Internet-based smoking cessation programmes and quitlines

9th international symposium: smoking cessation: A clinical update. Leuven, March 6-8, 2008. Summary of contribution to Working group 2: interventions for smoking cessation, session 1 'Non-pharmacological interventions'.

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Introduction

At the population level, success rates of unaided quit attempts are not higher than 3 -7% (Baillie, Mattick & Hall, 1995; West, 2006). During the past decades, several efficacious pharmacotherapies have been developed to support quit attempts, e.g., various forms of nicotine replacement and medication, notably bupropion, nortriptyline, and varenicline (Hughes, Stead & Lancaster, 2004). These are regarded as the cornerstones of effective treatment, due to their well established evidence from clinical trials (Silagy et al, 2004; West, McNeill, & Raw, 2000; Fiore et al., 1996). For example, NRT approximately doubles the relative likelihood of quitting successfully whether or not behavioural support is provided (Hughes et al. 2003; Silagy et al., 2004). While proper use of pharmacological treatment increases the likelihood of success, the resulting chances to be not smoking at one year follow-up are still small in absolute terms when a quit attempt is not backed up by psychological ('behavioural') support. Combining pharmacological treatment with behavioural support can substantially increase success rates (resulting in success rates in the range of 20-30%). Getting behavioural support therefore is crucial. In practice however, most smokers quit smoking on their own and if they use pharmacological aids, this is rarely accompanied by behavioural support. Physicians are very much reluctant to provide this support and in general are not optimally equipped and trained for this task. Quitters therefore have to look for professional support within their community or contact national organisations such as cancer societies, national tobacco control or public health institutes, and non-governmental organisations. The challenge for these national organisations is to provide effective support to an as large as possible group of smokers and to do so on a continuous

basis, so as to have any population impact. Two strategies are especially promising: quitlines and internet services.

Quitlines

Telephone counselling services are an effective population-wide strategy to deliver smoking cessation support. Quitline services have been available in North America since 1980 and in Europe since 1988. In Europe, quitlines are coordinated and supported by the European Network of Quitlines (ENQ). The number of ENQ member countries was 27 in 2007. Quitlines can help direct smokers to the most appropriate assistance and provide cessation help in the form of one-off sessions (reactive service) or call-back counselling (pro-active service) (Borlan & Segan, 2006). The efficacy of call-back telephone counselling for smoking cessation has been well established (Stead, Lancaster & Perera, 2005). Reactive helplines are less well studied due to reluctance to undertake randomized trials that would involve refusing support. Nevertheless, several studies report one year point prevalence quit rates ranging from 15% (Owen, 2000), 24% (Platt, 1997) to 29% (Miller, Wakefield & Roberts, 2003). Data from the European Smoking Cessation Helplines Evaluation study (ESCHER), an ongoing study to assess quit rates from European quitlines, showed that at one year follow up point prevalence quit rates range from 12% to 24%, while prolonged abstinence ranged from 4% to 14% (Bot, Willemsen & van der Meer, 2008). Quitlines may provide different services or treatment to callers. First-time callers may be offered a wide range of services, including self-help materials, brief advice, information about pharmacotherapy, counselling, and referral to other services such as group courses. Data from ESCHER showed that the most efficacious services (i.e., counselling and giving information about pharmacotherapy) more often were provided to higher educated callers, callers who already had quit, and callers who were referred by a health professional (Willemsen, van der Meer & Schippers, 2007). Counselling is less often provided to low educated smokers and heavy smokers.

There is some evidence that simply having quitlines available may make a positive contribution to smoking cessation at a population level. A study comparing cessation rates in a community with a quitline to a comparable community without one found greater cessation in the community with the quitline (Ossip-Klein et al., 1991). Use of quitlines by smokers is still low in most countries that have national helplines: typically less than 1% of all smokers contact a quitline in any given year (Bot, van der Meer, & Willemsen, 2007), but call volumes may increase substantially by various means. Use of mass media and systematic integration of quitlines within the health care system are the most important (Borland & Segan, 2006).

Another way of improving the reach of quitlines is to put the telephone helpline number on cigarette packs. In a recent study we examined data on call volumes from seven European countries, and concluded that the appearance of quitline telephone number on cigarette packets call significantly and substantially impacts on the number of callers (Bot, van der Meer, & Willemsen, 2007). In the second year this impact generally was a lot less strong, yet call volumes were still significantly higher than before the appearance of the telephone numbers on the cigarette packs.

Internet

Currently there is a gap between the underused intensive face-to-face treatment and the low intensity, low efficacious types of support such as self-help materials and books. The internet has the potential to fill this gap, because in theory if can offer true therapeutic support to a large number of smokers while being constantly available, not requiring constant input from counsellors (Etter, 2006). This might be done either in the form of short learning modules that smokers may access online, and/or through more interactive functions such as taking part in peer support forums, and using automatic tailored advice and support. Recent initiatives focus on providing smokers the same intensive personal support that is traditionally only possible face-to-face or through the telephone, be using an embodied conversational agent (a 'virtual coach or counsellor') instead of a text interface (Grolleman et al., 2005).

Nowadays, smoking cessation help is among the most widely available services on the Web, but a recent review concluded that over 80% of smoking cessation websites provide no coverage of any of key components of tobacco treatment recommended in the clinical guidelines (Bock et al, 2004). There is a lack of scientifically valid research regarding impact and efficacy of the various functionalities within smoking cessation websites (Lenert et al., 2004; Etter, 2006), with the exception of computerized tailoring (Lancaster & Stead, 2005; Strecher, 1999). Interactive social functions such as peer support forms and personal stories are popular with smokers, but their efficacy is not yet clear. Other promising strategies are automated e-mail messaging (Lenert et al., 2004). In a recent study (Willemsen, van Emst, Wiebing, unpublished data) we evaluated such an e-mail tool, called StopMail. StopMail starts when a quitter types in a quit date in an application form on the StopMail website. The intervention consists of 10 brief motivation enhancing messages send to participants at strategic times, beginning with a welcoming email, followed by a second message at the quit date and ending after 3 months. The timing of the messages is tailored to the needs of quitters after their quit date and the content of the information was tailored to the quitting process (not

individually tailored). The emails were short, practical and attractive. Quitters who had been exposed to the StopMail were 1,5 times more likely to be non smoker at 6 months follow-up (point prevalence) compared to smokers who had not been exposed.

References

Baillie A, Mattick R, Hall W. (1995). Quitting smoking: estimation by meta-analysis of the rate of unaided smoking cessation. Aust J Public Health; 19:129-31

Bock, B.C, Graham, A.L., Sciamanna, C.N., et al. (2004). Smoking cessation treatment on the internet: content, quality, and usability. Nicotine & Tobacco Research, 6, 207-219.

Borland, R., & Segan, C.J. (2006). The potential of quitlines to increase smoking cessation. Drug and Alcohol Review, 25: 73-78.

Bot, S., van der Meer, R., & Willemsen, M.C. (2007). Impact of Telephone Numbers on Cigarette Packets on Call Volumes to Quitlines. The Hague: STIVORO. http://enqonline.org/presentations/Impact_of_Quitline_Telephone_Numbers_on_Cigarette_Packets_final.pdf

Bot, S., Willemsen, M.C., & van der Meer. (2008). Effectiveness of European smoking cessation quitlines. The Hague: STIVORO.

Etter, J-F. (2006). The internet and the industrial revolution in smoking cessation counselling. Drug and Alcohol Review, 25: 79-84.

Fiore M, Bailey W, Cohen S et al. (1996). Smoking cessation clinical practice guidelines no 18. Rockville, MD: Agency for Health Care Policy and Research, US Department of Health and Human Services.

Grolleman, J., van Dijk, B., Nijholt, A., & van Emst, A. (2005). Break the habit! Designing an e-Therapy intervention using a virtual coach in aid of smoking cessation. In: Proceedings Persuasive 2006. First International Conference on Persuasive Technology for Human Well-being. Lecture Notes in Computer Science 3962, W. IJsselsteijn, Y. de Kort, C. Midden, B. Eggen & E. van den Hoven (eds.), ISBN 3-540-34291-5, Springer-Verlag, Berlin Heidelberg, 2006, 133-141.

Hughes JR, Shiffman S, Callas P, et al. (2003). A meta-analysis of the efficacy of over-the-counter nicotine replacement. Tob Control; 12: 21–27

Hughes JR, Stead LF, Lancaster T. (2004). Antidepressants for smoking cessation (Cochrane Review). Cochrane Database of Systematic Reviews 2004; 4. http://www.cochrane.org/reviews/en/ab000031.html

Lancaster T, Stead LF. (2005). Self-help interventions for smoking cessation (Cochrane Review). Cochrane Database of Systematic Reviews 2005; 4. www.cochrane.org/reviews/en/ab001118.html

Lenert, L., Munoz, R.F., Perez, J.E., Bansod, A. (2004). Automated E-mail messaging as a tool for improving quit rates in an internet smoking cessation intervention. J American Medical Informatics Association, 11, 235-240.

Miller CL, Wakefield M, Roberts L. (2003). Uptake and effectiveness of the Australian telephone Quitlineservice in the context of a mass media campaign. Tob Control 2003;12, Suppl II: 53-8.

Ossip-Klein D, Giovino G, Megahed N, et al. (1991). Effects of a smokers' hotline: results of a 10-country self-help trial. J Consult Clin Psychol 1991; 59: 325-32

Owen L. (2000). Impact of a telephone helpline for smokers who called during a mass media campaign. Tob Control 2000;9:148-54.

Platt S. (1997). Effectiveness of antismoking telephone helpline: follow up survey. Br Med J 1997;314:1371-5.

Silagy C, Mant D, Fowler G, et al. (2004). Nicotine replacement therapy for smoking cessation (Cochrane Review). Cochrane Database of Systematic Reviews 2004; 3. http://www.cochrane.org/reviews/en/ab000146.html.

Stead LF, Lancaster T, Perera R. (2005). Telephone counselling for smoking cessation (Cochrane Review). Cochrane Database of Systematic Reviews 2005; 4. http://www.cochrane.org/reviews/en/ab002850.html

Strecher VJ. (1999). Computer-tailored smoking cessation materials: A review and discussion. Patient Educ Couns 1999; 36: 107–117.

West R (2006) Background smoking cessation rates in England:www.smokinginengland.info/Ref/paper2.pdf.

West R, McNeill A, Raw M. (2000). Smoking cessation guidelines for health professionals: an update. Thorax 2000; 55: 987-999

Willemsen, M.C., van Emst, A.J., & Wiebing, M.A. (2007). StopMail: Effectiveness of an automated e-mail relapse prevention intervention for smoking cessation.

Willemsen, M.C., van der Meer, R., & Schippers, G.M. (2007). Which smokers get the most effective treatment from quitlines? Results from the European Smoking Cessation Helplines Evaluation Research (ESCHER). European Journal of Public Health (submitted).