

Harnessing the Electronic Health Record to Improve Workflow & Reporting in a Hepatitis C Clinic

Cori L Edmonds, PharmD, BCPS, CSP and Kristen Whelchel, PharmD, CSP
Vanderbilt Specialty Pharmacy, Nashville, TN

BACKGROUND

Gathering and managing clinical data for outcomes reporting and patient management in a health-system often requires the use of multiple systems and is easily susceptible to being outdated by the time it is extracted and presented.

Workflow associated with gathering this data is time intensive, often involves duplicative documentation, post-hoc chart review, and data aggregation efforts by clinical pharmacy staff.

The complexity and duplicity of work involved can negatively impact employee morale increasing the risk of burn-out of even the most highly motivated and performing pharmacy team members.

PURPOSE

Gain real-time data collection and reporting, save staff time and improve morale by harnessing untapped electronic health record (EHR) documentation functionality in Epic™ underutilized by the specialty pharmacy department.

METHODS

Setting	<ul style="list-style-type: none"> Health System Specialty Pharmacy Academic Medical Center
Type	Quality Improvement Effort
Area	Hepatitis C Clinic
Assess Workflow Elements	<ul style="list-style-type: none"> Systems in daily use by pharmacy team Duplicative documentation Identify discrete clinical documentation data elements Data aggregation, report elements and generation
Harness	EHR SmartForm functionality
Create	SmartForms with EHR SuperUser
Implement	SmartForm documentation by PharmDs
Extract	EHR data extraction
Display	<p>Hepatitis C workload dashboard in Tableau®</p> <ul style="list-style-type: none"> Aggregates Tabulates Charts

RESULTS

SmartForms Created

Pre-Treatment

- Baseline characteristics

Treatment Details

- Medication regimen
- Start, end and SVR dates

Med Rec and Drug Interactions

- Medication reconciliation
- Drug interaction management

On Treatment Monitoring

- Adherence
- Side effects

Pre-Treatment SmartForm

HCV Type: Acute, Chronic, Unspecified

HCV Genotype: 1, 1A, 1B, 2, 3, 4, 5, 6, Unknown

HCV Baseline Viral Load (IU/mL):

Date of Baseline Viral Load:

HCV Prior Treatment Status: Naive, Experienced, Reinfected, Unknown

HCV Baseline RAV: Yes, No, Unknown, Not Applicable, Not Available

Post-Transplant Status: Not Applicable, Liver, Kidney, Heart, Lung

Liver Staging

Liver Fibrosis Stage: Non-cirrhotic, F0-F1, F1-F2, F2-F3, F3-F4, F0, F1, F2, F3, F4

Pulling SmartForm Data Into Notes

Create Note: Specialty Assessment 1

My Note: VUMC VSP HCV TREATMENT DETAILS, VUMC VSP HCV DDI ASSESSMENT

Summary:

HCV Initial Therapy Teaching

Medication Education: HCV Counseling Type

Person(s) present for education: Ms. Kate Id Validate

HCV TREATMENT DETAILS

I have reviewed the patient's chart. The salient information is as follows: Kate Id Validate has a history of HCV Genotype 1A infection, is treatment Naive with a base line viral load of 120,000 IU/mL on 8/1/2022. she was previously treated with No value filed. she has Non-cirrhotic fibrosis and a CTP score of No value filed. HCC status: No history of HCC. Status post Liver transplant.

Final EHR Note View

HCV Therapy Monitoring: Eplclusa week 3/24

HPI: I have reviewed the patient's chart. The salient information is as follows: has a history of HCV Genotype 1 infection and was treatment Naive prior to current HCV therapy start. he has F4 fibrosis and a CTP score of 7B.

HCV Treatment Details: sofosbuvir-velpatasvir 400-100mg (Eplclusa) Tablets for 24 weeks
Start date: 6/1/2022
Anticipated EOT: 11/15/2022
Anticipated SVR12: 2/6/2022

HCV Treatment Status: Patient is currently at week 3 on treatment. End of treatment date has been updated: 11/15/2022
Updated SVR12 due date has been noted: 2/9/2023

Adherence: has missed 3 doses of medication since starting HCV therapy. Verified by patient report. Patient developed nausea/vomiting which required hospital stay. He reports missing or vomiting doses on 6/16-6/18. He restarted on Sunday 6/19/22. He is tolerating well at this time. He also missed Vemlidy doses those same days.

Side Effects: The patient is experiencing the following side effects: nausea and vomiting.

Side Effect Notes: He took ondansetron last week but started it after NVV began and felt it was too late for it to help. His nephrologist referred him to ED. Patient reports he had an issue like this once before a while back. The only explanation at this time was diverticulitis episode. He is doing better now.

HCV Therapy Monitoring: Patient's current treatment status- On treatment.

CONCLUSION

- Eliminated duplicative documentation/data recording
- Simplified clinic reporting by automation of data extraction, aggregation and tabulation
- Created near real-time workload, workflow and outcomes dashboards
- Reduced reporting delays
- Improved team morale

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