

## Trans-disciplinary Care: A New Approach to Improving the Effectiveness of Tobacco Use Interventions

Robert Hoffmann, MA  
Virna Little, PsyD, LCSW-r, SAP

Tobacco use disorders devastate lives and financial well-being, and constitute one of the largest public health problems the world faces today. A main cause of avoidable illness and death, tobacco-related mortality rates lead to more than 435,000 deaths per year, in the United States alone<sup>1-3</sup> with millions more affected by tobacco-related illnesses. Annually, nearly 96 billion dollars are lost to medical costs directly related to smoking.<sup>4</sup> While smoking is the most prevalent form of tobacco use, all forms of tobacco use pose dangers to health. The well-being of entire communities, particularly underserved communities, is affected, making tobacco use one of the largest public challenges facing the health care system today.

Tobacco use, like any addiction, is complex, affecting individuals, families, and communities in many ways. It is critical that tobacco use disorders be addressed in both micro (individual) interventions and macro (community-wide) initiatives with the challenges of working with underserved populations considered. Evidence suggests interventions which have been proven effective with the general population will work with underserved populations, if those interventions are made available. The key components of evidence-based tobacco use interventions center on dynamic system changes incorporating policy support and performance feedback mechanisms. Incorporating current developments in national standards surrounding the creation of medical homes and meaningful use of electronic health records, and reinforced with a trans-disciplinary approach, evidence-based smoking cessation practices can have an effect on tobacco use in underserved communities.

One of the new ways to increase the effectiveness of tobacco interventions being explored is the utilization of trans-disciplinary teams, now being developed in health care organizations around the country. An evolution from inter-disciplinary care, trans-disciplinary care is a multi-disciplinary team in which all members have expanded knowledge and training in the disciplines of other team members. In a trans-disciplinary team model, all members of the team address tobacco use and reinforce goals, regardless of the main purpose of the visit. This shared reinforcement, along with the transmission

---

**ROBERT HOFFMANN** is the Assistant Director of the Tri-County Cessation Center in Lake Katrine, NY. **VIRNA LITTLE** is Senior Vice President for Psychosocial Services and Community Affairs at the Institute for Family Health in New York, NY. Please address correspondence to Robert Hoffmann at 741 Grant Avenue, Lake Katrine, NY 12449; (845) 334-2700 ext. 5505; rhoffmann@kingstonhospital.org.

of information by disciplines with varying approaches, allows not only for consistent information to be given to the patient, but for information on tobacco use to be tied into all areas of primary care, mental health, nutrition, and oral health. This approach provides the patient with information on the effect of tobacco use in all areas of their lives and health. Combining evidence-based practices with a trans-disciplinary team approach maximizes the effect of messages being delivered in tobacco cessation campaigns, especially in underserved communities where there may be challenges with language and literacy in the provision of tobacco cessation interventions.

In an effort to promote evidence-based tobacco interventions, public and private organizations have developed best practices using evidence-based interventions to provide comprehensive treatment of tobacco use disorders. During the past 15 years, private and public organizations have been studying the efficacy of tobacco use interventions.<sup>5-7</sup> During this time, many state tobacco control programs have been independently evaluated, proving that when evidence-based approaches are used, decreases in smoking rates ensue.<sup>8</sup> The Public Health Service Guideline on Treating Tobacco Use and Dependence represents a consolidation of the evidence base and identifies key components of effective tobacco use interventions. Counseling and medication are generally recommended as crucial elements of tobacco dependence treatments. Interventions may be brief or intense, should be motivationally geared, and follow a dose-response pattern. Motivational counseling should include practical problem-solving skills and social support. Psycho-social support should also include Quitline assistance when possible. Finally, in light of the clinical and cost-saving effect of evidence-based tobacco treatments, coverage for these treatments by insurers should be supported whenever possible. This summary must be used in conjunction with expert guidance in administering a system-wide, trans-disciplinary tobacco treatment protocol within an organization in order to achieve maximum effect. Tobacco treatment protocols delivered by a trans-disciplinary team effectively address tobacco use in communities, particularly underserved communities.

Despite declines in tobacco-use rates, interventions have fallen short in providing certain groups of addicted smokers with the tools they need to support meaningful quit attempts.<sup>9-15</sup> These data show that members of some underserved communities use tobacco at greater than national averages. The ability to facilitate the development of both cessation programs and trans-disciplinary teams in community health settings would allow for an increase in the effectiveness of interventions, especially in underserved populations.

## **Disparities**

Underserved communities represent a significant portion of tobacco-use treatment service gaps, a fact discussed in depth in the reprinted 2008 Department of Health and Human Services, Public Health Service Guidelines Treating Tobacco Use and Dependence. In addition, the 2010 Surgeon General's Report points to these gaps and calls for effective tobacco interventions to reach underserved populations. There is significant evidence that tobacco manufacturers target underserved communities; the fact that many of the members of these communities are uninsured and not connected to a medical

home exacerbates the difficulty of addressing their tobacco use. Sub-populations such as pregnant women, lesbians and gay and bisexual people, HIV/AIDS-infected people, and those with significant psychiatric and substance abuse impairments each present specific additional needs in this connection. Reaching these populations with tobacco cessation interventions are challenging. None the less, as most smokers will touch the health care system at some point within the calendar year<sup>16-18</sup> trans-disciplinary tobacco-use interventions represents an critical opportunity for promoting positive behavior change.

Tobacco dependence is a chronic condition subject to frequent relapse often requiring repeated interventions and multiple attempts to quit. Applying effective treatment models significantly increases the rates of long-term abstinence. Tobacco dependence treatments are effective across a broad range of populations and will be effective when health care delivery systems consistently identify and document tobacco use status at each encounter. It is imperative that trans-disciplinary teams caring for the underserved ensure that medical management systems are in line with established guidelines. Not only do underserved communities include some of the consumers who smoke the most, but also those who may have least access to effective evidence-based support.

### **Meaningful Use and Medical Home Model on Tobacco Use Interventions: Medical Home**

The developments of trans-disciplinary teams are critical towards an organization's successful achievement of medical home status. Two basic requirements for becoming a medical home are the utilization of electronic health records and integrated team-based care. Over the past few years, the inclusion of smoking cessation tools in electronic health records has exploded, most containing smoking history information at design along with the ability to build customized tools to support smoking cessation efforts by members of the health care team. A main focus of the medical home model is the application of electronic health records in light of a standard referred to as meaningful use. Meaningful use means not simply the presence of an electronic health record system, but that the system be used in such a way that it has a positive effect on quality and outcomes.

Tobacco use has been specifically targeted as a component required to achieve meaningful use standards by implementing financial incentives in order to encourage organizations to implement and fully exploit the potential of electronic health records. Tobacco use assessment has been deemed one of the measures that matter for affecting public health, both in improved outcomes and decreased dollars spent. Health care organizations applying for meaningful use dollars are required to quantify and report on the number of patients screened for tobacco and provided with cessation counseling.

### **Importance of Trans-disciplinary Models of Care**

Trans-disciplinary care can be a highly effective means of presenting and enforcing tobacco use interventions. A trans-disciplinary team comprising a diverse group of health professionals, such as primary care, nutrition, dental, mental health, and community

health workers is optimally designed to work with underserved populations around tobacco use.

The concept of consistent reinforcement of interventions by a trans-disciplinary care team is empowering to patients, especially underserved populations who may have little outside support. Research suggests that when recommendations are applied comprehensively, consistently, and systemically in health settings, all levels of tobacco users benefit. To enhance the success of trans-disciplinary care, all members of the trans-disciplinary team should be provided with role-specific training on providing direct, evidence-based support to tobacco users at each and every stage of the clinical interaction.

All members of the trans-disciplinary medical team are encouraged to take part in supporting the quit process as strong, positive motivational advice from the clinical team is among the most powerful drivers informing the quit process. Regardless of the method a tobacco user employs for their final quit attempt, most smokers must cycle through periods of relapse and remission. A comprehensive effort ensures that smokers have access to customized tools required to facilitate quitting. A trans-disciplinary approach, enforced organizationally and combined with training in evidence-based cessation practices, can have a profound effect on smoking rates in underserved communities.

### **A Case Example**

Hobart Street Family Medicine Clinic,<sup>19</sup> located in rural upstate New York, is one of the primary providers of health care to the underserved in the county where it is located. Many patients of the Hobart Street clinic face multiple health care-use barriers such as language, illiteracy, lack of transportation, and inability to pay for prescriptions or specialty care co-payments. The Hobart Street clinic provides interpreter services in 32 languages, inspiring many to call the center the “mini-United Nations.” In response to the federal care recommendations, the Hobart leadership developed a trans-disciplinary approach to drive evidence-based tobacco cessation interventions by providing all staff with formal tobacco cessation training. The tobacco use rate among clients was as high as 53% prior to the system change (with included on-site distribution of NRT, counseling, documentation prompts, and follow-up support) and fell to as low as 28% at the end of the study period.

Consistent with the approach taken by Hobart, a system must be developed to identify tobacco users at each patient encounter and provide brief counseling, with all members of the health care team capitalizing on so-called teachable moments. In order to support these system-wide efforts and policies, all members of the team must be educated in multiple venues and at multiple times during implementation. Education may include grand rounds, general staff meetings with tobacco cessation as standing items on the agenda, or including tobacco cessation efforts as part of organizational quality improvement projects.

## Conclusions and Recommendations

Development and implementation of a comprehensive program utilizing a trans-disciplinary team, policy standards, and evidence-based treatment of tobacco use and dependence are effective in increasing both clinician knowledge and tobacco cessation rates. The provision of on-site education and pharmacotherapy to patients in high-risk populations is supported when reinforced across team members and disciplines. Barriers to promoting cessation can be removed through a comprehensive, system-wide effort, therefore reaching the high-risk patient population. These efforts help finally to reduce the smoking rates in underserved communities and fulfill our professional mission of providing access to all.

To fulfill our health care mission of providing access to effective care in our communities, trans-disciplinary, evidenced-based tobacco-use must feature prominently in treatment protocols. Negatively affecting every disease etiology, tobacco use still remains as one of the most pervasive, powerful threats to community wellness. Finally, as national standards shift the criteria by which tobacco use interventions fit into meaningful use and other important accreditation standards, it is important to use the evidence-based systems model as a template around which many chronic diseases may be treated in both the underserved and the general population.

## Notes

1. Centers for Disease Control and Prevention. Annual smoking-attributable mortality, years of potential lives lost, and productivity losses—United States, 1997–2001. *MMWR*. 2005 Jun 1;54(25):625–8.
2. McGinnis JM, Foegen WH. Actual causes of death in the United States. *JAMA*. 1993 Nov 10;270(18):2207–12.
3. Sloan FA, Ostermann J, Picone G. *The price of smoking*. Cambridge, MA: Massachusetts Institute of Technology, 2004.
4. Centers for Disease Control and Prevention. *Best practices for comprehensive tobacco control programs—2007*. Atlanta, GA: Department of Health and Human Services, 2007.
5. Quinn VP, Stevens VJ, Hollis JF, et al. Tobacco-cessation services and patient satisfaction in nine nonprofit HMOs. *Am J Prev Med*. 2005 Aug;29(2):77–84.
6. Conroy MB, Majchrzak NE, Regan S, et al. The association between patient-reported receipt of tobacco intervention at a primary care visit and smokers' satisfaction with their health care. *Nicotine Tob Res*. 2005 Apr;7 Suppl 1:S29–34.
7. Stevens VJ, Solberg LI, Quinn VP, et al. Relationship between tobacco control policies and the delivery of smoking cessation services in nonprofit HMOs. *J Natl Cancer Inst Monogr*. 2005;(35):75–80.
8. Centers for Disease Control and Prevention. *Evidence of effectiveness: a summary of State Tobacco Control Program Evaluation literature—2005*. Atlanta, GA: Department of Health and Human Services, 2006.
9. Cokkinides VE, Ward E, Jemal A, et al. Under-use of smoking-cessation treatments: results from the National Health Interview Survey, 2000. *Am J Prev Med*. 2005 Jan; 28(1):119–22.

10. Centers for Disease Control and Prevention. Cigarette smoking among adults—United States, 2006. *MMWR*. 2007 Nov 9;56(44):1157–61.
11. Parnes B, Main DS, Holcomb S, et al. Tobacco cessation counseling among underserved patients: a report from CaReNet. *J Fam Pract*. 2002 Jan;51(1):65–9.
12. Fang CY, Ma GX, Miller SM, et al. A brief smoking cessation intervention for Chinese and Korean American smokers. *Prev Med*. 2006 Oct;43(4):321–4. Epub 2006 Jul 24.
13. Ferreira-Borges C. Effectiveness of a brief counseling and behavioral intervention for smoking cessation in pregnant women. *Prev Med*. 2005 Jul;41(1):295–302.
14. Fiore MC, Jorenby DE, Schensky AE, et al. Smoking status as the new vital sign: effect on assessment and intervention in patients who smoke. *Mayo Clin Proc*. 1995 Mar;70(3):209–13.
15. Glasgow RE, Whitlock EP, Eakin EG, et al. A brief smoking cessation intervention for women in low-income planned parenthood clinics. *Am J Public Health*. 2000 May;90(5):786–9.
16. Gardiner P, Clark PI. Summary of the second conference on menthol cigarettes. A report to the FDA. Washington, DC, Oct 19–20, 2009.
17. New York State Department of Health. First annual independent evaluation of New York's Tobacco Control Program Final Report. Research Triangle Park, NC: RTI International, 2004.
18. Centers for Disease Control and Prevention. Physician and other health care professional counseling of smokers to quit—United States, 1991. *MMWR*. 1993 Nov 12;42(44):854–7.
19. Zaykoski J. Improving cessation outcomes by embracing the obstacles in developing a comprehensive approach to treating tobacco use and dependence. In: National Conference on Tobacco or Health, Phoenix (AZ), 2008. New York State Department of Health Tobacco Control Annual Meeting. Albany, 2008.