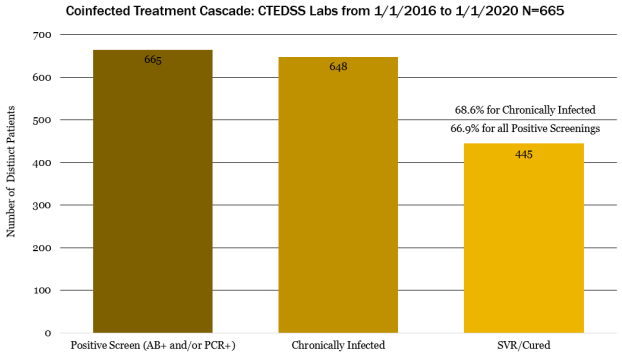
Treatment cascade for all surveillance entries with labs from 1/1/2016 to 1/1/2020



Conclusion. It is feasible to create statewide treatment cascades for HIV/HCV coinfected individuals. SVR rates improved from 36.5% to 68.6% with the use a of more recent HCV surveillance timeline. Contributing factors include: 2016 HCV case definition change (increased HCV PCR testing); electronic lab interface with CTEDSS being able to record negative PCRs in 2018; enhanced DAA availability and implementation. Future studies should adopt this approach which more accurately represents the HCV care status of the current co-infected population.

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

933. Cured vs. Not Yet Treated: Population Differences for HIV/HCV Co-infected Patients Navigating the HCV Care Cascade in 11 Connecticut Clinics

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Session: P-44. HIV: Complications and Special Populations

Background. Hepatitis C (HCV) care cascades for persons with HIV/HCV co-infection are hampered by incomplete HCV surveillance data, lack of standardized matching algorithms, and incomplete ability to determine HCV treatment status from surveillance alone. However, client-level data from individual clinics can be combined into multi-site cascades to assess progress toward micro-elimination goals. To achieve these goals, characterization of treatment gaps is crucial. Looking at trends in 11 HIV clinics, we examine correlates of not entering/initiating HCV therapy.

Methods. We established a partnership with CT Dept. of Public Health and 11 HIV clinics through a HRSA SPNS grant (047). Lists of HIV/HCV co-infected individuals obtaining care from these clinics from 1/2009-9/2018 were created using data from HIV (eHARS) and HCV (CTEDSS) surveillance, individual clinic rosters and a validated matching algorithm. Clinic personnel reviewed these lists to determine who were treatment eligible (TE) and their current HCV treatment status (e.g. treatment initiated, SVR documented, untreated but in clinical care). Clinic lists were updated regularly to reflect changes in overall patient status (e.g. deceased, relocated, transferred care). We performed bivariate analysis to identify correlates of treatment initiation including odds ratios with 95% confidence intervals.

Results. Of 7265 patients receiving HIV-related services, 2117 matched to HCV surveillance, representing 1496 unique patients. As of 6/1/2020, 821 patients were TE, 727 (89% of TE) were in active care, 630 (77%) initiated treatment, 620 (76%) completed treatment, 584 (71%) achieved SVR. Of the TE group, 77 (9%) had not yet initiated treatment. Compared to initiators of HCV therapy, patients not yet initiating treatment are more likely to be women (OR 1.7 95% CI 1.1-2.8), and black (OR 1.9 95% CI 1.1-3.1), with unsupressed HIV viral loads (OR 2.5, 95% CI 1.5-4.0).

Conclusion. This work capitalizes on the feasibility of creating a care cascade for HIV/HCV by Data to Care methods. Patients in partner clinics who had not yet initiated treatment were more likely to be women, black, and have poorly controlled HIV. Further efforts are needed to determine the barriers to treatment initiation among these groups.

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

934. Diagnostic Utility of Blood (1- >3)-β-D-Glucan Testing in Patients with HIV in Arkansas

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Session: P-44. HIV: Complications and Special Populations

Background. Blood (1- > 3)-β-D-Glucan (BDG) is a sensitive marker for *Pneumocystis jirovecii* pneumonia (PJP) in patients with AIDS (PWA). However, other fungal infections, including progressive disseminated histoplasmosis (PDH), cause high levels of BDG. At our hospital, PDH is a common diagnosis in PWA with fever and respiratory complaints, making it difficult to differentiate PJP from PDH based on clinical features alone. The objective of this study was to assess BDG as a diagnostic test for PJP in Arkansas where histoplasmosis is endemic.

Methods. We performed a retrospective review of patients with confirmed PJP and confirmed PDH who had BDG testing between 2014-2020. Positive cytological or histological evidence of *P. jirovecii* in bronchoalveolar lavage (BAL) or lung biopsy, or positive PCR on sputum or BAL confirmed PJP. Identification of *Histoplasma capsulatum* in culture of blood or other normally sterile site, histology showing typical yeast forms, or a positive urine *H. capsulatum* antigen assay (MiraVista Diagnostics) confirmed PDH. The Fungitell Assay determined BDG levels as follows: negative, < 60 pg/mL; indeterminate, 60-79 pg/mL, and positive > 80 pg/mL. Values below 31 pg/mL and those above 500 pg/mL were censored at 30 and 500, respectively. Respiratory symptoms were defined as the presence of cough, shortness of breath, or dyspnea on exertion.

Results. 53 episodes of PDH occurred in 46 patients. 42 were accompanied by a BDG result. Of these, 38 (90%) were positive; 3 (7%) were negative; and 1 (2%) was indeterminate. 44 (83%) of the PDH episodes were associated with respiratory symptoms. 36 of these had a BDG result. 34 (94%) were positive; 1 (3%) was negative; and 1 (3%) was indeterminate. 44 episodes of PJP occurred in 40 patients. All had a BDG result. 43 (98%) were positive.10 (23%) episodes of PJP were accompanied by a concomitant infection.

The mean BDG level was significantly higher in the PJP group compared to those with PDH and respiratory symptoms (P=.002). However, values overlapped substantially, and BDG positivity was not significantly more frequent in the PJP group (P=.586).

Results of (1->3)-β-D-Glucan Testing by Diagnosis

BDG level (pg/mL)	PDH (N=42)	PDH and respiratory symptoms (N=36)	PJP (N=44)	P*
Mean (SD)	322.5 (185.3)	315.6 (184.5)	422.5 (146.5)	0.002[a]
Min, max	30, 500	30, 500	30, 500	
Median (Q1-Q3)	369.5 (122-500)	320 (120-500)	500 (427-500)	
Negative <60	3 (7%)	1 (3%)	1 (2%)	0.586[b]
Indeterminate 60-79	1 (2%)	1 (3%)	-	
Positive ≥80	38 (90%)	34 (94%)	43 (98%)	

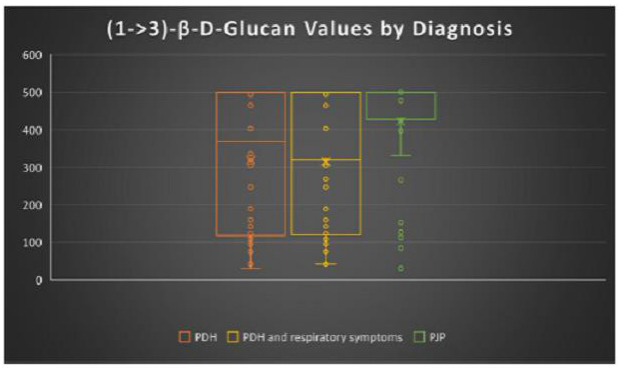
Note: BDG, (1-> 3)-β-D-Glucan; PDH, progressive disseminated histoplasmosis; PJP, *Pneumocystis jirovecii* pneumonia; SD, standard deviation; Q1, first quartile; Q3, third quartile

*Comparing PDH and respiratory symptoms to PJP

[a] Student's t-test

[b] Fisher's exact test (for calculation, indeterminate values were classified as negative)

Box-and-Whisker Display of (1->3)-β-D-Glucan Results



Conclusion. In Arkansas, BDG positivity is not a reliable marker of PJP because it cannot distinguish between PJP and PDH. Attributing an elevated BDG to PJP without additional evaluation risks misdiagnosis.

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

935. Effect of Tesamorelin in People with HIV with and without Dorsocervical Fat: Post Hoc Analysis of Phase III Double Blind Placebo Control Trial

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Session: P-44. HIV: Complications and Special Populations

Background. Lipohypertrophy is defined as excess fat deposition in abdominal defined as visceral adipose tissue (VAT) as well as in the dorsocervical region, breasts, trunk, and along with possible fat deposition in liver, muscle, myocardium and epicardium. Multiple factors have been described as contributing to lipohypertrophy in people living with HIV (PLWH), including patient characteristics, antiretroviral therapy (ART) and also impaired growth hormone (GH) secretion. Tesamorelin, a synthetic form of growth-hormone-releasing hormone (GHRH), is indicated for reduction of excess abdominal fat in PLWH with lipodystrophy

Methods. Post-hoc analysis was done on phase 3 randomized, double-blind, multicenter trials. Patients were eligible if between 18 and 65 years of age, had confirmed HIV infection, had evidence of excess abdominal fat accumulation and on stable ART regimen for 8 weeks or more. Participants were randomized to receive tesamorelin 2 mg daily or placebo daily for 26 weeks. Only tesamorelin responders, defined as patients with at least 8% decrease in VAT and who were adherent to the medication, were used for this analysis. Results are reported for patients with and without dorsocervical (DC) fat deposition.

Results. Demographic characteristics of responders at week 26 are shown according to presence or absence of DC fat (Table 1). At week 26, on average, the patients with DC fat deposition had higher BMI and waist circumference (WC) than the group without DC fat. Most patients in both groups had lipoatrophy. Metabolic and anthropometric parameters were measured at week 26 in patients with and without DC fat (Table 2). There was a decrease in VAT and also an improvement in their WC at week 26 in both groups.

Table 1: Baseline Characteristics of Tesamorelin Responder Subjects at Week 26, by Dorsocervical Status

	At 26 weeks		
Variable	With Dorsocervical Fat (N=88)	Without Dorsocervical Fat (N=144)	P value
Sex, n (%)			0.37
Male	75 (85.2)	128 (88.9)	
Age (years)			0.63
N	88	144	
mean (SD)	48.0 (6.8)	47.4 (7.1)	
Race, n (%)			0.50
Asian	0 (0)	1 (0.7)	
Black or African American	11 (12.5)	12 (8.3)	
Hispanic	4 (4.5)	12 (8.3)	
Other	1 (1.1)	2 (1.4)	
White	72 (81.8)	117 (81.3)	
ART as Baseline, n (%)			0.86
NRTI-NNRTI-NO PI	30 (34.1)	49 (34.0)	
NRTI-NNRTI-PI	10 (11.4)	11 (7.6)	
NRTI-PI-NO NNRTI	40 (45.5)	71 (49.3)	
NRTI Alone	3 (3.4)	6 (4.2)	
Other	5 (5.7)	7 (4.9)	
CD4 Cell count (cells/ mm³)			0.071
n	88	144	
mean (SD)	658.4 (296.69)	578.4 (279.85)	
Viral Load, n (%)			0.070
Undetectable	72 (81.8)	108 (75.0)	
50 - 400	11 (12.5)	17 (11.8)	
> 400	5 (5.7)	19 (13.2)	
BMI			<0.001
n	88	144	
Mean (SD)	29.683 (4.1724)	27.681 (3.2498)	
Presence of Lipoatrophy, n (%)			0.16
Yes	70 (79.5)	101 (70.1)	
Waist Circumference (cm)			0.002
N	88	144	
mean (SD)	105.99 (9.95)	102.32 (7.39)	
VAT (cm³)			0.57
N	88	144	
mean (SD)	189.68 (87.04)	184.88 (78.59)	
IGF-1 level (ng/mL)			0.32
N	86	143	
mean (SD)	147.50 (62.22)	154.10 (60.43)	

Table 2: Change in Abdominal Adiposity, Insulin-Like Growth Factor-1 Levels, and Metabolic Parameters Between Baseline and Week 26 Among Tesamorelin Responders

	Patients with Dorsocervical Fat (n=88)				*Patients without Dorsocervical Fat (n=144)*			
Variable	Baseline	Week 26	Change	P-value within group	Baseline	Week 26	Change	P value within group
VAT (cm³)				<0.001				<0.001
N	88	88	88		144	144	144	
mean (SD)	189.68 (87.04)	139.67 (67.95)	-50.01 (33.13)		184.88 (78.59)	134.65 (69.21)	-50.23 (33.95)	
Waist Circumference (cm)				<0.001				<0.001
N	88	88	88				143	
mean (SD)	105.99 (9.95)	102.37 (10.18)	-3.62 (6.35)		102.35 (7.41)	97.77 (9.12)	-4.58 (5.24)	
Trunk Fat (kg)				<0.001				<0.001
N	83	83	83				143	
mean (SD)	15.58 (4.73)	13.90 (4.74)	-1.68 (2.06)		13.71 (4.54)	11.87 (4.81)	-1.84 (2.03)	
Fat in Limbs (Kg)				0.47				<0.001
N	83	83	83				143	
mean (SD)	6.99 (3.74)	6.91 (3.68)	-0.086 (1.07)		6.48 (3.82)	6.06 (3.53)	-0.41 (0.98)	
Lean Mass (kg)				<0.001				<0.001
N	83	83	83				143	
mean (SD)	62.97 (9.64)	64.25 (10.24)	1.29 (2.08)		61.75 (9.55)	63.54 (9.72)	1.79 (2.59)	
IGF-1				<0.001				<0.001
N	85	85	85				142	
mean (SD)	148.70 (61.55)	298.60 (135.92)	149.90 (109.30)		154.10 (60.64)	281.40 (118.92)	127.40 (103.54)	
Adiponectin (ug/mL)								0.062
N	53	53	53				69	
mean (SD)	4.80 (2.86)	5.90 (3.11)	1.10 (1.32)		6.04 (5.38)	7.20 (7.30)	0.90 (3.89)	
Total Cholesterol (mmol/L)				0.401				<0.001
N	85	85	85				143	
mean (SD)	4.98 (1.05)	4.91 (0.96)	-0.067 (0.73)		5.09 (1.23)	4.82 (1.03)	-0.27 (0.94)	
HDL (mmol/L)				0.30				0.11
N	85	85	85				143	
mean (SD)	1.19 (0.36)	1.21 (0.36)	0.022 (0.19)		1.18 (0.40)	1.22 (0.41)	0.032 (0.24)	
HbA1C (%)				0.070				0.015
N	81	81	81				137	
mean (SD)	5.34 (0.43)	5.40 (0.50)	0.063 (0.31)		5.21 (0.51)	5.28 (0.58)	0.075 (0.36)	

Conclusion. This data demonstrates that tesamorelin is effective at reducing VAT in both patients with and without DC fat. The medication was well tolerated without significant changes to metabolic based measurements. Treatment of excessive VAT with tesamorelin has seemingly positive results in fat reduction in patients with or without DC fat deposition and our study contributes to the growing literature.

Disclosures. Marilyn de Chantal, PhD, Theratechnologies Inc (Employee) Pedro Mesquita, PhD, Theratechnologies, Inc. (Employee) Judith A. Aberg, MD, Theratechnology (Consultant)

936. Evaluating the Impact of Polypharmacy on Virologic Success in People with HIV

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Session: P-44. HIV: Complications and Special Populations

Background. As people with HIV (PWH) have experienced reductions in antiretroviral pill burden, there has been an increase in medications to manage non-AIDS-related co-morbidities. Previous studies have linked virologic failure to an increased pill burden. This study assessed whether polypharmacy and other variables affect success of HIV management in our population.

Methods. A retrospective, cross-sectional analysis of PWH receiving care at a Ryan White-funded clinic in New Jersey was performed. Eligible patients were ≥18 years old, had ≥2 visits in 2019 and were receiving antiretroviral therapy (ART). The primary endpoints were to determine the effect polypharmacy (defined as 5 or more non-ART pills per day) on virologic response rates (HIV RNA < 200 copies/mL). Secondary endpoints accounted for the impact of age, gender, race/ethnicity, HIV transmission risk factor, and AIDS diagnosis on virologic response. A descriptive analysis of comorbidities and medication classes was also completed. Logistic regression, chi square and student's t test were used for statistical analysis.

Results. 964 patients were included in the analysis, with 355 (37%) meeting the criteria for polypharmacy. Most patients were male (60%) and the mean age was 49 years of age. The racial/ethnic breakdown was 46% Hispanic, 45% Black and 8% White. Polypharmacy was associated with higher rates of virologic success compared to those with a lower pill burden: 94% vs 86% had an HIV RNA < 200 copies/mL (P=0.0003), respectively. ART pill burden was statistically, but not clinically higher among those with polypharmacy (1.34 vs 1.45, P=0.025). Virologic response was found to be higher among Hispanics and Whites in comparison to Black patients (OR 2.2, CI 1.4-3.5 and 3.0, CI 1.1-8.2). Patients with an AIDS diagnosis were less likely to achieve virologic response (OR 0.64, CI 0.42-0.99).

Conclusion. Patients with polypharmacy were more likely to achieve virologic success than paitents with a low pill burden in our population.

Disclosures. Humberto R. Jimenez, PharmD, BCPS, AAHIVP, Gilead (Speaker's Bureau)