Tobacco Cessation in Hospitals: Updates for Practice

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Tobacco use is one of the major preventable causes of morbidity and mortality in the United States despite the decline in the smoking rate. Smokers die at least a decade before nonsmokers due to the negative health consequences associated with smoking (Jha et al., 2013). In addition to 4.5 million adolescents who are tobacco users, the United States has 40 million adult smokers (Centers for Disease Control and Prevention [CDC], 2016). Tobacco-related illnesses are costly, with an estimated $170 billion spent each year in this country on direct medical costs (Xu, Bishop, Kennedy, Simpson, & Pechacek, 2015). To reduce the tobacco-related disease burden, the U.S. government set the goal to reduce the smoking rate from the current 17% to 12% by 2020 (CDC, 2016; Office of Disease Prevention and Health Promotion, 2016).

Diverse Tobacco Products

A number of smoked or smokeless tobacco products are available and relatively accessible. Smoked tobacco products include cigarettes, cigars, and bidis. Additionally, hookah and pipe can be used as instruments for tobacco use. Smokeless tobacco products are chewable, sniffed, or inhaled vapor such as in electronic cigarettes. Among these, use of hookah and electronic cigarettes has increased. Hookah use can be equally or more toxic than cigarettes and is on the rise especially among youth (CDC, 2014). Electronic cigarettes (e-cigarettes) have been available in the U.S. market since 2007. According to the 2015 National Youth Tobacco Survey, 16% of adolescents use electronic cigarettes as the most commonly used tobacco product among that age group (U.S. Department of Health and Human Services [HHS], 2016a). No tobacco product is safe for use, and the newer products bring with them known associated risks of tobacco use along with potential unknown risks (CDC, 2018). Thus, patient tobacco screening should focus on all types of tobacco products and not merely traditional cigarettes. See Tables 1 and 2 for information about electronic cigarettes and hookah.

Tobacco Cessation: A Priority for Nursing, Regulatory Bodies, and Professional Organizations

Apart from the nation’s initiative to reduce tobacco use, regulatory and accrediting agencies have also made it a priority to involve hospitals in tobacco control. The Joint Commission (2017) recommended hospitals become smoke- and vape-free environments. It also set tobacco treatment as one of the performance measurement areas for hospitals, with specific guidelines for tobacco screening and cessation interventions. The Centers for Medicare & Medicaid Services (CMS) (2013) also emphasized the need for hospital involvement in tobacco cessation by including tobacco screening and a plan for intervention as part of the hospital admission process. Professional nursing organizations such as the Academy of Medical-Surgical Nurses (2016) and the Oncology Nursing Society (2014) also support tobacco control activities in hospitals. Leaders of hospitals and other healthcare agencies can follow directives of accrediting and professional agencies in developing tobacco cessation initiatives.
The return on investment through tobacco cessation interventions can have valuable economic benefits for hospitals and healthcare systems. However, tobacco cessation interventions are underused by healthcare professionals. According to a monograph published by the National Cancer Institute and the World Health Organization (NCI & WHO, 2016), use of evidence-based practices is justified for economic and public health benefits. Cost-effectiveness calculation of a brief annual tobacco counseling for youth and adults would yield a net benefit of $225 and $580 per person through prevention of tobacco-related harm (Mациosek et al., 2017). Furthermore, tobacco abstinence can reduce hospitalization and readmissions for cardiovascular disorders (NCI & WHO, 2016). Thus, hospital leaders can adopt tobacco-cessation interventions as a means to reduce readmissions. Additionally, the cost for tobacco cessation services and treatments is covered by most insurances and the Affordable Care Act (CMS, 2013).

**Best Practices**

### Comprehensive Tobacco Cessation Program

Tobacco use is changing with the emergence of multiple tobacco products that replace conventional cigarettes. The U.S. Food and Drug Administration (FDA) has provided a comprehensive list of tobacco products including e-cigarettes, hookah, all cigar types, nicotine gels, and pipe tobacco as tobacco products (HHS, 2016b). Because no tobacco product is harmless, screening for tobacco use should include all types of tobacco products. Strategies for education about newer forms of tobacco become essential for comprehensive tobacco cessation programs. A study of enrolled members of the U.S. Air Force examined a brief tobacco cessation intervention for users of nine different non-cigarette tobacco products, including e-cigarettes and hookah (Little et al., 2016). A significant increase in knowledge about perceived harm caused by non-cigarette tobacco products was found, as well as a decreased intention to use tobacco following the brief tobacco intervention. Provision of
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brief counseling by clinical nurses during patient encounters can be beneficial to initiate tobacco cessation for patients.

**Training Nurses about Tobacco Cessation Programs**

Training of healthcare professionals is recommended as the initial step for integrating tobacco cessation initiatives in healthcare systems (Bialous et al., 2017). Education of clinical staff can increase confidence in providing tobacco cessation services to hospitalized patients (Fore, Karvonen-Gutierrez, Talsma, & Duffy, 2014). To provide comprehensive tobacco cessation services, the training should include newer products such as e-cigarettes (Pepper, McRee, & Gilkey, 2014).

Nurses who are also patient educators can be given specific training for tobacco cessation through different methods. Nurses trained through a toolkit, including a PowerPoint® presentation, a pocket card with supportive protocol, and documentation tool, contributed to an increased quit rate for inpatient tobacco users (Duffy et al., 2016). Face-to-face training on tobacco cessation for healthcare professionals such as nurses also has shown an increase in perceived ability and knowledge to deliver tobacco cessation treatment (Chen et al., 2015). Adequate training can improve a nurse's skill in tobacco cessation and thus resolve barriers to adherence.

**Use of Electronic Health Records (EHRs)**

Use of EHRs can facilitate delivery of tobacco cessation information. Use of EHRs increased tobacco cessation interventions from 23% to 54% in 19 community health centers in New York City (Silfen et al., 2014). The volume of referrals to tobacco treatment programs was increased significantly when patients were identified as tobacco users and given an automated electronic referral (Rabius, Karam-Hage, Blalock, & Cinciripini, 2014). Furthermore, meaningful use criteria of EHRs by CMS requires health professionals to record the patient's smoking status (CMS, 2013).

EHRs can help with surveillance of tobacco use in patients along with navigation of tobacco cessation interventions. Use of the EHR for documentation of e-cigarettes enabled researchers to identify information such as prevalence, purpose, and side effects associated with e-cigarette use (Winden et al., 2015). Community health center leaders in New York City identified a lack of tobacco screening and cessation interventions through retrieval of EHR data, providing an opportunity for quality improvement (Silfen, Cha, Wang, Land, & Shih, 2015). Hospitals can use the EHR as a tool for implementing and monitoring tobacco cessation interventions.

**Strategies for Initiation of Tobacco Cessation Interventions**

Tobacco cessation interventions can be implemented through various approaches. The Agency for Healthcare, Research and Quality (2015) and the CDC (2017) recommended the use of the 5A algorithm developed by the World Health Organization (2014) for tobacco cessation interventions. The 5A approach involves five tasks, which are performed by healthcare workers during tobacco screening:

1. **Ask** about tobacco use.
2. **Advise** patients to quit.
3. **Assess** readiness for quitting.
4. **Assist** by providing resources.
5. **Arrange** follow up.

The National Adult Tobacco Survey findings showed persons who received a 5A intervention during their visit to a healthcare provider had significant increases in use of tobacco cessation counseling and nicotine replacement therapy (NRT) (Kruger, O’Halloran, Rosenthal, Babb, & Fiore, 2016).

Provision of training, infrastructure, and a culture of tobacco cessation in acute care hospitals can help in promoting use of the 5A algorithm by nurses (see Figure 1). A study on the integration of the 5A algorithm by nurses in acute care facilities showed hospitals with established standing orders for tobacco cessation and nicotine withdrawal were five times more likely to help patients quit tobacco use (Heath et al., 2016). Nurses’ routine use of the recommended 5A algorithm can create a lasting impact on the health of their patients. Successful strategies implemented for hospitalized smokers by trained nurses include provision of written materials, educational video, quit-line contact, behavioral therapy, and administration of NRT (Duffy et al., 2016).

**Behavioral Interventions**

While motivational interviewing by trained personnel can be an effective tool, acute care nurses are able to provide counseling with minimal training. A 1-hour training for nurses was found to increase their confidence in counseling and lead to an increased quit rate for hospitalized patients (Duffy et al., 2016). Apart from motivational interviewing, other behavioral interventions can support tobacco cessation. A review of 13 randomized controlled trials found interventions such as brief advice, proactive telephone support, text messaging, and printed self-help materials provided by healthcare workers promoted smoking cessation (West et al., 2015).

**Pharmacotherapy**

Non-nicotine medications (e.g., bupropion SR [Zyban®], 6 varenicline tartrate [Chantix®]) as well as NRT in the form of lozenges, patches, gum, inhaler, or nasal spray are recommended forms of pharmacotherapy for cessation. The U.S. Preventive Services Task Force Recommendation Statement suggested bupropion SR, varenicline, and NRT may be used in combination with behavioral therapy to increase the abstinence rate (Siu, for the U.S. Preventive Services Task Force, 2015). The Joint Commission (2017) also suggested hospitals should offer a prescription for NRT upon discharge. Nurses can be advocates to ensure patients receive appropriate pharmacotherapy during hospitalization and a prescription on discharge.
Technology for Cessation

In addition to traditional telephone services for cessation counseling, tobacco users can choose text messaging, cessation software applications, and social media for assistance to quit. Comparison of a nurse-supported web-based program with the Quitline service demonstrated the quit rate was higher for the nurse-supported program (Choi et al., 2014). A Cochrane review on Internet-based smoking interventions found such types of interventions are helpful if they are interactive and tailored (Civljak, Stead, Hartmann Boyce, Sheikh, & Car, 2013). While many of these technological cessation services are offered free, nurses are in a position to educate and provide tailored resources for tobacco users about available technological assistance.

Follow-Up Care

Behavioral interventions initiated during hospitalization need to be followed after discharge to assist in sustained abstinence. The Joint Commission’s recommendation for tobacco treatment suggests follow-up contact should occur 15-30 days after discharge. Patients exposed to a post-discharge tobacco intervention with an automated telephone call and free NRT for 90 days showed higher abstinence rates at 6 months after discharge than usual care (Rigotti et al., 2014).

Conclusion

Nurses can play a pivotal role in tobacco cessation intervention among hospitalized patients through evidence-based approaches. An organization-wide commitment to tobacco cessation initiatives, along with proper infrastructure, can help in achieving comprehensive tobacco cessation among hospitalized patients (Little et al., 2016). Designing EHR systems with a clinical workflow that allows comprehensive tobacco screening and interventions will help with performance improvement (Silfen et al., 2015). Hospital-based patient education departments should engage actively in developing educational material that trains nurses on tobacco screening and interventions to aid patients to make a behavioral change (Duffy et al., 2016). Adequate education and training can empower nurses to perform this task with necessary skill and confidence. Thus, nurses can partner in reducing the preventable mortality and morbidity caused by tobacco use through actively participating in tobacco cessation within hospitals.

REFERENCES

To Obtain CNE Contact Hours

1. For those wishing to obtain CNE contact hours, you must read the article and complete the evaluation through the AMSN Online Library. Complete your evaluation online and print your certificate immediately, or later. Simply go to www.amsn.org/library.

2. Evaluations must be completed online by October 31, 2020. Upon completion of the evaluation, a certificate for 1.3 contact hour(s) may be printed.

Learning Outcome

After completing this learning activity, the learner will be able to discuss evidence-based approaches nurses can use as tobacco cessation interventions among hospitalized patients.

Learning Engagement Activity

- Identify best practices hospitals can use to plan and provide effective comprehensive tobacco cessation programs.
- Are you familiar with the use of the 5A Approach/Algorithm during tobacco screening? See Figure 1. 5As at the Bedside for more information.

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