Figure 1. Example of methodology for calculating the estimated minimum cost of production for orlistat

Results. Weight loss and anti-diabetic treatments can be generically manufactured at low per-course costs, e.g. $85 per person per year for oral treatments such as orlistat and $1 per person per month for metformin. However, prices for a year of treatment with orlistat are as high as $1,205 in the USA and as low as $11 in Vietnam. In comparison, a month of ARV treatment costs about $15 via global health institutions like CHAI. Price for injectable (subcutaneous) treatments were higher, ranging from $1,985 for liraglutide in USA to $330 in Morocco, whilst they could potentially be profitably sold for $155 for a 12-week course. No export price data was available for semaglutide. When compared against international list prices, we found wide variations between countries.

Table 1. Summary of drug prices and minimum cost estimates

| Drug, route (Course duration and dose) | Highest course list price (Country) | Lowest course list price (Country) | Estimated minimum cost course (USD) |
|---------------------------------------|------------------------------------|-----------------------------------|------------------------------------|
| Metformin (PO) (500mg/day for 30 days) | $0.72 (USA)                        | $0.01 (Kenya)                     | $1.03                              |
| Topiramate (PO) (12mg/day for 30 days) | $27 (Pw)                           | $0.70 (Kenya)                     | $0.86                              |
| Phenetermine (PO) (35mg/day for 30 days) | $1.53 (USA)                        | $0.64 (Kenya)                     | $0.53                              |
| Topiramate-phenetermine (PO) (92/15mg/day for 36 days) | $1.97 (USA) | $1.97 (USA) | $4.78 |
| Semaglutide (PO) (1mg/day for 30 days) | $578 (USA)                         | $97 (UK)                          | NA                                 |
| Orlistat (PO) (120mg TDS for 360 days) | $1,295 (USA)                       | $11 (Vietnam)                     | $85                                |
| Liraglutide (5/100mg/day for 84 days) | $1,985 (USA)                       | $330 (Morocco)                    | $155                               |
| Nalidixic-acetone suspension (PO) (60mg/90mg/day for 360 days) | $3.918 (USA) | $1.156 (UK) | $655 |

Figure 2. Orlistat course costs in a range of countries, compared with estimated minimum cost

Figure 3. Liraglutide course costs in a range of countries, compared with estimated minimum cost

Conclusion. We show that weight loss treatments can be manufactured and sold profitably for low prices, but have a wide price range between countries. Government and non-governmental healthcare systems should be evaluating weight loss agents for inclusion within ART programmes.

Disclosures. All Authors: No reported disclosures

892. Determination of the Unavailability of Alternative Antiretroviral Formulations
Milena M. Murray, PharmD, MSc, BCIDP, AAHIVP; Devon Flynn, PharmD, MPH, BCPS, AAHIVP; Leonard A. Sowah, MBChB, MPH, AAHIVS, FACP; Aaron Austin, n/a; Eric Farmer, PharmD, BCPS, AAHIVP; 1Midwestern University, Chicago College of Pharmacy, Downers Grove, Illinois; 2Oregon Health & Science University, Portland, Oregon; 3National Institute of Allergy and Infectious Diseases, Rockville, Maryland; 4American Academy of HIV Medicine, Pensacola, Florida; 5Indiana University Health LifeCare Clinic, Indianapolis, Indiana

Session: P-51. HIV: Treatment

Background. Many pediatric and some adult people living with HIV (PLWH) are unable to swallow tablets and require alternative antiretroviral formulations (ARVF) such as liquids, chewable tablets, or powders for suspension. A growing number of issues with the timely procurement of alternative ARVF have been reported; the full scope of this problem is unknown. Without access to appropriate treatment, PLWH are at increased risk of poor disease outcomes. This study's objective was to determine the scope of availability issues of ARVF and its potential impact on patient care.

Methods. An online survey invitation was sent to members of AAHIVM and the ACCP HIV PRN. Data collection included provider demographics, number of issues related to ARVF availability, time spent procuring ARVFs, and identification of unavailable formulations. To determine potential impact on clinical care and cost of care the time required to resolve shortages was summarized.

Results. The analyzable sample was 154, a majority of whom were pharmacists or physicians (n=132, 85.7%; Figure 1), in a clinical role (n=134, 87.0%), and serve pregnant patients (n=121, 79.2%). 85 (55.2%) practice at sites that provide care to > 300 PLWH, 81 (52.6%) practice at sites that did not serve pediatric patients. 525 instances of gaps in care due to ARVF unavailability were reported. In 283 instances, a more complex regimen was prescribed due to first-choice ARVF unavailability. Providers also reported 186 situations in which a less optimal regimen was used and 140 cases of treatment delays. The average time spent to resolve such issues was 2.7 hrs (CI: 1.3 – 4.2). The longest time reported was 72 hrs; most providers spent 1 hr or less. The most common unavailable ARVF were branded rilatiravir 80 mg/mL solution (n=12), zidovudine 50 mg/mL syrup (n=11), raltegravir 100 mg chewable tablets (n=11), and raltegravir 100 mg granules for suspension (n=10). Branded nevirapine 50 mg/5 mL suspension (n=7) and generic nevirapine 50mg/5ml powder for suspension (n=11) were also reported more frequently.

Distribution of Respondents by Provider Type
Conclusion. Our report suggests the unavailability of alternative ARV has the potential to significantly impact patient care. Further research is needed to identify the root causes of this problem to determine specific solutions.

Disclosures. Milena M. Murray, PharmD, MSc, BCIDP, AAHIVP, Merck (Speaker’s Bureau) Theratechnologies (Other Financial or Material Support, Medical Advisory Board) Eric Farmer, PharmD, BCPS, AAHIVP, TheraTechnologies, Inc (Other Financial or Material Support, Medical Advisory Board)

893. Evaluating Weight Gain in Treatment-naive, HIV-infected Patients Started on Antiretroviral Therapy

Nimra Chaudhry, PharmD; Eri Cani, PharmD, BCPS, BCIDP; Lendelle Raymond, PharmD, BCIDP; Tae Park, PharmD, BCPS-ID; Timothy Kanter, MD; BronxCare Health System, Brooklyn, New York

Session: P-51. HIV: Treatment

Background. There is increasing evidence that integrase strand transfer inhibitors (INSTIs) are associated with more weight gain when compared to other anti-retroviral (ART) classes. Thus, the primary objective of the study was to evaluate the difference in weight gain at 6 and 18 months among treatment-naive patients started on an INSTI-based versus a non INSTI-based ART regimen.

Methods. This was a retrospective cohort study of ART-naive adults who were initiated and maintained on INSTI and non INSTI-based regimens for at least 18 months at an HIV clinic in an inner-city hospital from January 2013 to June 2019. The non-INSTI-based regimens were darunavir (DRV) or rilpivirine (RPV)-based. Data collected included patient demographics, ART regimen, pre- and post-ART initiation weight in kilograms (kg), body mass index (BMI), CD4 count, and viral load. A two-tailed t-test was used to compare change in weight in INSTI-based versus non INSTI-based regimens. Sub-group analyses were conducted using the ANOVA test.

Results. Out of 170 patients, 60% were initiated on an INSTI-based regimen, 7.1% on a DRV-based regimen, and 32.9% on a RPV-based regimen. Of the patients initiated on INSTI-based regimens, 73.5% were on elvitegravir (EVG), 16.7% on dolutegravir, 8.8% on bictegravir, and 0.98% on raltegravir. The mean age at ART initiation was 38 years with majority of the patients described as Black. More male patients received an INSTI-based regimen compared to females (77.5% vs. 32%). The average change in weight at 6 and 18 months in the INSTI-based group vs non INSTI-based group was +3.6 kg vs. +2.9 kg (95% CI -2.2-0.7, p=0.317) and +5.7 kg vs. +4.8 kg (95% CI -3.2-1.2, p=0.357) respectively. There was no significant average change in weight among the INSTI-based regimens (+3.6 kg), vs DRV (+5.3 kg), or RPV (+2.4 kg) based regimens at 6 months (+p=0.108) and 18 months (+p=0.186) respectively. Among the INSTIs, EVG was associated with the highest increase in weight at both 6 and 18 months (+3.9 kg and +5.8 kg). Forty-six percent of patients in the INSTI-based group respectively. Among the INSTIs, EVG was associated with the highest increase in weight at both 6 and 18 months (+3.9 kg and +5.8 kg). Forty-six percent of patients in the INSTI-based group versus 32% in the non-INSTI groups.

Conclusion. When comparing INSTI-based to DRV- or RPV-based regimens, there was no significant increase in average weight at 6 and 18 months.

Disclosures. All Authors: No reported disclosures

894. Trend of Transmitted Resistance Associated Mutations in People Living with HIV (PLWH) in a Large Southeastern U.S. Ryan White Clinic

Alisha Kaurouklis, Pharm.D.; Amber F. Lakd, Pharm.D., BCACP, AAHIVP; Caroline Hamilton, PA-C, MPH; Annasteria Mims, MPH; Gina Askar, MD; Cheryl Newman, MD; Augusta University, Waynesboro, Georgia; Augusta University/Medical College of Georgia, Augusta, Georgia

Session: P-51. HIV: Treatment

Background. Department of Health and Human Services (DHHS) guidelines recommend integrase strand transfer inhibitors (INSTIs) as the backbone of preferred initial antiretroviral (ART) regimens (1). Baseline mutation rates for the INSTI class is 0.8% compared with an overall rate of 19% for all ART classes, based on Centers for Disease Control and Prevention (CDC) U.S. data from 2013-16 (2). First-generation INSTIs (raltegravir and elvitegravir) have a lower genetic barrier to resistance compared with newer, second generation INSTIs (bictegravir and dolutegravir) (3, 4).

DHHS guidelines do not currently recommend routine HIV genotypic resistance testing to INSTIs prior to ART initiation (1). Our study seeks to determine the current prevalence of transmitted INSTI and overall resistance in a large southeastern U.S. Ryan White clinic.

Methods. This was a single-center, retrospective analysis of treatment naive PLWH presenting for care from January 1, 2017 to December 31, 2020. Of these, 164 had a baseline genotype performed by one of two commercially available assays – Vela Genomics or ViroSeq. Subsequent interpretations were based on Stanford HIV Drug Resistance Database.

Results. 65 patients (39.6%) had at least one transmitted resistance associated mutation (RAMs). Of these, 24 (36.9%) had an INSTI RAM. Baseline PI, NRTI, and NNRTI RAMs declined during the four-year interval (2017-2020), while the rate of INSTI RAMs increased from 11.1% to 19%; all conferred resistance to the first generation INSTIs with one also conferring resistance to second generation INSTIs.

Conclusion. INSTI Resistance Associated Mutation Prevalence 2017-2020

Disclosures. Eric Farmer, PharmD, BCPS, AAHIVP; Tae Park, PharmD, BCPS-ID; Milena M. Murray, PharmD, MSc, BCIDP, AAHIVP; TheraTechnologies, Inc (Other Financial or Material Support, Medical Advisory Board)