

Title:

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Closing the care gap — Systematic identification of overlooked patients with hepatitis C

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Abstract: Achieving the World Health Organization's goals for Hepatitis C Virus (HCV) elimination is challenged by patients who remain untreated or are lost to follow-up. We aimed to develop and assess a data-driven strategy to identify and re-engage these overlooked patients. From 592 candidates (20218-2023) we identified 54 untreated patients who were suitable for specialist referral.

To the editor:

Chronic hepatitis C virus (HCV) infection continues to pose a significant global health burden despite the widespread availability of curative therapies. The World Health Organization (WHO) has set ambitious targets for the elimination of hepatitis C virus (HCV) by 2030: 90% diagnosis, 80% treatment coverage, and a 65% reduction in mortality (1). Achieving these goals, supported by regional frameworks like the Andalusian PAITSIDA Plan, requires innovative models to overcome healthcare fragmentation and reach patients who remain untreated or lost to follow-up, despite the availability of curative direct-acting antivirals (DAAs) (2).

Automated alert systems effectively link HCV patients to care. A recent study describes one such system, implemented in March 2020, which uses positive HCV antibody and core antigen results to alert specialists who then coordinate a single-visit diagnosis and treatment. By November 2023, this system had identified 359 new diagnoses, achieving a 66% sustained viral response. Findings from 2022-2023 show it continues to find new cases, primarily among patients unaware of their disease (78.2%) (3). While this system proactively identifies new cases, our study complements these efforts by focusing on rescuing previously diagnosed patients lost to follow-up.

We present the results of a structured, cross-departmental intervention aiming to identify and refer patients with active HCV infection who had not been treated with DAAs. A retrospective cross-sectional analysis of clinical and administrative data was conducted at a tertiary hospital from January 2018 to October 2023. Laboratory data (anti-HCV antibodies and HCV RNA) were extracted from Servolab (Siemens Healthcare). Positive cases were matched against the hospital pharmacy database using Health Analytics (Siemens Healthcare) to determine whether antiviral therapy had been prescribed. For patients with no record of DAA dispensation, electronic medical records (Diraya) were manually reviewed to assess clinical history, liver function, comorbidities, and previous evaluations. Those with confirmed active infection and no prior treatment were referred to the Gastroenterology and Hepatology Unit for clinical staging and potential treatment initiation.

During the study period, 25,736 antibody tests and 970 HCV viral load tests were performed. A total of 592 HCV-positive patients were identified and evaluated. Among them, 11 were classified as false positives; 331 had negative viral loads; 11 were deceased; 28 were under current specialist follow-up; and 157 had already received treatment. Of the treated group, 26 had undergone interferon and/or ribavirin-based therapy, 89 received DAAs, and 42 showed SVR or resolved infection without clear treatment documentation. Ultimately, 54 individuals were identified as candidates for specialist referral and treatment assessment.

This retrospective analysis highlights the effectiveness of a coordinated, data-driven strategy to identify untreated patients with chronic hepatitis C virus (HCV) infection. By integrating laboratory diagnostics, pharmacy treatment records, and electronic medical records, we were able to efficiently filter and prioritize candidates for specialist referral. Future efforts should focus on expanding this strategy across healthcare networks, incorporating real-time alerts within electronic health systems, and evaluating the clinical and economic impact of structured HCV rescue strategies across broader populations.

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Figure 1. Coordinated strategy for identifying and linking untreated hepatitis C virus (HCV) patients to specialist care.

The workflow integrates data from clinical microbiology (HCV-positive cases), hospital pharmacy (treatment verification), and electronic health records (Diraya) to identify patients with confirmed HCV infection who have not initiated direct-acting antiviral (DAA) therapy. Eligible individuals are referred to hepatology services for clinical assessment and treatment initiation, facilitating improved case finding and supporting regional HCV elimination goals.