

Review Article

Smoking Cessation in Long-Term Conditions: Is There “An Opportunity in Every Difficulty”?

Kamran Siddiqi,^{1,2} Omara F. Dogar,¹ and Najma Siddiqi^{3,4}

¹ Department of Health Sciences, University of York, York YO10 5DD, UK

² Hull York Medical School, York YO10 5DD, UK

³ Leeds Institute of Health Sciences, University of Leeds, Leeds LS2 9LJ, UK

⁴ Bradford District Care NHS Trust, Bradford BD21 4AD, UK

Correspondence should be addressed to Kamran Siddiqi; kamran.siddiqi@york.ac.uk

Received 5 July 2013; Accepted 16 October 2013

Academic Editor: Sally Guttmacher

Copyright © 2013 Kamran Siddiqi et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Introduction. Smoking plays a causal role in several long-term conditions and worsens their outcomes. Focusing on six such conditions, we present a narrative review of seminal studies on the prevalence and impact of continued tobacco use on these conditions; the effectiveness of cessation interventions; the extent to which patients receive these interventions, and barriers to providing and taking up these interventions. *Methods.* A conceptual framework was used to identify questions for a series of focused literature reviews. Findings were synthesized and the literature was examined to identify themes common across these conditions. *Results.* Smoking prevalence is either similar or higher in patients with established long-term conditions compared to the general population. Continued smoking accelerates disease progression, worsens outcomes, and risks poor treatment compliance or further complications. There is strong evidence for the effectiveness of cessation interventions in achieving smoking abstinence. Despite this, only a small proportion of patients receive such interventions. Important barriers to uptake include concerns about weight management and drug safety, higher nicotine dependency and codependency, comorbidity, and misperceptions about the benefits of cessation. *Conclusion.* The benefits of offering smoking cessation in patients with long-term conditions are far too great for it to remain of a low priority.

1. Introduction

Tobacco use is responsible for 5.5 million deaths and 4% of the global burden of disease in terms of disability adjusted life-years [1]. Tobacco's causal association with several long-term conditions (e.g., coronary heart disease (CHD), chronic obstructive pulmonary disease (COPD)) has long been established [2, 3]. In others (e.g., diabetes, schizophrenia), although tobacco does not play a causal role, its use is thought to worsen outcomes [4]. Using six prevalent long-term conditions as examples, CHD, diabetes, COPD, asthma, schizophrenia, and HIV/AIDS, we examine whether tobacco cessation in patients with established long-term conditions deserves a stronger focus than it currently receives. In this paper, we highlight some of the pivotal studies relevant to (i) the prevalence and impact of continued tobacco use on the outcomes of these conditions; (ii) the effectiveness and

cost-effectiveness of cessation interventions; (iii) the extent to which patients receive cessation interventions, and (iv) key barriers to providing and taking up of these interventions. By highlighting some of the seminal work carried out in this area in recent years, this paper aims to identify the gaps in provision of smoking cessation interventions for people with long-term conditions and to help to reenergise efforts to address this important aspect of tobacco control.

2. Materials and Methods

Our review questions (Table 1) were based on a conceptual framework consisting of four fundamental blocks (Figure 1). We set out to review the literature on patients with established long-term conditions (CHD, diabetes, COPD, schizophrenia, asthma, and HIV/AIDS) examining.

TABLE 1: Questions and key words for the literature search.

Questions in patients with established long-term conditions	Study designs included	Specific terms	Interventions	Search terms	Long term conditions
Need	<p>What is the prevalence of smoking?</p> <p>What is the effect of continued smoking on their outcomes?</p> <p>What is the effectiveness and cost-effectiveness of smoking cessation interventions in achieving abstinence?</p>	<p>Prevalence, frequency, use, prevalent, survey</p> <p>Cohort, cohort study, case-control study, cohort analysis</p> <p>clinical trials, randomized, controlled</p> <p>clinical trials, randomized, and randomized controlled trial</p>			<p>Coronary artery disease, acute coronary syndrome, coronary arteriosclerosis, myocardial infarction, and ischemic heart disease</p> <p>Diabetes mellitus, type 2 diabetes mellitus, and adult onset diabetes mellitus</p> <p>Chronic obstructive pulmonary disease, chronic obstructive lung disease, chronic obstructive airways disease, pulmonary emphysema, and emphysema</p> <p>Asthma and bronchial asthma</p>
Benefit	<p>What is the feasibility of delivering smoking cessation interventions?</p> <p>What is the acceptability of smoking cessation interventions?</p>	<p>Feasibility, practicality, feasible, and practical</p> <p>Acceptable, acceptability, appropriateness, appropriate</p> <p>Cohort, cohort study, case-control study, cohort analysis</p> <p>clinical trials, randomized, controlled</p>	<p>Smoking cessation, nicotine</p> <p>replacement, tobacco cessation, counselling, bupropion, varenicline, and tobacco cessation</p>	<p>Smoking, cigarette smoking, tobacco dependence, chewing tobacco, smokeless tobacco, and tobacco smoking</p>	<p>Chronic obstructive pulmonary disease, chronic obstructive lung disease, chronic obstructive airways disease, pulmonary emphysema, and emphysema</p> <p>Asthma and bronchial asthma</p> <p>Schizophrenia, schizoaffective disorder, and psychosis</p> <p>HIV, acquired immune deficiency syndrome, and acquired immune deficiency syndrome virus</p>
Gap	<p>To what extent they receive smoking cessation interventions as part of their routine care?</p>	<p>Service provision, service gap, provision, access, accessible, accessibility, available, availability, offer, provide, give, service</p>			
Barriers	<p>What are the barriers in providing and accessing smoking cessation interventions?</p>	<p>Surveys, audits, and qualitative and mixed methods studies</p> <p>Surveys, qualitative and mixed methods studies</p>			

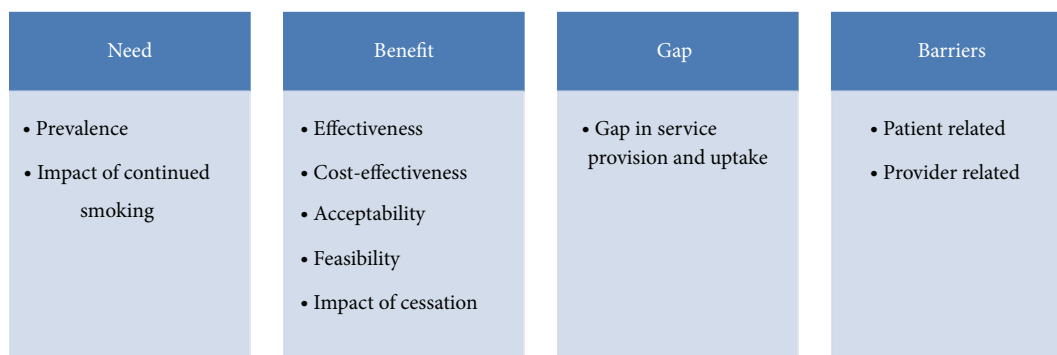


FIGURE 1: Tobacco cessation and long-term conditions—a conceptual framework.

Need—the prevalence of tobacco use and the effect of continued smoking on outcomes.

Capacity to benefit—the effectiveness and cost-effectiveness of tobacco cessation interventions in achieving abstinence; the acceptability and feasibility of these interventions from patients' and providers' perspectives, respectively; and the impact of cessation on patient outcomes.

Gap—gaps in provision of cessation services and in uptake among patients.

Barriers—barriers to accessing cessation services from both patients' and providers' perspectives.

A series of focused literature reviews were carried out. We prospectively agreed appropriate study designs and search terms for each question separately (details in Table 1). These were combined with search terms for smoking and its use, cessation interventions, and the six long-term conditions to identify relevant citations for each question. We searched Cochrane and PubMed databases for articles published in the English language between January 1992 and October 2012. We also examined reference lists of selected articles, to avoid missing any important and relevant work. Findings were synthesized and the literature was also examined to identify themes common across all of these long-term conditions.

3. Results

Given the nature and range of questions, articles selected for this overview used a variety of research designs including multicountry surveys, longitudinal studies, randomised controlled trials, and quasi-experimental and qualitative studies. Settings, participants, and outcomes also varied; almost all studies were from high-income countries.

3.1. Smoking Prevalence in Long-Term Conditions. Globally, approximately 20% of the adult population smoke cigarettes on a regular basis [5]. Smoking is at least prevalent in patients with long-term conditions. A multi-country European survey (EUROASPIRE) reported that 21% of CHD patients continue to smoke after being diagnosed [6]. In patients with diabetes mellitus, prevalence is between 15 and 20% [7–10] and in COPD it is 26% [11]. A survey, Global Asthma Prevalence in

Adults, found that 24% of people with asthma (on treatment) were current smokers [12]; in developing countries, smoking prevalence is as high as 30% among adults with asthma [13]. In mental illness, smoking is at least twice as common as in the general population [14, 15], and in people with schizophrenia, it is six times higher [16, 17]. People living with HIV and AIDS are three times more likely to be smokers than general public (59% versus 20%) [18, 19], mainly because HIV risk behaviours cluster among certain populations, in which smoking is also very common.

3.2. Impact of Continued Smoking. Continued smoking with long-term conditions contributes towards excess mortality and morbidity by expediting disease progression, worsening outcomes, increasing complication rates, and reducing treatment compliance.

People who continue to smoke after acute myocardial infarction (AMI) are twice as likely to die compared to those who have never smoked or those who quit just before or after the event [20]. Smokers also have a 70% risk of recurrence of AMI [21]. In a large cohort study, in people with established CHD, the relative risk (RR) for further coronary events for heavy smokers (>15 cigarettes/day) compared to nonsmokers was 2.68 (95% CI, 2.07–3.48), with a lower but still increased risk for exsmokers and for moderate smokers (<15 cigarettes/day) [22]. Mortality was also higher for current smokers compared to non-smokers [23].

Among diabetics, smoking acts as an independent risk factor for rapid progression to kidney disease [24], retinopathy [25], and sensory neuropathies [26]. Around 80% of COPD-associated morbidity is attributable to smoking [27]. In those who continue to smoke, the forced expiratory volume in one-second (FEV1) declines at an accelerated rate compared to those who quit [28, 29]. Risk of hospitalization and chest infections is also higher [30, 31]. Mortality rates for COPD are higher in current smokers (1.04–2.61) than in ex-smokers (0.64) and never smokers (0.11) [32].

Smoking in adult asthmatics is associated with worse symptom control, increased admissions for exacerbations, deterioration of pulmonary functions, and increased mortality [33–35]. Smoking also impairs the efficacy of oral

corticosteroid treatment in asthma [36]. Almost two-thirds of deaths in people with schizophrenia are caused by CHD compared to only one-half in the general population. Such patients have a 20% shorter life expectancy; most of it is attributable to smoking [37, 38]. For 35–54-year-old patients with schizophrenia, the hazard ratio for mortality for smokers versus non-smokers is 2.0 [39].

Smoking is a strong predictor of poor quality of life, morbidity, and mortality in people living with HIV/AIDS [40, 41]. Smoking is of particular concern in HIV/AIDS due to the high background risk of cardiovascular disease, dyslipidemia, insulin resistance, and susceptibility to COPD and lung cancers [42–44]. It is also associated with risk of developing bacterial pneumonia [45] and AIDS-related pneumocystis pneumonia (PCP) [46]. Compared to former and never smokers combined, the Population Attributable Fraction (PAF%) for current smokers with HIV/AIDS is 24.3% for overall mortality, 25.3% for major cardiovascular disease, 30.6% for non-AIDS cancer, and 25.4% for bacterial pneumonia [47]. In addition, smoking increases the incidence of periodontal disease, oral candidiasis, and hairy leukoplakia [48]. Smoking during pregnancy is associated with a threefold increase in the risk of vertical HIV transmission [49]. Smoking is also correlated with lower drug adherence [50].

3.3. Smoking Cessation

3.3.1. Effectiveness and Cost-Effectiveness. There is strong evidence (16 RCTs) for the effectiveness of smoking cessation interventions in achieving continuous abstinence in patients with CHD (OR: 1.66, 95% CI: 1.25–2.22) [51]. Face-to-face behavioural support, telephone support, and self-help were all similar in effectiveness, but more intensive interventions achieved higher quit rates (OR: 1.98, 95% CI: 1.49–2.65) compared to brief interventions (OR: 0.92, 95% CI: 0.70–1.22). In patients with diabetes, training primary care staff in motivational interviewing led to a threefold increase in quit rates in the intervention group (20%) compared to controls (7%) [52]. Another study showed that training diabetes nurses in smoking cessation could significantly increase quit rates (17% versus 2.3%) [53]. In COPD patients, a Cochrane review (five RCTs; two, high quality) concluded, behavioural and pharmacological interventions combined are superior to usual care or behavioural intervention alone in achieving sustained abstinence [54]. A combination of counselling and nicotine replacement therapy (NRT) (RR: 4.19, 95% CI: 3.41–5.15) or bupropion (RR: 1.74, 95% CI: 1.01–3.00) was effective compared to usual care [55, 56]. Another review (9 RCTs and 4 systematic reviews) concluded that sustained abstinence is higher in COPD patients receiving behavioural intervention both with (pooled RR: 4.28, 95% CI: 3.51–5.20) and without (pooled RR: 5.85, 95% CI: 3.81–8.97) NRT when compared with usual care [57]. The effectiveness of interventions for smoking cessation has not been investigated specifically in patients with asthma.

In people with schizophrenia, there is good evidence that bupropion is effective in achieving cessation (RR, 2.78; 95%

CI; 1.02–7.58) at six months without any adverse effects on mental health [58]. Similarly, varenicline is also effective in achieving higher cessation rates (19% versus 4.7%) compared to placebo in such patients without an increase in adverse effects [59].

Few definitive studies have assessed the effectiveness of smoking cessation in people living with HIV/AIDS. A recent paper reviewed eight studies (four RCTs), two with an adequate sample size [60]. Most of these studies used NRT with or without counselling. Results of the larger trials were promising (modest effect size with moderate quality) but highlighted that more intensive treatment is required to sustain abstinence in this group.

Smoking cessation is highly cost-effective in patients with cardiovascular diseases; the incremental cost per Quality Adjusted Life Years (QALY) for smoking cessation (varenicline plus behavioural support) is €6120 in Belgium, €5151 in Spain, €5357 in Portugal, and €5433 in Italy [61]. It is also highly cost-effective in patients with diabetes; the incremental cost per QALY is around \$8,000 for individuals aged between 45 and 74 [62]. A cost-utility analysis in COPD patients showed that, compared to usual care, the costs per QALY for minimal counselling (<90 minutes), intensive counselling (>90 minutes), and intensive counselling and pharmacotherapy, were €16,900, €8200, and €2400, respectively [63].

3.3.2. Feasibility and Acceptability. Patients with long-term conditions are generally more receptive to smoking cessation messages with several “teachable moments” during their care. One study found high motivation levels among patients with AMI and described how smoking cessation advice can be improved accordingly [64]. Similarly, patients with diabetes, hypertension, and CHD have higher motivation to quit and desire to receive support compared to the general population [65]. Adolescents with asthma expressed higher levels of willingness to quit and acceptance of support than those without asthma [66]. Around 40–63% of people living with HIV/AIDS are motivated to quit with a positive interest in cessation, which is equivalent to the general smoker population [19].

3.3.3. Impact on Long-Term Conditions. Smoking cessation benefits patients with long-term conditions by improving outcomes. There is strong evidence that cessation leads to a 36% risk reduction in mortality in patients with established CHD [22, 23, 67]. In patients with type 2 diabetes, smoking cessation leads to a reduction in the rate of complications. One study demonstrated an improvement in metabolic parameters, lowered blood pressure, and reduction of microalbuminuria [68]. Among those with microalbuminuria, smoking cessation ameliorates progression to end stage renal disease [69]. In COPD, mortality rates decline progressively after smoking cessation but are still elevated in comparison with never smokers [32, 70]. A sizeable minority of smokers with COPD (20%) who receive long-term oxygen therapy often die from severe burns and inhalation injuries due to accidents caused by smoking whilst receiving

oxygen therapy [71]. Cessation can prevent such accidents. In people with asthma, smoking cessation improves quality of life and reduces use of β_2 agonists, daytime symptoms, bronchial reactivity, and inhaled corticosteroids dose [72]. In HIV/AIDS, smoking cessation leads to a significant reduction in HIV-related symptoms [73]. We did not find any studies on schizophrenia in this category.

3.4. Gap in Service Provision. There are very few studies investigating the provision of smoking cessation interventions for people with long-term conditions. However, the evidence does indicate a provision gap. For CHD patients, it often relies on the availability and access to cardiac rehabilitation and secondary prevention services. The majority of smokers with CHD receive either verbal (72.9%) and/or written (25.4%) advice to quit [74]. Only 9.6% are referred to a smoking cessation service, and of these, only 11.4% are prescribed NRT and 5.8% bupropion. In another survey, 42% of smokers with diabetes did not receive any cessation support [75]. In a study in Kerala, India, only half of diabetic patients who also smoked tobacco received advice to quit from their doctor [76]. A US-based study suggests that the majority of dentists do not offer cessation advice to diabetic patients who smoke. They see smoking cessation as a marginal activity and do not perceive it to be a service expected from them [77]. Patients with schizophrenia are 30% less likely to receive cessation advice compared to people with other mental illnesses and to the general population [78]. A survey found that although two-thirds of psychiatrists asked about patient's smoking status, only one-third offered cessation advice [79]. HIV healthcare providers are less likely to assess smoking status and to feel confident in offering cessation advice to patients with HIV compared to other health providers [80].

3.5. Patient Related Barriers

3.5.1. Weight Management Issues. For people with diabetes, a major constraint in making an intention to quit is concern about potential weight gain [81]. Such concerns are also shared by COPD and HIV patients, citing weight management as a major reason for not intending to quit [82]. People with HIV tend to gain more weight after quitting than non-HIV patients [82]. Moreover, some patients use smoking to manage lipodystrophy related to antiretroviral therapy [80].

3.5.2. Awareness and Motivation. Patients with CHD, who have other comorbidities such as COPD and depression, have low motivation to quit after AMI [83, 84]. Patients with diabetes who continue to smoke are generally more depressed less likely to self-manage and to maintain good glucose control [85]. They are often less motivated to quit than the general population [85]. In a study in India, 52% of patients with diabetes who smoked were not aware of the associated risks [76]. Similarly, in Indonesia, most smokers with diabetes did not associate the risk of developing diabetic complications with smoking [86]. Patients with COPD are more likely to develop depression and anxiety, which adversely affect

cessation attempts. However, they are more motivated to receive support once they have decided to quit [82]. Patients with schizophrenia are less motivated to quit compared to general smokers [87, 88]. Most of them think that smoking helps to alleviate negative symptoms and cognitive deficits, enhances cognitive performance, and provides psychomotor stimulation [17, 89]. Generally, people with schizophrenia feel less confident about being successful in quitting and have concerns about their coping ability and potential negative symptoms following quitting [90].

3.5.3. Dependency and Codependency. Patients with high nicotine dependency (Fagerstrom score ≥ 8) are less likely to quit than those who are less dependent [83]. Smokers with COPD have a higher nicotine dependency than healthy smokers (mean Fagerstrom score, 4.77 versus 3.15, resp.) [91]. People living with HIV/AIDS who smoke also have high nicotine dependency [92]. They are likely to have codependencies too, such as alcohol and substance misuse, which makes them more vulnerable to withdrawal symptoms on quitting and means that sustained abstinence is more difficult to achieve compared to those without HIV [19]. Psychiatric comorbidity such as depression is also common and is associated with low motivation to quit [80].

3.5.4. Misperceptions. A sizeable minority of smokers with diabetes believe that smoking is "beneficial" and quitting can have a deleterious effect on their diabetes [93]. Some COPD patients, who continue to smoke, do so with the belief that "the damage has already been done" [94]. There are also some unsubstantiated beliefs that quitting smoking exacerbates the negative symptoms of schizophrenia [95]. Some people living with HIV/AIDS trivialise health risks associated with smoking and see it as a "helpful" coping aid [96].

3.5.5. Other Barriers. People living with HIV/AIDS are more likely to be socioeconomically disadvantaged compared to the general smoker population [19]. This affects access to cessation interventions, which tend to involve additional expenditure [19].

3.6. Provider Related Barriers

3.6.1. Perceived Lack of Relevance. Primary care providers who believe that their patients are not willing to quit are less inclined to offer cessation counselling to them [97, 98]. The perceptions of nurses delivering smoking cessation counselling to home-bound medically ill patients about the relevance, effectiveness (quit attempts), and outcomes (successful quits) of cessation advice are found to be significantly correlated with their counselling behaviours. Nurses who believe that patients would quit as a result of their counselling tend to spend more time in counselling them [99]. Smoking cessation has long been considered irrelevant to HIV/AIDS due to perceived poor outcomes. However, since the success of antiretroviral therapy, attitudes towards smoking cessation have changed considerably both among providers and patients [80]. With people with HIV/AIDS

living longer, concerns about developing other associated chronic conditions and cancers have raised the importance of quitting [80].

3.6.2. Own Smoking Behaviour. Nurses, both in general and speciality care, who are themselves current smokers, are less likely to arrange follow-up discussions about quitting smoking with patients [97]. Self-efficacy (confidence in own ability to counsel patients who smoke) is also found to be higher among nonsmoking health providers and positively predicts arranging patient followup for smoking cessation advice [99].

3.6.3. Just Focus on Treating the Condition. Lack of motivation, opportunity, and capacity among healthcare staff are some of the barriers in delivering cessation interventions [97, 100, 101]. Nurses and doctors are often not motivated to deliver cessation interventions as they perceive it to be outside their roles. A survey of US physicians found that whilst the majority (62%) were confident about their knowledge of the benefits of smoking cessation, few (14%) offered it in practice [102]. High patient volume and complexity of the health issues in presenting patients are also reported as factors that limit the time available for effective smoking cessation counseling [103]. Nurses report lack of time and skills in advising people with diabetes in lifestyle changes including smoking cessation [104]. In a US study of psychiatric nurses, the majority acknowledged the importance of providing smoking cessation to their patients but only a quarter offered any cessation advice [105].

3.6.4. Concerns about Drugs Safety. Another barrier is the concern about safety of NRT, bupropion, and varenicline in patients with cardiovascular conditions due to their possible hemodynamic effects [106, 107]. Whilst such concerns may be justified on the basis of pharmacodynamics profiles, clinical studies have found no evidence of increased risk of cardiovascular events associated with these treatments [106]. Studies to-date have been relatively small and may, therefore, have missed potential adverse effects; there is a general consensus that the benefits of cessation interventions outweigh the risks of any potential, yet unsubstantiated, safety concerns. Similarly, concerns have been raised about using varenicline in people with schizophrenia. A recent review, however, reported a brief negative psychiatric episode in only three out of 260 patients with stable schizophrenia [108]. No excess adverse events were found in those who used bupropion in such patients [109].

4. Discussion

We found that smoking prevalence is either similar or higher in patients with established long-term conditions compared to the general population. There is evidence from good quality longitudinal studies to suggest that continued smoking in patients with these conditions accelerates disease progression, worsens outcomes, and risks poor treatment

compliance or further complications. There is strong evidence for the effectiveness in achieving smoking abstinence of behavioural support alone in CHD, behavioural support in combination with NRT or bupropion in COPD, and pharmacotherapy (varenicline and bupropion) in schizophrenia. Although there are fewer good quality studies for diabetes and HIV/AIDS, the limited evidence does suggest effectiveness in these conditions also. Studies have also shown considerable benefits of smoking cessation in improving disease outcomes.

The need and potential to benefit from cessation interventions in long-term conditions seem to be clear. However, there is a significant gap in provision. A large proportion of patients with CHD, diabetes, and schizophrenia do not receive even brief cessation advice and only a minority obtain specialist advice or cessation interventions. This gap is due to a number of barriers, including concerns about weight management in patients with diabetes and schizophrenia and drug safety in those with CHD and schizophrenia. Higher nicotine dependency in COPD patients and codependency in HIV/AIDS make cessation even more challenging. Comorbidity and misperceptions about the efficacy and benefits of cessation influence patients' motivation to quit. Health professionals often do not prioritise cessation or consider it as part of mainstream management, which further contributes towards this service gap.

This is not a systematic review, and therefore, it does neither provide a comprehensive evidence synthesis for each question nor has it offered a qualitative appraisal of the studies included. We have conducted a narrative review on the topic using broad terms and inclusion criteria in order to highlight some of the seminal studies and knowledge gaps.

Our findings have implications for future research and for service provision. Knowledge of smoking prevalence in patients with long-term conditions is key to plan and target cessation services; yet we found few studies specifically of smoking prevalence in such patients and most estimates for prevalence were derived from studies with other primary aims. We found no smoking cessation trials in patients with asthma and very few high quality trials in HIV/AIDS. In general, most trials were exploratory and, except for a few studies in diabetes, did not test service models for delivering smoking cessation within the general management of long-term conditions. Nonpharmacological interventions were often poorly defined, making it difficult to assess the underlying behaviour change techniques used. We suggest, therefore, that there is an urgent need for further studies of smoking prevalence and trials testing well-defined interventions and service models for smoking cessation in long-term conditions. In the last few years, knowledge has emerged on effective behaviour change techniques in smoking cessation [110] making it apposite to develop interventions based on these techniques that are relevant to long-term conditions. Future research on behavioural support interventions needs to determine the best ways to integrate these within existing models of care. Future trials should also include economic evaluations, particularly in patients with schizophrenia, diabetes, and HIV/AIDS, where there are concerns that more intensive cessation treatment might be required to achieve cessation

rates comparable to the general population. Such trials should also assess the impact of cessation on outcomes of these conditions. Further research is also required to understand the barriers to service provision, as the literature on this is limited to only a few conditions and is particularly sparse on the perspectives of health providers.

Although the true extent of the gap in providing cessation support in long-term conditions is unclear (and in COPD, asthma, and HIV/AIDS, it has not been investigated at all), the available evidence suggests that it is likely to be significant. This is of concern, given the established need and potential to benefit in these conditions. Moreover, the increased frequency of contact with health services for people with these conditions presents an opportunity. Recording and reporting smoking status and offering cessation interventions should be integral to the management of long-term conditions. We may, as yet, not be aware of the most effective and cost-effective models of service provision and ways to address barriers and concerns. However, there is sufficient evidence of the benefits to mandate that smoking cessation support should be implemented as an integral part of the management of long-term conditions.

Conflict of Interests

The authors declare that they have no conflict of interests.

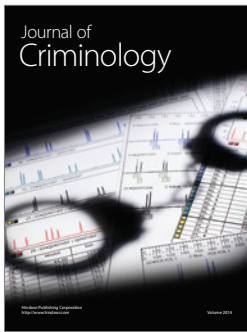
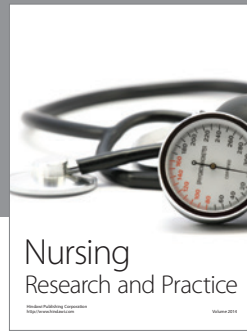
References

- [1] J. Rehm, B. Taylor, and R. Room, "Global burden of disease from alcohol, illicit drugs and tobacco," *Drug and Alcohol Review*, vol. 25, no. 6, pp. 503–513, 2006.
- [2] J. T. Doyle, T. R. Dawber, W. B. Kannel, A. S. Heslin, and H. A. Kahn, "Cigarette smoking and coronary heart disease," *New England Journal of Medicine*, vol. 266, no. 16, pp. 796–801, 1962.
- [3] H. Zhang and B. Cai, "The impact of tobacco on lung health in China," *Respirology*, vol. 8, no. 1, pp. 17–21, 2003.
- [4] E. R. Gritz, D. J. Vidrine, and M. Cororve Fingeret, "Smoking cessation. A critical component of medical management in chronic disease populations," *American Journal of Preventive Medicine*, vol. 33, no. 6, pp. S414–S422, 2007.
- [5] J. Mackay, M. P. Eriksen, and H. Ross, *The Tobacco Atlas*, The American Cancer Society, Atlanta, Ga, USA, 2012.
- [6] W. S. O. Reimer, E. de Swart, D. de Bacquer et al., "Smoking behaviour in European patients with established coronary heart disease," *European Heart Journal*, vol. 27, no. 1, pp. 35–41, 2006.
- [7] J. Cederholm, K. Eeg-Olofsson, B. Eliasson, B. Zethelius, P. M. Nilsson, and S. Gudbjörnsdóttir, "Risk prediction of cardiovascular disease in type 2 diabetes," *Diabetes Care*, vol. 31, no. 10, pp. 2038–2043, 2008.
- [8] W. K. Al-Delaimy, W. C. Willett, J. E. Manson, F. E. Speizer, and B. H. U. Frank, "Smoking and mortality among women with type 2 diabetes: the nurses' health study cohort," *Diabetes Care*, vol. 24, no. 12, pp. 2043–2048, 2001.
- [9] A. J. Karter, M. R. Stevens, E. W. Gregg et al., "Educational disparities in rates of smoking among diabetic adults: the translating research into action for diabetes study," *American Journal of Public Health*, vol. 98, no. 2, pp. 365–370, 2008.
- [10] M. C. Gulliford, J. E. C. Sedgwick, and A. J. Pearce, "Cigarette smoking, health status, socio-economic status and access to health care in diabetes mellitus: a cross-sectional survey," *BMC Health Services Research*, vol. 3, article 1, pp. 1–9, 2003.
- [11] J. Garcia-Aymerich, E. Barreiro, E. Farrero, R. M. Marrades, J. Morera, and J. M. Antó, "Patients hospitalized for COPD have a high prevalence of modifiable risk factors for exacerbation (EFRAM study)," *European Respiratory Journal*, vol. 16, no. 6, pp. 1037–1042, 2000.
- [12] T. To, S. Stanojevic, G. Moores et al., "Global asthma prevalence in adults: findings from the cross-sectional world health survey," *BMC Public Health*, vol. 12, article 204, 2012.
- [13] M. D. Althuis, M. Sexton, and D. Prybylski, "Cigarette smoking and asthma symptom severity among adult asthmatics," *Journal of Asthma*, vol. 36, no. 3, pp. 257–264, 1999.
- [14] D. Lawrence, F. Mitrou, and S. R. Zubrick, "Smoking and mental illness: results from population surveys in Australia and the United States," *BMC Public Health*, vol. 9, article 285, 2009.
- [15] K. Lasser, J. W. Boyd, S. Woolhandler, D. U. Himmelstein, D. McCormick, and D. H. Bor, "Smoking and mental illness: a population-based prevalence study," *Journal of the American Medical Association*, vol. 284, no. 20, pp. 2606–2610, 2000.
- [16] J. de Leon and F. J. Diaz, "A meta-analysis of worldwide studies demonstrates an association between schizophrenia and tobacco smoking behaviors," *Schizophrenia Research*, vol. 76, no. 2-3, pp. 135–157, 2005.
- [17] A. Dervaux and X. Laqueille, "Smoking and schizophrenia: epidemiological and clinical features," *Encephale*, vol. 34, no. 3, pp. 299–305, 2008.
- [18] J. M. Tesoriero, S. M. Gieryic, A. Carrascal, and H. E. Lavigne, "Smoking among HIV positive New Yorkers: prevalence, frequency, and opportunities for cessation," *AIDS and Behavior*, vol. 14, no. 4, pp. 824–835, 2010.
- [19] S. Nahvi and N. A. Cooperman, "Review: the need for smoking cessation among HIV-positive smokers," *AIDS Education and Prevention*, vol. 21, supplement 3, pp. 14–27, 2009.
- [20] Y. Gerber, L. J. Rosen, U. Goldbourt, Y. Benyamini, and Y. Drory, "Smoking status and long-term survival after first acute myocardial infarction. A population-based cohort study," *Journal of the American College of Cardiology*, vol. 54, no. 25, pp. 2382–2387, 2009.
- [21] A. M. Shah, M. A. Pfeffer, L. H. Hartley et al., "Risk of all-cause mortality, recurrent myocardial infarction, and heart failure hospitalization associated with smoking status following myocardial infarction with left ventricular dysfunction," *American Journal of Cardiology*, vol. 106, no. 7, pp. 911–916, 2010.
- [22] W. K. Al-Delaimy, J. E. Manson, G. G. Solomon et al., "Smoking and risk of coronary heart disease among women with type 2 diabetes mellitus," *Archives of Internal Medicine*, vol. 162, no. 3, pp. 273–279, 2002.
- [23] W. K. Al-Delaimy, W. C. Willett, J. E. Manson, F. E. Speizer, and B. H. U. Frank, "Smoking and mortality among women with type 2 diabetes: the nurses' health study cohort," *Diabetes Care*, vol. 24, no. 12, pp. 2043–2048, 2001.
- [24] T. Chuahirun and D. E. Wesson, "Cigarette smoking predicts faster progression of type 2 established diabetic nephropathy despite ACE inhibition," *American Journal of Kidney Diseases*, vol. 39, no. 2, pp. 376–382, 2002.
- [25] P. Reichard, "Risk factors for progression of microvascular complications in the Stockholm Diabetes Intervention Study (SDIS)," *Diabetes Research and Clinical Practice*, vol. 16, no. 2, pp. 151–156, 1992.

- [26] M. L. Sands, S. M. Shetterly, G. M. Franklin, and R. F. Hamman, "Incidence of distal symmetric (sensory) neuropathy in NIDDM: the San Luis Valley Diabetes Study," *Diabetes Care*, vol. 20, no. 3, pp. 322–329, 1997.
- [27] A. Løkke, P. Lange, H. Scharling, P. Fabricius, and J. Vestbo, "Developing COPD: a 25 year follow up study of the general population," *Thorax*, vol. 61, no. 11, pp. 935–939, 2006.
- [28] T. J. Crowley, M. J. Macdonald, and M. I. Walter, "Behavioral anti-smoking trial in chronic obstructive pulmonary disease patients," *Psychopharmacology*, vol. 119, no. 2, pp. 193–204, 1995.
- [29] C. M. Burchfiel, E. B. Marcus, J. D. Curb et al., "Effects of smoking and smoking cessation on longitudinal decline in pulmonary function," *American Journal of Respiratory and Critical Care Medicine*, vol. 151, no. 6, pp. 1778–1785, 1995.
- [30] N. S. Godtfredsen, J. Vestbo, M. Osler, and E. Prescott, "Risk of hospital admission for COPD following smoking cessation and reduction: a Danish population study," *Thorax*, vol. 57, no. 11, pp. 967–972, 2002.
- [31] R. E. Kanner, N. R. Anthonisen, and J. E. Connett, "Lower respiratory illnesses promote FEV1 decline in current smokers but not ex-smokers with mild chronic obstructive pulmonary disease: results from the Lung Health Study," *American Journal of Respiratory and Critical Care Medicine*, vol. 164, no. 3, pp. 358–364, 2001.
- [32] R. Doll, R. Peto, J. Boreham, and I. Sutherland, "Mortality in relation to smoking: 50 Years' observations on male British doctors," *British Medical Journal*, vol. 328, no. 7455, pp. 1519–1528, 2004.
- [33] N. C. Thomson, R. Chaudhuri, and E. Livingston, "Asthma and cigarette smoking," *European Respiratory Journal*, vol. 24, no. 5, pp. 822–833, 2004.
- [34] C. H. Marquette, F. Saulnier, O. Leroy et al., "Long-term prognosis of near-fatal asthma: a 6-year follow-up study of 145 asthmatic patients who underwent mechanical ventilation for a near-fatal attack of asthma," *American Review of Respiratory Disease*, vol. 146, no. 1, pp. 76–81, 1992.
- [35] P. Lange, J. Parner, J. Vestbo, P. Schnohr, and G. Jensen, "A 15-year follow-up study of ventilatory function in adults with asthma," *New England Journal of Medicine*, vol. 339, no. 17, pp. 1194–200, 1998.
- [36] R. Chaudhuri, E. Livingston, A. D. McMahon, L. Thomson, W. Borland, and N. C. Thomson, "Cigarette smoking impairs the therapeutic response to oral corticosteroids in chronic asthma," *American Journal of Respiratory and Critical Care Medicine*, vol. 168, no. 11, pp. 1308–1311, 2003.
- [37] C. H. Hennekens, A. R. Hennekens, D. Hollar, and D. E. Casey, "Schizophrenia and increased risks of cardiovascular disease," *American Heart Journal*, vol. 150, no. 6, pp. 1115–1121, 2005.
- [38] M. de Hert, J. M. Dekker, D. Wood, K. G. Kahl, R. I. G. Holt, and H. J. Möller, "Cardiovascular disease and diabetes in people with severe mental illness position statement from the European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC)," *European Psychiatry*, vol. 24, no. 6, pp. 412–424, 2009.
- [39] D. L. Kelly, R. P. McMahon, H. J. Wehring et al., "Cigarette smoking and mortality risk in people with schizophrenia," *Schizophrenia Bulletin*, vol. 37, no. 4, pp. 832–838, 2011.
- [40] K. Crothers, T. A. Griffith, K. A. McGinnis et al., "The impact of cigarette smoking on mortality, quality of life, and comorbid illness among HIV-positive veterans," *Journal of General Internal Medicine*, vol. 20, no. 12, pp. 1142–1145, 2005.
- [41] J. Turner, M. Chesney, P. C. Hopewell et al., "Adverse impact of cigarette smoking on dimensions of health-related quality of life in persons with HIV infection," *AIDS Patient Care and STDs*, vol. 15, no. 12, pp. 615–624, 2001.
- [42] G. V. L. de Socio, L. Martinelli, S. Morosi et al., "Is estimated cardiovascular risk higher in HIV-infected patients than in the general population?" *Scandinavian Journal of Infectious Diseases*, vol. 39, no. 9, pp. 805–812, 2007.
- [43] K. Crothers, "Chronic obstructive pulmonary disease in patients who have HIV infection," *Clinics in Chest Medicine*, vol. 28, no. 3, pp. 575–587, 2007.
- [44] G. M. Clifford, J. Polesel, M. Rickenbach et al., "Cancer risk in the Swiss HIV cohort study: associations with immunodeficiency, smoking, and highly active antiretroviral therapy," *Journal of the National Cancer Institute*, vol. 97, no. 6, pp. 425–432, 2005.
- [45] R. Kohli, Y. Lo, P. Homel et al., "Bacterial pneumonia, HIV therapy, and disease progression among HIV-infected women in the HIV epidemiologic research (HER) study," *Clinical Infectious Diseases*, vol. 43, no. 1, pp. 90–98, 2006.
- [46] M. J. Miguez-Burbano, D. Ashkin, A. Rodriguez et al., "Increased risk of *Pneumocystis carinii* and community-acquired pneumonia with tobacco use in HIV disease," *International Journal of Infectious Diseases*, vol. 9, no. 4, pp. 208–217, 2005.
- [47] A. R. Lifson, J. Neuhaus, J. R. Arribas, M. D. Van Berg-Wolf, A. M. Labriola, and T. R. H. Read, "Smoking-related health risks among persons with HIV in the strategies for management of antiretroviral therapy clinical trial," *American Journal of Public Health*, vol. 100, no. 10, pp. 1896–1903, 2010.
- [48] A. Chattopadhyay, D. J. Caplan, G. D. Slade, D. C. Shugars, H. C. Tien, and L. L. Patton, "Risk indicators for oral candidiasis and oral hairy leukoplakia in HIV-infected adults," *Community Dentistry and Oral Epidemiology*, vol. 33, no. 1, pp. 35–44, 2005.
- [49] D. N. Burns, S. Landesman, L. R. Muenz et al., "Cigarette smoking, premature rupture of membranes, and vertical transmission of HIV-1 among women with low CD4+ levels," *Journal of Acquired Immune Deficiency Syndromes*, vol. 7, no. 7, pp. 718–726, 1994.
- [50] M. S. Webb, P. A. Vanable, M. P. Carey, and D. C. Blair, "Medication adherence in HIV-infected smokers: the mediating role of depressive symptoms," *AIDS Education and Prevention*, vol. 21, supplement 3, pp. 94–105, 2009.
- [51] J. Critchley and S. Capewell, "Smoking cessation for the secondary prevention of coronary heart disease," *Cochrane Database of Systematic Reviews*, no. 1, Article ID CD003041, 2004.
- [52] L. G. Persson and A. Hjalmarson, "Smoking cessation in patients with diabetes mellitus: results from a controlled study of an intervention programme in primary healthcare in Sweden," *Scandinavian Journal of Primary Health Care*, vol. 24, no. 2, pp. 75–80, 2006.
- [53] N. Canga, J. de Irala, E. Vara, M. J. Duaso, A. Ferrer, and M. A. Martínez-González, "Intervention study for smoking cessation in diabetic patients: a randomized controlled trial in both clinical and primary care settings," *Diabetes Care*, vol. 23, no. 10, pp. 1455–1460, 2000.
- [54] R. M. van der Meer, E. J. Wagena, R. W. Ostelo, J. E. Jacobs, and C. P. van Schayck, "Smoking cessation for chronic obstructive pulmonary disease," *Cochrane Database of Systematic Reviews*, no. 2, Article ID CD002999, 2003.

- [55] N. R. Anthonisen, J. E. Connett, J. P. Kiley et al., "Effects of smoking intervention and the use of an inhaled anticholinergic bronchodilator on the rate of decline of FEV1: the Lung Health Study," *Journal of the American Medical Association*, vol. 272, no. 19, pp. 1497–1505, 1994.
- [56] D. Tashkin, R. Kanner, W. Bailey et al., "Smoking cessation in patients with chronic obstructive pulmonary disease: a double-blind, placebo-controlled, randomised trial," *Lancet*, vol. 357, no. 9268, pp. 1571–1575, 2001.
- [57] M. Thabane, "Smoking cessation for patients with chronic obstructive pulmonary disease (COPD): an evidence-based analysis," *Ontario Health Technology Assessment Series*, vol. 12, no. 4, pp. 1–50, 2012.
- [58] D. T. Tsoi, M. Porwal, and A. C. Webster, "Interventions for smoking cessation and reduction in individuals with schizophrenia," *Cochrane Database of Systematic Reviews*, no. 6, Article ID CD007253, 2010.
- [59] J. M. Williams, R. M. Anthenelli, C. D. Morris et al., "A randomized, double-blind, placebo-controlled study evaluating the safety and efficacy of varenicline for smoking cessation in patients with schizophrenia or schizoaffective disorder," *Journal of Clinical Psychiatry*, vol. 73, no. 5, pp. 654–660, 2012.
- [60] R. Niaura, G. Chander, H. Hutton, and C. Stanton, "Interventions to address chronic disease and HIV: strategies to promote smoking cessation among HIV-infected individuals," *Current HIV/AIDS Reports*, vol. 9, no. 4, pp. 375–384, 2012.
- [61] K. Wilson, R. Hettle, S. Marbaix et al., "An economic evaluation based on a randomized placebo-controlled trial of varenicline in smokers with cardiovascular disease: results for Belgium, Spain, Portugal, and Italy," *European Journal of Preventive Cardiology*, vol. 19, no. 5, pp. 1173–1183, 2012.
- [62] S. R. Earnshaw, A. Richter, S. W. Sorensen et al., "Optimal allocation of resources across four interventions for type 2 diabetes," *Medical Decision Making*, vol. 22, supplement 5, pp. S80–S91, 2002.
- [63] K. Chandra, G. Blackhouse, B. R. McCurdy et al., "Cost-effectiveness of interventions for chronic obstructive pulmonary disease (COPD) using an Ontario policy model," *Ontario Health Technology Assessment Series*, vol. 12, no. 12, pp. 1–61, 2012.
- [64] E. C. Hansen and M. R. Nelson, "How cardiac patients describe the role of their doctors in smoking cessation: a qualitative study," *Australian Journal of Primary Health*, vol. 17, no. 3, pp. 268–273, 2011.
- [65] S. Wilkes and A. Evans, "A cross-sectional study comparing the motivation for smoking cessation in apparently healthy patients who smoke to those who smoke and have ischaemic heart disease, hypertension or diabetes," *Family Practice*, vol. 16, no. 6, pp. 608–610, 1999.
- [66] R. M. P. van Zundert, R. C. M. E. Engels, M. Kleinjan, and R. J. J. M. van den Eijnden, "An integration of parents' and best friends' smoking, smoking-specific cognitions, and nicotine dependence in relation to readiness to quit smoking: a comparison between adolescents with and without asthma," *Journal of Pediatric Psychology*, vol. 33, no. 8, pp. 821–832, 2008.
- [67] J. A. Critchley and S. Capewell, "Mortality risk reduction associated with smoking cessation in patients with coronary heart disease: a systematic review," *Journal of the American Medical Association*, vol. 290, no. 1, pp. 86–97, 2003.
- [68] C. Voulgari, N. Katsilambros, and N. Tentolouris, "Smoking cessation predicts amelioration of microalbuminuria in newly diagnosed type 2 diabetes mellitus: a 1-year prospective study," *Metabolism: Clinical and Experimental*, vol. 60, no. 10, pp. 1456–1464, 2011.
- [69] T. Chuahirun, J. Simoni, C. Hudson et al., "Cigarette smoking exacerbates and its cessation ameliorates renal injury in type 2 diabetes," *American Journal of the Medical Sciences*, vol. 327, no. 2, pp. 57–67, 2004.
- [70] N. S. Godtfredsen, T. H. Lam, T. T. Hansel et al., "COPD-related morbidity and mortality after smoking cessation: status of the evidence," *European Respiratory Journal*, vol. 32, no. 4, pp. 844–853, 2008.
- [71] Y. Lacasse, J. LaForge, and F. Maltais, "Got a match? Home oxygen therapy in current smokers," *Thorax*, vol. 61, no. 5, pp. 374–375, 2006.
- [72] P. Tønnesen, C. Pisinger, S. Hvidberg et al., "Effects of smoking cessation and reduction in asthmatics," *Nicotine and Tobacco Research*, vol. 7, no. 1, pp. 139–148, 2005.
- [73] D. J. Vidrine, R. C. Arduino, and E. R. Gritz, "The effects of smoking abstinence on symptom burden and quality of life among persons living with HIV/AIDS," *AIDS Patient Care and STDs*, vol. 21, no. 9, pp. 659–666, 2007.
- [74] K. Kotseva, D. Wood, G. de Backer et al., "EUROASPIRE III. Management of cardiovascular risk factors in asymptomatic high-risk patients in general practice: cross-sectional survey in 12 European countries," *European Journal of Cardiovascular Prevention and Rehabilitation*, vol. 17, no. 5, pp. 530–540, 2010.
- [75] "Healthcare Essentials Survey," UK D.15, 2011.
- [76] C. U. Thresia, K. R. Thankappan, and M. Nichter, "Smoking cessation and diabetes control in Kerala, India: an urgent need for health education," *Health Education Research*, vol. 24, no. 5, pp. 839–845, 2009.
- [77] C. Kunzel, E. Lalla, D. A. Albert, H. Yin, and I. B. Lamster, "On the primary care frontlines: the role of the general practitioner in smoking-cessation activities and diabetes management," *Journal of the American Dental Association*, vol. 136, no. 8, pp. 1144–1153, 2005.
- [78] S. A. Duffy, A. M. Kilbourne, K. L. Austin et al., "Risk of smoking and receipt of cessation services among veterans with mental disorders," *Psychiatric Services*, vol. 63, no. 4, pp. 325–332, 2012.
- [79] J. H. Price, J. E. Sidani, and J. A. Price, "Child and adolescent psychiatrists' practices in assisting their adolescent patients who smoke to quit smoking," *Journal of the American Academy of Child and Adolescent Psychiatry*, vol. 46, no. 1, pp. 60–67, 2007.
- [80] S. Rahmanian, M. E. Wewers, S. Koletar, N. Reynolds, A. Ferketich, and P. Diaz, "Cigarette smoking in the hiv-infected population," *Proceedings of the American Thoracic Society*, vol. 8, no. 3, pp. 313–319, 2011.
- [81] M. Wakefield, L. Roberts, and E. Rosenfeld, "Prospects for smoking cessation among people with insulin-dependent diabetes," *Patient Education and Counseling*, vol. 34, no. 3, pp. 257–266, 1998.
- [82] B. M. Eklund, S. Nilsson, L. Hedman, and I. Lindberg, "Why do smokers diagnosed with COPD not quit smoking?—a qualitative study," *Tobacco Induced Diseases*, vol. 10, no. 1, article 17, 2012.
- [83] I. Vogiatzis, E. Tsirikika, V. Sachpekidis, S. Pittas, and A. Kotsani, "Factors affecting smoking resumption after acute coronary syndromes," *Hellenic Journal of Cardiology*, vol. 51, no. 4, pp. 294–300, 2010.
- [84] M. F. Attebring, M. Hartford, A. Hjalmarson, K. Caidahl, T. Karlsson, and J. Herlitz, "Smoking habits and predictors of continued smoking in patients with acute coronary syndromes," *Journal of Advanced Nursing*, vol. 46, no. 6, pp. 614–623, 2004.

- [85] L. I. Solberg, J. R. Desai, P. J. O'Connor, D. B. Bishop, and H. M. Devlin, "Diabetic patients who smoke: are they different?" *Annals of Family Medicine*, vol. 2, no. 1, pp. 26–32, 2004.
- [86] R. S. Padmawati, N. Ng, Y. S. Prabandari, and M. Nichter, "Smoking among diabetes patients in Yogyakarta, Indonesia: cessation efforts are urgently needed," *Tropical Medicine and International Health*, vol. 14, no. 4, pp. 412–419, 2009.
- [87] D. L. Kelly, H. G. Raley, S. Lo et al., "Perception of smoking risks and motivation to quit among nontreatment-seeking smokers with and without schizophrenia," *Schizophrenia Bulletin*, vol. 38, no. 3, pp. 543–551, 2012.
- [88] A. M. Barr, R. M. Procyshyn, P. Hui, J. L. Johnson, and W. G. Honer, "Self-reported motivation to smoke in schizophrenia is related to antipsychotic drug treatment," *Schizophrenia Research*, vol. 100, no. 1–3, pp. 252–260, 2008.
- [89] R. Segarra, A. Zabala, J. I. Eguíluz et al., "Cognitive performance and smoking in first-episode psychosis: the self-medication hypothesis," *European Archives of Psychiatry and Clinical Neuroscience*, vol. 261, no. 4, pp. 241–250, 2011.
- [90] M. C. Mann-Wrobel, M. E. Bennett, E. E. Weiner, R. W. Buchanan, and M. P. Ball, "Smoking history and motivation to quit in smokers with schizophrenia in a smoking cessation program," *Schizophrenia Research*, vol. 126, no. 1–3, pp. 277–283, 2011.
- [91] C. A. Jiménez-Ruiz, F. Masa, M. Miravittles et al., "Smoking characteristics: differences in attitudes and dependence between healthy smokers and smokers with COPD," *Chest*, vol. 119, no. 5, pp. 1365–1370, 2001.
- [92] A. Benard, F. Bonnet, J. F. Tessier et al., "Tobacco addiction and HIV infection: toward the implementation of cessation programs. ANRS CO3 aquitaine cohort," *AIDS Patient Care and STDs*, vol. 21, no. 7, pp. 458–468, 2007.
- [93] D. Haire-Joshu, S. Heady, L. Thomas, K. Schechtman, and E. B. Fisher Jr., "Beliefs about smoking and diabetes care," *The Diabetes Educator*, vol. 20, no. 5, pp. 410–415, 1994.
- [94] R. C. M. Jones, M. E. Hyland, K. Hanney, and J. Erwin, "A qualitative study of compliance with medication and lifestyle modification in chronic obstructive pulmonary disease (COPD)," *Primary Care Respiratory Journal*, vol. 13, no. 3, pp. 149–154, 2004.
- [95] M. L. Esterberg and M. T. Compton, "Smoking behavior in persons with a schizophrenia-spectrum disorder: a qualitative investigation of the transtheoretical model," *Social Science and Medicine*, vol. 61, no. 2, pp. 293–303, 2005.
- [96] N. R. Reynolds, J. L. Neidig, and M. E. Wewers, "Illness representation and smoking behavior: a focus group study of HIV-positive men," *Journal of the Association of Nurses in AIDS Care*, vol. 15, no. 4, pp. 37–47, 2004.
- [97] L. Sarna, M. E. Wewers, J. K. Brown, L. Lillington, and M. L. Brecht, "Barriers to tobacco cessation in clinical practice: report from a national survey of oncology nurses," *Nursing Outlook*, vol. 49, no. 4, pp. 166–172, 2001.
- [98] L. S. Meredith, E. M. Yano, S. C. Hickey, and S. E. Sherman, "Primary care provider attitudes are associated with smoking cessation counseling and referral," *Medical Care*, vol. 43, no. 9, pp. 929–934, 2005.
- [99] B. Borrelli, J. P. Hecht, G. D. Papandonatos, K. M. Emmons, L. R. Tatevosian, and D. B. Abrams, "Smoking-cessation counseling in the home: attitudes, beliefs, and behaviors of home healthcare nurses," *American Journal of Preventive Medicine*, vol. 21, no. 4, pp. 272–277, 2001.
- [100] V. Aboynans, D. Thomas, and P. Lacroix, "The cardiologist and smoking cessation," *Current Opinion in Cardiology*, vol. 25, no. 5, pp. 469–477, 2010.
- [101] T. Raupach, J. Falk, E. Vangeli et al., "Structured smoking cessation training for health professionals on cardiology wards: a prospective study," *European Journal of Preventive Cardiology*, 2012.
- [102] J. Castaldo, J. Nester, T. Wasser et al., "Physician attitudes regarding cardiovascular risk reduction: the gaps between clinical importance, knowledge, and effectiveness," *Disease Management*, vol. 8, no. 2, pp. 93–105, 2005.
- [103] D. S. Blumenthal, "Barriers to the provision of smoking cessation services reported by clinicians in underserved communities," *Journal of the American Board of Family Medicine*, vol. 20, no. 3, pp. 272–279, 2007.
- [104] R. Jansink, J. Braspenning, T. van der Weijden, G. Elwyn, and R. Grol, "Primary care nurses struggle with lifestyle counseling in diabetes care: a qualitative analysis," *BMC Family Practice*, vol. 11, article 41, 2010.
- [105] C. Essenmacher, C. Karvonen-Gutierrez, J. Lynch-Sauer, and S. A. Duffy, "Staff's attitudes toward the delivery of tobacco cessation services in a primarily psychiatric veterans affairs hospital," *Archives of Psychiatric Nursing*, vol. 23, no. 3, pp. 231–242, 2009.
- [106] D. M. Sobieraj, W. B. White, and W. L. Baker, "Cardiovascular effects of pharmacologic therapies for smoking cessation," *Journal of the American Society of Hypertension*, vol. 7, no. 1, pp. 61–67, 2013.
- [107] F. C. May, N. Stocks, and C. Barton, "Identification of barriers that impede the implementation of nicotine replacement therapy in the acute cardiac care setting," *European Journal of Cardiovascular Prevention and Rehabilitation*, vol. 15, no. 6, pp. 646–650, 2008.
- [108] J. M. Cerimele and A. Durango, "Does varenicline worsen psychiatric symptoms in patients with schizophrenia or schizoaffective disorder? A review of published studies," *Journal of Clinical Psychiatry*, vol. 73, no. 8, pp. e1039–e1047, 2012.
- [109] D. T. Y. Tsoi, M. Porwal, and A. C. Webster, "Efficacy and safety of bupropion for smoking cessation and reduction in schizophrenia: systematic review and meta-analysis," *British Journal of Psychiatry*, vol. 196, no. 5, pp. 346–353, 2010.
- [110] S. Michie, N. Hyder, A. Walia, and R. West, "Development of a taxonomy of behaviour change techniques used in individual behavioural support for smoking cessation," *Addictive Behaviors*, vol. 36, no. 4, pp. 315–319, 2011.



Hindawi

Submit your manuscripts at
<http://www.hindawi.com>

