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A Comprehensive Approach to Tobacco Cessation for the Homeless

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Carpenter et al. report a study of Contingency Management (CM) as a potential modality for delivering tobacco cessation treatment to homeless smokers. CM is an intensive behavioral intervention for difficult to treat smokers.[1] CM may be an effective model for delivery of care to this underserved population for whom little guidance exists for effective treatment approaches.

Problem

Cigarette smoking remains a major public health concern in the United States, with higher prevalence rates in several special populations. Tobacco use among homeless individuals represents a significant health disparity, as their smoking prevalence is estimated to be as high as 70-80%.[2-3] Homeless smokers have higher risk for chronic diseases and greater potential for hospitalizations, indicating increased vulnerability to the health consequences of smoking.[2] Homeless smokers also represent a population likely to have greater difficulty quitting tobacco use and lacking resources to support cessation.[4-6] For example, homeless smokers commonly have psychiatric and substance use disorder comorbidities which are associated with higher nicotine dependence and confer additional barriers to quitting.[5,7-8] Although homeless smokers are found to have similar rates of quit attempts to other smokers, they may also report less readiness to make a quit attempt and be more difficult to engage in treatment.[4,9] Even when ready to make a quit attempt, a comparison of a domiciled individuals to homeless patients at a free clinic indicated poorer outcomes for the homeless smokers.[10] It is clear that quitting smoking would have significant benefits for homeless individuals, including potential reductions in alcohol consumption as well as other health and economic benefits.[11] The barriers to successful smoking cessation among the homeless indicate an urgent need for efforts to increase their motivation and engagement in cessation, as well as the development of specialized treatment modalities targeted to the needs of these smokers.

Providing effective tobacco cessation treatments to tobacco users has proven challenging. These challenges are amplified when targeting homeless smokers. A more appropriate and systematic approach may be to adopt a multi-dimensional approach to addressing this important issue.

Chronic Management

Tobacco Use Disorder (TUD) is a chronic, relapsing disease for which a long-term approach to treatment is important.[11] For example, treatment of a chronic medical disorder such as diabetes typically includes ongoing monitoring maintain target glycemic control. Tobacco use treatment may be best conceptualized as a chronic, long term intervention with consistent follow-up. **Goal: Target TUD as a chronic, relapsing disease.**

Defining success

Tobacco free life is the ultimate goal of TUD treatment.[11] However, alternative or intermediate outcomes may be important to consider, especially in a difficult to treat population such as homeless smokers. Increasing quit attempts has been identified as a potential strategy for reducing population smoking prevalence, and is likely important for this population as well.[12] As

highlighted in the literature, tobacco users typically require multiple attempts to quit tobacco use, sometimes exceeding 20 attempts before achieving prolonged abstinence.[11,13] Motivational interventions to increase quit attempts paired with engaging homeless smokers in evidence-based treatment may serve to increase successful outcomes. Smoking reduction may also be a viable intermediate outcome for homeless smokers. Although there is no direct health benefit for reduced tobacco use, reduction efforts may effect greater confidence in quitting, enhance skills for behavior change, and increase motivation to quit ultimately yielding better cessation outcomes.[14] **Goal: Increase quit attempts, reduce cigarette smoking, and ultimately be tobacco free**

Evidence-based treatments

Consistent with research, providing behavioral treatment with pharmacotherapy provides the highest likelihood of successful abstinence.[11] Medications are widely available and generally consist of combination therapies with Nicotine Replacement (e.g. Nicotine patch and Nicotine lozenge), bupropion combinations (e.g. bupropion and Nicotine lozenge) or varenicline.[11] However, cost and access to treatment may be an issue for homeless smokers. A focus on long term cost savings (e.g. cigarette costs vs temporary cost of nicotine patch) may be a way to approach cost concerns. For behavioral treatment, greater intensity (e.g. 30 minutes of behavioral treatment will yield better results than 5 minutes) and more sessions can increase cessation rates (e.g. greater than 8 sessions generally yields better abstinence rates). Referral to free treatment programs, such as telephone quit lines which are available in most states in the U.S. will be important to increase utilization. Long-term treatment represents a model that may be particularly appropriate for this population given their greater difficulty quitting and maintaining abstinence from smoking. In the absence of resources for chronic care, an alternative is to provide more behavioral sessions early in the quit attempt, with fewer sessions during the maintenance phase.[11] Behavioral treatment for TUD may also incorporate motivational interviewing (MI) strategies designed to increase motivation for change.[11] Research is still limited, but MI is effective for increasing cessation attempts[15] and can be also useful for enhancing engagement in treatment and providing movement through the stages of change.[11, 15] **Goal: To engage tobacco users, assisting them along the stages of change, and when ready to make a quit attempt: provide medications and behavioral treatment to tobacco users.**

Mechanisms of Treatment Delivery

Tobacco users may not be able to attend face to face or group appointments. Some may not own a telephone or computer to access quitlines or web-based materials. Given that one size does not fit all, providing choices and a variety of options for tobacco users is important. There is evidence for the effectiveness of employing multiple treatment modalities.[11] It is well established that behavioral treatment can be delivered by telephone, in-person or in groups and by diverse healthcare professionals.[11,16] More recently, technological advancements have been harnessed for tobacco cessation treatment including web-based interventions, smartphone applications, and text message services.[18-20] All of these may serve as supplemental tools for existing provider practices. Likely, homeless tobacco users may need a combination of modalities given the high rates of comorbidity and barriers to cessation; successful cessation may require more intensive, ongoing treatment incorporating pharmacotherapy and behavioral counseling. **Goal: Provide evidence-based delivery options to tobacco users and supplement with modalities that provide evidence-based information.**

Evidence based components of the Contingency Management model

It is also important to highlight the evidence based practices employed by the CM model proposed by Carpenter et al. including pharmacotherapy and behavioral counseling. In addition to medications, there were a total of 13 contact points where participants smoking status was assessed or biologically verified.[11] Four 20-minute sessions employed evidenced based cognitive behavioral therapy (CBT), two prior to quitting, and one on the quit date and the last session 2 weeks following the quit date. All of these are well documented evidence based practices that improve outcomes, supporting the value of this CM model as an effective approach for homeless smokers.[11]

Conclusion: There are no easy solutions to providing tobacco treatment to the homeless population. Understanding the chronic nature of TUD and potential barriers to the patient population can assist in identifying appropriate treatment options. Initial goals of increasing quit attempts and engagement in treatment may be of particular importance for this population and may eventually help homeless smokers to be tobacco free. Evidenced-based practices, use of multiple modalities and adoption of technological advances in treatment to the extent feasible should be provided for all homeless tobacco users. The CM model evaluated by Carpenter et al represents a valuable and novel contribution to evidence based tobacco use treatment for in homeless tobacco users.

The opinions expressed in this article are those of the authors and do not necessarily represent those of the Veterans Health Administration (VHA).

1. Romanowich, P., Mintz, J., & Lamb, R. J. (2009). The relationship between self-efficacy and reductions in smoking in a contingency management procedure. *Experimental and Clinical Psychopharmacology*, *17*(3), 139–145. doi:10.1037/a0015842
2. Wilder Foundation. *Homeless Adults and Children in MinnesotaStatewide Survey*. Saint Paul, MN: Wilder Foundation; 2004. Available at: http://www.wilder.org/fileadmin/user_upload/research/Homeless2003/adult/StatewideAdultsByMetroGreaterMN_Tables_192-199.pdf (accessed 29 September 2006) (Archived at http://www.webcitation.org/6EtqU5at5).
3. Torchalla I., Strehlau V., Okoli C. T., Li K., Schuetz C., Krausz M. Smoking and predictors of nicotine dependence in a homeless population. *Nicotine Tob Res* 2011; **13**: 934–42.
4. Arnsten, J. H., Reid, K., Bierer, M., & Rigotti, N. (2004). Smoking behavior and interest in quitting among homeless smokers. *Addictive Behaviors*, *29*(6), 1155–1161. doi:10.1016/j.addbeh.2004.03.010

5. Garner, L., & Ratschen, E. (2013). Tobacco smoking, associated risk behaviours, and experience with quitting: a qualitative study with homeless smokers addicted to drugs and alcohol. *BMC Public Health*, *13*, 951. Doi:10.1186/1471-2458-13-951
6. Goldade, K., Whembolua, G.-L., Thomas, J., Eischen, S., Guo, H., Connett, J., … Okuyemi, K. S. (2011). Designing a smoking cessation intervention for the unique needs of homeless persons: a community-based randomized clinical trial. *Clinical Trials (London, England)*, *8*(6), 744–754. doi:10.1177/1740774511423947
7. Weinreb, L., Goldberg, R., & Perloff, J. (1998). Health characteristics and medical service use patterns of sheltered homeless and low-income housed mothers. *Journal of General Internal Medicine*, *13*(6), 389–397.
8. Reitzel, L. R., Nguyen, N., Eischen, S., Thomas, J., & Okuyemi, K. S. (2014). Is Smoking Cessation Associated with Worse Comorbid Substance Use Outcomes among Homeless Adults? *Addiction (Abingdon, England)*. doi:10.1111/add.12688
9. Connor, S. E., Scharf, D. M., Jonkman, L. J., & Herbert, M. I. (2014). Focusing on the five A's: a comparison of homeless and housed patients' access to and use of pharmacist-provided smoking cessation treatment. *Research in Social & Administrative Pharmacy: RSAP*, *10*(2), 369–377. doi:10.1016/j.sapharm.2013.05.011
10. Reitzel, L. R., Nguyen, N., Eischen, S., Thomas, J., & Okuyemi, K. S. (2014). Is Smoking Cessation Associated with Worse Comorbid Substance Use Outcomes among Homeless Adults? *Addiction (Abingdon, England)*. doi:10.1111/add.12688
11. Clinical Practice Guideline Treating Tobacco Use and Dependence 2008 Update Panel, Liaisons, and Staff. (2008). A clinical practice guideline for treating tobacco use and dependence: 2008 update. A U.S. Public Health Service report. *American Journal of Preventive Medicine*, *35*(2), 158–176. doi:10.1016/j.amepre.2008.04.009
12. Shu-Hong Zhu, Madeleine Lee, Yue-Lin Zhuang, Anthony Gamst,Tanya Wolfson 2012. Interventions to increase smoking cessation at the population level: how much progress has been made in the last two decades? Tobacco Control 2012;21:110**e**118
13. Borland, R., Partos, T. R., Yong, H.-H., Cummings, K. M., & Hyland, A. (2012). How much unsuccessful quitting activity is going on among adult smokers? Data from the International Tobacco Control 4-Country cohort survey. *Addiction (Abingdon, England)*, *107*(3), 673–682. doi:10.1111/j.1360-0443.2011.03685.x
14. Lindson-Hawley, N., Aveyard, P., & Hughes, J. R. (2012). Reduction versus abrupt cessation in smokers who want to quit. *The Cochrane Database of Systematic Reviews*, *11*, CD008033. doi:10.1002/14651858.CD008033.pub3
15. Okuyemi, K. S., Goldade, K., Whembolua, G.-L., Thomas, J. L., Eischen, S., Sewali, B., … Des Jarlais, D. (2013). Motivational interviewing to enhance nicotine patch treatment for smoking cessation among homeless smokers: a randomized controlled trial. *Addiction (Abingdon, England)*, *108*(6), 1136–1144. doi:10.1111/add.12140
16. Chen, T., Kazerooni, R., Vannort, E. M., Nguyen, K., Nguyen, S., Harris, J., & Bounthavong, M. (2013). Comparison of an Intensive Pharmacist-Managed Telephone Clinic With Standard of Care for Tobacco Cessation in a Veteran Population. *Health Promotion Practice*. doi:10.1177/1524839913509816

17. Chen, T. C., Christofferson, D. E., Hamlett-Berry, K., Kazerooni, R., Bounthavong, M., Bodie, L., & Myers, M. (2014). A tobacco cessation treatment model using telehealth: a pilot evaluation in Veterans. *Journal of Telemedicine and Telecare*, *20*(3), 161–163. doi:10.1177/1357633X14527707
18. Abroms, L. C., Boal, A. L., Simmens, S. J., Mendel, J. A., & Windsor, R. A. (2014). A Randomized Trial of Text2Quit: A Text Messaging Program for Smoking Cessation. *American Journal of Preventive Medicine*, *47*(3), 242–250. doi:10.1016/j.amepre.2014.04.010
19. Hutton, H. E., Wilson, L. M., Apelberg, B. J., Tang, E. A., Odelola, O., Bass, E. B., & Chander, G. (2011). A systematic review of randomized controlled trials: Web-based interventions for smoking cessation among adolescents, college students, and adults. *Nicotine & Tobacco Research: Official Journal of the Society for Research on Nicotine and Tobacco*, *13*(4), 227–238. doi:10.1093/ntr/ntq252
20. BinDhim, N. F., McGeechan, K., & Trevena, L. (2014). Who Uses Smoking Cessation Apps? A Feasibility Study Across Three Countries via Smartphones. *JMIR mHealth and uHealth*, *2*(1), e4. doi:10.2196/mhealth.2841