

Background

- Multiple studies have established the increased risk of cardiovascular disease seen from cigarette smoking.
- The 2020 Report of the Surgeon General acknowledges that hospital initiation of smoking cessation medications can reduce tobacco use, improve post-surgical outcomes, reduce readmissions, and improve overall patient survival. Among hospitalized smokers, starting smoking cessation counseling and continuing it at least 1 month after discharge was shown to increase long term quit rates by 37%
- Problem Statement:** Lack of tobacco use assessment and intervention for hospitalized patients
- Project AIM:** To increase assessment of patient's smoking status and increase rates of tobacco cessation pharmacotherapy prescription at discharge by 10% over the course of six months in patients admitted for coronary artery disease

Methodology

Hospitalized, active smoker patients with a diagnosis of coronary artery disease were identified during 1/2020-12/2020 and 1/11/2022-3/1/2022. Prescription of smoking cessation pharmacotherapy (varenicline, nicotine replacement therapy, or bupropion) at discharge was compared for the two subsets of patients: before launch of the inpatient order-set (n=224) and after launch (n=109). A univariable logistic regression analysis was performed.

Interventions and Results

After successful approval from the Pharmacy and Therapeutics Committee at both local and enterprise meetings, the EPIC team was able to build an easy-to-use order-set included on general medical admissions.

Nicotine Replacement Therapy-Patch

Medications:

- Nicotine Replacement Therapy (NRT)
 - nicotine polacrilex (NICORETTE) gum OR lozenge
 - nicotine (NICODERM CQ) patch

Instructions:

- If > 10 cigarettes per day (begin with 21 mg/day):
 - nicotine (NICODERM CQ) 21 mg/24 hr patch 21 mg (D) 21 mg, transdermal, Administer over 24 Hours, Daily, First dose tomorrow at 0900, For 42 doses BLACK BOX WASTE
 - If <= 10 cigarettes per day (begin with 14 mg/day):
 - nicotine (NICODERM CQ) 14 mg/24 hr patch 14 mg 14 mg, transdermal, Administer over 24 Hours, Daily, First dose tomorrow at 0900, For 14 doses BLACK BOX WASTE

Smoking Cessation Medications

Medications:

- Smoking Cessation Medications
 - varenicline (CHANTIX) tablet. Consider avoiding in patients with uncontrolled major depressive disorders, psychosis, suicidal ideation or behavior, other uncontrolled neuropsychiatric disorders.
 - bupropion SR (WELLBUTRIN SR) tablet. Consider avoiding in low BMI or patients at risk of seizure.
 - varenicline (CHANTIX) tablet
 - bupropion SR (WELLBUTRIN SR) tablet

Instructions:

- varenicline (CHANTIX) tablet
 - varenicline (CHANTIX) tablet 0.5 mg 0.5 mg, oral, Daily, First dose tomorrow at 0900, For 3 doses Give with meals and with a full glass of water.
 - varenicline (CHANTIX) tablet 1 mg 1 mg, oral, 2 times daily, First dose on Fri 12/10 at 0900, For 365 days Give with meals and with a full glass of water.
- bupropion SR (WELLBUTRIN SR) tablet
 - bupropion SR (WELLBUTRIN SR) tablet 150 mg 150 mg, oral, Daily, First dose tomorrow at 0900, For 3 doses Do not crush, split, or chew.
 - bupropion SR (WELLBUTRIN SR) tablet 12 hr tablet 150 mg 150 mg, oral, Every 12 hours scheduled, First dose on Mon 12/6 at 0900, For 365 days Do not crush, split, or chew.

Smoking Cessation Therapy	Before (%)	After (%)	p value
Total	16.1	20.2	0.439
Nicotine gum	1.3	3.7	0.325
Nicotine patch	12.9	15.6	0.625
Varenicline	0.4	4.6	0.026
Bupropion	3.1	1.8	0.748

Discussion

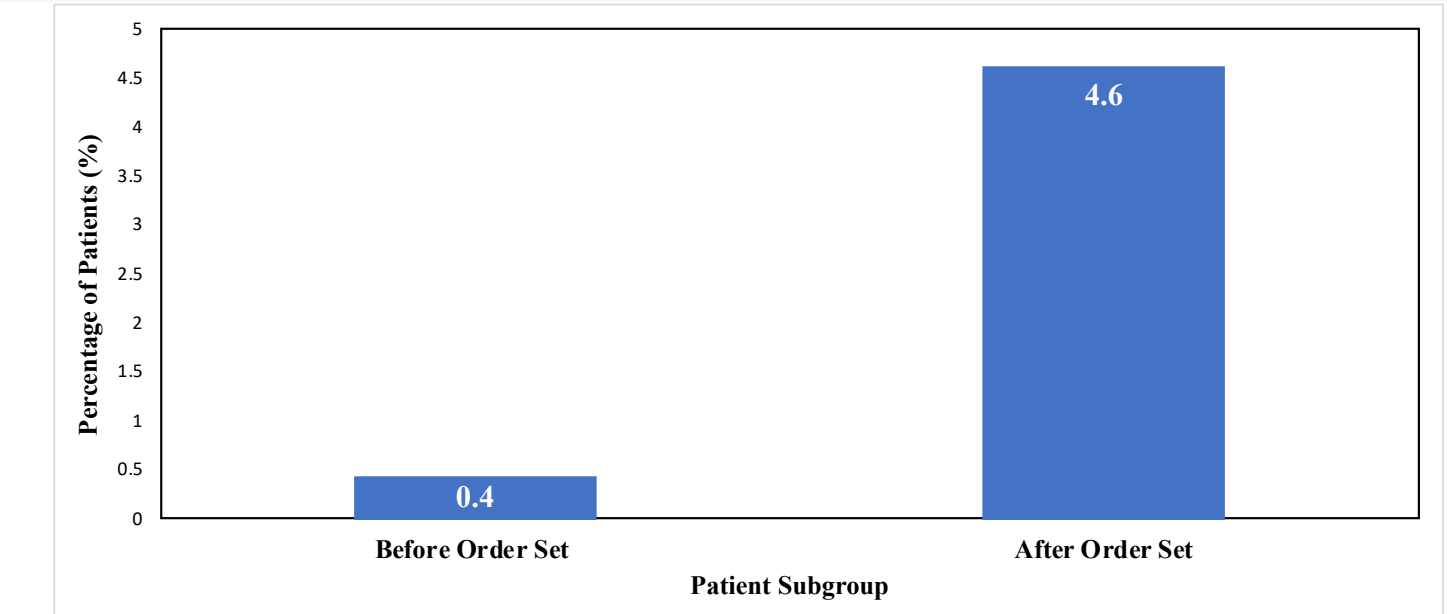


Figure 1. Percentages of patients prescribed varenicline prior to discharge from hospital stay before and after launching of the smoking cessation order-set (p=0.026).

The lack of statistical significance in increase in prescription among different subsets could be secondary to a smaller patient size in the post-intervention group, from the smaller timeframe. It was noted that bupropion rates of prescription were higher in the pre-launching group than post-launching group. This was likely a combination of a smaller cohort of patients in the post-launching group and bupropion's multiple indications, including depression.

Future Directions

We will reassess post intervention data (after 12/2022) and plan to see more significant data at that time. We will continue to emphasize smoking cessation by utilizing the EMR. We plan to create a Best Practice Advisory to remind providers to prescribe these same therapies on discharge.

Linkage to Healthcare Disparities

- We are working with the CMO office to target patients from four zip codes identified as populations in the Philadelphia area with health care equity disparities and connect with the Philadelphia Collaborative for Health Equity and Hansjörg Wyss Wellness Center.
- A limitation we have experienced is cost of medications at discharge. We have applied for financial assistance to create a fund accessible to patients who are unable to afford these medications. We aim to provide guideline directed medical therapy no matter the circumstances.