



An Interdisciplinary Team Approach to Hepatitis C Virus (HCV) Evaluation and Treatment: Assessing the Impact of Clinical Pharmacist Involvement on HCV Clinical Practice and Treatment

Autumn Bagwell, PharmD, BCPS¹; Cody A. Chastain, MD²

¹Vanderbilt Specialty Pharmacy, ²Division of Infectious Diseases, Department of Medicine, Vanderbilt University Medical Center

BACKGROUND

- The new era of hepatitis C virus (HCV) direct-acting antivirals (DAA) allows an increased number of patients to be treated with more efficacious and tolerable therapies to prevent the progression of HCV infection.
- Recent reports have outlined the challenges posed by the increased labor and cost burden imposed on current HCV providers; thus, there is a need for innovative treatment approaches to provide efficient and affordable care.^{1,2}
- The involvement of clinical pharmacists in the management of HCV has been shown to be equivalent or superior to that of clinics not utilizing a pharmacist.³⁻⁵

OBJECTIVE

- The objective of this pilot program was to assess the benefit of integrating a clinical pharmacist (CP) in an existing infectious diseases (ID) clinic to manage patients with HCV infection.

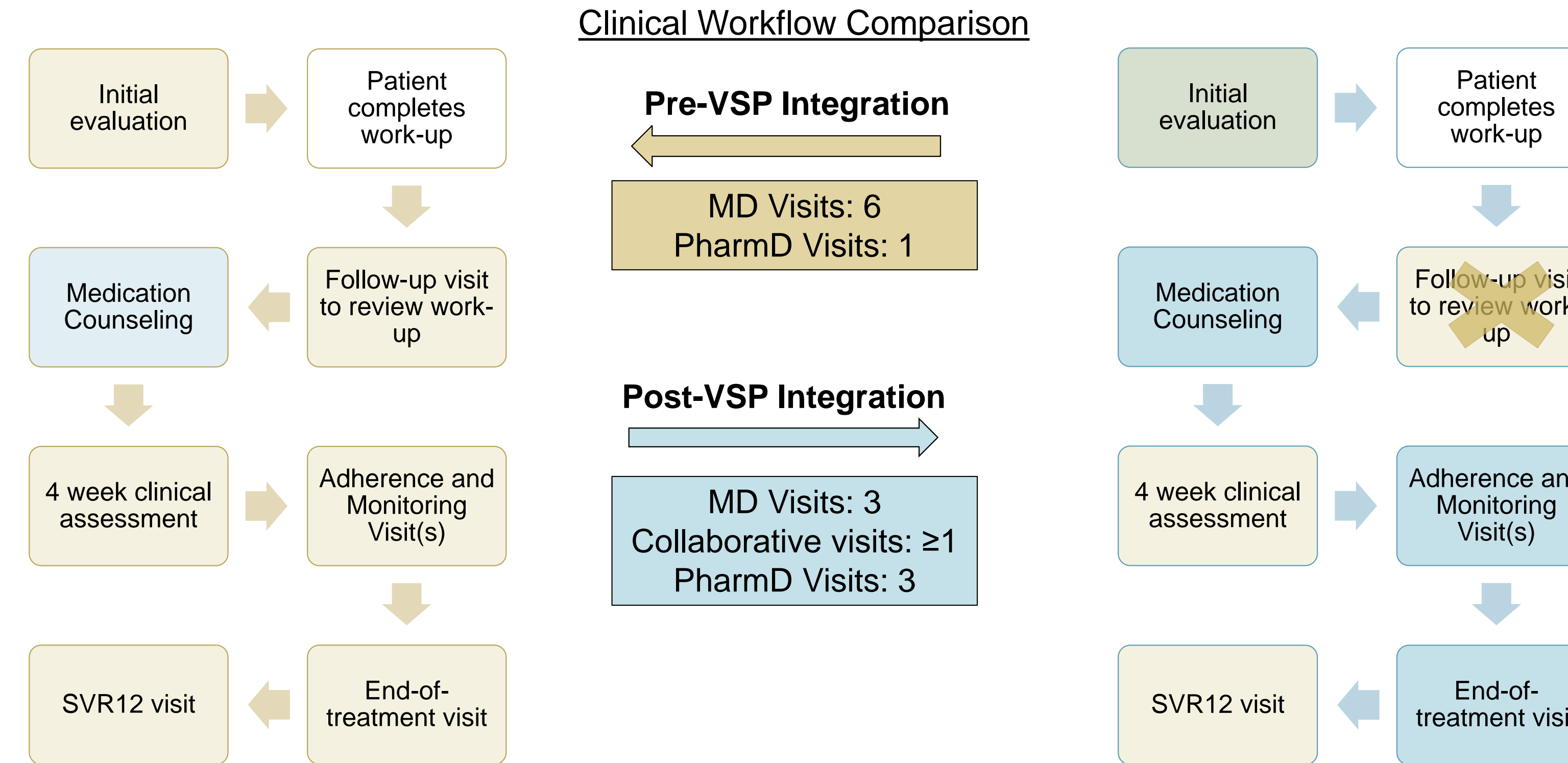
METHODS

- Single center, IRB-exempt quality improvement initiative with retrospective cohort review performed at the Vanderbilt University Medical Center ID Clinic.
- The quarter before integration of Vanderbilt Specialty Pharmacy (VSP) Services was compared to median values of the three quarters following integration.

PharmD Integration

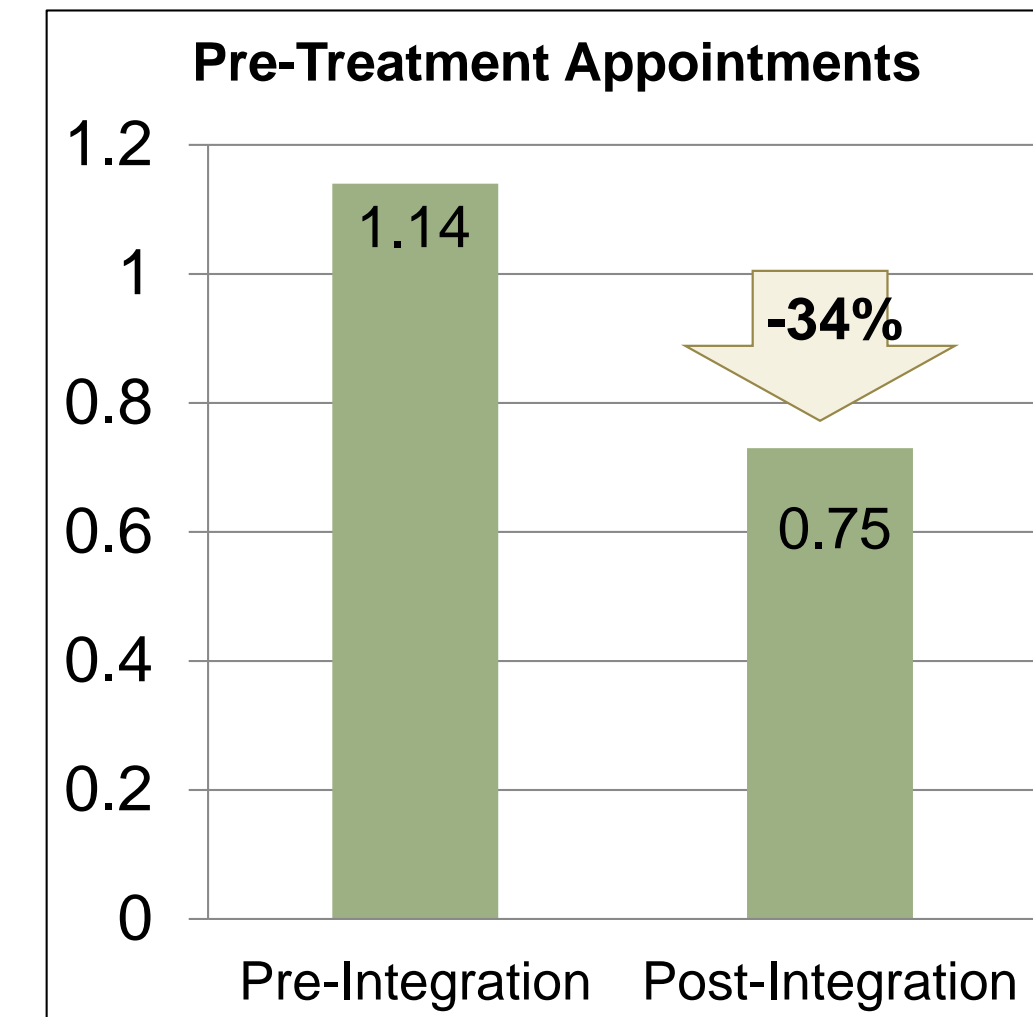
Initial Evaluation	Prior Authorization Application	Medication Education and Counseling	Treatment Monitoring
<ul style="list-style-type: none"> General HCV treatment education Medication reconciliation and interaction evaluation Barriers to adherence assessment Monitor for completion of work-up needed for prior authorization (PA) 	<ul style="list-style-type: none"> Denied → PharmD authors appeal, reviewed by MD Approved → Set up financial assistance Discuss approved therapy with the patient and schedule a medication education visit 	<ul style="list-style-type: none"> Patient-specific medication education Adherence action plan Pharmacy materials discussed and provided First fill of medications provided 	<ul style="list-style-type: none"> Week 1 phone follow-up Adherence, side effect, and medication reconciliation follow-up every four weeks as needed and at end of treatment

RESULTS

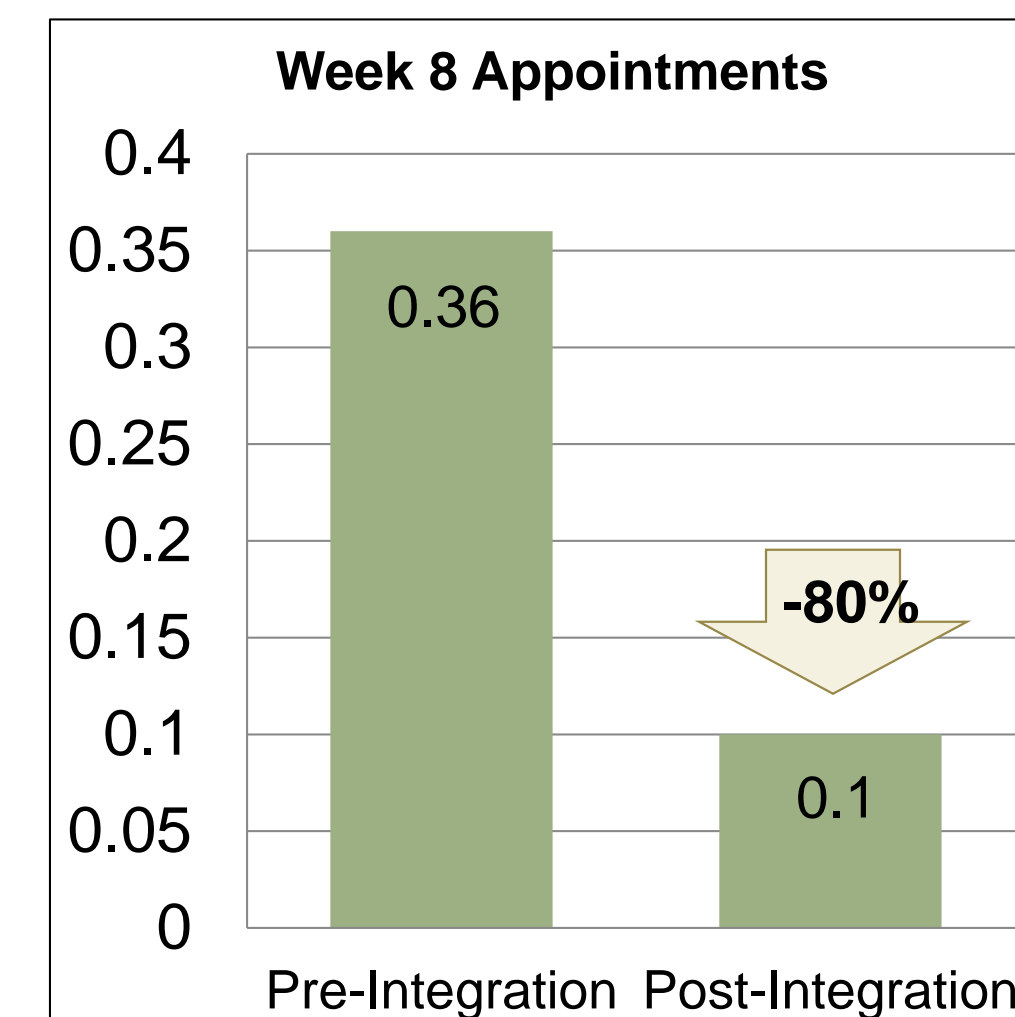


Decrease in Provider Burden

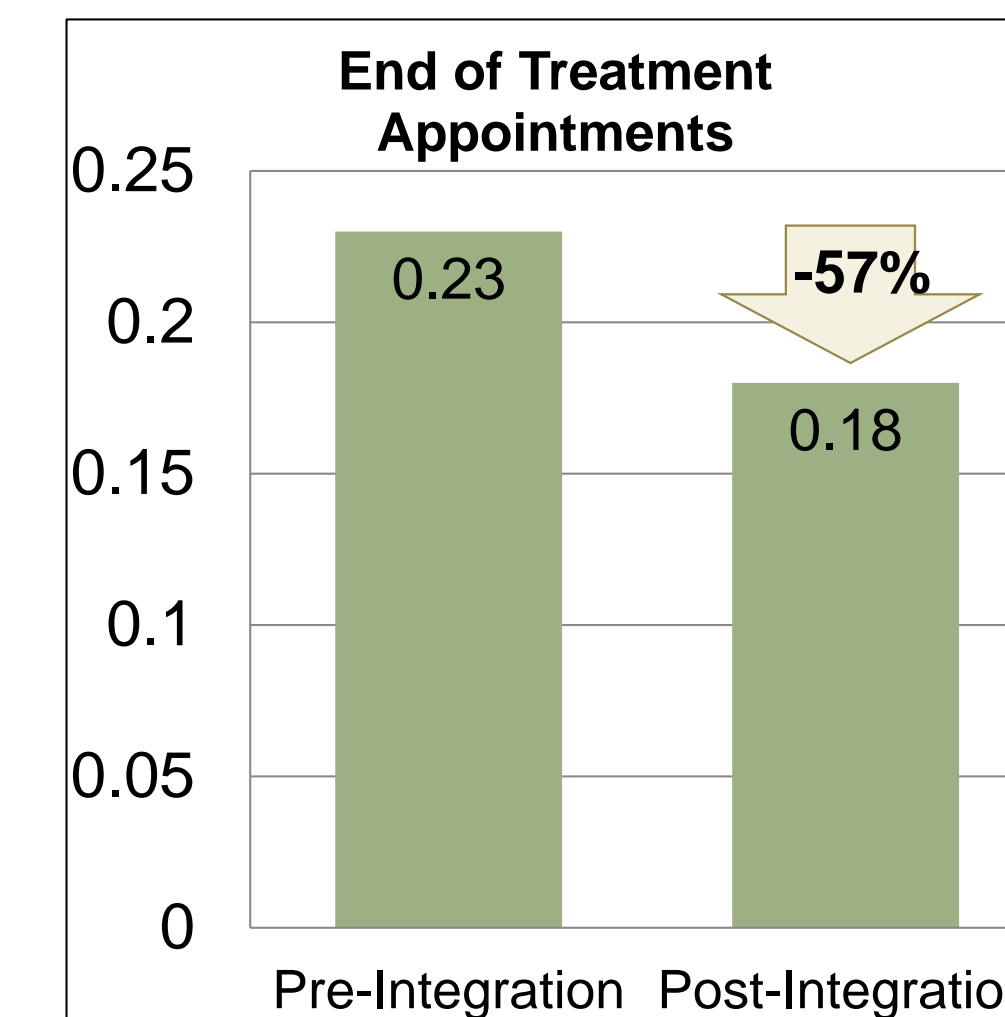
- Integration of VSP services led to more patients on HCV treatment with fewer visits by MD/PA and more by PharmD providers.
- Results are reported as median fulfilled MD/PA appointments per clinic day.



Close monitoring by PharmD for lab/imaging completion resulted in decreased pre-treatment appointments.



PharmD performed adherence, side effect, and medication reconciliation visits at week 8 and/or at the end of HCV treatment as clinically necessary instead of MD providers.



RESULTS (continued)

Decrease in Time to Medication Approval and Initiation

	Pre-Integration (Median Days)	Post Integration (Median Days)	Change (%)
First appointment to medication approval	67	15	-78
First appointment to medication initiation	82	26	-68
Benefits investigation to medication approval	7	4	-43
Benefits investigation to medication initiation	21	12	-43

Patient Satisfaction

- Patient satisfaction surveys were provided at end of treatment.
- Unanimously (18/18) positive responses by patients:
 - “Pharmacists at this clinic help me better understand how to take medications and what to expect when taking them.”**
 - “I believe I receive overall better care because of the team approach at this clinic.”**

CONCLUSIONS

- Patients benefited from decreased time to medication approval and initiation, and they expressed satisfaction in care delivery.
- Provider burden was decreased, shown by a decrease in pre-treatment and follow-up appointments seen by MD/PA providers.
- Pharmacists are in an ideal position to improve the HCV care continuum by decreasing provider burden, improving medication access, and educating and monitoring patients receiving DAA therapy.
- Given the high cost of HCV treatment, it is imperative that patients receive the appropriate regimen and are supported to facilitate treatment completion.

References:

- Chastain CA, Beekmann SE, Wallender EK, Hulgan T, Stapleton JT, Polgreen PM. Hepatitis C Management and the Infectious Diseases Physician: A Survey of Current and Anticipated Practice Patterns. Clin Infect Dis. 2015;61(5):792-4.
- Walters-smith N, Marshall SM. Opportunities and considerations for pharmacist intervention in the management of the chronic hepatitis C patient. J Manag Care Pharm. 2009;15(5):417-9.
- Smith JP, Dong MH, Kaunitz JD. Evaluation of a pharmacist-managed hepatitis C care clinic. Am J Health Syst Pharm. 2007;64(6):632-6.
- Marino EL, Alvarez-rubio L, Miro S, et al. Pharmacist intervention in treatment of patients with genotype 1 chronic hepatitis C. J Manag Care Pharm. 2009;15(2):147-50.
- Fung HB, Stone EA, Bräu N. Hepatitis C pharmacotherapy clinic. Am J Health Syst Pharm. 2002;59(9):876.