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Prevalence of smoking in China in 2010

Authors: Li Q et al.

Reference: N Engl J Med 2011; 364: 2469-70.

URL: <http://www.nejm.org/doi/pdf/10.1056/NEJMc1102459>

Comment: The Chinese Center for Disease Control and Prevention conducted the Global Adult Tobacco Survey (GATS) in China from December 2009 to March 2010. This was a cross-sectional survey of tobacco use among adults and all non-institutionalized persons, 15 years of age or older, who were resident in China at the time of the survey. A stratified, multistage cluster-sampling design was used to select 15,000 adults in 100 counties or districts to participate in the survey. In all, 13,354 participants completed the survey. In 2010, an estimated 28.1% of adults in China (52.9% of men and 2.4% of women) were current smokers. Among men, the prevalence was highest among those aged 45 to 64 years (63.0%) and lowest among those aged 15 to 24 years (33.6%). The prevalence of smoking among men was significantly higher among rural residents (56.1%), as compared with inhabitants of urban areas (49.2%). In terms of educational level, the prevalence of smoking in men was highest among those who had attended secondary school (63.2%) and lowest among those who were college graduates or postgraduates (44.0%). Among the current smokers, 85.6% smoked daily. Smokers of manufactured cigarettes smoked an average of 14.2 cigarettes per day (14.3 for men and 10.6 for women). GATS China also showed that among Chinese who had smoked at some time, 57.5 million (16.9%) had quit smoking and were not smoking currently, whereas 112.8 million (33.1%) had quit smoking in the past but were currently smoking. In 2010, there were an estimated 301 million current smokers in China, making Chinese the largest consumers of tobacco in the world.

A randomized placebo-controlled trial of varenicline for smoking cessation allowing flexible quit dates

Authors: Rennard S et al.

Reference: Nicotine Tob Res 2011; Nov 11 Epub ahead of print: doi: 10.1093/ntr/ntr220.

URL: <http://ntr.oxfordjournals.org/content/early/2011/11/11/ntr.ntr220.full>

Comment: Current smoking cessation guidelines recommend that a quit date be set prior to the commencement of pharmacotherapy. This study was planned with the objective of comparing varenicline, 1 mg twice daily, with placebo, using a flexible quit date paradigm after commencement of the medication, as it was thought that flexibility in the date of quitting may be more acceptable to some smokers. This was a double-blind, randomized, placebo-controlled study in persons who smoked ≥ 10 cigarettes/day and were aged 18-75 years. Subjects who were motivated to quit were randomized (3:1) to receive varenicline, 1 mg bd, or placebo for 12 weeks and they were followed up for 24 weeks. Subjects were instructed to quit between days 8 and 35 after starting the medication. The primary endpoint was carbon monoxide-confirmed continuous abstinence during weeks 9-12, with a secondary endpoint of continuous abstinence during weeks 9-24. Four hundred and ninety three subjects were randomized to varenicline and 166 to placebo. Continuous abstinence was more frequent among those receiving varenicline than among those receiving placebo, at the end of treatment (weeks 9-12: 53.1% vs. 19.3%; odds ratio [OR] 5.9; 95% CI 3.7-9.4; $P < 0.0001$), and through 24 weeks of follow-up (weeks 9-24: 34.7% vs. 12.7%; OR 4.4; 95% CI 2.6-7.5; $P < 0.0001$). Serious adverse events occurred in 1.2% of subjects using varenicline (none were psychiatric patients) and 0.6% of subjects receiving placebo. Fewer subjects using varenicline than placebo reported depression-related adverse events (2.3% vs. 6.7%). In this study, varenicline, 1 mg bd, with a flexible quit date paradigm showed similar efficacy and safety to that observed in previous studies with fixed quit dates. A flexible quit date may enhance compliance with smoking cessation.

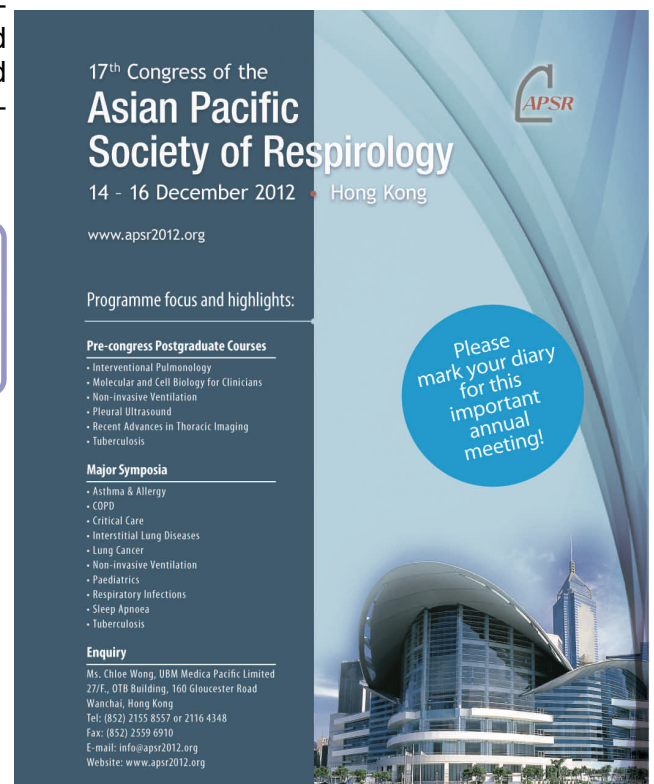
Effects of varenicline in adult smokers: a multinational, 24-week, randomized, double-blind, placebo-controlled study

Authors: Bolliger CT et al.

Reference: Clin Ther 2011; 33: 465-77.

URL: <http://www.sciencedirect.com/science/article/pii/S0149291811001962>

Comment: This study evaluated the efficacy and tolerability of the smoking-cessation medication, varenicline, in populations of participants from developing countries in Latin America, Africa and the Middle East, and also investigated potential differences in therapeutic responses to varenicline. This was a multinational, randomized, double-blind, placebo-controlled trial conducted at 42 centres in 11 countries (Latin America: Brazil, Colombia, Costa Rica, Mexico and Venezuela;



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Africa: Egypt and South Africa; Middle East: Jordan, Lebanon, Saudi Arabia, and the United Arab Emirates). Participants were male and female smokers aged 18 to 75 years, who were motivated to stop smoking, smoked ≥ 10 cigarettes/day, had no cumulative period of abstinence of >3 months in the previous year, and who had no serious or unstable disease within the previous six months. Subjects were randomized in a 2:1 ratio to receive varenicline, 1 mg, or placebo, bd for 12 weeks, with a 12-week non-treatment follow-up. Brief smoking-cessation counselling was provided. The main outcome measures were carbon monoxide-confirmed continuous abstinence rate (CAR) at weeks 9 to 12 and weeks 9 to 24. Adverse events (AEs) were recorded for assessment of tolerability. Five hundred and eighty eight subjects (varenicline 390, placebo 198) were randomized and treated. CAR at weeks 9 to 12 was significantly higher with varenicline than with placebo (53.6% vs 18.7%; odds ratio [OR] 5.76, 95% CI 3.74-8.88; $P < 0.0001$), and this difference was maintained during weeks 9 to 24 (39.7% vs 13.1%; OR 4.78, 95% CI 2.97-7.68; $P < 0.0001$). Nausea, headache and insomnia were the most commonly reported AEs with varenicline, and these were reported more frequently in the varenicline group than in the placebo group. Serious AEs (SAEs) were reported by 2.8% of varenicline recipients compared with 1.0% of placebo recipients, with six subjects in the varenicline group reporting psychiatric SAEs, compared with none in the placebo group. The conclusion from this study was that varenicline is apparently efficacious, and generally well tolerated as a smoking-cessation aid by smokers from selected countries in Latin America, Africa and the Middle East.

Reduction in cadmium exposure in the United States population, 1988-2008: The contribution of declining smoking rates

Authors: Tellez-Plaza M et al.

Reference: Environ Health Perspect 2011; Nov 7 Epub ahead of print: doi:10.1289/ehp.1104020

URL: <http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.1104020>

Comment: This study estimated the trends in urinary cadmium concentrations in US adults from 1988 to 2008, using data from the National Health and Nutrition Examination Surveys, and also evaluated the impact of changes in the distribution of the available determinants of cadmium concentrations (age, gender, race, education, BMI, smoking and occupation) at the population level, to explain these trends. The study population included 19,759 adults ≥ 20 years old, for whom there were measurements and determinants of urinary cadmium concentrations. Age-adjusted geometric means for urinary cadmium concentrations were 0.36, 0.35, 0.27, 0.27, 0.28, 0.25 and 0.26 $\mu\text{g/g}$ creatinine in 1988-91, 1991-94, 1999-2000, 2001-02, 2003-04, 2005-06 and 2007-08, respectively. The percent reductions in geometric mean urinary cadmium concentrations, adjusted for age, gender and race/ethnicity, comparing 1999-2002 and 2003-08 with 1988-94, were 27.8%, 95% CI 22.3, 32.9, and 34.3%, 95% CI 29.9, 38.4, respectively (P -trend < 0.001), with reductions in all the participant subgroups investigated. In never smokers, reductions in serum cotinine concentrations accounted for 15.6% of the observed reduction in urinary cadmium. In ever smokers, changes in smoking cessation, and cumulative and recent dose accounted for 17.1% of the observed reduction. Urinary cadmium concentrations decreased markedly between 1988 and 2008. Declining smoking rates and changes in exposure to tobacco smoke may have played an important role in the decline of urinary cadmium concentrations, benefitting both smokers and non-smokers. Cadmium has been associated with several adverse health outcomes and is a carcinogen. This study emphasizes the need for aggressive smoking cessation initiatives, which will lead to reductions in exposure to disease producing chemicals, thereby reducing the adverse effects of smoking on human health.

Environmental tobacco smoke exposure increases *Mycobacterium tuberculosis* infection risk in children

Authors: du Preez K et al.

Reference: Int J Tuberc Lung Dis 2011; 15: 1490-7.

URL: <http://www.ingentaconnect.com/content/iatld/ijtld/2011/00000015/00000011/art00015>

Comment: This study examined the dose-response effect of environmental tobacco smoke (ETS) exposure on the risk of *M. tuberculosis* infection in children living in the setting of a high tuberculosis (TB) burden. This cross-sectional study included healthy South African children from impoverished urban communities. Information was collected on household ETS and *M. tuberculosis* exposure, demographic, socio-economic and anthropometric data, and *M. tuberculosis* infection, human immunodeficiency virus and TB disease status. Among 196 children (median age 6.8 years, range 0.3-15.9), 97 (49.5%) were infected with *M. tuberculosis* (tuberculin skin test [TST] ≥ 10 mm) and 128 (65.3%) reported exposure to ETS; of these, 81 (63.3%) were exposed to ≥ 2 smokers in the household. By univariate analysis, the presence of ≥ 2 smokers in the household was associated with *M. tuberculosis* infection, irrespective of TST cut-off point. The association between ETS exposure and *M. tuberculosis* infection remained significant after adjustment for *M. tuberculosis* exposure, socio-economic status, age and previous TB treatment. In univariate and multivariate analyses, pack-years of ETS exposure were associated with the risk of TB infection. This study suggests that exposure to ETS is associated with *M. tuberculosis* infection in children, after adjustment for multiple variables, with a dose-response relationship between the degree of ETS exposure and risk of infection. This important study articulates the need for urgent public health interventions to reduce exposure to tobacco smoke among children living in the setting of a high TB burden.

Placebo-controlled trial of cytisine for smoking cessation

Authors: West R et al.

Reference: N Engl J Med 2011; 365: 1193-200.

URL: www.nejm.org/doi/full/10.1056/NEJMoa1102035

Comment: Cytisine, a partial agonist that binds with high affinity to the $\alpha_4\beta_2$ nicotinic acetylcholine receptor, may be effective in aiding smoking cessation. This study assessed the efficacy and safety of cytisine as compared with placebo. This was a single-centre, randomized, double-blind, placebo-controlled trial, in which participants were randomly assigned to receive cytisine or matching placebo for 25 days. Participants in both groups received minimal counselling during the study. The primary outcome measure was sustained, biochemically verified abstinence from smoking for 12 months after the end of treatment. Of the 1542 adult smokers who were screened, 740 were enrolled and 370 were randomly assigned to each study group. The rate of sustained 12-month abstinence was 8.4% (31 participants) in the cytisine group, as compared with 2.4% (9 participants) in the placebo group (difference 6.0 percentage points, 95% CI 2.7 to 9.2; $P = 0.001$). The 7-day point prevalence for abstinence at 12-month follow-up was 13.2% in the cytisine group compared with 7.3% in the placebo group ($P = 0.01$). Gastrointestinal adverse events were more frequently reported in the cytisine group (difference 5.7 percentage points, 95% CI 1.2 to 10.2). This study demonstrates that cytisine is more effective than placebo for smoking cessation. The lower price of cytisine as compared with that of other smoking cessation pharmacotherapies may make it an affordable treatment for advancing smoking cessation.

Association between parental smoking behavior and children's respiratory morbidity: 5-year study in an urban city of South Korea

Authors: Jung JW et al.

Reference: *Pediatr Pulmonol* 2011; Oct 17 Epub ahead of print: doi: 10.1002/ppul.21556.

URL: <http://onlinelibrary.wiley.com/doi/10.1002/ppul.21556/full>

Comment: This study investigated the effect of parental smoking on the respiratory morbidity of the children of parents who smoke, and evaluated the relationship between parental smoking behaviour and children's respiratory symptoms. This was a cross-sectional follow-up study of 31,584 children, aged 6-11 years, living in an urban community in Anyang City, Korea. The children's parents were asked about their smoking status and completed questionnaires regarding their children's symptoms related to asthma and other upper or lower respiratory tract illnesses. The analysis focused on a comparison of the frequency of respiratory and ocular symptoms, according to parental smoking status [non-smoking (Non-S), third-hand smoking (THS) or second-hand smoking (SHS)]. The group of children with Non-S parents comprised 40.9%, those in the THS group comprised 40.6%, and those in the SHS group comprised 18.5%. The THS group had lower ORs for most respiratory symptoms when compared with the SHS group; however, the THS group had increased ORs for cough-related symptoms compared with the Non-S group. There was a linear trend in the frequencies of cough and sputum-related symptoms, according to the degree of exposure to cigarette smoke ($P < 0.05$). The prevalence of respiratory symptoms was increased in children exposed to parental smoking, including SHS and THS. This study underscores the need for cessation of smoking by parents, to prevent respiratory diseases in children.

Effectiveness of a school nurse-delivered smoking-cessation intervention for adolescents

Authors: Pbert L et al.

Reference: *Pediatrics* 2011; 128: 926-36.

URL: <http://pediatrics.aappublications.org/content/128/5/926.full.pdf+html>

Comment: The aim of this study was to evaluate the effectiveness of a school nurse-delivered smoking-cessation intervention to increase abstinence among adolescent smokers. Thirty-five high schools were pair-matched and randomly assigned to one of two conditions, each of which consisted of four visits with the school nurse: 1) counselling intervention using the 5 A's model and cognitive-behavioural techniques; or 2) an information-attention control condition. Adolescents ($n = 1068$) who reported smoking in the past 30 days and expressed an interest in quitting, completed surveys at baseline and at three and 12 months, and provided saliva samples for biochemical validation of reported abstinence from smoking. Intervention participants were almost twice as likely to self-report abstinence at three months (odds ratio 1.90, 95% CI 1.12-3.24; $P = 0.017$) compared with control participants; at 12 months there were no differences. The difference at three months was driven by rates of quitting among male students (intervention 15.0% vs. control 4.9%; odds ratio 3.23, 95% CI 1.63-6.43; $P = 0.001$). There was no intervention effect among female students at either time point (6.6% vs. 7.0% at three months and 16.6% vs. 15.5% at 12 months), and there was no intervention effect among male students at 12 months (13.9% vs. 13.2%). The amount and frequency of smoking decreased significantly in intervention compared with control schools, at three but not at 12 months. This study demonstrated that a school nurse-delivered smoking-cessation intervention is feasible and effective in improving short-term abstinence among adolescent boys. Similar studies of interventions by paramedical staff are required to enhance smoking cessation, especially among adolescents.

Intensive intervention for alcohol-dependent smokers in early recovery: A randomized trial

Authors: Carmody TP et al.

Reference: Drug Alcohol Depend 2011; Oct 18 Epub ahead of print: doi:10.1016/j.drugalcdep.2011.09.026.

URL: <http://www.sciencedirect.com/science/article/pii/S0376871611004261>

Comment: This study investigated the efficacy of an intensive tobacco cessation intervention for alcohol-dependent smokers, who were in the early stage of recovery. A total of 162 alcohol-dependent smokers were randomized to either intensive intervention for smoking cessation or usual care. The intensive intervention consisted of 16 sessions of individual cognitive behavioural therapy (CBT) and combination nicotine replacement therapy for 26 weeks. Usual care involved referral to a free-standing smoking cessation program that provided smoking cessation counselling of varying duration and guideline-concordant medications. The primary smoking cessation outcome was verified 7-day point prevalence abstinence (PPA) at 12, 26, 38, and 52 weeks. At 12 and 26 weeks, the verified 7-day point-prevalence quit rate was significantly higher for the intensive intervention group than for the usual care group ($P = 0.03$ for both time points). However, the quit rates for the two treatment groups were not significantly different at 38 or 52 weeks. Verified 30-day alcohol abstinence rates were not significantly different between the two treatment groups at any of the follow-up assessments. The intensive smoking cessation intervention resulted in a higher rate of short-term quitting by smokers. As smoking is prevalent among alcohol users, effective interventions such as this are required, to facilitate smoking cessation among alcohol-dependent smokers.

Impact of the 2010 tobacco tax increase in Australia on short-term smoking cessation: a continuous tracking survey

Authors: Dunlop SM et al.

Reference: Med J Aust 2011; 195: 469-72.

URL: http://www.mja.com.au/public/issues/195_08_171011/dun10074_fm.html

Comment: The authors used population-level data to monitor the impact on smoking cessation activity of an increase in the tobacco tax in Australia. The Cancer Institute New South Wales Tobacco Tracking Survey is a continuous tracking telephone survey, with about 50 interviews being conducted per week. Data from February to September in 2009 and 2010 were analyzed, with comparison of data on people who quit smoking in the three months before and five months after the tax increase in 2010. Quitting activity over the same period in 2009 was also analyzed. Participants were adult smokers and smokers who had stopped smoking in the previous 12 months: 2009, $n = 1604$; 2010, $n = 1699$. The main outcome measure was recent quitting, defined as stopping smoking or trying to quit within a 1-month period. Twenty-two percent of the sample reported that they had quit smoking in May 2010, compared with 13% in April 2010 and 12% in May 2009. Respondents interviewed in the three months after the tax increase (May-July) were significantly more likely to report quitting than those interviewed in the three months before the tax increase (odds ratio 1.84, 95% CI 1.26-2.69; $P < 0.01$). This increase in quitting activity was not sustained in the subsequent months (August-September). This study demonstrated that there was a short-term increase in the rate of smoking cessation, suggesting that an increase in tobacco tax can be one of the methods of encouraging smoking cessation.

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