Welcome to issue 19 of Smoking Cessation Research Review.

Interesting findings are reported by researchers from the San Diego School of Medicine, who estimate that around 396,000 Californians (12.3% of the state’s population of smokers) smoke on a measurable basis, but do not consider themselves to be “smokers”. The researchers suggest that media campaigns and public health policies need to be designed to reach these smokers, who may continue to smoke and be adversely impacted by the tobacco that they smoke, yet they do not attempt to quit or seek any assistance to quit because they believe they are not smokers. We need to understand more about the complex issue of identity and self-perception of smokers.

Another study provides interesting insights into associations between smoking, drinking and socialising among young late-onset smokers in New Zealand. The study researchers suggest a number of initiatives that could help to reduce the high smoking prevalence among young adults in this country.

We hope you enjoy the selection in this issue, and we welcome any comments or feedback.

Kind Regards,

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**Smoking and perioperative outcomes**

Authors: Turan A et al.

**Summary:** These researchers investigated the effect of smoking on 30-day postoperative outcomes among noncardiac surgical patients from the American College of Surgeons National Surgical Quality Improvement Program database. A total of 82,304 current smokers were propensity matched with 82,304 never-smoker controls. The analysis revealed that current smokers were 1.38 (95% CI, 1.11 to 1.72) times more likely to die than never smokers. Current smokers also had significantly greater odds of pneumonia (odds ratio [OR] 2.09; 95% CI, 1.80 to 2.40), unplanned intubation (OR 1.87; 95% CI, 1.58 to 2.11) and mechanical ventilation (OR 1.53; 95% CI, 1.31 to 1.79). Furthermore, current smokers were significantly more likely to experience a cardiac arrest (OR 1.57; 95% CI, 1.10 to 2.25), myocardiac infarction (OR 1.80; 95% CI, 1.11 to 2.92) and stroke (OR 1.73; 95% CI, 1.18 to 2.53). Current smokers also had significantly higher odds of having superficial (OR 1.30; 95% CI, 1.20 to 1.42) and deep (OR 1.42; 95% CI, 1.21 to 1.68) incisional infections, sepsis (OR 1.30; 95% CI, 1.15 to 1.46), organ space infections (OR 1.38; 95% CI, 1.20 to 1.60) and septic shock (OR 1.55; 95% CI, 1.29 to 1.87).

**Comment (NW):** This large study provides clear evidence that smoking significantly increases the risk of death (40% increase) or serious postoperative complications (30–100% increase) within 30-days of non-cardiac surgery. The chance of experiencing even minor postoperative complications is increased in smokers. Therefore, make sure you use the preoperative period as a “teachable moment” to highlight the effects of smoking on the risks of surgery. Provision of smoking cessation support at this time has been shown to increase quitting success.

Reference: Anesthesiology. 2011;114(4):837-46

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**Abstract**

These researchers investigated the effect of smoking on 30-day postoperative outcomes among noncardiac surgical patients from the American College of Surgeons National Surgical Quality Improvement Program database. A total of 82,304 current smokers were propensity matched with 82,304 never-smoker controls. The analysis revealed that current smokers were 1.38 (95% CI, 1.11 to 1.72) times more likely to die than never smokers. Current smokers also had significantly greater odds of pneumonia (odds ratio [OR] 2.09; 95% CI, 1.80 to 2.40), unplanned intubation (OR 1.87; 95% CI, 1.58 to 2.11) and mechanical ventilation (OR 1.53; 95% CI, 1.31 to 1.79). Furthermore, current smokers were significantly more likely to experience a cardiac arrest (OR 1.57; 95% CI, 1.10 to 2.25), myocardiac infarction (OR 1.80; 95% CI, 1.11 to 2.92) and stroke (OR 1.73; 95% CI, 1.18 to 2.53). Current smokers also had significantly higher odds of having superficial (OR 1.30; 95% CI, 1.20 to 1.42) and deep (OR 1.42; 95% CI, 1.21 to 1.68) incisional infections, sepsis (OR 1.30; 95% CI, 1.15 to 1.46), organ space infections (OR 1.38; 95% CI, 1.20 to 1.60) and septic shock (OR 1.55; 95% CI, 1.29 to 1.87).

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**Reference:** Anesthesiology. 2011;114(4):837-46

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**HELP KIWIS BECOME SMOKEFREE NOW AND NZ CAN BE SMOKEFREE BY 2025.**

At 12 weeks, smokers are around 4 x more likely to quit with Champix than if they had taken placebo2 (OR 3.85, CI 2.69-5.50, p <0.0001 for CO confirmed 4 week continuous quit rate for week 9-12). AND NZ CAN BE SMOKEFREE BY 2025.

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Contact Pfizer on 0800 736363 to discuss Champix and the support resources available.

References: 1. Pharmac Special Authority Form Click here. 2. Champix Data Sheet. MINIMUM DATA SHEET: CHAMPIX® (varenicline tartrate) 0.5 mg and 1 mg tablets. Indications: Aid to smoking cessation. References: 1. Pharmac Special Authority Form Click here. 2. Champix Data Sheet.

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**Champix**

**Smoking complications postoperative outcomes**

**Financial-incentive programmes for smoking cessation**

**Targeting light smokers by media campaign**

**When is a smoker not a smoker?**

**Examining tobacco excise taxes in NZ**

**Does long-term NRT provide additional therapeutic benefit?**

**Understanding young late-onset smokers in NZ**

**First- vs second-generation e-cigs: withdrawal symptoms compared**

**Ever-use and current use of e-cigs in NZ**

**Exploring use of e-cigs among NZ adolescents**

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**Abbreviations used in this issue**

NRT = nicotine replacement therapy

OR = odds ratio

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**CLICK HERE**

to read previous issues of Smoking Cessation Research Review
Randomized trial of four financial-incentive programs for smoking cessation

Authors: Halpern SD et al.

Summary: This US research group recruited 2538 CVS Caremark employees, their relatives and friends, and randomly assigned them to 1 of 4 incentive programmes or to usual care for smoking cessation. Two of the incentive programmes targeted individuals; the other programmes targeted groups of 6 participants. One of the individual-oriented programmes and 1 of the group-oriented programmes entailed rewards of approximately $800 for smoking cessation; the others entailed refundable deposits of $150 plus $650 in reward payments for successful participants. Usual care included informational resources and free smoking cessation aids. The assignment was accepted by a significantly higher proportion of individuals assigned to reward-based programmes compared to those assigned to deposit-based programmes (90.0% vs 13.7%; p<0.001). In intention-to-treat analyses, rates of sustained abstinence from smoking through 6 months were higher with each of the 4 incentive programmes (range, 9.4–16.0%) than with usual care (6.0%) (p<0.05 for all comparisons); the superiority of reward-based programmes was sustained through 12 months. Six-month abstinence rates were similar for the group-oriented and individual-oriented programmes (13.7% and 12.1%, respectively; p=0.29). Reward-based programmes were associated with higher abstinence rates than deposit-based programmes (15.7% vs 10.2%; p<0.001). However, in instrumental-variable analyses that accounted for differential acceptance, the rate of abstinence at 6 months was 13.2 percentage points (95% CI, 3.1 to 22.8) higher in the deposit-based programmes than in the reward-based programmes among the estimated 13.7% of the participants who would accept participation in either type of programme.


Abstract

One cigarette is one too many: evaluating a light smoker-targeted media campaign

Authors: Jasek JP et al.

Summary: Outcomes are reported from an online panel survey that assessed the effectiveness of an anti-tobacco media campaign targeted to light and non-daily smokers. The “One Cigarette is One Too Many” campaign was developed in 2007 to increase awareness of smoking risks and encourage cessation service use among light smokers in New York City (NYC). The survey involved 804 current adult NYC smokers (44% non-daily, 15% light daily, 41% heavy daily). Current smoking was defined as having smoked ≥100 cigarettes in a lifetime. Light and heavy smoking were each defined as ≤9 cigarettes daily and ≥10 cigarettes daily; non-daily smoking was defined as only smoking on some days. Survey participants viewed the ad and were questioned about how effective they perceived it to be, concerns for smoking-related health risks and 30-day quit intentions. The proportion of light smokers among smokers requesting cessation services increased 50% (from 13% to 20%) relative to previous time-limited nicotine replacement therapy (NRT) giveaways. Compared to heavy daily smokers, non-daily (adjusted OR 1.95; p<0.05) and light daily (adjusted OR 2.27; p<0.05) smokers were more likely to express increased concern about smoking-related health risks after viewing the ad. Perceived effectiveness of the ad did not differ by smoker type.

Comment (NW): I’ve included this paper to draw attention to this group of smokers, as their exposure to the harms associated with smoking are still considerable. It would be great if a media campaign targeting light and non-daily smokers was implemented in NZ, particularly given that the new Smokefree National Action Plan 2015–2018 has identified “increased tobacco control mass media” as one of 13 priority objectives needed to achieve our Smokefree 2025 Goal (see here for more detail: http://www.sfc.org.nz/documents/refwg-road-map-2015-2018.pdf).

Reference: Tob Control. 2015;24(4):382-8

Abstract

Smokers who report smoking but do not consider themselves smokers: a phenomenon in need of further attention

Authors: Leas EC et al.

Summary: This cross-sectional analysis examined data from the 2011 California Longitudinal Smokers Survey, using a sample of the population of adults (≥18 years) in California who reported smoking at least 100 cigarettes in their lifetime, smoking at least some days and at least once in the last 30 days (n=1698). The researchers defined non-identifying smokers (NIS) as persons who answered ‘no’ when asked if they ‘considered themselves a smoker’. In this cohort, the odds of being an NIS were higher among non-daily smokers who were previously daily smokers (adjusted OR 7.63; 95% CI, 2.67 to 21.8) or were never previously daily smokers (adjusted OR 7.14; 95% CI, 2.78 to 18.3) compared with daily smokers. The odds of being an NIS were also higher among those who did not believe they were addicted to cigarettes (adjusted OR 3.84; 95% CI, 1.68 to 9.22), were older than 65 years (vs less than 45 years) (adjusted OR 3.35; 95% CI, 1.16 to 9.73), or were from ethnic minorities including Black and Asian (vs non-Hispanic white) (adjusted OR 3.16; 95% CI, 1.19 to 8.49).

Comment (NW): This brief report is all about social desirability bias – how much we underestimate the prevalence of smoking in NZ because some people that smoke do not consider themselves to be ‘a smoker’. I am not aware of any NZ data on this topic, but clearly this is something healthcare providers should be aware of when enquiring about smoking habits.

Reference: Tob Control. 2015;24(4):400-3

Abstract

The impact of an increase in excise tax on the retail price of tobacco in New Zealand

Authors: Marsh L et al.

Summary: Since 2010, New Zealand’s government has introduced annual tobacco excise tax increases of 10% each year until 2016 to reduce smoking prevalence and support the goal of becoming a Smokefree nation by 2025. The study collected price data from tobacco retailers throughout New Zealand in regard to three British American Tobacco (BAT) factory-made cigarette brands, (premium, mainstream, and budget), and one roll-your-own tobacco brand before and after the 2014 10% tax increase. The researchers examined whether retailers adhered to recommended retail prices (RPP), and whether the RRP included the full tax increase. They found that the median increase in price from before to after the tax change was only 3% for the budget brand (461 retailers), whereas the median price increased by 4% for the premium brand (448 retailers) and by 11% for both mainstream and roll-your-own brands (471 and 464 retailers, respectively). The researchers suggest that, according to their findings, BAT may be undershifting excise tax on the budget brand, and overshifting tax on brands in other price partitions.

Comment (NW): An important paper for New Zealand. The conclusion says it all: “The increasing price differential between budget brands, and mainstream and premium brands may undermine cessation and impede realisation of New Zealand’s Smokefree 2025 goal.” The other day I heard the checkout lady at my local supermarket promoting a budget cigarette brand to her customers (“trust me they are better-tasting and way cheaper”). Smell of tobacco company involvement!

Reference: Tob Control. 2015 Jul 2. [Epub ahead of print]

Abstract

Independent commentary by Honorary Associate Professor Natalie Walker.

Dr Natalie Walker is an epidemiologist and leader of the Addiction Research programme at the National Institute for Health Innovation, University of Auckland.

FOR FULL BIO CLICK HERE.

Disclosure Statement: Natalie Walker has provided consultancy to the manufacturers of smoking cessation medications, received honoraria for speaking at a research meeting and received benefits in kind and travel support from a manufacturer of smoking cessation medications. Natalie has also undertaken two trials of very low nicotine content cigarettes, which were purchased from two different tobacco companies. The companies concerned had no role in development of the study design, data collection, data analysis, data interpretation, or writing of the trial publications.

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www.smokingcessationresearchreview.co.nz
Long-term nicotine replacement therapy: a randomized clinical trial

**Authors:** Schnoll RA et al.

**Summary:** For this study, 525 treatment-seeking smokers were recruited through 2 US universities. All received 12 smoking cessation behavioural counselling sessions and were randomised to 6 (standard), 24 (extended), or 52 (maintenance) weeks of nicotine patch treatment for promoting tobacco abstinence. Seven-day point prevalence abstinence was confirmed with breath levels of carbon monoxide at 6 and 12 months. At 24 weeks, 21.7% of participants in the standard treatment arm were abstinent, compared with 27.2% of participants in the extended and maintenance treatment arms (p=0.17). In multivariate analysis accounting for covariates, compared with the standard treatment arm, participants in the extended and maintenance treatment arms had significantly higher abstinence rates at 24 weeks (OR 1.70; 95% CI, 1.03 to 2.81; p=0.04), had a longer duration of abstinence until relapse (β = 21.10; 95% CI, 10.30 to 32.26; p<0.001), reported smoking fewer cigarettes per day if not abstinent (mean 5.8 vs 6.4 cigarettes daily; β = 0.43; 95% CI, 0.06 to 0.82; p=0.02), and reported more abstinent days (mean 80.5 vs 68.2 days; OR 1.55; 95% CI, 1.06 to 2.26; p=0.02). At 52 weeks, abstinence rates were not significantly greater with maintenance treatment compared with standard and extended treatment (20.3% vs 23.8%; OR 1.17; 95% CI, 0.69 to 1.98; p=0.57). Similarly, week 52 abstinence rates did not differ between participants in the extended and standard treatment arms (26.0% vs 21.7%; OR 1.33; 95% CI, 0.72 to 2.45; p=0.36). Treatment duration was not associated with any adverse effects or adherence to the counselling regimen, but adherence to the nicotine patch regimen was lower with maintenance treatment compared with both standard and extended treatment (mean 3.94, 4.61, and 4.7 patches/week, respectively; p=0.003).

Comment (BC): NZ guidelines state that NRT should be used for ≥8 weeks, and suggests that 5% of smokers may need to use NRT for one year. The guidelines also recommend that people who smoke ≥10 cigarettes per day should be given patch plus another type of NRT, whereas in this trial people were only given patch. Counselling was only given monthly in this trial. Perhaps the provision of a greater variety of NRTs in addition to patch, and more frequent counselling, may have improved adherence in this trial. If adherence after 24 weeks had been greater, then longer duration therapy may have been more effective. New forms of NRT that motivate smokers to use them long-term, and better methods of encouraging treatment adherence, are desperately needed.

Reference: JAMA Intern Med. 2015;175(4):504-11

Abstract

Barriers to successful cessation among young late-onset smokers

**Authors:** Guiney H et al.

**Summary:** This study used data from the 2013 New Zealand Smoking Monitor (a fortnightly telephone survey of current smokers and recent quitters) to examine the attitudes and behaviours of young adults who became established smokers only after turning 18. Responses were analysed from 111 late-onset smokers aged 18-29 years, who were temporarily (for 11 fortnights) added to the monitor. The majority (68%) had low nicotine dependence and were actively trying to quit (81% had attempted to quit in the last 12 months). One-half (50%) reported high self-efficacy to quit and three-quarters (73%) said they intended to quit without any cessation aids. Their smoking status, even if they have previously said they were non-smokers, because smoking initiation is not limited to under-18-year-olds. The low intention to use NRT or support services among these young adults, combined with their low nicotine dependence, highlights the need for readily accessible behavioural interventions, such as Quitline’s blog. This survey suggests that healthcare workers might get more traction with young adult smokers by suggesting they use effective electronic cigarettes such as njoy, joytech, or minisciggy. An intervention aimed at the drinking culture of young adults, which also dealt with smoking initiation and vapour from e-cigs and conduct clinical trials to determine the benefits versus potential harms of e-cigs. Trustworthy unbiased evidence is required to guide clinicians and policy makers. For the latest research on E-cigs see http://www.treatobacco.net/en/page_402.php.

Reference: Addiction. 2015;110(5):862-7

Abstract

Independent commentary by Dr Brent Caldwell.

Brent Caldwell is a Senior Research Fellow at Wellington Asthma Research Group, he is currently working on the Inhale Study. His main research interest is in identifying and testing improved smoking cessation methods, with a particular focus on clinical trials of new smoking cessation pharmacotherapies.

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The comparative efficacy of first- versus second-generation electronic cigarettes in reducing symptoms of nicotine withdrawal

**Authors:** Lechner WV et al.

**Summary:** This community-based study was conducted in the Midwest region of the US and enrolled 22 mildly to moderately nicotine-dependent adults (mean age 28.6 years), who reported smoking an average of 15.2 tobacco cigarettes daily. At study entry, they had a mean baseline carbon monoxide level of 18.7 parts per million. Participants were randomised to use first- and second-generation e-cigarettes on separate days, in a crossover fashion. Symptoms of withdrawal from nicotine were measured via the Mood and Physical Symptoms Scale, immediately prior to and after product use. Analysis of changes in withdrawal symptoms revealed a significant time × product interaction (F(2, 21) = 5.057; p=0.036; n² p=0.202). Nicotine withdrawal symptoms were reduced by a greater extent with second- compared with first-generation e-cigarettes.

Comment (BC): The greater reduction in withdrawal symptoms with second- compared to first-generation e-cigs is encouraging, but may come at the cost of safety because the higher battery power of newer e-cigs may cause higher temperatures and formation of greater quantities of dangerous chemicals (see Kosmider L et al. Nicotine Tob Res. 2014;16(10):1319-26). E-cig technology is rapidly evolving, and evidence on the safety of new devices is needed. However, the new devices are likely to be many times safer than continuing to smoke tobacco. Ideally, an independent organisation would be established to test the content and vapour from e-cigs and conduct clinical trials to determine the benefits versus potential harms of e-cigs. Trustworthy unbiased evidence is required to guide clinicians and policy makers.


Abstract

A Simple Offer

We knew brief medical advice to quit smoking increases quit attempts (by 24% actually). What we didn’t know was that simply making an offer of treatment prompts a further 40-60% of people to give up. Even if they weren’t thinking about it.

It’s a simple offer that changes lives

Want to learn more? Visit the e-learning tool at: www.smokingcessationabc.org.nz
The prevalence, correlates and reasons for using electronic cigarettes among New Zealand adults

Authors: Li J et al.

Summary: Data are reported from New Zealand’s 2014 Health and Lifestyles Survey, which was completed by 2544 adults aged ≥15 years. Rates of ever-use and current use of e-cigarettes were 13.1% and 0.8%, respectively. Tobacco smoking status predicted the use of e-cigarettes, with current smokers reporting the highest rate of use (50% ever-use and 4% current use). Current smokers who had tried an e-cigarette cited curiosity (49%) and desire to quit smoking (37%) as being the most common reasons for trying. About half of the ever-users could not name any of the brand(s) they had ever tried, and one-fifth (18%) of current users could not name their current brand.

Comment (BC): It is reassuring that use of e-cigs amongst never-smokers is very uncommon. However, it is worrying that current use of e-cigs is so high amongst current smokers – does this mean that e-cigs were ineffective at helping them to quit, or that e-cigs are effective but these smokers need more time using e-cigs before they can quit smoking, or does it mean that these smokers are not using e-cigs to quit but are using them in addition to smoking tobacco? The higher ever-use of e-cigs among Māori and less deprived smokers suggests that if e-cigs are effective, they may help reduce ethnic inequality in smoking, but increase socioeconomic inequality. This could be overcome by adding e-cigs to the Quitcard system.

Reference: Addict Behav. 2015;45:245-51

Abstract

Tripling use of electronic cigarettes among New Zealand adolescents between 2012 and 2014

Authors: White J et al.

Summary: The New Zealand Youth Insights Survey is a biennial self-complete survey of Year 10 students (predominately aged 14–15 years). This report discusses data collected from 3127 students in 2012 and 2919 in 2014. Ever-use of e-cigarettes was self-reported by participants in both years, and in 2014, e-cigarette ever-users also reported their reasons for first trying e-cigarettes. Between 2012 and 2014, the rate of e-cigarette ever-use tripled from 7.0% to 20.0%. In analyses adjusted for sociodemographic variables, smoking status (including susceptibility), and other factors associated with tobacco smoking uptake, e-cigarette ever-use was associated with gender, smoking status, close friends’ smoking behaviour, and risky substance use. Among smokers, desire for a cigarette, quit intention, or past-year quit attempts failed to predict e-cigarette ever-use. Whatever the respondents’ smoking status, curiosity was most often cited as the reason for trying e-cigarettes.

Comment (BC): Although this survey found a dramatic increase in ever-use of e-cigs between 2010 and 2012 among NZ adolescents, data from this same survey (available online) shows that there was not a significant increase in smoking initiation among these adolescents during the same period, suggesting that e-cig use did not lead to smoking initiation, but that the adolescents who used e-cigs and went on to smoke were destined to be smokers regardless of their use of e-cigs. This is supported by the association of e-cig use with risky behaviours such as marijuana smoking and binge drinking. Given the harms from alcohol, marijuana, and tobacco smoking are likely to outweigh the harm from e-cigs, perhaps our attention should be focussed on limiting the former rather than the latter?

Reference: J Adolesc Health. 2015;56(5):S22-8

Abstract

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