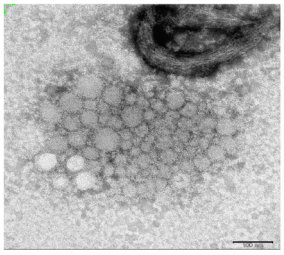
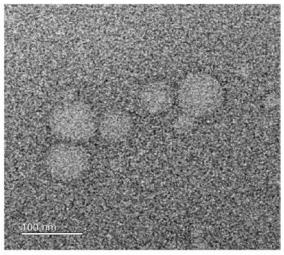


HEV-A4 p239



HEV-C1 p241

Transmission electron microscopy images of the two peptides used in this study

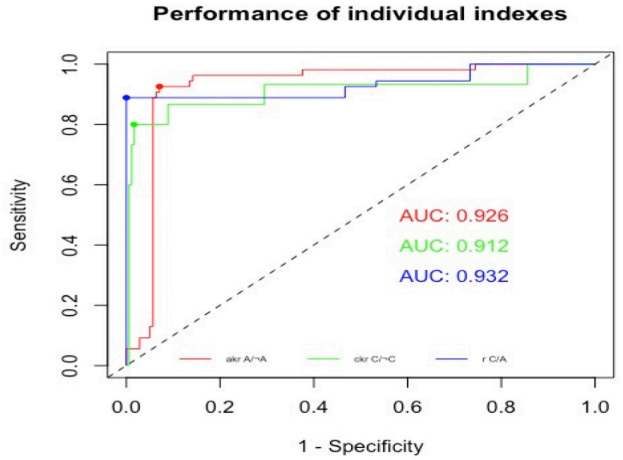
Diagnostic testing algorithm interpretation

HEV-A IgG EIA result	HEV-C IgG EIA result	Interpretation
Neg	Neg	Negative for both HEV-A and HEV-C IgG
Pos	Neg	Exposure to HEV-A
Neg	Pos	Exposure to HEV-C
Pos	Pos	Assessment of differentiating ratio of HEV-C/HEV-A S/N signals to assign as likely HEV-A or HEV-C exposure

Interpretation of results of testing using parallel enzymatic immunoassays

Results. Using cutoffs determined by ROC analysis (figure 2), HEV-A4 p239 and HEV-C p241 EIAs detected species-specific antibody responses well (sensitivity: 92.6% and 80% respectively) and were specific (92.9% and 98.3% respectively). The DC was 100% congruent with HEV-C RT-PCR and 88.9% congruent with HEV-A RT-PCR in RT-PCR positive samples. Incorporating all three cutoffs into the algorithm, we derived a 3×3 confusion matrix of RT-PCR sample assignation vs EIA algorithm classification (table 2). The Cohen's κ value was 0.883 indicating excellent inter-rater reliability.

ROC analysis for determining S/N cutoffs



Curve for A/A represents analysis for HEV-A4 p239 EIA. Curve for C/¬C represents analysis for HEV-C p241 EIA. Curve for r(C/A) represents analysis for the differentiating ratio.

3×3 confusion matrix comparing sample assignations by RT-PCR vs. EIA algorithm

		Algorithm (EIA-based)		
RT-PCR		HEV-A	HEV-C	Negative control
	HEV-A	47	2	5
	HEV-C	1	11	3
	Negative control	0	0	126

Conclusion. A parallel EIA system accurately differentiated HEV-A and HEV-C serological signatures in acute patient sera. This method can now be applied to seroprevalence studies to determine seroprevalence of rat hepatitis E in human populations.

Disclosures. **Siddharth Sridhar, FRCPath**, **Abbott** (Other Financial or Material Support, Speaker's honoraria)

911. Rapid Hepatitis C Treatment Initiation in Young People Who Inject Drugs: Final Results from the HCV-Seek, Test and Rapid Treatment (HCV-ST&RT) Randomized Pilot Clinical Trial

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Session: P-52. Hepatitis

Background. Young people who inject drugs (PWID) have higher HCV incidence and lower treatment initiation rates compared to their older peers. Novel, simplified care models need to be developed to engage, treat and cure hard to reach patient populations, such as young PWID.

Methods. We present final data from the randomized pilot clinical trial *HCV-Seek Test & Rapid Treatment* (HCV-ST&RT) for curing HCV in young PWID. Eligible participants were 18-29 years of age, HCV Ab+, treatment naïve, and had injected drugs in the past 30 days. Participants were randomized 1:1 to the Rapid Treatment or Usual Care arm. Participants randomized to ***Rapid Treatment*** received a same-day medical evaluation, confirmatory and baseline lab testing, and 7-day starter pack of sofosbuvir/velpatasvir. Participants in ***Usual Care*** received same-day HCV confirmatory testing and, if positive, facilitated referral to local providers. The primary endpoint was sustained virologic response (SVR12) in RNA+ participant within 12 months of enrollment.

Results. Among 47 eligible participants, 38 were enrolled and randomized. 14/18 in the Rapid Treatment arm and 11/20 in the Usual Care arm were confirmed HCV RNA+ and included in the intention-to-treat analysis. Demographics of the RNA+ participants were similar in the two arms with a mean age of 26 years; 24% women; 36% Hispanic and 4% non-Hispanic black. At baseline 24% were homeless, 52% received medication for opioid use disorder in the prior 90 days, and participants injected a median of 20 of the last 30 days. In the intention-to-treat analysis, 9/14 (64%) of the Rapid Treatment arm and 2/11 (18%) of the Usual Care arm had confirmed SVR12 (p=0.042). Of the 5 participants in the Rapid Treatment arm who did not achieve SVR12, 1 had treatment failure, 1 never started DAA therapy, 1 had an on-treatment response with pending SVR12 confirmation, and 2 were lost to follow-up.

Conclusion. Among young HCV RNA+ PWID, significantly higher rates of cure were achieved using the Rapid Treatment model with same day, low-threshold, simplified HCV care compared to facilitated referral. Meeting young PWID where they're at and initiating HCV treatment 'in the moment' without the need for repeat visits appears to be a promising strategy for treating this hard to reach population.

Disclosures. **Benjamin Eckhardt, MD, MS**, **Gilead Sciences** (Grant/Research Support) **Shashi Kapadia, MD**, **Gilead Sciences Inc** (Grant/Research Support) **Kristen Marks, MD**, **Gilead Sciences** (Grant/Research Support)

912. Expansion of Hepatitis C Treatment with New Medicaid Subscription Model in Louisiana

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Session: P-52. Hepatitis

Background. It is estimated that nearly 80,000 people with hepatitis C are living in Louisiana, many with Medicaid coverage. Previously, only Medicaid patients free from drugs and alcohol with a fibrosis score of F3 or F4 were eligible for treatment, resulting in few patients receiving treatment. Beginning in July 2019, generic sofosbuvir/velpatasvir was made available through the Medicaid program in a subscription model, allowing unlimited hepatitis C treatment in Louisiana's Medicaid program for 5 years at a set price to the program. This has dramatically expanded access to Hepatitis C treatment for people with Medicaid in Louisiana.

Methods. Patients with Hepatitis C seen in the Infectious Diseases Center at University Medical Center in New Orleans, in 2020 by the 5 main hepatitis C providers were included. Demographics and laboratory data were collected to determine outcomes.

Results. Most patients with a hepatitis C (HCV) viral load and insurance data had Medicaid (80%, N=275). Twenty-two (8%) were HIV co-infected. Most were men (75%) and African-American (77%). Among the mono-infected patients with Medicaid and an HCV viral load, 216 (85%) had an undetectable viral load by the beginning of June 2021. Of the remaining 37 patients, 30 patients were prescribed treatment; but did not take it (n=4), didn't follow-up (n=23), or followed-up but never got labs (n=3). One was treated but had a treatment failure (n=1). Six of the 37 were not prescribed medications due to a short life expectancy or significant drug interactions. The percentage of patients with an undetectable viral load was similar by gender and race, however younger age groups had lower viral suppression. In those aged less than 35, only 47% had an undetectable viral load and among those aged 36 to 44, it was 66%. Using the previous criteria of requiring a fibrosis score of F3 or F4, only 20% (n=44) would have been eligible for medicine to treat hepatitis C.

Conclusion. The new hepatitis C treatment subscription model with resultant removal of previous barriers has dramatically expanded treatment for people with Medicaid in Louisiana. More than five times the number of Medicaid patients received treatment in 2020 in our academic medical clinic.

Disclosures. **Yussef Bennani, MD, MPH**, **Gilead Sciences** (Scientific Research Study Investigator)**ViiV Healthcare** (Scientific Research Study Investigator)

913. Re-engagement using Historical Hepatitis C Antibody Results: Is it Worth the Effort?

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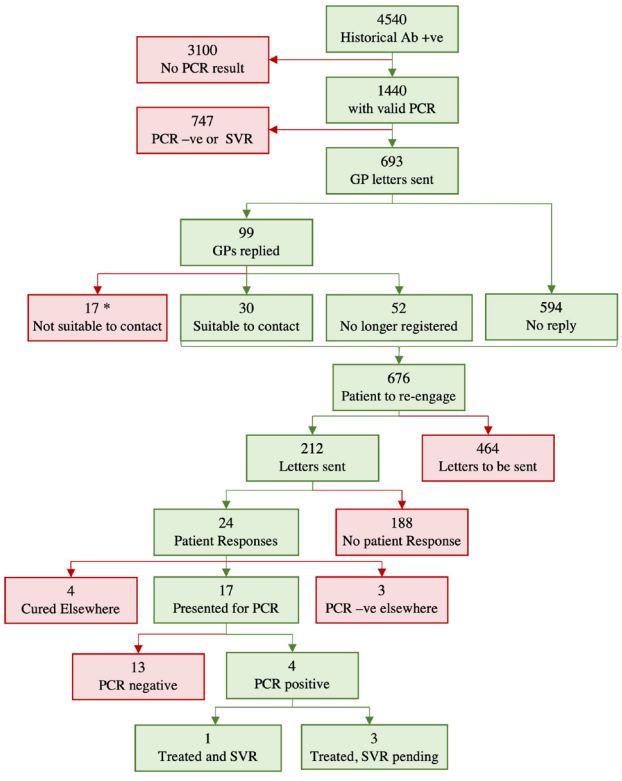
Session: P-52. Hepatitis

Background. The World Health Organisation aim to eliminate hepatitis C (HCV) as a public health concern by 2030. One aspect of Public Health England's (PHE) strategy to meet this target is to use historical surveillance data of anti-HCV positive patients identified by PHE to re-engage with offers of PCR testing and treatment if RNA-positive. Operational Delivery Networks (ODN) are responsible for enacting this initiative across 22 regions in England. We present an interim analysis and evaluation of the effectiveness of using this data to re-engage HCV-infected persons in the West Midlands ODN of England.

Methods. A dataset of historical anti-HCV positive antibody patients provided to the West Midlands ODN by PHE was cross-referenced with HCV RNA data from 01/01/1996 to 01/01/2019 from 5 regional laboratories and regional treatment databases. If HCV RNA positive, letters were sent to the general practitioner and to the patient to invite them for further testing and, if necessary, treatment to achieve SVR. This received no additional funding or support and occurred in addition to the routine clinical workload.

Results. From a dataset of 4,540 anti-HCV antibody results, 31.7% (n=1,440) had a PCR result: 48.1% (n=693) were PCR positive for HCV RNA with no evidence of cure. 693 letters were sent to GPs from Oct 2019 to Feb 2020 with responses from 14.2% (n=99). From July to Oct 2020 only 212 patient letters were sent (due to significant interruption due to the COVID-19 pandemic) and 11.3% (n=24) replied by May 2021. 17 presented for PCR testing and 4 were found to be viraemic. To date, one patient has achieved SVR and three have completed treatment awaiting SVR.

Re-Engagement Process



Flow diagram of re-engagement of patients with historical antibody-positive results for hepatitis C virus. * Of the 17 deemed not suitable to contact by the GP: 4 treated elsewhere, 3 had negative PCR elsewhere, 1 was unknown reason, 2 were under care of another hospital, 7 had died

Conclusion. The use of historical anti-HCV antibody results to re-engage people into testing and treatment for hepatitis C in this format is low yield. Rollout was limited by ongoing clinical work and the COVID-19 pandemic. Dedicated time and resources with a less restrictive cohort might improve yields.

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

914. The Relationship Between Buprenorphine Maintenance Therapy and Hepatitis C Virus Infection, Testing, and Treatment in Southern Appalachian Ohio

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Session: P-52. Hepatitis

Background. The hepatitis C virus (HCV) epidemic in the United States is primarily among young people who use drugs (PWUD), especially in rural and Appalachian regions. Buprenorphine maintenance therapy (BMT) may indirectly prevent HCV infection by reducing injection drug use. We aim to assess the relationship between BMT and HCV infection, testing, and treatment among rural PWUD.

Methods. We conducted a cross-sectional respondent driven sampling survey of 243 PWUD adults in southern Appalachian Ohio from May to November 2019. Participants completed audio computer-assisted self-interview and were tested for HCV antibodies. We defined recent BMT use as self-reported BMT in the past 30 days and prior BMT use as self-reported BMT any time prior to the past 30 days. HCV antibody positive participants were incentivized to receive confirmatory HCV RNA testing. We fit log-binomial regression models to assess the relationship between BMT and HCV infection, testing, and treatment.

Results. 72% of participants were HCV antibody positive (n=175). 31% (n=54) of antibody positive participants received an RNA test; of those, 96% (n=52) were HCV RNA positive. Compared to participants with no history of BMT, those with prior BMT were more likely to be HCV antibody positive (PR=1.3, 95% CI: 1.1-1.6) and to have been tested for HCV (PR=1.3 95% CI: 1.1-1.5); they were somewhat more likely to have been treated for HCV (PR=1.3 95% CI: 0.5-3.4). Compared to participants with no history of BMT, those reporting recent BMT had similar HCV antibody positivity (PR=1.1 95% CI: 0.9-1.5) but were more likely to have been tested (PR=1.3 95% CI: 1.1-1.6) and possibly more likely to have been treated for HCV (PR=2.0 95% CI: 0.6-5.9). Compared to those with a prior BMT, people with recent BMT use had slightly lower HCV antibody positivity (PR=0.8 95% CI: 0.7-1.1) and possibly higher prevalence of HCV treatment (PR=1.5 95% CI: 0.6-3.8) but had similar prevalence of HCV testing (PR=1.0 95% CI: 0.9-1.2).

Table 1. Respondent Driven Sampling Survey Summary Statistics from 243 People Who Use Drugs in Southern Appalachian Ohio in 2019.

	HCV Antibody Positive	HCV Antibody Negative	History of HCV testing	No history of HCV testing	History of HCV treatment	No history of HCV Treatment
Variable	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
Gender						
Male	83 (69.8)	36 (30.3)	98 (79.0)	26 (21.0)	8 (12.7)	55 (87.3)
Female	90 (74.4)	31 (25.6)	103 (83.7)	20 (16.3)	14 (22.6)	48 (77.4)
Age						
18-35	72 (74.2)	25 (25.8)	87 (82.9)	18 (17.1)	13 (22.8)	44 (77.2)
35+	102 (70.8)	42 (29.2)	115 (80.4)	28 (19.6)	9 (13.2)	59 (86.8)
Race						
White	158 (74.2)	55 (25.8)	184 (82.9)	38 (17.1)	20 (17.7)	93 (82.3)
Black	7 (53.9)	6 (46.2)	9 (69.2)	4 (30.8)	1 (16.7)	5 (83.3)
Other	9 (60.0)	6 (40.0)	9 (69.2)	4 (30.8)	1 (16.7)	5 (83.3)
Education						
High school diploma or less	135 (75.4)	44 (24.6)	149 (81.0)	35 (19.0)	17 (17.4)	81 (82.7)
More than high school	39 (62.9)	23 (37.1)	53 (82.8)	11 (17.2)	5 (18.5)	22 (81.5)
History of buprenorphine maintenance therapy						
Ever, but not past 30 days	90 (82.6)	19 (17.4)	67 (69.1)	30 (30.9)	12 (17.4)	57 (82.6)
Past 30 days	23 (69.7)	10 (30.3)	29 (90.6)	3 (9.4)	5 (26.3)	14 (73.7)
Never	60 (61.9)	37 (38.1)	67 (69.1)	30 (30.9)	5 (13.5)	32 (86.5)
Total*	175 (72.0)	68 (28.0)	201 (81.4)	46 (18.6)	22 (17.6)	103 (82.4)

***Columns do not add up to the total N due to missingness.**

Conclusion. Participants with a recent history of BMT were more likely to have been tested for HCV and possibly to have received prior treatment. Participants with prior BMT were more likely to be antibody positive and to have tested for HCV. Improved