

# Physiotherapists' knowledge and uptake of the ABC approach to smoking cessation

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## ABSTRACT

The purpose of the study was to determine physiotherapists' knowledge and uptake of the ABC approach to education on smoking cessation. An invitation to complete a web-based survey was emailed to each member of Physiotherapy New Zealand. Data gathered included demographic details, personal smoking habits and knowledge and uptake of the ABC training. Results were analysed using descriptive statistics. Respondents,  $n=602$ , (response rate 19%), were representative of physiotherapists in New Zealand when demographics were matched with national workforce data. Over 50% knew about the ABC approach, however only 30% had completed training with Otago respondents reporting the highest level of training and those in Taranaki, the lowest. District Health Board employees were more likely to have completed training (60%) than those in the private sector (16%), or elsewhere (24%). Participants who had completed the ABC training more frequently or always asked patients if they smoked (69%) and more frequently scored the correct answer to true/false questions on social misconceptions regarding smoking (57%). The results suggest that geographic, employment and work environment impact on physiotherapists' engagement in the ABC smoking cessation education. It is recommended that the profession specifically targets training in areas where uptake of the training is lowest.

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Smoking is a major determinant of mortality, morbidity and socioeconomic disparity in New Zealand (Ministry of Health 2009a) and the negative effects of smoking are well recognised by health professionals. Smokers themselves have begun to recognise the negative effects, as illustrated by the fact that 60% of New Zealanders who smoke have made attempts to quit within the last five years (Ministry of Health 2009a). Many such attempts are self-initiated and consequently fail as components for successful quitting such as behavioural support and nicotine replacement therapy (NRT) are lacking (McRobbie et al 2008). The provision of cessation advice to patients who are current smokers is considered to be a logical way of turning smokers away from the habit (Fagerström 2002) and potentially improving the health of that sector of the New Zealand population. Furthermore, a concerted approach to a smoke-free New Zealand from the entire health sector is likely to be beneficial as research has shown that health professionals who have undertaken training programmes identify more people who are smokers and offer advice to quit to more people (An et al 2008). Furthermore when patients are asked about their smoking status by two or more health professionals, they are nearly three times more likely to make a quit attempt (Bodner and Dean 2009; Ministry of Health 2011a).

Providing better support for smokers 'to quit' is a strong focus of the Ministry of Health (2009b). The New Zealand Smoking Cessation Guidelines were first published by the Ministry of Health in 2007. The online programme for health care workers, the ABC approach to smoking cessation (Lancaster and Fowler 2000), has now been active for over a year and smoking

cessation has been identified by the Government as a Primary Health Target for 2010-2012 (Ministry of Health 2009b).

The ABC approach to smoking cessation is designed to integrate evidence-based advice and support into patient management and focuses around three key concepts: **A**sk the patient if they are a smoker, give **B**rief advice and provide **C**essation support (Lancaster and Fowler 2000). Training is by an internet or seminar-based programme which informs health practitioners about best practice for encouraging and supporting smoking cessation (Lancaster and Fowler 2000). By meeting the competencies of the accompanying test, the practitioner is able to register to become a Quitcard provider and to issue patients with an exchange voucher for NRT (e.g. gum, lozenges and nicotine patches) (Lancaster and Fowler 2000).

Results from a recent study indicate that 76.9% of physiotherapists surveyed in Canada strongly agreed or agreed that they should ask their patients about their smoking habits; however, only 56.8% agreed that they should receive training on smoking cessation and over 70% were not prepared to provide counselling on cessation (Bodner et al 2011). There are currently no published data on the uptake of education and use by physiotherapists in New Zealand of the ABC or other approaches to smoking cessation in patient management (Lancaster and Fowler 2000). This study aimed to gather information to determine physiotherapists' knowledge and uptake of the ABC approach to education on smoking cessation in order to determine the profession's response to the Ministry of Health's initiative for health care workers, and to have a basis on which to strategically target future education of the profession on approaches to smoking cessation.

## METHOD

A short web-based questionnaire was developed to determine physiotherapists' uptake and use of the ABC approach to smoking cessation. An online survey was selected as the method of distribution and for data collection. The inclusion criteria for participation were physiotherapists, physiotherapy students and physiotherapy assistants who were members of the professional organisation, Physiotherapy New Zealand (PNZ) and whose contact details were listed on the email distribution list (n=3157). This allowed contact via email with approximately 80% of physiotherapists registered with the Physiotherapy Board of New Zealand (PBNZ) and the majority of final year undergraduate students and reduced the potential for bias by having PNZ act as an independent conduit for the survey.

Relevant literature and the ABC training programme were reviewed and a questionnaire that included both open and closed questions was then developed: *Section A*: General questions on demographics including age range, ethnicity, years since graduating, province, employment area, personal smoking history. *Section B*: Knowledge of and training undertaken in the ABC approach to smoking cessation and the physiotherapists' application of the knowledge **A** (**A**sk the question) to patients seen in clinical practice. *Section C*: This section comprised four true/false questions designed to determine the physiotherapists' general knowledge of smoking prevalence and its effects on health.

Consultation with Maori was completed as part of the ethical approval process and approval for the study was gained from the University of Otago Human Ethics Committee prior to commencement of the research.

The questionnaire was initially piloted on a sample group of physiotherapists for clarity and feedback. In response to feedback on the ability to compare the level of knowledge of participants who had undertaken smoking cessation education with participants who did not have the benefit of training, four true/false general knowledge questions about smoking were added. A letter of invitation from the researchers including information about the study and the web link to the survey were emailed by PNZ to members in early November, 2010. Reminder emails were sent after two weeks and a final reminder at the end of week three, one week before the survey closed. The notices that were circulated with the reminders included a thank you to members who had already participated in the survey. Completion of the survey was taken as consent to participate in the study.

The results were returned anonymously to a web address in text format and were then downloaded into an Excel file and a rank-ordered database was created. The provinces and employment areas were grouped and numerically coded using key words which matched the 2010 Health Workforce Survey categories (Ministry of Health 2011b). Data were extracted for analysis using descriptive statistics (frequencies and percentages). Answers to open questions were grouped according to key themes identified in the responses.

## RESULTS

Of the surveys emailed to potential participants, 615 were returned. Thirteen responses were excluded because of incomplete or unusable data, thus the results were based on

completed data from a total of 602 participants, comprising 587 physiotherapists and 15 physiotherapy students (2.5%) who were members of PNZ, a response rate of 19% from the potential group surveyed. Physiotherapists who participated were representative of the physiotherapy population in New Zealand when matched with current physiotherapy workforce data (Ministry of Health 2011b). Demographics of the survey participants are summarised in Table 1 and their knowledge and uptake of the ABC approach are recorded in Table 2. The uptake of the ABC training was also analysed by work type. Physiotherapists working in the musculoskeletal field were found to have a low uptake of the ABC approach (19%) whereas there was a high uptake by physiotherapists working in the acute adult inpatient setting (68%).

**Table 1: Demographics of the survey participants (n=602)**

Age range (years)	Total group (%)	Number of previous smokers	Number of current smokers
20-29	129 (21%)	6	2
30-39	177 (29%)	20	3
40-49	148 (25%)	21	0
50-59	111 (18%)	24	0
60-69	34 (6%)	18	0
70+	3 (<1%)	3	0
Total number of participants	602	92 (15%)	5 (0.8%)
Location			
Urban	456	69 (15%)	5
Rural	82	14 (17%)	0

Overall 9.4% of participants stated they did not intend to complete the training. Reasons given included "no patient contact", "not relevant to their practice", "feel it is not within their scope of practice", and "other smoking cessation guidelines in place so no need to train".

Participants' knowledge about smoking prevalence is summarised in Table 3; overall results were better for participants who had participated in ABC training. Figure 1 sets out the results for the number of survey participants who had completed ABC training and their responses to the frequency of questioning patients about smoking habits. In regard to geographic distribution of the participants and their knowledge, those participants residing in Otago (n=49, 77.5%) knew about the Government initiative, 73.4% were aware of the ABC approach and 53.1% had completed training. In contrast, the responses from the Wellington region (n=53) were 73.6%, 47.2% and 28.3% respectively. Physiotherapists in Taranaki had the lowest completion rate for ABC training (n= 11, 9.1%); though 72.7% knew of the Government initiative however only 18.2% were aware of the ABC approach.

## DISCUSSION

The key purpose of the survey was to determine physiotherapists' knowledge about and uptake of the ABC approach to education regarding smoking cessation that is available to health practitioners in New Zealand. Results showed

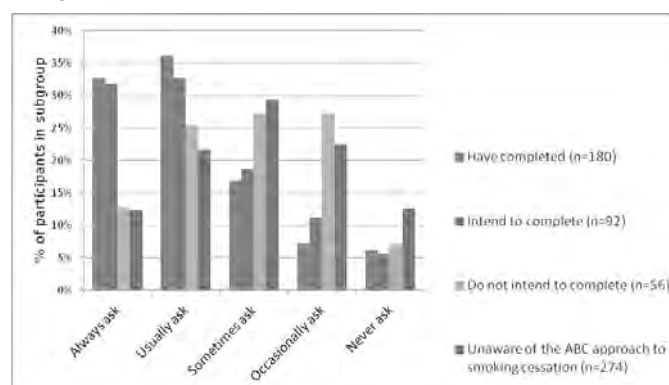
**Table 2: Participants' knowledge of and uptake of the ABC approach to smoking cessation described as total numbers (percentage)**

	Total n	Aware of government initiative (%)	Aware of ABC approach (%)	Completed training for ABC (%)
Participants	602	478 (79.5)	328 (54.5)	179 (29.8)
Employer Description				
District Health Board	163	158 (96.9)	50 (80.9)	97 (59.5)
Private practice	265	184 (69.4)	106 (40.1)	42 (15.5)
Other	161	120 (74.5)	83 (51.5)	38 (23.6)

**Table 3: Responses (percentages) to True/False questions regarding smoking prevalence and smoking cessation from participants who had and had not completed the ABC smoking cessation training**

Questions 14-21 from survey requiring True/False answers	Correct Answer	Not Completed ABC - answered correctly	Completed ABC - answered correctly
Q14- The prevalence of smoking amongst Maori and Pacific people in NZ is higher than for other groups.	True	98%	97%
Q15. The prevalence of smoking amongst Maori women is higher than for other women in NZ.	True	98%	96%
Q16. The chance of taking up smoking later in life is higher if both parents of a child smoke.	True	94%	96%
Q17. The chance of success in smoking cessation is higher if a person participates in a quit smoking programme such as the Quit Group/Te Roopu Me Moto.	True	95%	97%
Q18. The chance of success in smoking cessation is higher if nicotine replacement therapy is used in conjunction with behavioural therapy & support.	True	98%	98%
Q19. People from lower socio-economic groups are less likely to make a quit attempt than people from higher socio-economic groups.	False	32%	57%
Q20. Appropriate smoking cessation interventions can increase a person's chance of quitting by up to 300% compared to 'cold turkey'.	True	89%	91%
Q21. Nearly 70% of Maori smokers have made a quit attempt in the past 5 years.	True	58%	71%

**Figure 1: Participant responses to Ask the question "Do you ask your patients if they smoke?" and status regarding completion of the ABC training programme for the grouped data**



that the majority (75%) of participants were aware of the Ministry of Health's initiative to have all health practitioners involved in offering support for smoking cessation and more

than half were aware of the Ministry's training initiative, the ABC approach to smoking cessation. The uptake, or intended uptake from this group was high as 80% of this group had completed the training, or intended to complete it. However the data did serve to highlight provincial differences in the uptake of the ABC training programme, though the survey format did not enable responses to be linked to a particular factor or factors.

In general those physiotherapists who had completed the training were more likely 'always' or 'usually' to ask their patients if they smoked, compared to those who had not completed or were unaware of the programme. These results are in line with the review of the outcomes of training health professionals in smoking cessation (An et al 2008). Although there are no data available yet on the direct contribution the ABC approach has on smoking cessation of the population, it is known that two or more approaches from health professionals have a positive impact (Bodner and Dean 2009; Ministry of Health 2011a). The survey outcomes suggest that physiotherapists who have undergone training in the ABC approach to smoking cessation are using the knowledge gained

from the training to impact positively on the health of their patients.

In a survey undertaken of physiotherapists in Canada (Bodner et al 2011) inconsistencies between their knowledge and perceived barriers to smoking cessation were noted to be at a high level. Only 56.6% agreed they should receive training and more than 70% reported they were not prepared to provide counselling citing lack of resources and lack of time as key barriers. In our survey a smaller group (9.3%) of participants were not prepared to undertake training. Their reasons included “no patient contact” or “not relevant to their work area”, however such responses are contrary to the evidence supporting the benefits of training for all health professionals and suggest a lack of knowledge by the physiotherapists about the benefits of smoking cessation as reinforcement of the quit smoking message does not have to just be in a clinical setting or context. (Ministry of Health 2011a). The evidence suggests that such answers may have differed if the physiotherapists had the benefit of training (Bodner 2011). Results from our study that showed the number of correct answers given by the physiotherapists who had undertaken smoking cessation training was higher, especially for Question 19 which had a societal bias (Table 3).

Data obtained on the number of physiotherapists who smoke suggest that as a group they smoke less than other health professionals do. While 15% of participants stated they were previously smokers, fewer than 1% stated they were current smokers. This figure is significantly below the national figure for smokers (21%) and the most recent New Zealand census data obtained for doctors (3.5%) and nurses (16.5%) who smoke (Edwards et al 2006, Edwards et al 2011). It is noted that those participants who were in the older age groups were more likely to have a history of smoking though they are no longer currently smoking (Table 1). This change suggests that they were part of the societal trend against smoking and in choosing to quit were aware of the negative relationship between smoking and health outcomes.

A higher percentage of physiotherapists working in District Health Boards (DHBs) were aware of the ABC approach compared with those working in private practice. Of the physiotherapists working in DHBs, 80% were aware of the ABC approach and 60% of this group had undertaken smoking cessation training. In the private sector 40% were aware of the ABC approach and 16% had undertaken training whereas in other areas including industry, schools, research and teaching 23.6% had undertaken training. The wide variation in the results amongst the physiotherapy workforce sectors may in part be attributed to the fact that the large institutions such as DHBs employ health workers to educate their workforce on matters such as smoking cessation (Ministry of Health 2011a).

Because of the likelihood of managing patients with a history of smoking it is not surprising that more physiotherapists working in areas such as acute care and cardiopulmonary care had seen the relevance of undertaking training – 64.5% had completed ABC training compared to physiotherapists working in the musculoskeletal area which had the lowest completion rates (18.6%). The Ministry's policy is to encourage all health professionals to be actively involved in helping their patients to stop smoking, regardless of their area of work, and the policy

has been supported by the registration authority, PBNZ (2009). Thus the authors suggest that more targeting of the education needs to be made to groups within the profession identified as having a low uptake of the education.

A key objective of the New Zealand Smokefree Coalition (2010) is that by 2012, all health professional graduates will have received training on smoking cessation as part of their compulsory studies. It is worthy of note that both Schools of Physiotherapy in New Zealand have already taken up this opportunity and so by the end of 2012 all graduating physiotherapists should have knowledge on smoking cessation and will be able to add to the success rate of quit attempts by including smoking cessation advice and reinforcement of the message (An et al 2008) as a standard part of clinical practice.

Limitations of the study included the fact that the physiotherapy population invited to participate in the survey included only those who were members of the professional organisation, PNZ which represents 80% of those registered, and that only 19% of the potential survey group of 3,157 responded. However the results showed that responses from physiotherapists who participated mirrored the demographics of the registered physiotherapists who completed the most recent Physiotherapy Workforce Survey (Ministry of Health 2011b) so we are confident that the participants are a representative sample of the physiotherapy profession across New Zealand.

In conclusion the outcomes showed that over 50% of the participants were aware of the ABC approach to smoking cessation. The data suggest that there are geographical, employment and work environment differences in the number of physiotherapists who have taken up smoking cessation education. It is recommended that regions where the trends were lowest are targeted to encourage local physiotherapists to undertake a programme to become registered as a provider of smoking cessation education. Secondly it is important that professional organisations such as PNZ use a variety of methods to continue to engage their members to promote knowledge of and training in smoking cessation education. In the long term the greater challenge for the physiotherapy profession will be for clinicians to ensure they include questions relating to smoking history as a standard component of patient assessment, and furthermore that they follow through with **B**rief advice and **C**essation support in order to assist patients to quit. By being proactive in the area of smoking cessation training and education of their patients, physiotherapists will be taking a practical step towards improving the overall health of the population in New Zealand.

## KEY POINTS

- Only half of the physiotherapists surveyed were aware of the ABC approach to smoking cessation.
- Physiotherapists who had completed the ABC training more frequently or always asked patients if they smoked.
- Results suggest that geographic, employment and work environment differences impact on physiotherapists' engagement in the ABC smoking cessation education.
- It is recommended that the profession specifically encourages uptake of quit-smoke education for physiotherapists in areas where training was reported to be the lowest.



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