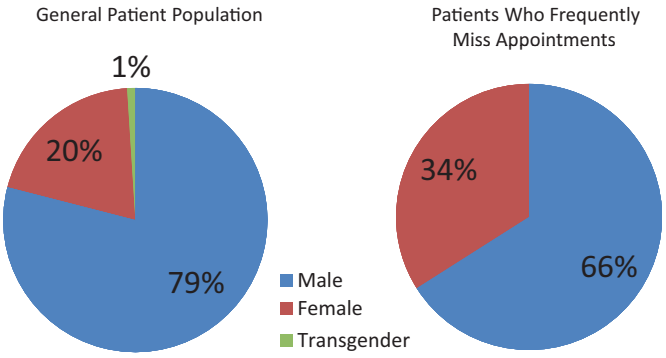
client population, while they make up 29% of the clients that frequently do not attend appointments.

Conclusions Surprisingly, a disproportionate percentage of individuals account for 1/5 of patients who do not attend or cancel appointments. Individuals surveyed by phone the majority had no actual perception of the average number of appointments they miss without cancelling. Interestingly, although the BCC serves 63 counties, 78% of those who frequently miss appointments live in the immediate area (within 30 miles of the BCC)- so transportation barriers that were identified during focus group sessions may not have a significant impact on those who frequently miss appointments.



Abstract P3-S3.07 Figure 1 Bluegrass care clinic: gender.

P3-S3.08 SENSITIVITY AND SPECIFICITY OF RAPID HIV TESTING IN A COMMUNITY SETTING

doi:10.1136/sextrans-2011-050108.457

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Background It was estimated in 2005 that 13% of men who have sex with men (MSM) in Montréal were HIV-positive, and that 23% of these were not aware of their diagnosis. Clinique l'Actuel introduced a pilot rapid HIV testing program using the MedMira kit in 2008. The objective of this study was to describe the sensitivity and specificity of rapid HIV tests in a community based, high HIV risk setting.

Methods An advertising campaign encouraged MSM and others at risk for HIV to undergo testing through dedicated clinics offering rapid HIV tests. Patients calling for testing deemed at high risk were given appointments within 2 weeks, where they filled out a short questionnaire, received medical consultation routine STI screening, pre- and post- test counselling and their HIV test results within the hour. Those consenting received with a MedMira or and INSTI rapid test and regular HIV screening. Any positive result was confirmed by Western blot.

Results 2500 individuals were tested: 98% men with a median age of 34 (IQR: 26–41). For the MedMira test there were 43 true positives, 2295 true negatives, 13 false positives and four false negatives. 145 patients received the finger-prick INSTI test giving two true positives and 143 true negatives. For MedMira, sensitivity was 91.5% and specificity 99.5% while both figures were 100% for INSTI. The four false negatives were also negative by standard ELISA but positive for P24 antigen. Patients testing positive for HIV had significantly more history of previous STI than those testing negative (p=0.041).

Conclusion In this setting sensitivity and specificity of the rapid tests used was comparable to standard testing. Acute seroconversion likely explains the four false negatives. As with conventional testing, rapid testing requires adequate counselling about the possibilities of a false negative test. In high-risk populations, routine STI screening should always be performed together with HIV screening.

P3-S3.09 NEW DRUGS TARGETING TOXICITIES HAVE HIGHEST HOPE OF IMPACTING PATIENT PROGNOSIS

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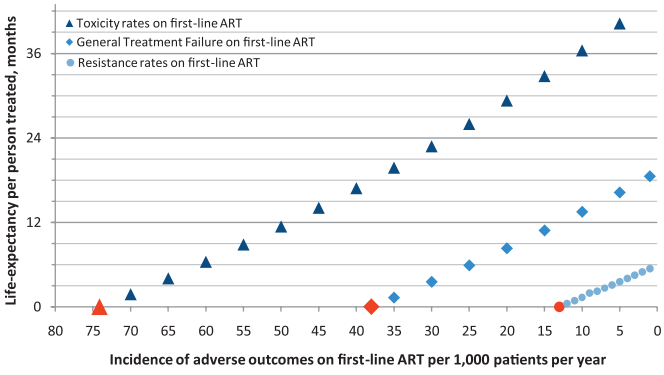
Background As more HIV drugs enter the market there is a need to evaluate the effect of various antiretroviral therapies (ART) on patient outcomes. We aim to quantify the impact of different first- and second-line ART strategies on patient outcome including TMC278, an investigative non-nucleoside reverse-transcriptase inhibitors, thought to have low toxicity rates.

Methods A deterministic model was developed representing a cohort of 100 000 HIV-infected individuals. The model was parameterised using data from Athena; a cohort encompassing all patients infected with HIV-1 followed longitudinally since 1996 at 25 HIV treatment centres in the Netherlands. Clinical, biological and immunological data for HIV-infected patients are collected upon entry and at each follow-up visit. The model allows comparison of different ART strategies and of the impact of adverse outcomes: (I) toxicity; (II) general failure and (III) resistance on time on ART and life-years saved per person treated.

Results One of the main reasons for switching treatment is toxicity; therefore, new drugs aimed at reducing toxicity will be valuable. The model shows that if TMC278 can reduce incidence of toxicity leading to discontinuation of first-line ART from 74 to 49 per 1000 patients per year (34%) compared with current treatment then this would equate to one additional life-year saved per patient (Abstract P3-S3.09 figure 1). In comparison, a reduction in general failure from 38 to 25 incidences per 1000 patients per year (34%) adds 6 months and a reduction in resistance from 13 to 1 incidence per 1000 patients per year (92%) adds only 5 months (Abstract P3-S3.09 figure 1). For second-line, reducing incidence of toxicity from 143 to 53 per 1000 patients per year (63%) will add one life-year to per patient. This compares favourably with empirical estimates of toxicity for TMC278 in clinical trials (70% reduction in toxicity leading to discontinuation of first-line ART compared with efavirenz). The model also shows that by reducing rates of toxicity for first-line ART, consequently improving patient prognosis, patients on average spend more time on first-line ART before switching. Decreasing toxicity by 34% equates to an additional 18 months on first-line ART and a 61% decrease in toxicity equates to about five additional years on first-line ART.



Abstract P3-S3.09 Figure 1 Increase in life-expectancy per person treated with reduced annual incidence of adverse outcomes per 1000 patients for first-line ART. The red markers indicate empirical data; the blue markers indicate simulated estimates.

Conclusions New drugs which target a reduction in toxicities have the highest impact on patient prognosis, and such drugs are within reach of current candidate products.

P3-S3.10 AN ASSESSMENT OF THE EFFECTS OF ANCILLARY SERVICES ON CD4 COUNTS AND VIRAL LOADS OF PEOPLE LIVING WITH HIV/AIDS

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Background The Ryan White Modernisation Care Act 2006 integrated medical case management with supportive social services to ensure that Persons Living with HIV/AIDS (PLWHA) from lower socioeconomic, marginalised groups, and those with mental health/substance use issues are sustained in medical care. This study sought to establish the relationship between the CD4 and viral load of PLWHA and the receipt of ancillary services.
Methods A random sample of N=222 subjects were drawn from the Bluegrass Care Clinic (BCC) database. The cohort was 67% white, 21.6% black, and 8.6% Hispanic with the majority of the subjects between 100 and 149% of the poverty level. Self-reported HIV risk factors for the sample were 59.9% MSM, 28.4% heterosexual, and 8.1% IDU. This sample adequately represents the population of the BCC as ethnicity, socioeconomic status and risk factors were similar for the clinic population as a whole. One way ANOVA tests were used to determine if the receipt of ancillary services by PLWHA in the BCC affects their viral loads and CD4 counts by using a multivariable analysis.
Results There was a statistically significant difference in mean CD4 counts when comparing between ethnicities. The ANOVA test showed a statistically significant relationship (p=0.002) between Hispanic ethnicity and mean CD4 count, as subjects in the study that were of Hispanic origin had lower mean CD4 counts (305) than non-Hispanic whites (550) and non-Hispanic African Americans (500). There was also a statistically significant difference (p=0.021) between the mean viral load of PLWHA having one to three mental health visits and PLWHA with no mental health visits at all.
Conclusion At the BCC, patients with adherence issues appear to be referred for mental health services, confirming the essential role of social workers on a multi-disciplinary HIV team. The BCC also has a Hispanic population with disproportionately lower CD4 counts. Implications for program improvement are to continue to target Hispanic patients with lower CD4 counts to retain them in medical care and improve adherence to ART medications. This study was limited by the fact that ancillary social services were lumped in with medical case management in the data set rather than delineated into individual service categories. Future research should use data sets that more accurately capture the various ancillary services provided to the sample subjects.

P3-S3.11 ABSTRACT WITHDRAWN

P3-S3.12 TRANSMITTED HIV DRUG RESISTANCE MUTATIONS IN ONTARIO, CANADA, 2002–2009

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Background We estimated the prevalence of transmitted HIV drug resistance (TDR) among HIV-positive outpatients in Ontario, Canada who were diagnosed since 2002 when the provincial laboratories started testing for drug resistance among treatment-naïve patients.
Methods We analysed data from the Ontario HIV Treatment Network Cohort Study, a multi-site open dynamic cohort of people living with HIV. Participants were recruited from specialised HIV clinics and primary care practices. Data were obtained from medical chart extractions, interviews and linked with data from the Ontario Public Health Laboratories, which performs almost all viral load and genotypic resistance testing (GRT). We analysed data from participants who received GRT testing while treatment-naïve, defined as (1) no record of antiretroviral use in their clinical chart and (2) detectable viral load. We used the Stanford University HIV Drug Resistance Database to identify TDR mutations in the viral sequences of the protease and reverse transcriptase genes. We used descriptive statistics to characterise the prevalence of TDR mutations and report results with 95% CI.
Results Among 623 persons diagnosed in 2002–2009, 330 received GRT while treatment naïve. Among those tested, the mean age was 39 (SD 9.9); 12% were female, 65% men who have sex with men (MSM), and 66% white. The median baseline viral load count was 4.5 log10 copies/ml (IQR 3.9–5.0) and the median baseline CD4 count was 399 cells/mm^3 (IQR 240–540). Overall, 13.6% (CI 9.9 to 17.3%) had one or more drug resistance mutations, and 8.8% (CI 5.7 to 11.8%), 4.8% (CI 2.5 to 7.2%) and 2.7% (CI 1.0 to 4.5%) had mutations conferring resistance against nucleoside/tide reverse transcriptase inhibitors (NRTIs), non-nucleoside reverse transcriptase inhibitors (NNRTIs), or protease inhibitors (PIs), respectively. TDR against two or more drug classes was observed in 2.7% (CI 1.0 to 4.5%). The most common mutations were T215 revertants, M41L, and K103N in the RT gene. The proportion with TDR was highest among IDU (30.4%), intermediate among MSM and heterosexuals (12.0% and 14.3%, respectively) and lowest among persons from HIV endemic regions (6.9%) (p=0.06). Participants diagnosed in 2008–2009 had a higher proportion of NRTI mutations (18.2% vs 5.9%, p=0.0009) and NNRTI mutations (11.7% vs 2.8%, p=0.004) than those diagnosed earlier; such increases were observed among MSM, heterosexuals and IDU. There was no evidence of a change in PI mutation frequency over time.
Conclusion Our finding of a recent increase in NRTI and NNRTI mutations is concerning but requires confirmation, ideally in a random sample of specimens from newly diagnosed individuals. Although the actual dates of infection were unknown, the results suggest that drug-resistant strains are commonly circulating within the established HIV epidemics in Ontario.

Clinical sciences poster session 4: Human papillomavirus

P3-S4.01 HIGH-RISK HUMAN PAPILLOMAVIRUS (HR-HPV) INFECTION DETECTION IN RUSSIA: NEED TO INTENSIFY ITS LABORATORY PROFICIENCY WITH STANDARDISATION PROGRAMS?

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Introduction HR-HPV infection is one of the most often diagnosed viral STIs and has been linked to some anogenital malignances. HPV vaccines have not yet widely been approved for men, representing an important source of HPV transmission between sex partners. The earliest detection plays a crucial role in decreasing of a number of HR-HPV-infected (wo)men and some screening