

“Operational Delivery Networks” (ODNs). To attempt to eliminate Hepatitis C before 2030, Public Health England (PHE) and NHS England (NHSE) are attempting to re-engage previously diagnosed infected persons. To this end, ODNs have been supplied with historical antibody result data to target and reengage individuals for PCR testing and intervention if required. A study was designed to evaluate these data to help with informing ODN decisions. This study aimed to ensure that the data accurately identified patients that were PCR positive for HCV and thus fit the current criteria for receiving DAAs.

Methods. The regional ODN for the West Midlands was provided with 4540 patients with historical positive HCV antibody results, collected by a PHE surveillance system, to target for DAA intervention. DAA-treated patients had been excluded. Patient details were cross-referenced with all PCR results from January 1, 1996 up to January 1, 2019 at several regional laboratories (Public Health England Birmingham, the Queen Elizabeth Hospital, City and Sandwell Hospital) and national treatment data.

Results. PCR data were found for 988, 276 (28%) of whom had received treatment. Of the 712 persons untreated, 347 (49%) were PCR negative and thus would not fit the criteria for receiving DAAs. 365 (51%) had a positive PCR result without a record of treatment would be eligible for DAAs (see Figure 1).

Conclusion. Our study suggests approximately one-third of patients identified by cross-referencing NHSE treatment and PHE epidemiological HCV antibody databases will be PCR-positive and suitable for re-engagement. Epidemiological data needs to be accurately curated when implementing public health control measures. Using “Big Data” to target interventions has several limitations but can be useful. DAAs for HCV are not without risk and administration should be clinically justified. Re-testing individuals prior to intervention is essential and other methods of elimination, for example “test and treat,” may be more efficient and accurate.

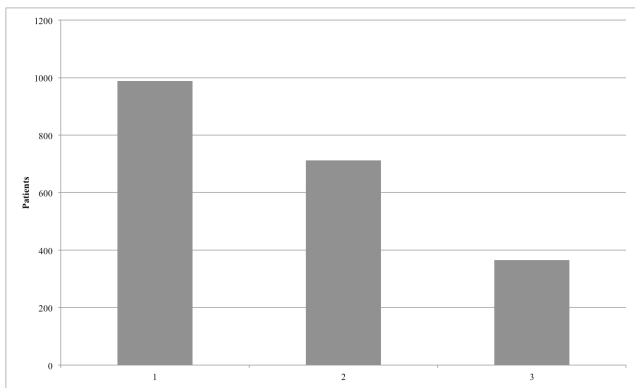


Figure 1: Breakdown of historical Hepatitis C antibody results. (1) Those with PCR result identified. (2) PCR result identified but excluding prior successful antiviral treatment. (3) Those with previous PCR result with no evidence of prior antiviral treatment who are PCR positive.

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306. CD8+ T-Cell Responses to Chronic Hepatitis C in Pregnancy

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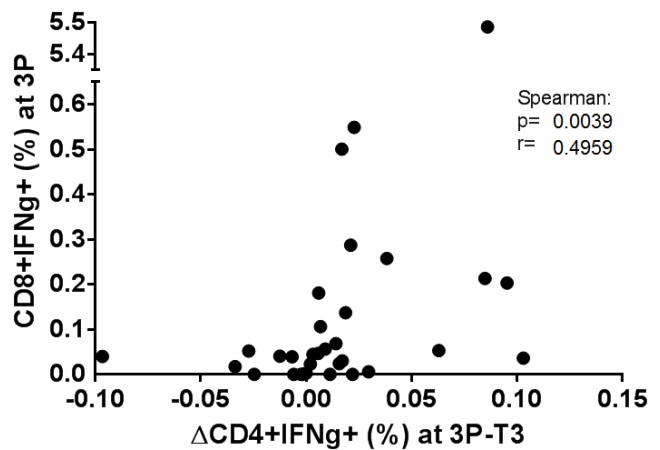
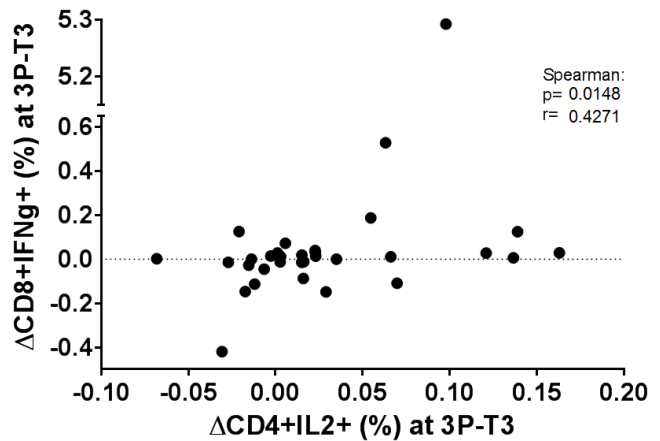
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Background. Chronic hepatitis C virus (HCV) infection is marked by stable, high -level viremia and a failed T-cell response. HCV-specific CD4+ helper T cells are rare, and CD8+ cytotoxic T cells are functionally exhausted or ineffective due to viral escape mutations. Postpartum, a subset of infected women experience a substantial drop in viremia. Preliminary data indicate that this unusual viral decline may be linked to a resurgence of HCV-specific CD4+ T cells producing Th1 cytokines. How improved CD4+ helper T-cell function might affect viral replication in this scenario is not established. Here we tested the hypothesis that improved CD4+ T cell help mediates control of chronic HCV replication through enhanced CD8+ T-cell function.

Methods. We examined plasma HCV RNA viral load (VL) and HCV-specific T-cell responses in 33 women with chronic HCV during the third trimester (T3) and at 3 months postpartum (3P). HCV-specific CD4+ and CD8+ T-cell IL2 and IFN γ responses were measured by intracellular cytokine staining following stimulation of peripheral blood mononuclear cells with peptide pools corresponding to the HCV proteins NS3, NS4a, and NS4B.

Results. Median VL dropped from 5.87 log₁₀ at T3 to 5.25 log₁₀ at 3P ($P < 0.0001$, Wilcoxon signed rank), with a wide range from +0.4 log₁₀ to -4.2 log₁₀. The degree of decline correlated significantly with improved frequencies of HCV-specific CD4+ T cells producing IFN γ ($P = 0.015$ Spearman) but did not correlate with CD8+ T-cell changes. Nevertheless, improved T helper function correlated with increased HCV-specific CD8+ T-cell function (Δ CD4+IL2+ vs. Δ CD8+IFN γ +, $P = 0.015$ Spearman, graph 1; Δ CD4+IFN γ + vs. CD8+IFN γ + at 3P, $P = 0.004$ Spearman, graph 2).

Conclusion. Despite no significant association between virus-specific CD8+ T-cell Tc1 cytokine production and postpartum viral control, our data suggest that recovery of CD4+ T-cell help may augment CD8+ T-cell function. Further study incorporating viral genomic sequences to focus on intact class I epitopes is needed to clarify the relationship of improved CD8+ function and viral control in this unique model of immune restoration.



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307. Overcoming Hepatitis C Elimination Challenges in the Coachella Valley through the Collaboration of Linkage to Care, a Managed Care Organization, and a Federally Qualified Health Center

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Background. Per the Centers for Disease Control and Prevention, 2.4 million Americans have the hepatitis C virus (HCV). New cases increased by 14% from 2014 to 2016 in California with 400,000 infections, 4,000 infections in the Coachella Valley and about 50% unaware of their diagnosis. A barrier to elimination is the lack of rapid screenings and linkage to care (LTC) of infected individuals into an integrated system. Thus, we developed a program at the Hepatitis Center of Excellence (HCE) where pharmacists in a managed care organization (MCO) provide opportunities to overcome these boundaries. The partnership of the MCO and federally qualified health center (FQHC) was established in 2017 to expand access to care to the HCV community. We anticipate that our program will eliminate HCV in the Coachella Valley by modeling past success in human immunodeficiency virus (HIV) testing and LTC at the FQHC through an interdisciplinary approach.

Methods. A single-center, retrospective analysis from January 2017 to December 2018 of HCV individuals was conducted at the pharmacist-led HCE in Palm Springs, California. The LTC team approached barriers through prompt free screenings and major advocacy. Pharmacists and specialty physicians collaborated to ensure rapid assessment, treatment initiation and completion, and sustained virologic response (SVR). The HCE has adapted the HIV testing and LTC model in hopes of achieving similar feats. From 2014 to 2018, 92,947 total HIV tests were performed with 90.2% of