Prioritizing Integration of PDMP into the Electronic Health Record

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INTRODUCTION

- The opioid epidemic continues to be a major public health challenge.
- The Prescription Drug Monitoring Program (PDMP) serves as a key database to monitor dispensing of controlled substances.
- In California, the necessity for physicians to access the PDMP through a separate website login **disrupts workflow**, and the tool's **suboptimal usability** may deter them from regular utilization.
- Study Aim: Assess how the integration of PDMP in the EHR, with single-sign on and improved patient matching, may impact task efficiency, user satisfaction and usability, which can lead to reducing EHR burnout among physicians.

METHODS

Participants: 17 Stanford School of Medicine physicians from 3 specialties were interviewed.

- **Primary Care**
- **Addiction Medicine**
- **Emergency Medicine**

Patient: Patient case 1 included time to log in to the PDMP website. Patient case 2 and 3 involved last names with hyphens or with increased complexity.

Metrics: Comparison across metrics for 2 PDMP methods

Website Method & Integration Method

- **Task Efficiency**: Tracked users from patient chart start to PDMP report review for three patients using observational time-motion
- **System Usability Scale (SUS):** Validated user satisfaction and system usability
- **Net Promoter Score (NPS):** Categorized users as promoters or detractors using method recommendation likelihood

Metrics: Comparison across metrics for 2 PDMP methods

- Microsoft Excel for descriptive analysis
- Python (Version 3.8.5), Tableau

RESULTS

Table 1. Participant Demographics

	n (%)
Age, Mean (SD)	42.53 (8.2)
Female	5 (29.4%)
Years of Practice	
0-5	5 (35.3%)
6-10	4 (29.4%)
11-20	6 (23.5%)
21+	2 (11.8%)
Familiarity with Technology	
Extremely	4 (23.5%)
Very	7 (41.2%)
Moderate	2 (11.8%)
Somewhat	3 (17.7%)
Slight	1 (5.9%)
Specialty	
Primary Care	6 (35.0%)
Addiction Medicine	6 (35.0%)
Emergency Medicine	5 (30.0%)

Figure 1. Average SUS Score

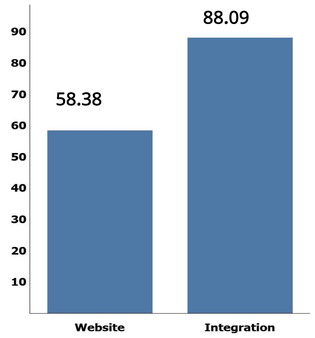


Table 2. Time saved with integration by specialty

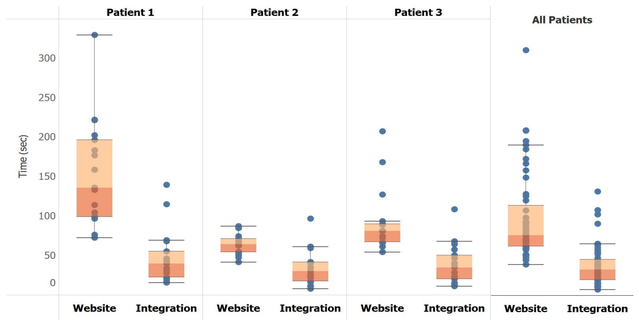
Specialty	Time (sec)
Primary Care	62.65
Emergency Medicine	66.09
Addiction Medicine	61.89

Figure 2. Net Promoter Score

-58.82 Website

+76.47 Integration

Figure 3. Mean Task Efficiency



CONCLUSION

- The integration method was **more efficient with higher user satisfaction and usability** suggesting its potential role in **reducing provider burnout** from increased EMR tasks and PDMP access/look-up tasks
- Integration method allowed providers across specialties to access objective PDMP data more easily, which could lead to reduced stigma
- Further research is needed to understand the effects of this integration method on PDMP guideline adherence and **patient health outcomes**.

AUTHORS & DISCLOSURES

No authors have disclosures. Diana Chen and Julie J. Lee contributed equally as first co-authors.

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