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Promoting tobacco cessation utilizing pre-health professional students as research associates in the emergency department

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Abstract

Objective—To investigate the extent to which volunteer research associates (RAs) can be utilized to screen emergency department patients and their visitors for tobacco use and effectively refer tobacco users requesting help to state Tobacco Quitlines.

Methods—A sample of 19,149 individuals in 10 emergency departments around the country was enrolled into a prospective, interventional study on tobacco cessation by pre-health professional RAs. Participants who screened positive for tobacco use were provided a brief description of Tobacco Quitline programs and then offered a faxed referral to their respective state Quitline.

Results—A total of 10,303 (54%) participants reported tobacco use for more than one month during their lives, with 3,861 (20%) currently using every day and an additional 1,340 using on some days (7%). Most importantly, 2,151 participants requested a faxed Tobacco Quitline referral (36% of individuals who used tobacco in the past month).

Discussion—Pre-health professional RAs were shown to be an effective and cost-efficient resource for providing a strongly recommended service in the emergency department. Patient care (and the care of their visitors) was supplemented, emergency department personnel were not provided with additional burden, and RAs were provided with valuable experience for their futures in the health professions.

Keywords

tobacco cessation; Quitline; research associates

1. Introduction

The Centers for Disease Control and Prevention estimates more than 45 million adults in the U.S. currently smoke cigarettes (Dube, Asman, Malarcher, & Caraballo, 2009), with approximately 80% reporting use every day. Perhaps more importantly, tobacco use is the leading cause of preventable death in the U.S., accounting for about 1 in every 5 deaths (Mokdad, Marks, Stroup, & Gerberding, 2000; US DHHS, 2014) and the loss of 5.6 million years of potential life yearly (US DHHS, 2004). Given these consequences, it is not surprising that nearly 2/3 of tobacco users report a strong desire to quit (Ozhathil et al., 2011). Despite this interest in quitting, only 1 in 5 quit attempters receive any form of tobacco cessation assistance (Zhu, Melcer, Sun, Rosbrook, & Peirce, 2000). The current study sought to evaluate a strategy for efficiently providing access to effective tobacco cessation assistance for a large portion of the population: individuals who visit hospital emergency departments (EDs).

More than 115 million people are seen as patients in EDs across the U.S annually (Niska, Bhuiya, & Xu, 2010). Often during these visits, one or more family members, friends or co-workers accompany the presenting patient. As such, as much as 1/2 to 2/3 of the U.S. population comes to an ED each year. An ED visit frequently involves inevitable periods of waiting (e.g., for testing and results, disposition, etc.). This wait time can potentially be a valuable resource for primary and preventive health care screening for concerns like tobacco use.

The U.S. Preventive Services Task Force provides their strongest recommendation (Grade A) for universal tobacco screening and referral to treatment. State Tobacco Quitlines are a set of treatments to which tobacco users are frequently referred (Borland & Segan, 2006; Cummins, Bailey, Campbell, Koon-Kirby, & Zhu, 2007). These free programs provide tobacco users with cessation assistance through services including medications, adaptive self-help materials, and counseling (Asfar, Ebbert, Klesges, & Klosky, 2012; North American Quitline Consortium, 2009). The effectiveness of Tobacco Quitlines for enhancing tobacco cessation have been consistently demonstrated in a wide breadth of research (Lichtenstein, Glasgow, Lando, Ossip-Klein, & Boles, 1996; Stead, Perera, & Lancaster, 2006; Zhu et al., 2002).

Despite the demonstrated effectiveness of the Quitlines, the desire of many tobacco users to stop smoking, the large potential audience, and calls from national organizations to do so, the use of screening and referral protocols for tobacco cessation in the ED remains very

limited. This is primarily due to clinical personnel being too busy providing medical care for presenting complaints to engage in this type of additional intervention. The current study sought to address this lack of implementation by utilizing a motivated and inexpensive resource, available in large numbers: pre-health professional students.

With regard to medical school alone, nearly 34,000 students applied for the first time in 2012 (AAMC, 2012). This ever-replenishing applicant pool, in part, creates the need for thousands of interested college undergraduates and post-baccalaureates to gain significant clinical experience to qualify and develop for a career in the health professions. Pre-health professional college students and graduates, termed Research Associates (RAs), have been previously shown to be efficacious data collectors in the ED on a variety of successful research studies (Edwards, Richman, Bradley, Eskin, & Mandell, 2002; Ferrigno, Bradley, & Werdmann, 2001). For example, in pilot research for this study, RAs enrolled 3,125 participants over 21 weeks, with 53% reporting use of tobacco for more than 30 days in their lives (Bradley et al., 2009). Of these smokers, 18% accepted a referral to the state Quitline.

1.1 Study Objectives

This study sought to expand upon the pilot work by examining the utility and efficiency of using pre-health professional students as volunteer rRAs in multiple independent institutions across the United States to screen ED patients and their visitors for tobacco use, and referring users requesting help to state Tobacco Quitlines.

2. Methods

2.1 Settings and Study Population

In this prospective, interventional study, RAs screened patients and their visitors 18 years-of-age or older in the emergency department (ED) for their history of tobacco use and quit-related behaviors and cognitions. A convenience sample of participants was enrolled from 10 EDs around the country, with sites ranging from small community hospitals to large academic institutions in rural, suburban, and urban settings (see Table 1). Each site is a part of the National Alliance of Research Associates Programs (NARAP).

2.2 Patient Recruitment, Consent, and Interview Procedure

In order to standardize the enrollment and interview process for use by the pre-health professional student RAs, an adaptive interview was created using Research Electronic Database Capture software (REDCap; Harris et al., 2009). Participants received a description of the study and provided documented verbal consent. Participants who requested a Tobacco Quitline referral as the result of the study provided written permission to fax the referral. The total interview took 2 – 15 minutes to complete, and the Institutional Review Board at each site provided approval for this study.

2.3 Research Associates (RAs)

RAs were recruited from undergraduate institutions through health professions advisors, online advertisement through NARAP, and site specific, volunteer postings. RAs volunteered at least one 4-hour shift per week per academic semester enrolling participants in the ED.

Chief RAs were selected at each institution to facilitate training and personnel management of the other RAs. Each RA received training in basic clinical research, ethics of informed consent and confidentiality, ED safety issues, and study procedures. RAs were also explicitly trained to avoid impeding clinical staff providing standard care in the ED (Bradley, Osborn, & Tang, 1996; Sibley, Bradley, Cordone, & Wedmann, 2000).

2.4 Measures and Data Analysis

Participants provided information on standard demographic characteristics: sex, race/ethnicity, educational level, and insurance status. Tobacco use status was documented as: (a) whether the participant used tobacco product(s) for at least 30 days at any point during their lifetime and (b) whether the participant was currently using tobacco product(s). The type of tobacco product and daily quantity used was documented. Since nicotine has been defined as a lifelong addiction, all participants who had used tobacco for at least one month during their life were offered a referral to their state's Tobacco Quitline. The RAs documented whether or not participants requested and approved the faxing of this referral.

Categorical data are presented as frequencies and percentages, and continuous data are presented as means and standard deviations. The primary objective of the study (i.e., assessing the feasibility and utility of RAs to enroll and refer participants) was evaluated using these descriptive statistics. All statistical analyses were performed using IBM SPSS version 21.

3. Results

3.1 Enrollment and Demographic Characteristics

RAs approached 31,728 individuals for enrollment, of whom 20,393 (64%) were eligible to participate. Individuals were excluded for the following reasons (not mutually exclusive categories): (1) consistently asleep, too ill/agitated, or excluded by clinical staff ($n = 2,564$), (2) insurmountable language barrier (i.e., participant unable to sufficiently respond in English; $n = 1,270$), (3) patient/visitor hearing impairment ($n = 263$), (4) comprehension difficulties between RA and potential participant ($n = 930$), (5) approach was not completed/interrupted (e.g., discharged before approach, interview interrupted by clinical staff, patient/visitor did not want to speak with RA; $n = 6,918$), and (6) other eligibility constraints ($n = 429$).

Of the eligible patients and visitors, 19,149 (94%) consented to participate: 76% patients and 24% visitors (see Table 1). Enrollment varied across institution largely based on the ED's patient volume, number of RAs at each site and number of concurrent studies for which RAs enrolled participants. There was a greater proportion of females than males, the majority of participants self-identified as White (59%), and Hispanic/Latino ethnicity was reported by 15% of the sample. Roughly 50% of the sample reported some level of post-secondary education, and most reported some form of insurance coverage (83%). Enrolled participants were found to be younger than eligible individuals who did not participate ($p < 0.001$).

3.2 Tobacco Use Behaviors

Approximately 54% of participants used tobacco for longer than one month at some point in their lives (termed *lifetime tobacco users*; see Table 2). The vast majority of lifetime users smoked cigarettes, while smaller numbers smoking cigars or pipes. The mean number of daily cigarettes smoked was nearly $\frac{3}{4}$ of a pack (pack = 20 cigarettes); cigar smokers averaged two cigars per day; and pipe smokers averaged 2.76 loads per day.

Half of lifetime tobacco users also currently used tobacco at least some days, with the majority using every day (74%; see Table 2). Similarly, 49% of lifetime users reported their use as occurring within the past seven days (termed *current tobacco users*). An additional subset reported last use as occurring more than seven days ago but less than one month ago (termed *recent abstainers*).

3.3 Quitline Referrals

A total of 2,151 participants (1,865 patients; 286 visitors) requested a referral to their state's Tobacco Quitline, representing 21% of lifetime tobacco users. More than 1/3 of current tobacco users or recent abstainers ($n = 1,917$; 36%) requested a referral. We received feedback from the Quitlines for a subset of these referred individuals from three of the sites ($n = 1,057$). Quitlines successfully contacted 401 individuals (38%), with 253 of them engaging in Quitline tobacco cessation treatment (63% of contacted individuals; 24% of individuals with Quitline feedback).

4. Discussion

The current study demonstrated the utility of pre-health professional students (RAs) for providing tobacco cessation screening and referral for patients and visitors in emergency departments in differing settings across the country. With limited financial and clinical staff investment, RAs were able to effectively provide a recommended service to a large group of individuals in the ED at multiple institutions with varying levels of experience incorporating RAs into research/service projects.

The method of screening and referral employed in the current study creates a mutually beneficial system for patients/visitors and providers. Patient care is supplemented with a recommended service, and this same service is made available to visitors whose current medical conditions are rarely addressed in the ED. Emergency department personnel were not asked to add to their workload, and the continuing problem of under-utilization of Tobacco Quitlines (Centers for Disease Control and Prevention, 2004; McAfee, 2007) was partially mitigated by using RAs to screen and refer large numbers tobacco users. As such, it can serve as an inexpensive template for subsequent studies on prevention/intervention services in the emergency department, as well as other medical settings like inpatient units and primary care facilities. For example, the NARAP collaborative is currently performing a subsequent trial using RAs to screen female ED patients and visitors for compliance with suggested cervical and breast cancer screening and referral of non-compliant individuals to available providers.

4.1 Limitations

This study has several limitations. First, follow-up data from the Tobacco Quitlines was only available for a subset (~50%) of referred individuals. Future studies should place a greater emphasis on obtaining this follow-up information, as well as potential reasons individuals decline Quitline treatment. Second, it is possible that screened individuals, in an effort to maintain social desirability, accepted referrals without really being interested in treatment or intentionally provided an incorrect phone number so they could not be reached. It is important to note that the current study demonstrated a very similar proportion of unreachable referred patients (Willett et al., 2009) and greater rates of treatment enrollment (Anders et al., 2011) than previous studies using faxed tobacco cessation referrals. Third, some institutions do not allow volunteers to perform the same services as paid employees (e.g., research assistants; project coordinators), which would negate much of the cost saving associated with the presented protocol. However, studies at these institutions might seek to include brief tobacco screening and referral to treatment into their ED protocols as a way to supplement care for a large number of individuals.

5. Conclusions

The current study demonstrated the potential value of using volunteer pre-health professional students as RAs to screen patients and visitors in the ED for tobacco use and refer tobacco users for cessation assistance. Given the substantial proportion of the population who visit the ED annually, a broader implementation of this sort of protocol has the potential to affect population rates of morbidity and mortality associated with tobacco use.

References

- Association of American Medical Colleges. 2012. <https://www.aamc.org/download/321442/data/2012factstable1.pdf>; <https://www.aamc.org/download/321470/data/2012factstable7.pdf>
- Anders ME, Sheffer CE, Barone CP, Holmes TM, Simpson DD, Duncan AM. Emergency department-initiated tobacco dependence treatment. *American Journal of Health Behavior*. 2011; 35:546–556. [PubMed: 22040616]
- Asfar T, Ebbert JO, Klesges RC, Klosky JL. Use of smoking reduction strategies among U.S. tobacco quitlines. *Addictive Behaviors*. 2012; 37:583–586. DOI: 10.1016/j.addbeh.2012.01.018 [PubMed: 22301531]
- Aveyard P, Begh R, Parsons A, West R. Brief opportunistic smoking cessation interventions: a systematic review and meta-analysis to compare advice to quit and offer of assistance. *Addiction*. 2012; 107:1066–1073. DOI: 10.1111/j.1360-0443.2011.03770.x [PubMed: 22175545]
- Borland R, Segan CJ. The potential of quitlines to increase smoking cessation. *Drug and Alcohol Review*. 2006; 25:73–78. [PubMed: 16492579]
- Bradley, K.; Illuzzi, F.; Lee, K.; Castillo, R.; Trowbridge, R.; Byun, R. Referrals for emergency department patients to a telephone-based tobacco cessation program using college research associates as screeners. Paper presented at Research Forum of the American College of Emergency Physicians; Boston MA. 2009.
- Bradley K, Osborn HH, Tang M. College research associates: a program to increase emergency medicine clinical research productivity. *Annals of Emergency Medicine*. 1996; 28:328–333. DOI: 10.1016/S0196-0644(96)70034-3 [PubMed: 8780478]
- Centers for Disease Control and Prevention. Telephone Quitlines: A Resource for Development, Implementation, and Evaluation. Atlanta, GA: U.S. Department of Health and Human Services,

- Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004.
- Cummins SE, Bailey L, Campbell S, Koon-Kirby C, Zhu S. Tobacco cessation quitlines in North America: a descriptive Study. *Tobacco Control*. 2007; 16(suppl 1):i9–i15. DOI: 10.1136/tc.2007.020370 [PubMed: 18048639]
- Cunningham RM, Bernstein SL, Walton M, Broderick K, Vaca FE, D’Onofrio G. Alcohol, tobacco, and other drugs: Future directions for screening and intervention in the emergency department. *Academic Emergency Medicine*. 2009; 16:1078–1088. DOI: 10.1111/j.1553-2712.2009.00552.x [PubMed: 20053226]
- Dube SR, Asman K, Malarcher A, Caraballo R. Cigarette smoking among adults and trends in smoking cessation – United States, 2008. *Morbidity and Mortality Weekly Report*. 2009; 58:1227–1232. [PubMed: 19910909]
- Edwards DJ, Richman PB, Bradley K, Eskin B, Mandell M. Parental use and misuse of antibiotics: are there differences in urban vs. suburban settings? *Academic Emergency Medicine*. 2002; 9:22–26. DOI: 10.1197/aemj.9.1.22 [PubMed: 11772665]
- Ferrigno RF, Bradley K, Werdmann MJ. A simple strategy for improving patient contact after ED discharge. *American Journal of Emergency Medicine*. 2001; 19:46–48. DOI: 10.1053/ajem.2001.20012 [PubMed: 11146018]
- Ferreira-Borges C. Effectiveness of a brief counseling and behavioral intervention for smoking cessation in pregnant women. *Preventive Medicine*. 2005; 41:295–302. DOI: 10.1016/j.ypmed.2004.11.013 [PubMed: 15917025]
- Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomed Informatics*. 2009; 42:77–81. DOI: 10.1016/j.jbi.2008.08.010
- Lichtenstein E, Glasgow RE, Lando HA, Ossip-Klein DJ, Boles SM. Telephone counseling for smoking cessation: rationales and meta-analytic review of evidence. *Health Education Research*. 1996; 11:243–257. DOI: 10.1093/her/11.2.243 [PubMed: 10163409]
- McAfee TA. Quitlines: A tool for research and dissemination of evidence-based cessation practices. *American Journal of Preventive Medicine*. 2007; 33(suppl 6):S357–367. DOI: 10.1016/j.amepre.2007.09.011 [PubMed: 18021911]
- Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States. *Journal of the American Medical Association*. 2000; 291:1238–1245. DOI: 10.1001/jama.291.10.1238
- Ozhathil D, Abar B, Baumann BM, Camargo CA Jr, Ziedonis D, Boudreaux ED. The effects of removing cost as a barrier to treatment initiation with an outpatient tobacco dependence clinic among emergency department patients. *Academic Emergency Medicine*. 2011; 18:662–664. DOI: 10.1111/j.1553-2712.2011.01048.x
- National Institutes of Health. [June 20, 2013] ClinicalTrials.gov Database. 2013. <http://www.clinicaltrials.gov/ct2/search/advanced>
- Niska R, Bhuiya F, Xu J. National Hospital Ambulatory Medical Care Survey: 2007 Emergency department summary. *National Health Statistics Reports*. 2010; 26:1–32.
- North American Quitline Consortium. Tobacco Cessation Quitlines: A Good Investment to Save Lives, Decrease Direct Medical Costs and Increase Productivity. Phoenix, AZ: North American Quitline Consortium; 2009. Available from: http://c.ymcdn.com/sites/www.naquitline.org/resource/resmgr/docs/naqc_issuepaper_tobaccocessa.pdf
- Rabe GL, Wellmann J, Bagos P, Busch MA, Hense HW, Neuner B, et al. Efficacy of emergency department-initiated tobacco control--systematic review and meta-analysis of randomized controlled trials. *Nicotine and Tobacco Research*. 2013; 15:643–655. DOI: 10.1093/ntr/nts212 [PubMed: 23024250]
- Sible, H.; Bradley, K.; Cordone, M.; Werdmann, M. College research associates as screeners for women’s health issues in an urban community hospital. Paper presented at the 8th International Conference on Emergency Medicine; Boston MA. 2000.

- Stead LF, Perera R, Lancaster T. Telephone counseling for smoking cessation. Cochrane Database Systematic Review. 2006; 19 CD002850. Available from: <http://www.thecochranelibrary.com/userfiles/ccoch/file/WorldTobaccoDay/CD002850.pdf>. doi: 10.1002/14651858.CD002850.pub2
- Steinberg ML, Ziedonis DM, Krejci JA, Brandon TH. Motivational interviewing with personalized feedback: a brief intervention for motivating smokers with schizophrenia to seek treatment for tobacco dependence. *Journal of Consulting and Clinical Psychology*. 2004; 72:723–728. DOI: 10.1037/0022-006X.72.4.723 [PubMed: 15301657]
- Streppel MT, Boshuizen HC, Ocké MC, Kok FJ, Kromhout D. Mortality and life expectancy in relation to long-term cigarette, cigar and pipe smoking: the Zutphen Study. *Tobacco Control*. 2007; 16:107–113. DOI: 10.1136/tc.2006.017715 [PubMed: 17400948]
- U.S Department of Health and Human Services. The health consequences of smoking: A report of the surgeon general. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004. Available from: http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/index.htm [July 5, 2011]
- U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014. Available from: <http://www.surgeongeneral.gov/library/reports/50-years-of-progress/50-years-of-progress-by-section.html> [April 11 2014]
- Willetts JG, Hood NE, Burns EK, Swetlick JL, Wilson SM, Levinson AH. Clinical faxed referrals to a tobacco quitline: reach, enrollment, and participant characteristics. *American Journal of Preventive Medicine*. 2009; 36:337–340. DOI: 10.1016/j.amepre.2008.12.004 [PubMed: 19201150]
- Zhu S, Anderson CM, Tedeschi GJ, Rosbrook B, Johnson CE, Gutiérrez-Terrell MA. Evidence of real-world effectiveness of a telephone quitline for smokers. *New England Journal of Medicine*. 2002; 3(347):1087–1093. DOI: 10.1056/NEJMsa020660
- Zhu S, Melcer T, Sun J, Rosbrook B, Pierce J. Smoking cessation with and without assistance: a population-based analysis. *American Journal of Preventive Medicine*. 2000; 18:305–311. DOI: 10.1016/S0749-3797(00)00124-0 [PubMed: 10788733]

Table 1

Demographic characteristics of the sample

	Frequency	Percentage
Type of Participant		
Patient	14,536	76%
Visitor	4,613	24%
Institution		
St. Vincent's Medical Center (CT)	4,027	21%
St. Louis University Hospital (MO)	3,210	17%
Hackensack University Medical Center (NJ)	2,878	15%
Hartford Hospital (CT)	2,787	15%
UMass Memorial Medical Center (MA)	1,910	10%
University Medical Center of Southern Nevada (NV)	1,757	9%
Thomas Jefferson University Hospitals (PA)	757	4%
University Medical Center Brackenridge (TX)	777	4%
University of Vermont Medical Center Campus (VT)	518	3%
Pullman Regional Hospital (WA)	528	3%
Sex		
Male	10,353	54%
Female	8,741	46%
Not Documented	55	< 1%
Race		
White	11,327	59%
Black	4,516	24%
Asian	394	2%
American Indian/Native American	93	1%
Native Hawaiian/Pacific Islander	51	< 1%
Other/Multi-Racial	2,399	13%
Refused to Respond/Not Documented	369	2%
Hispanic Ethnicity	2,846	15%
Educational Level		
< 12 th Grade	2,452	13%
GED	736	4%
High School Diploma	4,997	26%
Some College	4,590	24%
College Degree	4,977	26%
Refused to Respond/Not Documented	1,397	7%
Insurance Status		
Has Private Insurance	9,678	51%
Has Medicare	4,796	25%
Has Medicaid	3,750	20%
No Reported Insurance	3,255	17%

Table 2

Tobacco use characteristics of the sample

	Frequency	Percentage of Enrolled Participants	Mean	Standard Deviation	Median
Ever used tobacco for one month	10,303	54%			
Used Cigarettes	9,611	50%			
Cigarettes per day			14.83	12.17	10.00
Used Cigars	1,144	6%			
Whole cigars per day			2.00	2.94	1.00
Used Pipes	437	2%			
Pipe loads per day			2.76	2.92	2.00
Current use tobacco					
Use every day	3,861	20%			
Use some days	1,340	7%			
Last used tobacco					
Within the last 24 hours	4,338	23%			
Longer than 24 hours, up to 7 days	678	4%			
Longer than 7 days, up to one month	261	1%			
Use Cigarettes	4,906	26%			
Cigarettes per day			12.02	9.26	10.00
Use Cigars	358	2%			
Whole cigars per day			2.39	3.55	1.00
Use Pipes	40	< 1%			
Pipe loads per day			2.42	3.20	1.00
Tobacco Quitline Referral Sent					
	2,151	11%			