

# Smoking Cessation Treatment Beginning During Inpatient Admission Using the Electronic Health Record

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## Problem Statement

- West Virginia (WV) has the highest prevalence of tobacco use (24.8%)<sup>1</sup> in the US and some of the highest rates of cardiovascular disease in the country.
- The WVU Health System provides care to a large portion of the state's population. Due to our presence across the state, a hospital driven intervention to decrease tobacco use could significantly decrease prevalence rates and improve vascular patient outcomes throughout the state.
- We propose using the electronic health record (EHR) to initiate Tobacco Quit Line (TQL) referral and nicotine replacement therapy (NRT) for our tobacco using inpatient population.
- This method has been described extensively by Bernstein et al.'s group at Yale, who found significant increases in TQL referrals, NRT initiation and communication with patient PCP's by using an EPIC-based program.<sup>2</sup>

## Goal

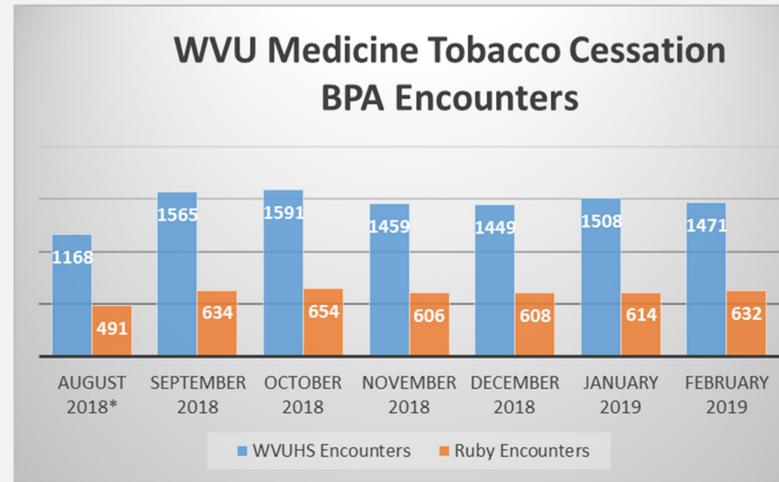
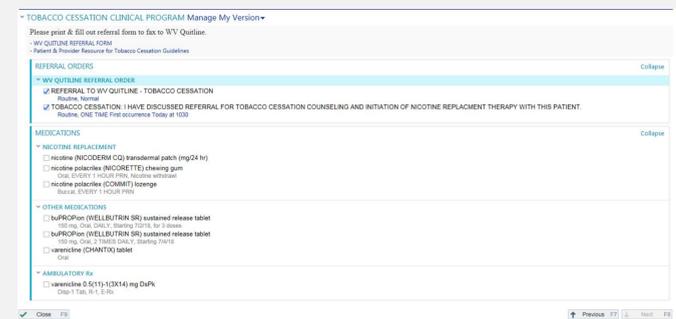
The goal of our project was to decrease tobacco use by designing and implementing a process within our EHR to identify tobacco users and connect them with tobacco cessation resources, primarily the WV Quit Line.

## Improvement Strategies

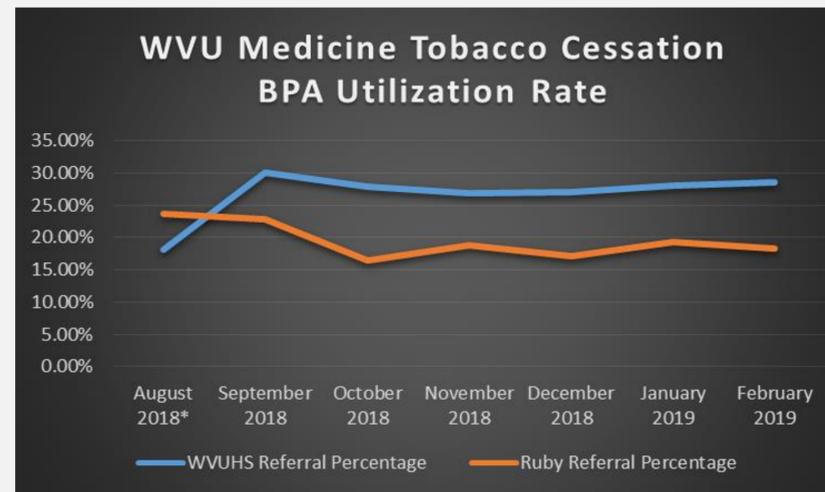
- We organized group meetings to talk to all providers throughout Heart and Vascular Institute, resulting in positive reception
- We utilized the Best Practice Alert and order set to send in-box messages to the PCP.
- Systematic attempts to follow-up with patients are being made.

## Process

- Our program relies on a Best Practice Alert (BPA) that alerts the provider that a patient is a tobacco user. The BPA suggests that the provider discuss tobacco cessation, and allows the provider to order a TQL referral, NRT and refer the patient to outpatient tobacco cessation services.
- Education was provided to individual service lines and included information on program workflow, tobacco cessation options and outpatient referral opportunities. The IT build was initially rolled out to services located within our Heart and Vascular Institute, then to academic medicine services and finally system-wide.



## Participants



## Results

- Since inception, 100% of all patients admitted to our health system have tobacco use assessed upon admission.
- The BPA has fired on 45.5% of all admissions, and we are currently seeing a 13.5% referral rate to the TQL throughout the system.

## Challenges/ Lessons Learned

- We became aware that nurses were not required to record and/or update tobacco use in the patient's history upon admission. We held meetings with the nursing administration in order to make this a requirement.
- In addition, the WV TQL requires a formal state-approved enrollment form be faxed to them upon referral, leading to significant delays. This process has been streamlined electronically.

## Success Factors

- Administrative support was instrumental in getting this project off the ground.
- The WV Hospital Association Honor's Program highlighted increased access to tobacco cessation as a requirement for Honor Roll designation in 2018. This provided administrative motivation to support the project.
- Identification of a physician champion was critical at the early stages in order to vet the program and engage physicians as the project progressed. Our physician champion helped us decide which services to pilot the program in and to develop education for providers.

## Future Directions

- The team is currently modifying the order set so this process can be rolled out to outpatient clinics system wide.
- The VQI data managers are currently adding #TQL to comments in VQI abstraction sheets to indicate that a patient was appropriately referred to the Tobacco Quit Line.
- In the future the follow up modules will be used to assess for efficacy.

## References

- CDC. State Tobacco Activities Tracking and Evaluation (STATE) system. 2016; [https://nccd.cdc.gov/STATESystem/rdPage.aspx?rdReport=OSH\\_State.CustomReports&rdAgCommand=OrderAdd&rdAgOrderColumn=Data\\_Value&rdAgOrderDirection=Ascending&rdAgCommandID=7b3c4b09-b6fe-4b73-98d4-7a743ac14870&rdScrollX=0&rdScrollY=900](https://nccd.cdc.gov/STATESystem/rdPage.aspx?rdReport=OSH_State.CustomReports&rdAgCommand=OrderAdd&rdAgOrderColumn=Data_Value&rdAgOrderDirection=Ascending&rdAgCommandID=7b3c4b09-b6fe-4b73-98d4-7a743ac14870&rdScrollX=0&rdScrollY=900). Accessed October 13, 2017, 2017.
- Bernstein SL, Rosner J, DeWitt M, et al. Design and implementation of decision support for tobacco dependence treatment in an inpatient electronic medical record: a randomized trial. *Transl Behav Med.* 2017;7(2):185-195.

BestPractice Advisory - Smoking Jack

▼ Suggestion (Advisory: 1)

✓ Patient is noted to use tobacco. Please discuss the WV Quitline program and open the orderset and place orders as appropriate. Please fill out WV Quitline Referral form with patient (use hyperlink for form within orderset).

**TOBACCO CESSATION CLINICAL PROGRAM**preview

**Tobacco use disorder** > Edit details (Hospital problem)

Acknowledge Reason

TOBACCO CESSATION CLINICAL PROGRAM Manage My Version

Please print & fill out referral form to fax to WV Quitline.

- WV QUITLINE REFERRAL FORM  
- Patient & Provider Resource for Tobacco Cessation Guidelines

REFERRAL ORDERS Collapse

▼ WV QUITLINE REFERRAL ORDER

✓ REFERRAL TO WV QUITLINE - TOBACCO CESSATION  
Routine, Normal

✓ TOBACCO CESSATION: I HAVE DISCUSSED REFERRAL FOR TOBACCO CESSATION COUNSELING AND INITIATION OF NICOTINE REPLACEMENT THERAPY WITH THIS PATIENT.  
Routine, ONE TIME First occurrence Today at 1030

MEDICATIONS Collapse

▼ NICOTINE REPLACEMENT

nicotine (NICODERM CQ) transdermal patch (mg24 hr)  
 nicotine polacrifex (NICORETTE) chewing gum  
Oral, EVERY 1 HOUR PRN, Nicotine withdrawal  
 nicotine polacrifex (COMMIT) lozenge  
Buccal, EVERY 1 HOUR PRN

▼ OTHER MEDICATIONS

bupropion (WELLBUTRIN SR) sustained release tablet  
150 mg, Oral, QDLY, Starting 10/16, for 3 weeks  
 bupropion (WELLBUTRIN SR) sustained release tablet  
150 mg, Oral, 2 TIMES DAILY, Starting 10/16  
 varenicline (CHANTIX) tablet  
Oral

▼ AMBULATORY Rx

varenicline 0.5(1)-1(2X14) mg DsPk  
Step 1 Tab, B-I, E-Rx

Close F8 Previous F7 Next F9

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