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

**SmartForms Created** 

Med Rec and Drug Interactions

Pre-Treatment

Baseline characteristics

**Treatment Details** 

Start, end and SVR dates

Medication reconciliation

Drug interaction management

On Treatment Monitoring

Medication regimen

Adherence

Side effects

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MEDICAL CENTER

#### 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and patient management in a health-system often requires the use of multiple systems and is easily susceptible to being outdated by the time it is extracted and presented.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.

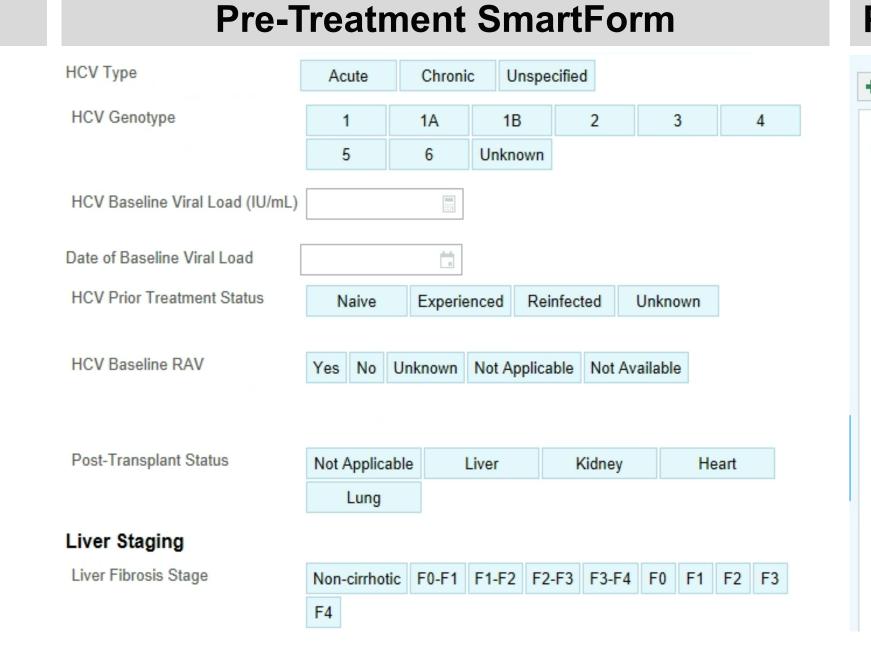
#### **PURPOSE**

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

## METHODS

MEIUDD	
Setting	<ul> <li>Health System Specialty Pharmacy</li> <li>Academic Medical Center</li> </ul>
Type	Quality Improvement Effort
Area	Hepatitis C Clinic
Assess Workflow Elements	<ul> <li>Systems in daily use by pharmacy team</li> <li>Duplicative documentation</li> <li>Identify discrete clinical documentation data elements</li> <li>Data aggregation, report elements and generation</li> </ul>
Harness	EHR SmartForm functionality
Create	SmartForms with EHR SuperUser
Implement	SmartForm documentation by PharmDs
Extract	EHR data extraction
Display	Hepatitis C workload dashboard in Tableau®  Aggregates  Tabulates  Charts

### RESULTS



#### **Pulling SmartForm Data Into Notes** ♣ Create Note ▼ Specialty Assessment 1 0 🍫 🔒 🥒 💟 VUMC VSP HCV DDI ASSESSMENT UMC VSP HCV TREATMENT DETAILS A B D → S S Insert SmartText 🖶 ← → 🖶 C + 🗈 🗈 HCV Initial Therapy Teaching Medication Education: HCV Counseling Type ▼ Person(s) present for education: Ms. Kate Id Validate \*\*\* HCV TREATMENT DETAILS 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.

**Treatment and Monitoring Dashboard** 

cardiac agents

opioids

statins

supplements

Grand Total

immunosuppressant

other (see notes)

psychiatric medications

## **Final EHR Note View**

**HCV Therapy Monitoring:** Epclusa 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 (Epclusa) Tablets for 24

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

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

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

Side Effect Notes: He took ondansetron last week but started it after N/V 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

Side Effects

Side Effect Intervention

change HCV medication

change non-HCV

change RBV dose

ordered labs

provided

Grand Total

Medication

Pharmacy

VSP for first fill

supportive medications

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

#### **HCV Pre-Treatment: Referrals** VANDERBILT WUNIVER **Pediatric Patients** Transplant Patients Completed Assessments by Month/Year Experienced Experienced; Reinfected Reinfected Additional HCV Medication HCV Genotypes Brand and Strength ✓ EPCLUSA 200-50MG ✓ EPCLUSA 400-100MG HARVONI 45-200MG / HARVONI 90-400MG MAVYRET 300-120MG ✓ VOSEVI 400-100-100MG Pharmacy Used Adult N Post-Transplant Status

**HBV** Screening Recommended

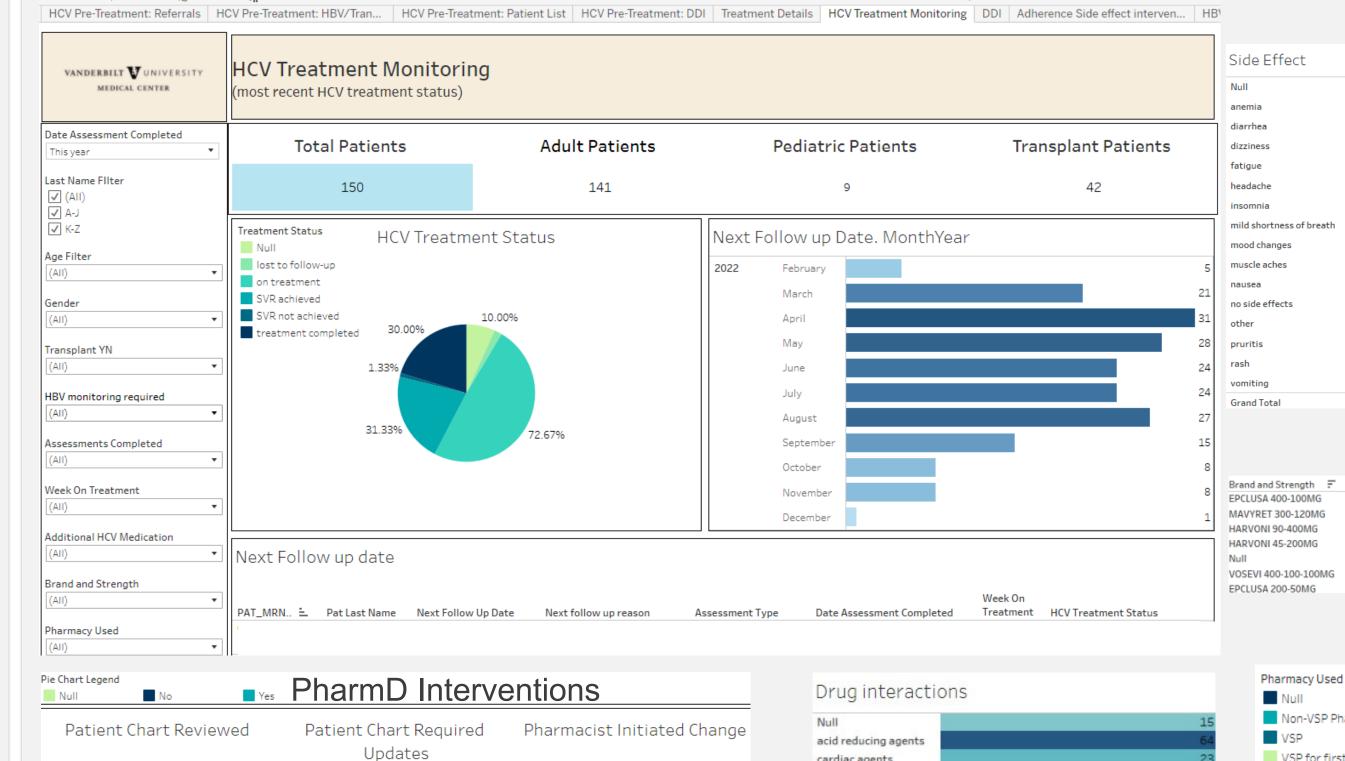
Vaccinated

Vaccination in process

Vaccine not indicated

Vaccine eligible

**Pre-Treatment Dashboard** 



# 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

**Acknowledgements:** Bridget Lynch, PharmD

and Kyle Babcock, PharmD for data extraction and dashboard design.

Disclosures:

Authors have no conflicts of interest to disclose.

