Conclusion. Here, we have analyzed the trends in INSTI prevalence over time and in different countries for HIV1 clade B. We demonstrate that globally, INSTI DRAM among INSTI-naïve patients are rare and incidence does not increase significantly over time despite increased usage. In addition, published studies showed a downward trend in INSTI DRAM among INSTI-experienced patients after 2015, reflecting the higher barrier to resistance in the second generation INSTIs. The most commonly occurring INSTI DRAMs observed were N155H (more common in the era of f1st generation INSTI), Q148H/K/R, and G140S. As INSTI usage continues to increase globally, continued vigilance and surveillance is needed to monitor continued INSTI resistance over time.

Disclosures. **All Authors**: No reported disclosures

1017. Haves vs. Have-Nots in Healthcare Communication: Examining the Paradox Where PLHIV Who Need Quality Discussions with their Providers the Most, Access it the Least

Patricia De Los Rios, MSc[1]; Benjamin Young, MD, PhD[1]; Marvelous Muchenje, BSW, MSc. in Global Health[1]; Nicolas Van de Velde, PhD[1]; Chinyere Okoli, PharmD, MSc, DIP[1]; [1]ViiV Healthcare, Toronto, ON, Canada

Session: P-47. HIV: Treatment

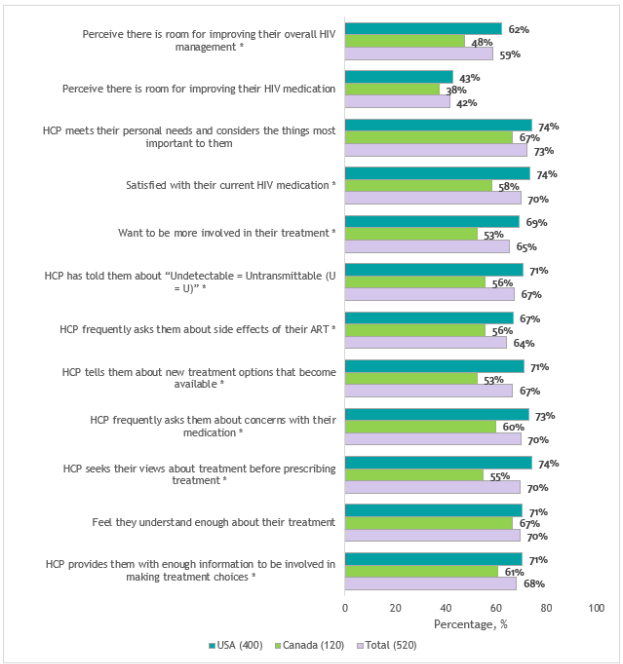
Background. Quality communication between patients & HCPs is important to help to identify/address treatment gaps. Who initiates this communication may vary, but impact of good quality communication as a marker of successful care has not been fully explored in PLHIV. We investigated whether perceived comfort discussing salient issues with HCPs differed between PLHIV with vs without specific treatment challenges.

Methods. We analyzed self-reported data for 520 PLHIV from the 2019 Positive Perspectives study from Canada and USA. Engagement in care (low, moderate, high), was modified from the Observing Patient Involvement scale. Using Chi-squared tests, we compared communication barriers among those uncomfortable discussing with their HCP ($p< .05$).

Results. Mean age was 39.6 years. Perceived comfort discussing salient issues with HCPs was significantly lower among PLHIV with than without the specified challenges: discussing side effects (those experiencing side effects=50.4%[135/268] vs without=60.7%[153/252], p=.018); discussing privacy concerns (those hiding medications=41.3%[138/334] vs not hiding =66.7%[124/186], $p< .001$); discussing adherence challenges (those with suboptimal =42.4%[78/184] vs optimal adherence=57.7%[194/336], p=.001); discussing concerns about HIV illnesses (those without viral suppression=43.1%[90/209] vs virally suppressed=64.6%[201/311], $p< .001$); and discussing impact of HIV on their life (45.4%[100/220] vs 62.7%[188/300] among those reporting vs not reporting that HIV negatively impacts their life, respectively, $p< .001$). Among those uncomfortable discussing HCP/clinic-related barriers (eg, no time during visits, worried HCP might perceive them as "difficult") and limited self-efficacy were particularly more prevalent among those with vs without specific challenges (Figure 2). Pooled analysis showed that optimal self-rated health was 33.9%[42/124]; 52.1%[112/215]; and 68.5%[124/181] among those with low, moderate, & high engagement ($p< .001$, Figure 3).

Figure 1

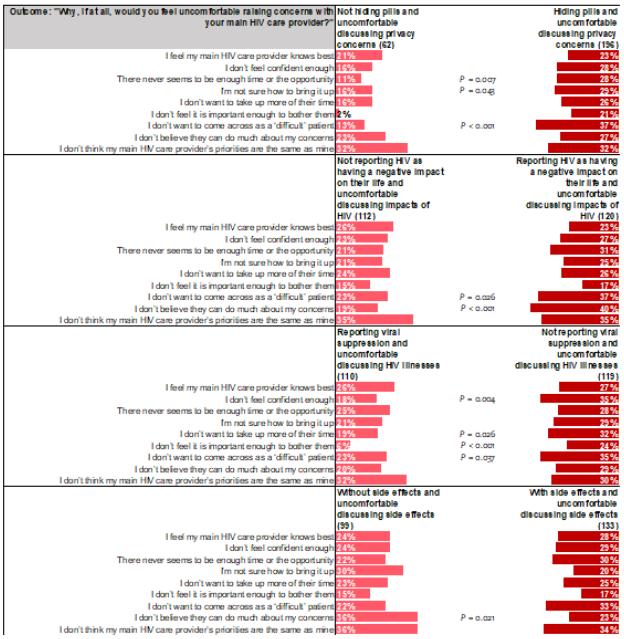
Figure 1. Indicators of communication between HCPs and PLHIV in Canada and the USA.



P < 0.05 for the difference between the U.S.A and Canada.

Figure 2

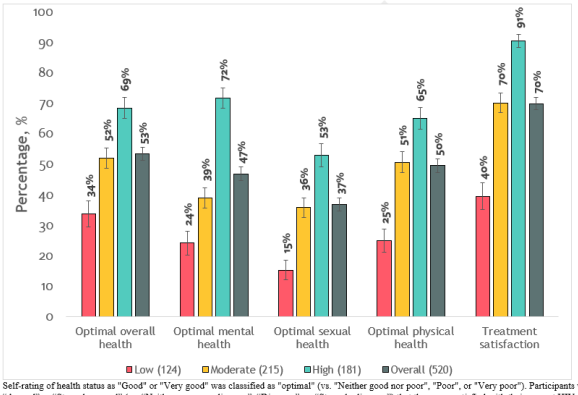
Figure 2. Comparisons of perceived barriers between those with vs. without specific unmet needs, among those who reported being uncomfortable discussing the specified issue with their healthcare provider.



P-values shown for only statistically significant results

Figure 3

Figure 3. Relationship between extent of patient engagement in care and health-related outcomes among people living with HIV in Canada and the U.S.A



Self-rating of health status as "Good" or "Very good" was classified as "optimal" (vs. "Neither good nor poor", "Poor", or "Very poor"). Participants who "Agreed" or "Strongly agreed" (vs. "Neither agree nor disagree", "Disagree", or "Strongly disagree") that they were satisfied with their current HIV medication were classified as reporting treatment satisfaction.

Conclusion. Individuals uncomfortable discussing issues with their HCP reported greater treatment challenges. Proactive HCP-driven high-quality communications with all patients is necessary to help address these concerns.

Disclosures. Patricia De Los Rios, MSc, GlaxoSmithKline (Shareholder) ViiV Healthcare (Employee) Benjamin Young, MD, PhD, ViiV Healthcare (Employee) Marvelous Muchenje, BSW, MSc. in Global Health, ViiV Healthcare Canada (Employee) Nicolas Van de Velde, PhD, GlaxoSmithKline (Shareholder) ViiV Healthcare (Employee) Chinyere Okoli, PharmD, MSc, DIP, ViiV Healthcare (Employee)

1018. Health Technology Assessment of New Long-Acting, Directly-Observed HIV Treatments in Canada: Impact of Real-World Adherence to Daily Oral Therapy on Treatment, Transmission and Cost-Effectiveness

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Session: P-47. HIV: Treatment

Background. Current antiretroviral therapy (ART) has dramatically improved outcomes for people living with HIV (PLWHIV), however adherence to daily oral dosing remains a challenge for some. New, long-acting (LA) ARTs which are directly administered by physicians eliminate the need to adhere to daily oral dosing and may improve clinical outcomes. The study objective was to evaluate costs and QALYs associated with improved adherence achieved via a novel, directly-observed therapy (DOT) of a monthly LA injectable ART, compared to standard of care (SoC), daily oral therapy.

Methods. A published Markov cohort state-transition model was adapted to model the impact of treatment adherence and subsequent disease transmission. Without the need to adhere to daily dosing, the efficacy of the injectable was modelled independent of adherence whereas virologic suppression in the SoC arm was adjusted to reflect published data on adherence to daily dosing (8.12% below optimal levels observed in clinical trials).

Results. This evidence-based approach of accounting for adherence revealed an increase in lifetime costs for oral SOC of approximately $850, and QALY loss of 0.109 when compared to results without accounting for adherence. Disease transmission results yielded 3 cases averted of HIV per 1,000 patients with LA's impact on adherence.

Conclusion. In the absence of comparative adherence estimates between a LA, injectable DOT and daily oral therapy in the real world, an evidence-based approach provides a method to address the uncertainty around the true impact on costs and QALYs of a novel mode of administration.

Disclosures. Erin Arthurs, MSc, GlaxoSmithKline (Employee) Ben Parker, MSc, HEOR Ltd. (Employee) Ian Jacob, MSc, HEOR Ltd (Employee) Debbie Becker, MSc, GSK (Consultant) Amy Lee, MSc, PhD, GSK (Consultant) Olivia Hayward, PhD, HEOR ltd. (Employee) Vasiliki Chounta, MSc, GlaxoSmithKline (Shareholder)ViiV Healthcare (Employee) Sarah-Jane Anderson, PhD, GlaxoSmithKline (Employee, Shareholder) Nicolas Van de Velde, PhD, GlaxoSmithKline (Shareholder)ViiV Healthcare (Employee)

1019. Healthcare Resource Utilization and Cost of People Living with HIV (PLWH) in US Commercial and Medicare Advantage Health Plans

Julie Priest, MSPH[1]; Erin Hulbert, MS[2]; Bruce L. Gilliam, MD[1]; Tanya Burton, PhD[2]; [1]ViiV Healthcare, Durham, NC; [2]Optum, Eden Prairie, Minnesota

Session: P-47. HIV: Treatment

Background. The goal of HIV treatment is to achieve and maintain virologic suppression to prevent disease progression. Patients with uncontrolled HIV and decreasing CD4 counts can experience more health problems and increased health care resource utilization (HCRU) and cost. The objectives were to describe the clinical characteristics, HCRU and cost of PLWH in US Commercial and Medicare Advantage health plans by CD4 count.

Methods. A retrospective cohort study of PLWH aged 18+ between 01/01/2014-03/31/2018 in the Optum Research Database was conducted. Patients were continuously enrolled 6 months before (baseline) and 12 months after (unless evidence of death) the first identified antiretroviral (ARV) therapy (follow-up). Patients were classified as heavily treatment-experienced (HTE) if their regimen indicated an ARV therapy used to treat multi-drug resistant (MDR) virus, Non-HTE if treatment did not include an HTE regimen, or Treatment-Naïve if they were not treated with any ARV medication during baseline. All variables were summarized descriptively by the CD4 count closest to the first ARV regimen and compared using chi-square or F-test/ANOVA.

Results. 5,522 patients met the inclusion criteria including 18% with a CD4 count < 200, 70% 200-500, and 12% > 500 cells/mm^3. Patients in the lowest CD4 group were more likely to be HTE or Naïve, African-American, female, living in the South, earn less and have at least one AIDS defining condition (Table 1). Patients in the lowest CD4 group also had the highest mortality rate, (6% in the < 200, 2% 200-500, 1% in the > 500 group; p-value < 0.001) and the highest rates of emergency room visits and inpatient stays (Figure 1). All-cause total cost among patients with CD4 counts < 200 was 51% higher than those with CD4 > 500, and medical cost was 207% higher driven primarily by inpatient health care cost. Similar trends were seen for HIV-related care. Among the lowest CD4 group, average total cost was highest in the HTE group followed by Naïve patients.

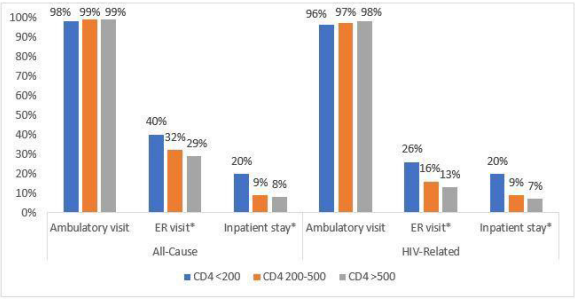
Table 1. Baseline Characteristics by CD4 count group, cells/mm3

Table 1. Baseline Characteristics by CD4 count group, cells/mm^3

Baseline Characteristics	CD4 <200 979 (18%)	CD4 200-500 3,891 (70%)	CD4 >500 652 (12%)	P-value
Age, mean (SD)	47 (12)	47 (13)	48 (12)	0.631
Males, n (%)	807 (82%)	3349 (86%)	558 (86%)	0.016
Race/Ethnicity, n (%)				<0.001
White	380 (39%)	1676 (43%)	341 (52%)	
African American/Black	292 (30%)	1069 (27%)	146 (22%)	
Hispanic	142 (15%)	665 (17%)	92 (14%)	
Other/Unknown	165 (17%)	481 (12%)	73 (11%)	
Payer type, n (%)				<0.001
Commercial	746 (76%)	3125 (80%)	558 (86%)	
Medicare Advantage	233 (24%)	766 (20%)	94 (14%)	
HIV Cohort, n (%)				<0.001
Heavily Treatment Experienced	244 (25%)	789 (20%)	84 (13%)	
Treatment Experienced	192 (20%)	1799 (46%)	403 (62%)	
Naïve	543 (55%)	1303 (33%)	165 (25%)	
Geographic Region, n (%)				<0.001
Northeast	93(10%)	471 (12%)	75 (12%)	
Midwest	63 (6%)	296 (8%)	45 (7%)	
South	719 (73%)	2619 (67%)	409 (63%)	
West	104 (11%)	505 (13%)	123 (19%)	
Household Income, n (%)				<0.001
Low (below $40,000)	226 (23%)	818 (21%)	121 (19%)	
Middle ($40,000 - $124,999)	413 (42%)	1804 (46%)	299 (46%)	
High ($125,000+)	101 (10%)	510 (13%)	100 (15%)	
Unknown/Missing	239 (24%)	759 (20%)	132 (20%)	
Any AIDS defining condition at baseline, n (%)	253 (26%)	302 (8%)	31 (5%)	<0.001

Figure 1. Percentage of Patients with All-cause and HIV-related Healthcare Utilization by CD4 Group

Figure 1. Percentage of Patients with All-cause and HIV-related Healthcare Utilization by CD4 Group



*P-value < 0.05

Conclusion. There are still PLWH with CD4 counts < 200 cells/mm^3 which can result in more AIDS defining conditions, higher mortality risk, and higher HCRU and cost. These results suggest interventions may be needed to diagnose and treat patients sooner and closely monitor the health of more advanced patients for worsening outcomes.

Disclosures. Julie Priest, MSPH, GlaxoSmithKline (Employee, Shareholder) Erin Hulbert, MS, Optum (Employee)ViiV (Grant/Research Support) Bruce L. Gilliam, MD, ViiV Healthcare (Employee)

1020. Higher efavirenz mid-dose plasma concentration is associated with less weight gain among virologically suppressed people living with HIV

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