

Role of procedural intervention and acute illness in veterans affairs smoking cessation program referrals: A retrospective study

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ABSTRACT

INTRODUCTION Tobacco use remains pervasive amongst veterans. Unfortunately, the negative impact on postoperative outcomes may preclude surgeons from offering operative intervention to veterans who smoke. As such, a major health event may provide added incentive to quit. We sought to describe the role of acute illness and interventional specialist involvement in Veterans Affairs Smoking Cessation Program referrals compared to primary care wellness initiatives.

METHODS We retrospectively reviewed consultations to the pharmacy-led Smoking Cessation Program (SCP) at the Middleton Memorial VA Hospital from 2017 to 2019. Consultations placed during the last three months were categorized based on the source of referral: primary care, acute care, and interventional specialties. Descriptive statistics were used to assess rates of veteran engagement based on referral source. Consultation completion was used as a proxy for veteran engagement.

RESULTS A total of 2993 new SCP consultations were placed during the study period. Overall, veteran engagement rose from 43% in 2017 to 53% in 2019. In recent months, there were 282 SCP referrals. While only 19 (7%) of these referrals were placed by interventional specialties – primarily cardiology and thoracic surgery – the rate of veteran engagement was 63%. The majority of referrals (65%) were placed by primary care providers with an engagement rate of 68%. In contrast, only 42% of consultations placed in the context of an acute illness were completed.

CONCLUSIONS In our study, primary care directed smoking cessation referrals were most prevalent and resulted in the highest completion rates. The presence of an acute illness in isolation failed to impact program success. However, while surgeon-initiated referrals were meager in number, the engagement rate approached that of primary care. This finding suggests that surgeons play a powerful role in influencing patient behavior that may be harnessed to augment success of existing smoking cessation programs.

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KEYWORDS

surgery, smoking cessation, veterans

Received: 29 May 2020

Revised: 18 November 2020

Accepted: 22 November 2020

INTRODUCTION

A momentous day in the history of the United States Veterans Administration (VA) was 1 October 2019. This day marked a public commitment of the nation's largest integrated healthcare system to protect the health and wellbeing of patients and

hospital staff by banning use of cigarettes, cigars, pipes and electronic nicotine delivery systems from VA facilities. Enactment of two new policies decisively extends smoke-free regulations to patients, visitors, contractors, volunteers, vendors, as well as hospital employees on all VA property^{1,2}.

While VA facilities have had a smoke-free policy in place since the Veterans Dignity in Health Care Act of 1991, smoking was previously permitted in designated areas. Our hospital, like many nationwide, had an outdoor ‘smoke shack’ which was frequented by patients and employees at all hours of the day and night. In fact, the Veterans Healthcare Act passed by Congress in 1992 mandated that each VA medical center maintain indoor smoking areas accessible to hospitalized patients³. The legacy of this Act persisted through the most recent Veterans Health Administration (VHA) Directive 1085, published in 2017, which allowed smoking in specially equipped indoor and outdoor areas. The revised policies of 2019 thus represent an abrupt departure from the concessions granted in prior legislation.

Despite substantial evidence demonstrating the dangers of smoking and secondhand exposure^{4,5}, VA hospitals officially became smoke-free campuses decades after their civilian counterparts. This undoubtedly speaks to the deeply entrenched culture of smoking in the United States military dating back to World War I when tobacco companies targeted troops and even included cigarettes in rations^{6,7}. Touted as a means of stress mitigation and community building amongst soldiers far from home, it is no surprise that a 2016 Department of Defence study found that 38% of veterans who currently smoke started using tobacco products while enlisted^{8,9}. While social denormalization of smoking has decreased civilian tobacco use in recent years, smoking remains prevalent in the veteran population; recent data suggest that over 30% of U.S. Marines smoke¹⁰.

Although active tobacco use is a ‘modifiable risk factor’, quitting is challenging without appropriate support. Smoking cessation programs and pharmacotherapy have improved cessation success rates but relapse is high¹¹. For some patients, a significant health related issue can be the impetus for lifestyle modification. For tobacco users, a serious medical illness that requires hospital admission or need for a surgical procedure may provide motivation to quit. Furthermore, the negative impact of tobacco use on postoperative outcomes may preclude surgeons from offering operative intervention to patients who continue to smoke, putting surgeons and interventionalists in a powerful position to influence health-related

behaviors. Within the VHA system a pharmacy-led tobacco cessation program was developed to help reduce smoking rates¹². We sought to describe the role of acute illness and interventional specialist involvement in Veterans Affairs Smoking Cessation Program (SCP) referrals compared to primary care driven wellness initiatives.

METHODS

We performed a retrospective analysis of SCP referrals placed at a single VA hospital. We used institutional records to review consultation referrals to the pharmacy-led Smoking Cessation Program at the William S. Middleton Memorial VA Hospital from 2017 to 2019. Consultations placed during the last three months of the study period were categorized based on the source of referral: primary care, acute inpatient care medical providers, and interventional specialties including surgeons and interventional cardiologists. Descriptive statistics were used to assess rates of veteran engagement based on referral source. Consultations were considered complete when the veteran responded to the initiating phone call from a SCP representative and agreed to participate. Consultation completion was used as a proxy for veteran engagement.

RESULTS

A total of 2993 new SCP consultations were placed during the study period. Overall, veteran engagement rose from 43% in 2017 to 53% in 2019. In the most recent three months, there were 282 SCP referrals. Of these, 60% of consultations resulted in veteran engagement. The majority of referrals (65%) were placed by primary care providers with an engagement rate of 68%. While only 19 (7%) referrals were placed by interventional specialties, primarily cardiology and thoracic surgery, the rate of veteran engagement was 63%. Referrals placed in the setting of an acute health issue (e.g. hospital admission with involvement of a medical but not interventional specialist) comprised 29% of referrals. Fewer veterans engaged in these efforts; only 42% of consultations placed in the context of an acute illness without procedural intervention were completed.

DISCUSSION

In our single-institution study, veteran engagement

in the VA Smoking Cessation Program has increased in recent years. Not surprisingly, most program referrals were initiated by primary care providers. While few consultations were placed by surgeons and procedural specialists, veteran engagement in these settings was high. In contrast, consultations placed in the context of an acute medical problem by a non-interventional specialist resulted in only moderate veteran engagement. These findings have important implications for veterans, surgeons, and policy makers.

For veterans, the 2019 smoke-free policy signifies a profound shift in the culture of the VHA. Despite declining rates of civilian smoking¹⁰, a recent qualitative analysis of U.S. Marines revealed that many service men and women perceive tobacco use as a fundamental 'right' and praise the stimulant qualities of tobacco as advantageous to the rigorous demands of their work^{13,14}. This sentiment is hardly surprising when taken in historical context. In the late 1980s, at the request of the tobacco industry, a public relations firm created the Veterans for Smokers Rights Coalition (VSRC). Masked as a grassroots initiative, the tobacco industry funneled money into the VSRC to combat VHA anti-smoking efforts by creating lobbying brochures and instigating protests. VSRC rhetoric emphasized the ability to smoke as a 'freedom' that society owed veterans for making the sacrifice to fight overseas and defend the nation's freedom. Furthermore, the tobacco industry worked hard to ensure that the Veterans Health Care Amendments of 1992 mandated smoking shelters at every VA facility. This critical stipulation not only facilitated ongoing tobacco use at VA medical centers but also allowed the ritual of smoking and smoke breaks to continue in a highly visible and culturally acceptable fashion¹⁵.

According to the Centers for Disease Control, 55% of active smokers have stopped smoking for some period of time in an effort to quit, and 68% of all current smokers reported the desire to stop smoking completely¹⁶. Unfortunately, data from 2008 suggest that only 16% of military personnel successfully quit smoking during that year¹¹. Research from the civilian setting suggests that social denormalization of smoking – such as disapproval from family and friends and a feeling of embarrassment – may promote successful cessation¹⁷. Recent analysis of active personnel across 24 United States military

installations found that 78% of study participants reported that their supervisor smoked and 41% started to use tobacco since joining the military. Furthermore, investigators report that smoking to fit in with one's unit was associated with increased intensity of tobacco use¹⁸. Given these findings and the hierarchical structure of the United States Military, the 2019 smoke-free VA policy has significant potential to change the narrative for veterans who smoke.

Yet policy enactment is only half the battle. It is encouraging that our data demonstrate increasing SCP participation over time; these findings align with prior studies suggesting that prescriptions for smoking cessation pharmacotherapy at the VHA have nearly doubled over the past decade¹⁹. However, fewer than two-thirds of these consultations led to veteran engagement. In our study, primary care initiated referrals were most prevalent and resulted in greatest veteran engagement. Longitudinal involvement with the provider is a likely contributor to this achievement. While the presence of an acute illness in isolation failed to impact program success, surgeon-initiated referrals resulted in veteran engagement rates approaching those of primary care. This finding suggests that even during a brief clinical encounter, surgeons play a powerful role in influencing patient behavior that may be harnessed to enhance effectiveness of existing smoking cessation programs.

The benefits of smoking cessation in the perioperative period are undisputed and can offer surgeons significant leverage when discussing modifiable health risks with patients²⁰. It is worth noting that in our study most procedure-related referrals came from interventional cardiologists and thoracic surgeons – physicians who manage diseases directly related to the sequelae of smoking. Although surgeons often lack a pre-existing relationship with a patient considering surgery, our data suggest that the presence of a new surgical problem may trigger a change in health behavior in a way that an acute medical illness cannot. Our findings build on prior work by Tang et al.²¹ who promote a surgeon-led script promoting referral to stop smoking resources for patients with newly diagnosed head and neck cancer. Similarly, a cluster-randomized trial by Newhall et al.²² demonstrated effectiveness

of surgeon-delivered smoking cessation advice in increasing interest and awareness in smoking cessation for patients with vascular surgical problems.

Policy makers and hospital administrators have significant incentive to promote effective smoking cessation programs. The negative health consequence of tobacco use – namely reduced physical endurance, higher rates of financial and emotional stress, increased sick days and chronic illness – erode the foundation of combat readiness^{18, 23-27}. Furthermore, recent statistics suggest that the Department of Defence spends nearly \$1.6 billion each year related to medical care and lost days of work linked to tobacco use⁴. Primary care clinics are notoriously overbooked and waitlists may defer some veterans from engaging in the healthcare system. As such, utilizing the potential of surgeon-patient encounters offers an opportunity to augment the success of an already proven program.

Limitations

Our study has several limitations. The single institution nature of the cohort results in a small sample size that may not be generalizable to practices at VA facilities in other regions. Furthermore, longer term data are needed to examine if observed differences in veteran engagement based on referral source are sustained. Importantly, we use veteran participation in the initial phone call from the SCP as a proxy for engagement but lack data to confirm ongoing participation in the program or successful smoking cessation.

CONCLUSIONS

The policies of 1 October 2019 mark a significant culture change in attitudes towards tobacco use at VA hospitals across the country. Such decisive policy enactment requires effective cessation programs to support veterans who wish to quit. Our single-center study suggests that veteran engagement in the VA Smoking Cessation Program is increasing over time. Most program referrals are initiated by primary care providers. Interestingly, referrals placed by surgeons and interventionalists were few but resulted in veteran engagement rivaling that of primary care. Larger scale investigation is necessary to substantiate this observation; however, further efforts to promote SCP referrals in the setting of surgical illness may encourage ongoing program success.

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CONFLICTS OF INTEREST

The authors have each completed and submitted an ICMJE form for disclosure of potential conflicts of interest. The authors declare that they have no competing interests, financial or otherwise, related to the current work. J. Maloney reports funding from Ethicon and Medtronic, outside the submitted work.

FUNDING

There was no source of funding for this research.

PROVENANCE AND PEER REVIEW

Not commissioned; externally peer reviewed.