524. Racial/Ethnic and Socioeconomic Disparities in Initiation of Direct-Acting Antiviral Agents for Hepatitis C Virus in an Insured Population

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Background. The high cost of direct-acting antiviral agents (DAAs) for hepatitis C virus (HCV) infection may present a barrier to access, thus contributing to disparities in treatment. However, few real-world data exist on factors associated with DAA uptake.

Methods. We conducted an observational study of Kaiser Permanente Northern California members with HCV infection, defined as a positive HCV RNA test or an HCV genotype, during the recent DAA era (i.e., October 2014–December 2016). To evaluate factors independently associated with DAA initiation, an adjusted Poisson regression was used. 

Results. We identified 18,140 HCV-infected individuals, of whom 6167 (34%) initiated DAA treatment. Treatment was less likely among women compared to men (RR 0.83, 95% CI: 0.81-0.85), Blacks compared to Whites (RR 0.82, 95% CI: 0.79-0.85), and individuals with a history of drug abuse (RR 0.87, 95% CI: 0.84-0.90). Treatment was also less likely among those with a history of drug abuse (RR 0.87, 95% CI: 0.82-0.91), smoking (RR 0.84, 95% CI: 0.80-0.88), or more alcoholics drinks per week (1-7 vs. 0 drinks: RR 0.88, 95% CI: 0.82-0.86; 8-16 vs. 0 drinks: RR 0.72, 0.63-0.82; ≥17 vs. 0 drinks: RR 0.63, 95% CI: 0.49-0.80). There was a higher likelihood of treatment among individuals with advanced fibrosis (RR 1.39, 95% CI: 1.34-1.44), HCV genotype 1 (RR 1.97, 95% CI: 1.87-2.08), no prior HCV treatment (RR 1.44, 95% CI: 1.37-1.52), or HIV infection (RR 1.19, 95% CI: 1.08-1.30).

Conclusion. Although clinical factors appear to drive HCV treatment decisions, racial/ethnic and socioeconomic disparities exist in DAA uptake. Lifestyle factors, such as alcohol use and drug abuse, may also influence patient or provider decision-making regarding DAA initiation. Strategies are needed to ensure equitable access to DAAs, even in insured populations.

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525. Making the Case for Universal Screening of Pregnant Women for Hepatitis C Virus: One State at a Time

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Background. New cases of Hepatitis C virus (HCV) infection are climbing in young adults and particularly in women of child-bearing age. Despite this growing burden, a risk-based screening approach is still recommended when testing for HCV in pregnant women and young adults. Risk-based screening was abandoned for "Baby Boomers" adults in favor of universal screening due to concerns for insufficient capture of cases.

Objective. We analyzed public health department data for all 50 states to compare the published rates of HCV infection among young adults and Baby Boomers.

Methods. Public health department websites for all 50 states were reviewed for the most recent information on HCV incidence and prevalence. Age-specific rates were recorded for young adults (ages 20-39) compared with Baby Boomers (ages 50-70). When specific rates were not available, data on year over year trends were noted for both age groups.

Results. Using their own published data, we identified 11 states where rates of HCV infection in young adults surpassed that of Baby Boomers, and 4 states where the rates of HCV were equal between the 2 age groups. These states alone make up 25% of the entire US population. When we include 6 additional highly populous states with reported HCV incidence on the rise in young adults, these 21 states account for more than half the US population. Only 4 states reported HCV rates in Baby Boomers to be higher than young adults and 25 states had no recent data to review. Of note, most of these states are direct neighbors to states in the first 2 categories with a higher burden of HCV.

Conclusion. Even using a risk-based screening strategy with lower case capture rate in young adults compared with universal screening in Baby Boomers, we identified that many states have HCV rates in young adults that is as high or higher than Baby Boomers. This results suggest that universal screening in this age group is warranted, where DAA treatment could reduce future spread. Pregnant women represent an easy group to target given their frequent medical visits, frequent lab testing, their exposed infants would require follow-up testing and the women could be referred for DAA treatment after delivery.

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526. Is DAA Treatment Associated with HBV Reactivation? Results from ERCHIVES

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Background. Reactivation of HBV infection has been reported in patients with HCV treated with newer directly acting antiviral agents (DAAs). Magnitude of this problem and its consequences are not fully understood.

Methods. Using ERCHIVES, a well-established national database of HCV infected Veterans, we identified all persons who received DAA treatment for >28 days. We determined the proportion of patients who had HBV viral reactivation (≥1 log increase in HBV DNA from baseline), seroconversion (from HBsAg...
or HBeAg seronegative to seropositive, or flare of hepatitis (HBV viral reactivation plus ALT increase ≥10 times baseline value) at anytime after initiating DAA treatment. We also determined factors associated with HBV using Cox regression analysis.

Results. Among 14,776 HCV patients in the study, most of the HCV patients (61% male, 43% Black, and 16% Hispanic) had Indigent care (42%), Medicare (14%), and Medicaid (27%). Co-morbidities in this population included mental health (71%), CVD (60%), HTN (51%), DM (21%), and HIV (9%). Indigent care, mental health, and CVD co-morbidities were associated with lower rates of HCV Tx but Other race and NAFLD were associated with higher rates of Tx (see Table 1).

Table 1: Table 1: Logistic regression results predicting HCV Tx in Safety Net Hospitals in Texas and California

| Variable | N (%) | OR (95% CI) |
|----------|-------|-------------|
| White (ref) | 6339 (42.9) | 0.98 (0.80–1.19) |
| Other | 152 (1.0) | 1.52 (1.10–2.09) |
| Hispanic | 2330 (15.8) | 1.07 (0.84–1.35) |
| Commercial (ref) | 2032 (13.8) | 0.70 (0.47–1.04) |
| Medicare | 3927 (26.6) | 0.78 (0.55–1.10) |
| Indigent | 6217 (42.1) | 0.67 (0.44–0.98) |
| HIV | 1380 (9.3) | 1.29 (0.98–1.68) |
| Mental Health | 10,507 (71.1) | 0.62 (0.47–0.99) |
| NAFLD | 443 (3) | 1.65 (1.04–2.61) |
| Cirrhosis | 2631 (17.8) | 0.96 (0.76–1.22) |
| CAD | 8820 (59.7) | 0.56 (0.47–0.70) |

Conclusion. In our safety-net hospitals only 4.4% received HCV Tx. Those with indigent funding, mental illness or cardiac disease were significantly less likely to receive HCV treatment. These data indicate that certain populations are less likely to have access to HCV care. The reasons for this remains unknown. If we are to move towards HCV elimination, we must find strategies to increase treatment.

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528. HCV Treatment Initiation in Patients with Chronic Kidney Disease: Results from ERCHIVES

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Background. Newer directing antiviral agents against HCV (DAA) are safe and efficacious in persons with chronic kidney disease (CKD). Whether availability of these newer DAAs has resulted in more persons with CKD initiating HCV treatment remains unknown.

Methods. We identified HCV+ persons in ERCHIVES. We excluded HCV+ and HBSAg+ and those with missing HCV RNA and eGFR data. We determined the CKD stage according to National Kidney Foundation criteria. We determined the number of persons initiated on any of the approved DAA regimen (defined as >14 days of DAA prescription). Logistic regression analyses was used to determine factors associated with treatment initiation.

Results. Among 76,513 evaluable persons, 21.1% initiated DAA treatment. Initiation rates differed significantly by CKD stage: 21.1% (15,136/68,469) for eGFR>90mL/minute/1.73m2 and CKD stage-2; 14.0% (695/4339) and CKD stage-3; 7.6% (148/1,958) for CKD stage-4. Those with CKD stage-3 were 35% less likely and those with CKD stage-4 were 65% less likely to initiate treatment with a DAA compared with those with baseline eGFR>90mL/minute/1.73m2. Those with Body Mass Index (BMI)>30 were more likely to initiate treatment (OR 1.24, 95% CI 1.19,1.29). Treatment initiation was less likely in HCV genotype 3 compared with 1 and 2 and those with diabetes (OR 0.82, 95% CI 0.78-0.86), cardiovascular disease (OR 0.73, 95% CI 0.68-0.78), alcohol abuse or dependence (OR 0.75, 95% CI 0.72-0.78) or cirrhosis (OR 1.08, 95% CI 0.80-1.00) at baseline.

Conclusion. Persons with more advanced CKD are less likely to receive treatment for HCV. Strategies are needed to improve treatment rates in the HCV/CKD population.