

ORIGINAL ARTICLE

Do pharmacy staff recommend evidenced-based smoking cessation products? A pseudo patron study

P. P. C. Chiang MIPH (Hons) and S. Chapman PhD

School of Public Health, University of Sydney, Sydney, NSW, Australia

SUMMARY

Objective: To determine whether pharmacy staff recommend evidence-based smoking cessation aids.

Methods: Pseudo patron visit to 50 randomly selected Sydney pharmacies where the pseudo patron enquired about the 'best' way to quit smoking and about the efficacy of a non-evidence-based cessation product, NicoBloc®.

Results: Nicotine replacement therapy was universally stocked and the first product recommended by 90% of pharmacies. After prompting, 60% of pharmacies, either also recommended NicoBloc® or deferred to 'customer choice'. About 34% disparaged the product.

Conclusions: Evidence-based smoking cessation advice in Sydney pharmacies is fragile and may be compromised by commercial concerns. Smokers should be provided with independent point-of-sale summaries of evidence of cessation product effectiveness and warned about unsubstantiated claims.

Keywords: pharmacists, pseudo patrons, smoking cessation, tobacco

INTRODUCTION

Nicotine replacement therapy (NRT) delivered through gum, patches, inhalers and lozenges has been demonstrated repeatedly to be a relatively effective aid to smoking cessation in both clinical and community settings (1). NRT is recommended in all key international and national guidelines on

smoking cessation as a form of first-line pharmacotherapy (2–6). Commencing in 1997, NRT products in Australia have been deregulated from prescription to non-prescription, over-the-counter status via pharmacies (7). This deregulation was in part justified by arguments that pharmacists are a professionally accredited, widely accessible group trained in principles of evidence-based practice, who like medical practitioners – but unlike supermarket or convenience store staff – could be expected to provide customers with advice on cessation that was supported by adequate research evidence.

Recently, considerable effort has been invested in Australia in training community pharmacists and their staff in smoking cessation skills to enable them to give appropriate counselling to their customers (8). However, the skills and information communicated through these efforts has often failed to translate into changed practice (8, 9).

The present study was conceived to investigate whether pharmacy staff recommend smoking cessation aids that are supported by research evidence. Using a pseudo patron approach to data collection, we sought to examine the advice and recommendations of pharmacy staff given to a customer enquiring about the 'best' way to quit. Specifically, we sought to determine whether pharmacy staff would recommend NRT and whether a new heavily promoted smoking cessation aid, NicoBloc® (hereafter, NB), a product not included in any known evidence-based smoking cessation guidelines, would be stocked and recommended by pharmacy staff.

Pseudo patrons have been increasingly used to assess and improve the quality of pharmacy practice (10, 11). Pseudo patrons have been trained to present particular ailments to pharmacy staff as an unobtrusive means of observing actual staff responses under conditions uninfluenced by awareness that one's behaviour is being monitored (10). Ethical approval for the study was obtained

Received 30 January 2005, Accepted 15 March 2005

Correspondence: Prof. Simon Chapman, School of Public Health, University of Sydney, A27, NSW 2006 Australia. Tel.: +61 2 9351 5203; fax: +61 2 9351 7420; e-mail: simonchapman@health.usyd.edu.au

from the Human Ethics Committee at the University of Sydney, Australia.

NicoBloc[®]

NicoBloc was launched in Australia as a smoking cessation aid at the end of 2002 (12, 13). It is widely available internationally. The product consists of approved food ingredients, principally corn syrup, which the smoker must apply to the end of the each cigarette being smoked, in an attempt to occlude the transfer of smoke constituents including nicotine. Promotional material claims that it can 'block up to 99% of tar and nicotine in filtered cigarettes' and is a 'smoker-friendly solution' (13). The company claims that if used as directed a smoker would be completely weaned off cigarettes in 6 weeks, without experiencing major withdrawal symptoms (13). However, the product lacks publicly available, peer reviewed scientific trial research demonstrating its effectiveness in helping people quit smoking. The Cancer Council of Australia (CCA) have complained to the Australian Competition Consumer Commission about unsubstantiated 15–17 claims they allege are being used in NB promotions (14). The CCA declined to adjudicate this complaint.

In Australia, the product has been heavily marketed to community pharmacies via detailing (13), online pharmacies, and magazines. Retailing at a recommended price of \$69–95, under recommended use it lasts approximately 2 weeks for a 20-a-day smoker. In June 2002 the Australian Therapeutic Goods Administration (ATGA) has determined that Nicobloc was not a therapeutic good. Under Section 3 of the Therapeutics Goods Act 1989. In May 2003, the CCA argued that Nicobloc should be designated a therapeutic good and the submission was rejected by the ATGA.

There is scant publicly available, peer reviewed scientific research supporting the manufacturer's public claims for efficacy (14). Unsubstantiated claims of smoking cessation rates of 60% have been made, although the claims do not address questions of the sustainability of such rates (15). Requests to the company elicited testimonials, summaries of 'company records', one conference report, a smoking machine laboratory report and letters, including one describing an 80% success rate with eight subjects.

The only report in a peer reviewed journal on the product examined the effects of corn syrup solution when applied to cigarette filters (18). Three drops of corn syrup reduced post-cigarette plasma nicotine and CO by 45 and 59% respectively, but the researchers acknowledged that many issues undermined the generalizability of their findings (sample size was only 19; only one brand of cigarette was used; many confounders needed to be controlled). Importantly, critical questions such as whether using corn syrup would lead people to smoke more cigarettes or alter other puff parameters to compensate for the reduced nicotine intake, and whether significant proportions of users would diligently apply the product on each occasion of use across several weeks remain to be addressed (18).

METHODS

Fifty pharmacies in the Sydney metropolitan area were randomly selected. The pseudo patron (author 1) commenced by asking either the person serving her (either the pharmacist or a pharmacy assistant) for help in choosing a smoking cessation aid product that 'would best help her boyfriend quit smoking'. If staff did not recommend NB unprompted in response to this initial enquiry, the pseudo patron then produced an NB promotional pamphlet and asked the staff members' opinion about the product. Notes summarizing the encounter were recorded outside each pharmacy immediately after the completion of each visit.

Pharmacy staff were deemed to be engaging in evidence-based practice if they specifically recommended an NRT product, and not engaging in evidence-based practice if they in any way recommended NB. More precisely, pharmacies were considered to be practicing evidenced-based smoking cessation advice if they:

1. recommended NRT;
2. emphasized that NRT be used even after being shown the NB brochure;
3. knew nothing about NB, instead recommending NRT;
4. did not make any particular judgement about specific products, instead preferring the smoker come into the pharmacy so that the best product could be individualized to fit his needs.

Similarly, pharmacies were considered to be not practicing evidenced-based pharmacy if they:

1. recommended NB unprompted;
2. initially recommended NRT, however when prompted with the NB brochure replied that it was up to the individual to choose which product to use;
3. did not stock NB but stated (unprompted) that they would order it if the customer wished.

After the visits had been completed over 2 weeks, delayed feedback was provided to the pharmacies via a letter which explained the study and the visit, its purpose, and the extent to which the (de-identified) staff member involved presented evidenced-based advice. The letter also explained how pharmacy educators would further utilize the findings in the training and education of pharmacists. Anonymity and confidentiality were ensured.

RESULTS

Of 50 pharmacies visited, the pseudo patron consulted with 29 pharmacists and 15 pharmacy assistants alone, and in six visits, with both a pharmacy assistant and the pharmacist, usually after the assistant referred the question to the pharmacist. The average duration of each interaction was 4.5 min (range 1.5–9). All pharmacies stocked NRT and 27 of 50 pharmacies stocked NB with 18 displaying it alongside NRT products.

However, after prompting with the brochure, nine of 45 (18% of total) recommended NB in some way, with an additional 13 pharmacies not stocking NB advising that they were willing to order the product if requested. Sixteen (32%) pharmacies responded to the prompt by commenting that it was ‘up to the customer to choose’ between the two types of product (see Fig. 1). Seventeen pharmacies commented adversely on NB after the prompt, including seven which stocked the product. Thus, by our criteria 20 of 50 (40%) pharmacies were found to be practicing evidence-based pharmacy (included three who were unaware of NB and offered no comment on it) while 30 of 50 (60%) recommended it unprompted, prompted or offered to order it in. A variety of reasons were given by those pharmacies recommending NB. These included that it:

1. works in a ‘different’ way and that cessation is different for everybody;
2. could be used in conjunction with NRT especially during cravings and social events;

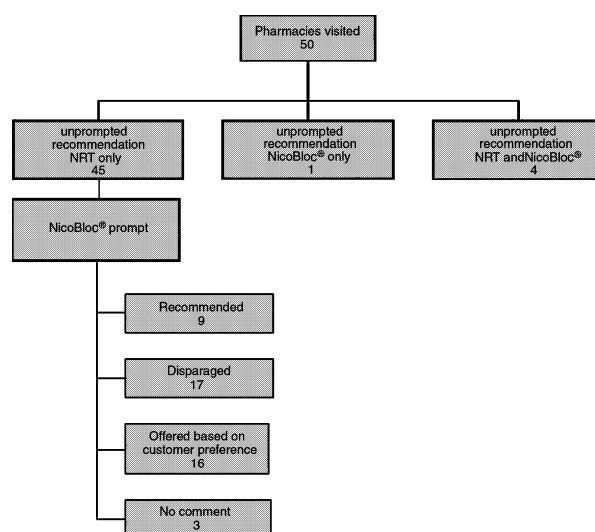


Fig. 1. Flowchart of responses to pseudo patron.

3. works because the sales representative said so;
4. works but also requires willpower;
5. works, otherwise why else would it be on the market;
6. works because some customers have re-purchased;
7. is good for dealing with the hand-to-mouth action for someone who needs to hold something in their hand, while weaning off cigarettes.

DISCUSSION

This paper supplements evidence that NRT use in the Australian community is accompanied by low levels of advice and support given by pharmacists, and potentially high levels of inappropriate use by the public (7). While stocking of NRT was universal, and nearly all pharmacies named NRT first in response to an open-ended question about effectiveness, a simple prompt asking about a non-evidence-based product elicited positive responses about it from 60% of pharmacies visited.

Our study thus suggests that non-evidence-based practice in Sydney pharmacies is widespread, suggesting that commercialism untethered from concerns of therapeutic efficacy can compromise evidence-based practice. Most pharmacies stock a wide variety of both efficacious and non-evidence-based products across a wide variety of product areas. It is thus perhaps unsurprising in this context that many such pharmacies are willing to sell or even recommend products not validated

by randomised controlled-trial evidence when a sales motive is involved.

When evidence-based and non-evidence-based smoking cessation aids are widely available alongside one another in pharmacies, and many pharmacy staff do not readily differentiate the two, consumer confidence in the quality of professional advice from pharmacies is put at risk.

Public health authorities might do well to produce a consumer-friendly smoking cessation product database for display in pharmacies at point of sale that provides current information on all available smoking aid products available on the market, rating each product for its demonstrated efficacy.

In the absence of sound peer reviewed scientific evidence that NB is an effective smoking cessation aid, smokers need to be cautioned about non-evidence based advertising claims being made for the product. The retail pharmacy industry should continue to try to educate its members about the importance of evidence-based practice in enhancing both the professionalism of the pharmacy trade and the public health benefits that this will provide.

ACKNOWLEDGEMENTS

We thank Prof. Charlie Benrimoj and Dr. Abilio C de Almeida Neto, School of Pharmacy, University of Sydney, for advice on the pseudo patron research method.

COMPETING INTERESTS

From 1996 to 2002 SC received occasional personal honoraria from both Pharmacia and SmithKline-Beecham (now GlaxoSmithKline). These payments (typically of approximately \$A3000 once or twice a year) were for preparing educational material for physicians, pharmacists and the public about smoking cessation. He was also a member of the Australian Smoking Cessation Consortium which received \$125 000 a year from GlaxoSmithKline to undertake research on smoking cessation in Australia until it was dissolved in May 2003.

REFERENCES

1. Silagy C, Lancaster T, Stead L, Mant D, Fowler G (2003) Nicotine replacement therapy for smoking cessation. *The Cochrane Database of Systematic Reviews*,

- May. Available at: <http://www.cochrane.org/cochrane/revabstr/ab00146.htm>.
2. Department of Family and Community Medicine (2000) *Smoking cessation guidelines: how to treat your patient's tobacco addiction*. Canada: University of Toronto. Available at: http://www.smoke-free.ca/pdf_1/smoking_guide_en.pdf.
3. US Department of Health and Human Services (2000) *Clinical practice guideline: treating tobacco use and dependence*. Bethesda, MD: Public Health Service. Available at: http://www.surgeongeneral.gov/tobacco/treating_tobacco_use.pdf.
4. West R, McNeill A, Raw M (2000) Smoking cessation guidelines for health professionals: an update. *Thorax*, **55**, 987–999.
5. American Heart Association. (2004) *Nicotine substitutes/nicotine replacement therapy*. Dallas, TX: American Heart Association <http://www.americanheart.org/presenter.jhtml?identifier=4615>.
6. Paul CL, Walsh RA, Girgis A (2003) Nicotine replacement therapy products over the counter: real-life use in the Australian community. *Australian and New Zealand Journal of Public Health*, **27**, 491–495.
7. De Almeida Neto AC, Benrimoj C (2000) Smoking cessation and the training of community pharmacists. *Australian Journal of Pharmacy*, **81**, 260.
8. Katz DA, Muehlenbruch DR, Brown RB, Fiore MC, Baker TB (2002) Effectiveness of a clinic-based strategy for implementing the AHRQ smoking cessation guideline in primary care. *Preventive Medicine*, **35**, 293–302.
9. De Almeida Neto AC, Benrimoj C (2001) Smoking cessation and pharmacy. *Australian Journal of Pharmacy*, **82**, 408–409.
10. De Almeida Neto AC (2003) The pseudo-patron: a real education. *Australian Journal of Pharmacy*, **84**, 314–315.
11. Madden JM, Quick JD, Ross-Degnan D, Kafle KK (1997) Undercover care seekers: simulated clients in the study of health provider behavior in developing countries. *Social Science and Medicine*, **45**, 1465–1482.
12. Riley R. (2003) *No butts, it's quitting time*. Melbourne: Herald Sun. Available at: <http://heraldsun.news.com.au/printpage/0,5481,5796171,99.html>.
13. NicoBloc® (2002) *About NicoBloc®*. Rosen Holdings Ltd. Available at: <http://www.nicobloc.com/>.
14. King B. (2002) *Comments on the promotional material for NicoBloc*. Carlton: VicHealth Centre for Tobacco Control.
15. Drugstore.com. United States. *Stop smoking aid by NicoBloc*. Available at: <http://www.drugstore.com>.

- com/products/prod.asp?pid=80447&catid=35076&trx=PLST-0-SRCH&trxp1=35076&trxp2=80447&trxp3=1&trxp4=0&btrx=BUY-PLST-0-SRCH.
16. ePharmacy Australia *NicoBloc*[®] 700 drops. API Suppliers Product Code: 779008. Available at: <http://www.epharmacy.com.au/searchresults.asp>.
 17. Pharmacy direct *NicoBloc*[®] 700 drops. http://www.pharmacydirect.com.au/PD_productName-Search.asp?psearch=nicobloc.
 18. Pickworth WB, Fant RV, Nelson RA, Henningfield JE (1998) Effects of cigarette smoking through a partially occluded filter. *Pharmacology, Biochemistry and Behavior*, **60**, 817–821.