



# Implementing a Hepatitis C Compliance Program

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## Abstract

**Background:** Hepatitis C virus is a blood borne illness that effects the liver. Untreated hepatitis C virus can lead to cirrhosis and hepatocellular carcinoma. Hepatitis C is very treatable with direct acting antiviral agents (DAA's). Non-compliance with treatment plans for hepatitis C can result in uncured patients with further complications. Non-compliance with Hepatitis C treatment plans has been identified as a major obstacle for patient's in their attempts to achieve sustained virologic response (SVR).

**Methods:** This is a quality improvement project that was implemented to remind patients of their hepatitis C appointments and lab work. Hepatitis C patients were sent reminders via My Health Online (electronic messaging) and USPS mail service. This quality improvement project was implemented at a local gastroenterology clinic in Northern California. This clinic is affiliated with a larger health system and includes two physicians and two nurse practitioners.

**Results:** There was 100% compliance in four out of five reminder categories; initial consultation, initial lab work, follow-up appointment and SVR lab work. The fifth category, mid-treatment lab work had a 50% compliance rate. The previous compliance rates varied based on category, ranging anywhere from 50 to 83%.

**Conclusions:** The reminder system has improved compliance of hepatitis C patients and should be adopted across the healthcare system. Attending appointments, completing lab work and taking all medications are imperative to achieve sustained virologic response (SVR).

## Purpose/Aims

The purpose of this project was to improve compliance to the hepatitis C regimen required at this specific clinic, including presenting for initial consultation, follow-up appointment, required pre and post lab work and SVR lab assessment. The aim of this project was to achieve improvement in compliance resulting in higher SVR rates. Improvement in compliance occurred through:

- The implementation of a scheduled reminder system via MHO or US mail
- Improved monitoring of the MHO system and compliance with treatment
- Dissemination of information to other parts of the organization, specifically GI clinics

## Demographic Data

Demographics	Selection Options	Number (Percentage)
Gender	Male	6 (67%)
	Female	3 (33%)
Age	20 – 29	2 (22%)
	30 – 39	0 (0%)
	40 – 49	0 (0%)
	50-59	2 (22%)
	60-69	4 (44%)
	70-79	1 (12%)
Insurance	All other	4 (44%)
	Medicare or Medical	5 (56%)
Hx of IV drug use	Yes	3 (33%)
	No	6 (67%)

## Methods

### Quality Improvement Project

- This was a prospective quality improvement project that was implemented in order to improve patient compliance throughout a hepatitis C treatment program. Implementation of this compliance program (reminder system) took place among HCV patients, over the age of 18, who had a referral placed to this clinic for HCV treatment. Their HCV status was confirmed with HCV RNA in order to be included in the study
- **Instruments and tools:** My Health Online (MHO), electronic health record (EHR) and US mail
- **Data collection:** pre and post implementation data as well as patient demographics
- **Statistical analysis:** frequency data, as well as chi-square test for comparison

## Results

Pre-implementation Data	No. of Patients	%
Initial consultation	38/46	83%
Initial lab work	31/38	82%
Follow-up appointment	20/31	65%
Mid treatment lab work	14/20	70%
SVR lab work	10/20	50%

Post-implementation Data	No. of Patients	%
Initial consultation	9/9	100%
Initial lab work	8/8	100%
Follow-up appointment	5/5	100%
Mid treatment lab work	2/4	50%
SVR lab work	1/1	100%

## Discussion

This study included all Hepatitis C patients that presented to this clinic in the last five months. The results have indicated that sending reminders prior to appointments and lab work, improved completion rates for these tasks and overall compliance rates have increased. There was 100% success in implementing the reminders, all 9 patients received the appropriate reminders at each stage of their treatment program. There has been 100% compliance with initial consultations, initial lab work, follow up appointments and SVR lab work. The only category that did not have 100% compliance was the mid-treatment lab work, four patients reached this phase of the compliance program and were sent reminders but only two patients completed their mid-treatment lab work. Fortunately, completing this lab work did not affect whether they are treated properly for HCV or not, as long as they finish their medications. The literature review supports the use of reminders to improve compliance and this project reflects that to be true.

## Conclusions

Hepatitis C compliance programs, such as reminder systems, help patient's achieve SVR. Further implementation across health systems would allow for more widespread compliance

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