (HAART) and this is the first time an international HIV/AIDS meeting has returned to Vancouver since then.

I have a particular affection for this meeting as not only is it cutting edge in terms of the latest basic and clinical science data being discussed, but it is particularly strong in tuning in on the political and social concerns around the virus. It is interesting to see how the main messages have changed over the years from ‘Break the Silence’ in Durban 2000 to ‘Access for All’ in Bangkok 2005. As a short report, I chose to talk about HIV testing and accessing HIV care in the ‘hard-to-reach’ groups, as we in Milton Keynes have a very high rate of late-stage HIV/AIDS diagnosis. Ironically, HIV testing formed the largest part of the IAS submissions in terms of research.

The theme this time was very much around ‘90-90-90’ (90% diagnosed, 90% on antiretrovirals and 90% with undetectable HIV viral loads) which has led to the city’s innovative TasP (treatment as prevention) and is thought to be a huge contribution to the 95% reduction in late-stage HIV in Vancouver over the past 20 years. Although we in the UK have 80% of individuals who know their status, I suspect this cascade will be lower in terms of those engaging in care, on antiretrovirals and those successfully suppressing the virus.

One WHO plenary session [2], however, suggested that although the demand for HIV testing is increasing, particularly point-of-care testing (POCT), modelling suggests this may not be enough to meet the 90-90-90 targets. The target of 90% of any one population being tested for HIV regardless of age, healthcare provider etc. clearly is a tall order, but nevertheless an opt-out programme is much needed. The recent introduction of self-testing at home may increase this uptake further but there is a clear need for linking local provision of healthcare services in areas of high prevalence. This has also led to talks of a 'test and treat' implementation, especially with the full release of the START study [3] data suggesting that patients with CD4 cell counts above 500 should be initiated on therapy. This will have consequences on HIV testing, but with dwindling healthcare budgets and growing cohorts it will be interesting to see how the UK policymakers and commissioners take this forward, especially alongside the likely implementation of PrEP.

I am always particularly keen to bring back innovative ideas to my own clinical practice. As I am a practising HIV physician in a high-prevalence area (around 0.3%), my main area of interest in this meeting was accessing the difficult-to-reach groups for HIV testing and care. HIV prevention budgets are, worryingly, being cut, which could lead to further rises in HIV/AIDS, and there were several focus group meetings to look at getting more links between the scientific groups and community to engage in awareness of the virus. Indeed the diversity of cultures in Vancouver itself was astonishing to see, and this has led to rises in HIV incidence in areas of the city, typically in the marginalised, impoverished areas as is seen in other countries. Rightly, the 'difficult-to-reach' groups are often cited as the injecting drug users, sex workers and the LGBT cohorts, but I think we should also include the cultural and ethnic minority groups who often have difficulties accessing healthcare as well as those living in rural areas compared to urban areas.

When I was here in 1991, the main indigenous group was the Canadian Aboriginal group, which according to the inspiring Aboriginal physician and 'film star' plenary speaker [4] is still a group which has high HIV risk for social and economic reasons, and this marginalisation has led to rises in HIV/AIDS. The vast ethnic diversity is very clearly seen here in Vancouver as the city continues to grow and prosper. There were many oral and poster sessions on initiatives and development of HIV testing.

One poster described how crucial it was for communities to mobilise and coordinate testing, which involves leadership, social cohesion, collective activities and community consciousness, leading to reduced HIV risk and reduced risk behaviours [5]. Community mobilisation programming, e.g. intensive workshops for men – street soccer, bars etc., related to what we are doing in Milton Keynes. This intervention increases the probability of HIV testing ($p < 0.01$), particularly with respect to rapid testing. A paper from the London School of Economics demonstrated the ongoing issues of stigmatisation [6] in HIV testing. Stigma between sexual partners is still a barrier. Thus informing the public that ART reduces transmission by 96% and a tested individual is safer was demonstrated in 122 villages in Malawi which have regular community meetings. This showed a shift in attitudes on transmission (70% in intervention vs 18% control), less stigma between sexual partners, and HIV testing 60% higher in intervention groups ($p = 0.035$). Most prefer a partner on ART to an untested partner, and more believe that someone on ART might find a new partner. There were plenty of data on HIV self-testing which itself made headlines here recently in the UK in terms of easily availability. High-risk groups

such as MSM stand to gain from this [7]. Self-testing showed significantly higher quarterly testing ($p=0.001$) and number of HIV tests. Less STI diagnosis is seen in the self-testing group in terms of condomless anal intercourse. Thus self-testing increases awareness of HIV status without affecting risk. Further research is required in other settings and populations. Media advertising is used for self-testing. Decentralising testing away from laboratories to patients is thus a sensible move and can make strides towards the 90-90-90 target. Interestingly, the instructions for use of self-testing can be quite confusing to some [8]. Evaluation of instructional materials for self-testing are rarely conducted where culturally relevant materials may be needed. 93% received an accurate result in supervised testing but 1% an inaccurate result. 4% performed the test incorrectly and 2% could not interpret the test result. 172 individuals in Zimbabwe were recruited in total. Urban and rural settings were compared, and it is possible that low literacy contributed to low HIV test accuracy. Thus supportive materials appropriate to country and not necessarily written/pictorial instructions are enough. Even opening the test and not being sure what to do next is a problem. The role of lay providers in HIV testing services will also be a way for the future [9]. This can alleviate shortages in resource-limited areas and many countries permit this. Good policy implementation is needed to scale this up and ensure access to treatment services [10]. High numbers preferred getting the result on the same day (91%) and 97% would recommend the test to others and would consider repeating the test if put in a risk position again.

Young people are still the most vulnerable group in many studies shown here [11]. In the USA, 18–24 year olds in impoverished areas were shown to be the highest risk groups, and these groups utilised rapid testing. There is also a gradual move from voluntary counselling and testing (VCT), which seems rather dated now considering it was a vital component at the start of the pandemic in the 80s. This oral plenary session [12] showed 75% of sub-Saharan Africa tested positive and were now on ARTs. 54% of adults know their status but 46% do not, which is about 17.1 million in Africa. VCT makes little sense now compared to before routine testing. Newer, emerging technologies in out-of-facility areas are also leading the way [13], preferably using oral specimens. A new 60-second INSTI test has now been developed with an HIV self-screening strategy and using Apps. Incidence testing also involves evaluating the impact and knowing your epidemic. Development of short-term and long-term HIV test indicate possible duration of virus carriage but the context of human rights and criminalisation must be remembered. There was some small evidence of forced, coercive testing of some individuals by partners [14]. The use of social media has further accelerated in many ways [15] community engagement with leaders and members for more mobile testing and community health campaigns. Posters, pamphlets, church/mosque, radio etc. co-exist with other screening and healthcare campaigns, but those not tested included males, singles and surprisingly those in higher education, which all fell through cracks, and cost-effective pathways and financial strategies are needed to reach these hard-to-access groups [16].

Despite a lot of optimistic, positive messages there were reminders that a lot of work was still needed [17]. In a joint plenary session, we were reminded that 54% globally were still undiagnosed with HIV, with over 70% of this being MSM. HIV self-testing can provide autonomy, privacy, confidentiality and time savings, and is rightly a large part of prevention strategy. Drawbacks, however, were self-harm, coercion, violence, negative emotions and the lack of counselling. The cost of the test and the possibility that this could contribute to higher risk behaviours were all documented in several studies. Errors were reported on blood/oral

collecting, instructions and interpretation. eHealth links were needed, e.g. Facebook, Skype, and social networks. Social harm was managed with a 24-hour helpline, counselling and structural issues, e.g. regulations, sensitivity, utilization, performance. A study suggested an accepted cost of a test was US\$20, with acceptance of distribution via social networking, Apps, vouchers, email etc. There also needs to be easy-to-use videos, Apps, fewer steps, more pictures, clear follow-up guidance, pathways if positive etc. Discreet packaging when purchasing also must appeal to MSM to preserve confidentiality and maybe packaging the tests in pairs for partners with clear guidance to uptake and linking to care.

1. CONCORDE study – 1st IAS meeting, Vancouver City 1996
2. Securing Uninterrupted Supply of ARVs and HIV diagnostics to Achieve 90-90-90 Targets. *WHO*. Abstract SUSA18
3. The Strategic Timing of AntiRetroviral Treatment (START) Study: Results and Their Implications. J.Lundgren, A.Babiker et al Abstract MOSY03
4. Kevin Anderson – Personal Communication. Opening Session SUPL01
5. MOPDC01 Lippman SA – Communities can mobilise to test: Findings from a community randomized trial of a theory-based community mobilisation intervention in South Africa
6. MOPDC02 Derksen L – Reducing stigma and increasing HIV testing with a health information intervention, a cluster randomised trial from Malawi.
7. MOPDC03 Katz D – HIV self-testing increases HIV testing frequency among high risk MSM.
8. MOPDC05 Napierala S – Supervised HIV self-testing to inform implementation and scale up of self-testing in Zimbabwe
9. Flynn, Johnson et al. The role of lay providers in HIV testing services.
10. Duran, Rossi et al. High acceptability of rapid HIV test in Argentina. Experience during a seroprevalence study in vulnerable groups.
11. Serrano, Philyaw et al. What individual and contextual factors are associated with Rapid HIV test use in USA?
12. MOSYO401 Samb B. Testing in the context of treatment expansion.
13. MOSYO402 Peter T. New technologies to advance HIV testing.
14. MOSYO403 Amon A. Enhanced testing in the context of Human Rights and criminalisation.
15. MOSYO404 Chamie G. Accelerating HIV testing to reach 90% coverage.
16. MOSYO405 Stover J. Cost and financial perspectives of HIV testing
17. WESY01 Lippmann S. MacPherson P. Jani I. The promises and pitfalls of new HIV testing Modalities.