# Knowledge & Library Services: Search results

Searcher: Rachel Gledhill

Person requesting search: Dave Jones

Date of request: 07/02/2018 Date results sent: 28/02/2018

Level of search: (2) annotated bibliography

## Search question:

What evidence is there that smokefree prisons are being implemented in the EU/internationally?

## Key search terms:

|  |  |  |  |
| --- | --- | --- | --- |
| **Patient/Population/Problem** | **Intervention** | **Comparison** | **Outcome** |
| Prison, jail, offenders, incarcerated | Smokefree, smoking, tobacco, cessation, ban | N/A | N/A |

The complete search strategy is in the [Appendix](#Appendix).

## Limits applied:

* Date range:
* Geography: UK, US, Europe, New Zealand, Australia

## Disclaimer

Although every effort has been made to ensure this information is accurate, it is possible it may not be representative of the whole body of evidence available. Both articles and internet resources may contain errors or out of date information. None of the resources have been critically appraised. No responsibility can be accepted for any action taken on the basis of this information.

## Summary of resources searched and results:

|  |  |
| --- | --- |
| **Source** | **No. of results\*** |
| Campbell Collaboration | 0 |
| Cochrane Library | 23 |
| Embase | 233 |
| Global Health | 75 |
| Google Scholar | 26 |
| Health Management Information Consortium | 30 |
| Medline | 177 |
| NICE Evidence | 2 |
| Social Policy and Practice | 7 |
| TRIP database | 7 |

**TOTAL after deduplication = 412**

These results have been sorted and sifted by title/abstract by the searcher into the following groups:

* [Implementation of smokefree prisons](#_Implementation_of_smokefree) (50 results)
* [Stop smoking services in prisons](#_Stop_smoking_services) (22 results)
* [Prevalence of smoking in prisons](#_Prevalence_of_smoking) (15 results)
* [Other / may be of interest](#_Other_/_may) (15 results)

Obtaining full text: For help with getting the full text of the articles below, please contact the PHE Knowledge & Library Services ([libraries@phe.gov.uk](mailto:libraries@phe.gov.uk))

**Results:**

## Implementation of smokefree prisons: 50 results

Mohan, A. R. M., Thomson, P., Leslie, S. J., et al. 2018. **A Systematic Review of Interventions to Improve Health Factors or Behaviors of the Cardiovascular Health of Prisoners During Incarceration**. *The Journal of cardiovascular nursing* 33(1) 72-81.

BACKGROUND: Prisoners are disproportionately affected by cardiovascular disease and its risk factors. However, primary prevention of cardiovascular disease in correctional settings has been widely neglected, and there is little information on interventions to improve the cardiovascular health of prisoners while incarcerated., OBJECTIVE: The aim of this study was to systematically review published literature to identify interventions to improve the health factors or behaviors of the cardiovascular health of prisoners during incarceration., METHODS: Selected databases were searched using terms related to prisoners and cardiovascular disease. Studies were included if they had prisoners as participants and measured outcomes of cardiovascular health. Narrative synthesis was used to organize the evidence from the studies., RESULTS: Twelve articles detailing 11 studies were identified. Most of the studies involved only men. Interventions were classified into 4 types: structured physical activity, nutrition, mixed with physical activity and educational sessions, and smoking cessation. Most studies measured short-term outcomes relating to cardiovascular health such as changes in blood pressure and weight. Only 4 studies were of high quality. Structured physical activity interventions, nutrition interventions, and smoking cessation interventions delivered in a group setting had significant effects on at least 1 measured outcome. The effect of mixed interventions could not be determined., CONCLUSIONS: Structured physical activity interventions, nutrition interventions, and smoking cessation interventions delivered in a group setting can improve health factors or behaviors of the cardiovascular health of prisoners during incarceration. More high-quality research is needed to increase the evidence base on the effectiveness of these interventions in the correctional setting.

Garver-Apgar, C., Young, S., Howard, B., et al. 2017. **Effects of a Statewide Tobacco Cessation Program Among Individuals Involved With Arkansas Community Correction**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 23(3) 259-270.

In response to a critical need for tobacco cessation services among justice-involved populations, Arkansas Community Correction (ACC) partnered with the University of Colorado's Behavioral Health & Wellness Program in 2013 to implement the DIMENSIONS: Tobacco Free Program within all probation, parole, and drug court units. In the first 2 years of this statewide, evidence-based program, more than 1,100 individuals from 33 ACC area office locations attended tobacco-free group sessions and provided data on tobacco use and readiness to quit. Results demonstrated a significant reduction in tobacco use among participants as well as increased knowledge, confidence, and intent to quit. This study provides some of the first evidence that members of this vulnerable population will attend tobacco-free group sessions with regularity and make progress toward tobacco cessation.

Puljevic, C., Kinner, S. A. & de Andrade, D. 2017. **Extending smoking abstinence after release from smoke-free prisons: protocol for a randomised controlled trial**. *Health & justice* 5(1) 1.

BACKGROUND: A smoking ban was implemented across all prisons in Queensland, Australia, in May 2014, with the aim of improving the health of prisoners and prison staff. However, relapse to smoking after release from prison is common. Only one previous study, conducted in the United States, has used a randomised design to evaluate an intervention to assist individuals in remaining abstinent from smoking following release from a smoke-free prison., METHODS: This paper describes the rationale for and design of a randomised controlled trial of an intervention to extend smoking abstinence in men after release from smoke-free prisons in the state of Queensland, Australia. Participants in the intervention group will receive a brief intervention involving four group sessions of motivational interviewing and cognitive behavioural therapy, initiated 4 weeks prior to release from prison. The comparison group will receive a pamphlet and brief verbal intervention at the time of baseline assessment. Assessment of self-reported, post-release smoking status will be conducted by parole officers at regular parole meetings with the primary outcome measured at 1 month post release., DISCUSSION: The prevalence of smoking and related health harms among people who experience incarceration is extremely high. Effective interventions that result in long-term smoking cessation are needed to reduce existing health disparities in this vulnerable population., TRIAL REGISTRATION: Current Controlled Trials ACTRN12616000314426.

Woodall, J. & Tattersfield, A. 2017. **Perspectives on implementing smoke-free prison policies in England and Wales**. *Health promotion international*.

This paper explores prisoner and staff views of the current smoking policy in English and Welsh prisons (a partial ban permitting smoking in prison cells) and gauges perceptions of the implications of the forthcoming policy change which will see a total smoking ban within all parts of the institution. Five focus group discussions in one medium security male prison in England were undertaken. Three focus groups were undertaken with prisoners (both smokers and non-smokers) and two focus groups with staff. The findings suggest that smoking is embedded in the fabric of prison life and serves several functions, including alleviating anxiety in prisoners. The current smoking policy was perceived as being a fair policy that both supported smoking and non-smoking prisoners. There were concerns, however, that a total smoking ban would have adverse outcomes for prisoners and staff, including deleterious effects on mental health and the potential for violence. The paper concludes by suggesting that the incoming policy, which sees a total smoking ban in prisons, is laudable, but this research suggests that without careful implementation there may be adverse health and organisational outcomes.Copyright © The Author 2017. Published by Oxford University Press. All rights reserved. For Permissions, please email: journals.permissions@oup.com.

de Andrade, D. & Kinner, S. A. 2016. **Systematic review of health and behavioural outcomes of smoking cessation interventions in prisons**. *Tobacco control* tobaccocontrol-2016-053297.

Djachenko, A., St John, W. & Mitchell, C. 2016. **Smoking cessation in smoke-free prisons: a grounded theory study**. *International journal of prisoner health* 12(4) 270-279.

Purpose Prisoners are vulnerable to tobacco addiction and have a smoking prevalence significantly higher than that of the general community. The context of this study was the implementation of a "smoke-free prisons" policy, which imposed forced smoking cessation onto the Queensland, Australian prison population. The study asked the question: "What are the psychosocial processes in which male prisoners engage during smoking cessation in a smoke-free environment?" Design/methodology/approach Qualitative interviews were conducted with 15 prisoners in South-east Queensland smoke-free correctional centres. Grounded theory methodology was applied to construct a theory of the processes of smoking cessation. Findings The constructed theory was named Engaging with Quitting. In this model, prisoners proceed through a cycle of evaluations, adjustments and reflections on their reality as related to the smoke-free prison. The study gives first-hand accounts of the prisoners' use (and abuse) of nicotine replacement therapy. Three personality typologies emerged from the data: The Angry Smoker, the Shifting Opportunist and the Optimistic Quitter. Research limitations/implications This qualitative study makes no claim of generalisability and cannot be taken to represent all prisoners. Females, youths and culturally diverse prisoners were not represented in the sample. Practical implications Smoking cessation in prisons must be recognised as an ongoing process, rather than a discrete event. A coordinated approach between custodial and health authorities is required to minimise maladaptive coping strategies. Originality/value This study provides a descriptive account of the processes prisoners undertake during involuntary smoking cessation and has described the manner in which prisoners manufacture home-made tobacco from nicotine patches. The study has produced an original theory named Engaging with Quitting.

Frazer, K., McHugh, J., Callinan, J. E., et al. 2016. **Impact of institutional smoking bans on reducing harms and secondhand smoke exposure**. *Cochrane Database of Systematic Reviews* 2016(5) CD011856.

Background: Smoking bans or restrictions can assist in eliminating nonsmokers' exposure to the dangers of secondhand smoke and can reduce tobacco consumption amongst smokers themselves. Evidence exists identifying the impact of tobacco control regulations and interventions implemented in general workplaces and at an individual level. However, it is important that we also review the evidence for smoking bans at a meso- or organisational level, to identify their impact on reducing the burden of exposure to tobacco smoke. Our review assesses evidence for meso- or organisational-level tobacco control bans or policies in a number of specialist settings, including public healthcare facilities, higher education and correctional facilities. Objectives: To assess the extent to which institutional smoking bans may reduce passive smoke exposure and active smoking, and affect other health-related outcomes. Search methods: We searched the Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE, EMBASE, and the reference lists of identified studies. We contacted authors to identify completed or ongoing studies eligible for inclusion in this review. We also checked websites of state agencies and organisations, such as trial registries. Date of latest searches was 22nd June 2015. Selection criteria: We considered studies that reported the effects of tobacco bans or policies, whether complete or partial, on reducing secondhand smoke exposure, tobacco consumption, smoking prevalence and other health outcomes, in public healthcare, higher educational and correctional facilities, from 2005 onwards. The minimum standard for inclusion was having a settings-level policy or ban implemented in the study, and a minimum of six months follow-up for measures of smoking behaviour. We included quasi-experimental studies (i.e. controlled before-and-after studies), interrupted time series as defined by the Cochrane Effective Practice and Organization of Care Group, and uncontrolled pre- and post-ban data. Data collection and analysis: Two or more review authors independently assessed studies for inclusion in the review. Due to variation in the measurement of outcomes we did not conduct a meta-analysis for all of the studies included in this review, but carried out a Mantel-Haenszel fixed-effect meta-analysis, pooling 11 of the included studies. We evaluated all studies using a qualitative narrative synthesis. Main results: We included 17 observational studies in this review. We found no randomized controlled trials. Twelve studies are based in hospitals, three in prisons and two in universities. Three studies used a controlled before-and-after design, with another site used for comparison. The remaining 14 studies used an uncontrolled before-and-after study design. Five studies reported evidence from two participant groups, including staff and either patients or prisoners (depending on specialist setting), with the 12 remaining studies investigating only one participant group. The four studies (two in prisons, two in hospitals) providing health outcomes data reported an effect of reduced secondhand smoke exposure and reduced mortality associated with smoking-related illnesses. No studies included in the review measured cotinine levels to validate secondhand smoke exposure. Eleven studies reporting active smoking rates with 12,485 participants available for pooling, but with substantial evidence of statistical heterogeneity (I2 = 72%). Heterogeneity was lower in subgroups defined by setting, and provided evidence for an effect of tobacco bans on reducing active smoking rates. An analysis exploring heterogeneity within hospital settings showed evidence of an effect on reducing active smoking rates in both staff (risk ratio (RR) 0.71, 95% confidence interval ( CI) 0.64 to 0.78) and patients (RR 0.86, 95% CI 0.76 to 0.98), but heterogeneity remained in the staff subgroup (I2 = 76%). In prisons, despite evidence of reduced mortality associated with smoking-related illnesses in two studies, there was no evidence of effect on active smoking rat s (1 study, RR 0.99, 95% CI 0.84 to 1.16). We judged the quality of the evidence to be low, using the GRADE approach, as the included studies are all observational. Authors' conclusions: We found evidence of an effect of settings-based smoking policies on reducing smoking rates in hospitals and universities. In prisons, reduced mortality rates and reduced exposure to secondhand smoke were reported. However, we rated the evidence base as low quality. We therefore need more robust studies assessing the evidence for smoking bans and policies in these important specialist settings.Copyright © 2016 The Cochrane Collaboration.

He, C., Knibbs, L. D., Tran, Q., et al. 2016. **Unexpected increase in indoor pollutants after the introduction of a smoke-free policy in a correctional center**. *Indoor air* 26(4) 623-33.

Correctional centers (prisons) are one of the few non-residential indoor environments where smoking is still permitted. However, few studies have investigated indoor air quality (IAQ) in these locations. We quantified the level of inmate and staff exposure to secondhand smoke, including particle number (PN) count, and we assessed the impact of the smoking ban on IAQ. We performed measurements of indoor and outdoor PM2.5 and PN concentrations, personal PN exposure levels, volatile organic compounds (VOCs), and nicotine both before and after a complete indoor smoking ban in an Australian maximum security prison. Results show that the indoor 24-h average PM2.5 concentrations ranged from 6 (+/-1) mug/m(3) to 17 (+/-3) mug/m(3) pre-ban. The post-ban levels ranged from 7 (+/-2) mug/m(3) to 71 (+/-43) mug/m(3) . While PM2.5 concentrations decreased in one unit post-ban, they increased in the other two units. Similar post-ban increases were also observed in levels of PN and VOCs. We describe an unexpected increase of indoor pollutants following a total indoor smoking ban in a prison that was reflected across multiple pollutants that are markers of smoking. We hypothesise that clandestine post-ban smoking among inmates may have been the predominant cause. Copyright © 2015 John Wiley & Sons A/S. Published by John Wiley & Sons Ltd.

Hefler, M., Hopkins, R. & Thomas, D. P. 2016. **Successes and unintended consequences of the Northern Territory's smoke-free prisons policy: results from a process evaluation**. *Public health research & practice* 26(2).

OBJECTIVES: In 2013, the Northern Territory was the first Australian jurisdiction to introduce a smoke-free policy for all correctional facilities. We report on a process evaluation to identify what worked well, key challenges and unintended consequences., METHODS: We interviewed 87 people, comprising remand, medium-security and low-security prisoners; visiting family members; and prison staff (including prison management and health workers). A realist evaluation approach was used., RESULTS: A long lead-in time, collaborative planning and a comprehensive communication strategy were vital for generating support for the policy and ensuring a smooth transition, with no riots or major incidents. Many prisoners expressed a preference for cessation support options other than nicotine replacement therapy (NRT). An unintended consequence was misuse of NRT patches., CONCLUSIONS: A comprehensive approach to creating support among staff and prisoners is important for smooth implementation of policies for smoke-free prisons. Planning should include assessment of prisoners' preferred form of cessation support and strategies to minimise NRT diversion.

Morrissey, H., Ball, P., Boland, M., et al. 2016. **Constituents of smoke from cigarettes made from diverted nicotine replacement therapy patches**. *Drug and alcohol review* 35(2) 206-11.

INTRODUCTION AND AIMS: Anecdotes of nicotine replacement therapy patch misuse associated with the introduction of smoke-free prisons have been reported by media internationally, including Canada in 2006, New Zealand in 2011 and Australia in 2014. This study identifies chemical compounds released through diverted nicotine replacement therapy patches when they are smoked., DESIGN AND METHODS: Two samples were produced: (i) shredded 21mg nicotine replacement therapy patches rolled with tea leaves into a cigarette; and (ii) patches boiled in water and tea leaves, and then dried tea leaves rolled into a cigarette. The smoke was tested for nicotine, caffeine and toxins. High-performance liquid chromatography, mass spectrometry and spectrophotometry were used to detect the presence and quantity of nicotine and caffeine. A specialised laboratory was contracted to test the presence of toxins., RESULTS: Nicotine was liberated when the two samples were burnt but not if the nicotine replacement therapy patches were boiled in water alone. High concentrations of formaldehyde, acetaldehyde, acrolein, toluene, xylene and heavy metals were also released., DISCUSSION AND CONCLUSION: Nicotine is released when diverted nicotine replacement therapy patches are smoked, as are caffeine and harmful toxins. These toxins have the potential to cause short- and long-term health damage.Copyright © 2015 Australasian Professional Society on Alcohol and other Drugs.

van den Berg, J. J., Roberts, M. B., Bock, B. C., et al. 2016. **Changes in Depression and Stress after Release from a Tobacco-Free Prison in the United States**. *International journal of environmental research and public health* 13(1).

Prior research has found high levels of depression and stress among persons who are incarcerated in the United States (U.S.). However, little is known about changes in depression and stress levels among inmates post-incarceration. The aim of this study was to examine changes in levels of depression and stress during and after incarceration in a tobacco-free facility. Questionnaires that included valid and reliable measures of depression and stress were completed by 208 male and female inmates approximately eight weeks before and three weeks after release from a northeastern U.S. prison. Although most inmates improved after prison, 30.8% had a worsening in levels of depression between baseline and the three-week follow-up. In addition, 29.8% had a worsening in levels of stress after release than during incarceration. While it is not surprising that the majority of inmates reported lower levels of depression and stress post-incarceration, a sizable minority had an increase in symptoms, suggesting that environmental stressors may be worse in the community than in prison for some inmates. Further research is needed to address depression and stress levels during and after incarceration in order for inmates to have a healthier transition back into the community and to prevent repeat incarcerations.

Butler, T. G. & Yap, L. 2015. **Smoking bans in prison: time for a breather?** *The Medical journal of Australia* 203(8) 313.

Dickert, J., Williams, J. M., Reeves, R., et al. 2015. **Decreased mortality rates of inmates with mental illness after a tobacco-free prison policy**. *Psychiatric Services* 66(9) 975-979.

Objective: Negative health consequences of smoking have prompted many correctional facilities to become tobacco free, including the New Jersey Department of Corrections, and this study examined the results of implementing tobaccofree policies. Methods: Mortality rates in the total population of inmates and in a subgroup with identified special mental health needs or mental illnesses (referred to in this article as persons with special needs) were measured from January 2005 through June 2014, a period during which tobacco use was significantly reduced and then eliminated. Results: The total mortality rate of all causes of death combined was three times higher for persons with special needs in 2005 compared with those without special needs. The total annual mortality rate decreased by 13%, from 232 to 203 per 100,000 population between 2005 and 2013. The mortality rate for persons identified as having special needs decreased by 48%, from an average of 676 per 100,000 population over the eight-year period before the ban to 353 per 100,000 in the 18 months after the ban. Reduced mortality among persons with special needs between 2005 and 2014 in half-year increments was correlated with the reduction and elimination of tobacco products (median bootstrapped Pearson r=.60, 95% confidence interval [CI] =.21 to .86). In strong contrast, however, the bootstrapped correlation between the mortality rate of persons not identified as having special needs and tobacco sales over the same period was not significant (median Pearson r=-.13, CI=-.50 to .28). No other major medical intervention occurred during these years. Conclusions: This striking correlation of quick and substantial reduction of mortality among individuals with a mental illness in association with the reduction and subsequent ban of smoking suggests that smoking may play a major role in the reduced life span of persons with mental illness. © 2015, American Psychiatric Association. All rights reserved.

Kennedy, S. M., Davis, S. P. & Thorne, S. L. 2015. **Smoke-free policies in U.S. Prisons and jails: A review of the literature**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 17(6) 629-35.

INTRODUCTION: Despite progress in limiting exposure to secondhand smoke (SHS) in the United States, little is known about the impact of smoke-free polices in prisons and jails. SHS exposure in this setting may be great, as smoking prevalence among inmates is more than three times higher than among non-incarcerated adults. To inform the implementation of smoke-free policies, this article reviews the literature on the extent, nature, and impact of smoke-free policies in U.S. prisons and jails., METHODS: We systematically searched PubMed, Embase, EconLit, and Social Services Abstracts databases. We examined studies published prior to January 2014 that described policies prohibiting smoking tobacco in adult U.S. correctional facilities., RESULTS: Twenty-seven studies met inclusion criteria. Smoke-free policies in prisons were rare in the 1980s but, by 2007, 87% prohibited smoking indoors. Policies reduced SHS exposure and a small body of evidence suggests they are associated with health benefits. We did not identify any studies documenting economic outcomes. Non-compliance with policies was documented in a small number of prisons and jails, with 20%-76% of inmates reporting smoking in violation of a policy. Despite barriers, policies were implemented successfully when access to contraband tobacco was limited and penalties were enforced., CONCLUSION: Smoke-free policies have become increasingly common in prisons and jails, but evidence suggests they are not consistently implemented. Future studies should examine the health and economic outcomes of smoke-free policies in prisons and jails. By implementing smoke-free policies, prisons and jails have an opportunity to improve the health of staff and inmates.Copyright © The Author 2014. Published by Oxford University Press on behalf of the Society for Research on Nicotine and Tobacco. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

Hefler, M. 2014. **Australia: 'Village approach' to prison smoking ban**. *Tobacco control* 23(1) 3-4.

Mackay, A. 2014. **Stubbing out smoking in prisons: Bans are an ineffective mechanism**. *Alternative Law Journal* 39(2) 99-103.

O'Moore, E., Davies, K. & Mulholland, I. 2014. **A partnership approach to implementing smoke-free prisons**. *BMJ (Online)* 349.

Ritter, C. 2014. **Tobacco use in prisons: None is best, but complete bans are not the answer**. *BMJ (Online)* 349 g4946.

Ritter, C. & Elger, B. S. 2014. **Attitudes of detainees and prison staff towards tobacco control policy in Switzerland: a qualitative interview study**. *Health policy (Amsterdam, Netherlands)* 115(1) 104-9.

PURPOSE: To explore detainees and staff's attitudes towards tobacco use, in order to assist prison administrators to develop an ethically acceptable tobacco control policy based on stakeholders' opinion., DESIGN: Qualitative study based on in-depth semi-structured interviews with 31 prisoners and 27 staff prior (T1) and after the implementation (T2) of a new smoke-free regulation (2009) in a Swiss male post-trial prison consisting of 120 detainees and 120 employees., RESULTS: At T1, smoking was allowed in common indoor rooms and most working places. Both groups of participants expressed the need for a more uniform and stricter regulation, with general opposition towards a total smoking ban. Expressed fears and difficulties regarding a stricter regulation were increased stress on detainees and strain on staff, violence, riots, loss of control on detainees, and changes in social life. At T2, participants expressed predominantly satisfaction. They reported reduction in their own tobacco use and a better protection against second-hand smoke. However, enforcement was incomplete. The debate was felt as being concentrated on regulation only, leaving aside the subject of tobacco reduction or cessation support., CONCLUSION: Besides an appropriate smoke-free regulation, further developments are necessary in order to have a comprehensive tobacco control policy in prisons.Copyright © 2013 Elsevier Ireland Ltd. All rights reserved.

Bonita, R. & Beaglehole, R. 2013. **New Zealand leads the way in banning smoking in prisons**. *BMJ (Clinical research ed.)* 346 f3923.

Clarke, J. G., Stein, L. A. R., Martin, R. A., et al. 2013. **Forced smoking abstinence: Not enough for smoking cessation**. *JAMA Internal Medicine* 173(9) 789-794.

Importance: Millions of Americans are forced to quit smoking as they enter tobacco-free prisons and jails, but most return to smoking within days of release. Interventions are needed to sustain tobacco abstinence after release from incarceration. Objective: To evaluate the extent to which the WISE intervention (Working Inside for Smoking Elimination), based on motivational interviewing (MI) and cognitive behavioral therapy (CBT), decreases relapse to smoking after release from a smoke-free prison. Design: Participants were recruited approximately 8 weeks prior to their release from a smoke-free prison and randomized to 6 weekly sessions of either education videos (control) or the WISE intervention. Setting: A tobacco-free prison in the United States. Participants: A total of 262 inmates (35% female). Main Outcome Measure: Continued smoking abstinence was defined as 7-day point-prevalence abstinence validated by urine cotinine measurement. Results: At the 3-week follow-up, 25% of participants in the WISE intervention (31 of 122) and 7% of the control participants (9 of 125) continued to be tobacco abstinent (odds ratio [OR], 4.4; 95% CI, 2.0-9.7). In addition to the intervention, Hispanic ethnicity, a plan to remain abstinent, and being incarcerated for more than 6 months were all associated with increased likelihood of remaining abstinent. In the logistic regression analysis, participants randomized to the WISE intervention were 6.6 times more likely to remain tobacco abstinent at the 3-week follow up than those randomized to the control condition (95% CI, 2.5-17.0). Nonsmokers at the 3-week follow-up had an additional follow-up 3 months after release, and overall 12% of the participants in the WISE intervention (14 of 122) and 2% of the control participants (3 of 125) were tobacco free at 3 months, as confirmed by urine cotinine measurement (OR, 5.3; 95% CI, 1.4-23.8). Conclusions and Relevance: Forced tobacco abstinence alone during incarceration has little impact on postrelease smoking status. A behavioral intervention provided prior to release greatly improves cotinine-confirmed smoking cessation in the community. Trial Registration: clinicaltrials.gov Identifier: NCT01122589. ©2013 American Medical Association. All rights reserved.

Collier, R. 2013. **Prison smoking bans: clearing the air**. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne* 185(10) E474.

Thornley, S., Dirks, K. N., Edwards, R., et al. 2013. **Indoor air pollution levels were halved as a result of a national tobacco ban in a New Zealand prison**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 15(2) 343-7.

INTRODUCTION: Few studies have measured the effect of tobacco bans on secondhand smoke (SHS) exposure in prisons. From June 1, 2011, the sale of tobacco was prohibited in New Zealand prisons. One month later, the possession of tobacco was banned. We studied the indoor air quality before and after this policy was enforced., METHODS: We measured indoor-fine-particulate (PM(2.5)) concentrations using a TSI SidePak photometer. The instrument was placed in a staff base of a New Zealand maximum-security prison, adjacent to four 12-cell wings. Measurements were made before the sales restriction, during this period, and after the ban. Data were summarized using daily geometric means and generalized least squares regression., RESULTS: A total of 7,107 observations were recorded at 5-min intervals, on 14 days before and 15 days after implementation, between 24 May and 5 August. Before the policy was implemented, the geometric mean was 6.58 mug/m(3) (95% CI = 6.29-6.58), which declined to 5.17 mug/m(3) (95% CI = 4.93-5.41) during the sales ban, and fell to 2.44 mug/m(3) (95% CI = 2.37-2.52) after the smoking ban. Regression analyses revealed an average 57% (95% CI = 42-68) decline in PM(2.5) concentrations, comparing the before and after periods., CONCLUSIONS: Our study showed a rapid and substantial improvement in indoor air quality after tobacco was banned at a prison. We conclude that prisoners have reduced their smoking in line with the ban, and that a significant health hazard has been reduced for staff and prisoners alike.

Collinson, L., Wilson, N., Edwards, R., et al. 2012. **New Zealand's smokefree prison policy appears to be working well: one year on**. *New Zealand Medical Journal* 125 164-168.

This review, based on evidence from the media, government departments, the scientific literature, and other sources, describes how the New Zealand's smoke-free prison policy was introduced and its likely effects, and explores its implications for public health and tobacco control.

Eadie, D. 2012. **Barriers and facilitators to a criminal justice tobacco control coordinator : an innovative approach to supporting smoking cessation among offenders**. *Addiction*.

The aims of the study were to examine the barriers and facilitators to effective operation of a regional tobacco control coordinator working within and across criminal justice and public health, whose goal was to raise tobacco control awareness and support the development of smoking cessation treatment for offenders. The design was a reflexive, mixed-methods case study approach using in-depth interviews, project reports and observation of advisory board meetings. The coordinator worked with prisons, probation and police custody, where there are high levels of social disadvantage and smoking. Participants were, interviews (n = 34) at different stages of project with the coordinator, project advisers and local stakeholders from criminal justice and public health. Measurements were, analysis of facilitators and barriers and the coordinator role from different perspectives. The findings were, readiness to develop cessation services was a critical predictor of different criminal justice settings' engagement with the coordinator role. The coordinator enhanced cessation service delivery in individual prisons where there was a requirement and infrastructure in place to provide such services. In police custody, where there was no central guidance or pre-existing requirements, efforts to establish smoking cessation on the local agenda proved ineffective. In probation settings, the coordinator documented examples of good practice and supported brief intervention training. Variability in willingness to engage limited the project's ability to create joined-up working across criminal justice settings. The conclusions were, in the English criminal justice system, the prison service appears to provide a favourable context for development of smoking cessation support and a means of accessing hard-to-reach groups. Other criminal justice settings, most specifically police custody, appear less responsive to such activity. A coordinator role can improve smoking cessation support in the prison setting, and develop local improvements in tobacco control interventions in other settings such as probation, but as configured here, does not have the capacity to effect change across the criminal justice system. Cites 49 references. [Journal abstract]

Etter, J.-F., Ritter, C., Christie, D. H., et al. 2012. **Implementation and impact of anti-smoking interventions in three prisons in the absence of appropriate legislation**. *Preventive medicine* 55(5) 475-81.

OBJECTIVE: To assess the acceptability and impact of anti-smoking policies in three prisons in Switzerland., METHODS: A before-after intervention study in A) an open prison for sentenced prisoners, B) a closed prison for sentenced prisoners, and C) a prison for pretrial detainees. Prisoners and staff were surveyed before (2009, n=417) and after (2010-2011, n=228) the interventions. Medical staff were trained to address tobacco dependence systematically in prisoners. In prison A, a partial smoking ban was extended. No additional protection against second-hand smoke was feasible in prisons B and C., RESULTS: In prison A, more prisoners reported receiving medical help to quit smoking in 2011 (20%) than in 2009 (4%, p=0.012). In prison A, prisoners and staff reported less exposure to second-hand smoke in 2011 than in 2009: 31% of prisoners were exposed to smoke at workplaces in 2009 vs 8% in 2011 (p=0.001); in common rooms: 43% vs 8%, (p<0.001). No changes were observed in prisons B and C., CONCLUSIONS: Reinforcement of non-smoking rules was possible in only one of the three prisons but had an impact on exposure to tobacco smoke and medical help to quit. Implementing anti-smoking policies in prisons is difficult in the absence of appropriate legislation.Copyright © 2012 Elsevier Inc. All rights reserved.

Martin, S. A., Celli, B. R., DiFranza, J. R., et al. 2012. **Health effects of the Federal Bureau of Prisons tobacco ban**. *BMC pulmonary medicine* 12 64.

BACKGROUND: Tobacco smoking remains the leading cause of preventable death in America, claiming 450,000 lives annually. Chronic Obstructive Pulmonary Disease, caused by smoking in the vast majority of cases, became the third leading cause of death in the U.S. in 2008. The burden of asthma, often exacerbated by tobacco exposure, has widespread clinical and public health impact. Despite this considerable harm, we know relatively little about the natural history of lung disease and respiratory impairment in adults, especially after smoking cessation., METHODS/DESIGN: Our paper describes the design and rationale for using the 2004 Federal Bureau of Prisons tobacco ban to obtain insights into the natural history of respiratory diseases in adult men and women of different races/ethnicities who are imprisoned in federal medical facilities. We have developed a longitudinal study of new prison arrivals, with data to be collected from each participant over the course of several years, through the use of standardized questionnaires, medical chart reviews, lung function tests, six-minute walk tests, and stored serum for the analysis of present and future biomarkers. Our endpoints include illness exacerbations, medication and health services utilization, lung function, serum biomarkers, and participants' experience with their health and nicotine addiction., DISCUSSION: We believe the proposed longitudinal study will make a substantial contribution to the understanding and treatment of respiratory disease and tobacco addiction.

Thibodeau, L., Seal, D. W., Jorenby, D. E., et al. 2012. **Perceptions and influences of a state prison smoking ban**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 18(4) 293-301.

Prison smoking bans are increasingly common. It is important to consider how those who are incarcerated respond to these bans and to the subsequent development of contraband tobacco markets. Since there are high rates of smoking in individuals who become incarcerated, along with high rates of chronic illnesses that are exacerbated by smoking, it is critical to examine whether there are health promoting changes in perceptions of and intentions toward smoking and other health behaviors that can be maintained on release to the community. Interviews with incarcerated men experiencing a prison smoking ban revealed their responses to being smoke-free, reactions to the presence of contraband smoking, and the influences of this experience on their intentions to smoke following release.

Gautam, J., Glover, M., Scott, A., et al. 2011. **Smokefree prisons in New Zealand: maximising the health gain**. *The New Zealand medical journal* 124(1338) 100-6.

A total smoking ban in prisons comes into effect from July 2011. The ban, introduced by the Corrections Minister, Judith Collins, aims to provide a healthier environment for prison staff and inmates through the elimination of secondhand smoke. Overseas experience has shown that simply banning smoking will not necessarily result in prisoners giving up, nor will it result in the maintenance of abstinence by those who do stop smoking during incarceration. In order to reap maximum health gains from the total smoking ban in prison policy, comprehensive cessation support for all inmates needs to be provided to ensure that they quit during incarceration and continue to abstain from smoking upon release.

Lasnier, B. 2011. **Supplementing an indoor smoking ban in prison: enforcement issues and effects on tobacco use, exposure to second-hand smoke and health of inmates**. *Canadian Journal of Public Health* 102(4).

Record in progress The objectives of the study were to describe the issues encountered during the implementation of an indoor smoking ban in prison and its effects on self-reported tobacco use, perceived exposure to second-hand smoke (SHS) and perceived health status of inmates in Quebec's provincial correctional facilities. Quantitative data were obtained from 113 inmates in three provincial correctional facilities in the province of Quebec, Canada. Qualitative data were obtained from 52 inmates and 27 staff members. Participants were recruited through a self-selection process. Particular efforts were made to enrol proportions of men, women, smokers and non-smokers similar to those generally found among correctional populations. The results were, despite the indoor smoking ban, 93% of inmates who declared themselves smokers reported using tobacco products inside the correctional facilities and 48% did not report any reduction in their tobacco use. Only 46% of smokers declared having been caught smoking inside the facility, and more than half of them (58%) reported no disciplinary consequences to their smoking. A majority of inmates incarcerated before the implementation of the ban (66%) did not perceive a reduction of their exposure to SHS following the indoor ban. Enforcement issues were encountered during the implementation of the indoor ban, notably because of the amendment made to the original regulation (total smoking ban) and tolerance from smokers in the staff towards indoor smoking. They were also related to perceptions that banning indoor smoking is complex and poses management problems. The conclusion was, this study's findings emphasise the importance of considering organisational and environmental factors when planning the implementation of an indoor smoking ban in correctional facilities. Cites 15 references. [Journal abstract]

Lasnier, B., Cantinotti, M., Guyon, L., et al. 2011. **Implementing an indoor smoking ban in prison: enforcement issues and effects on tobacco use, exposure to second-hand smoke and health of inmates**. *Canadian journal of public health = Revue canadienne de sante publique* 102(4) 249-53.

OBJECTIVES: To describe the issues encountered during the implementation of an indoor smoking ban in prison and its effects on self-reported tobacco use, perceived exposure to second-hand smoke (SHS) and perceived health status of inmates in Quebec's provincial correctional facilities., METHODS: Quantitative data were obtained from 113 inmates in three provincial correctional facilities in the province of Quebec, Canada. Qualitative data were obtained from 52 inmates and 27 staff members. Participants were recruited through a self-selection process. Particular efforts were made to enrol proportions of men, women, smokers and non-smokers similar to those generally found among correctional populations., RESULTS: Despite the indoor smoking ban, 93% of inmates who declared themselves smokers reported using tobacco products inside the correctional facilities and 48% did not report any reduction in their tobacco use. Only 46% of smokers declared having been caught smoking inside the facility, and more than half of them (58%) reported no disciplinary consequences to their smoking. A majority of inmates incarcerated before the implementation of the ban (66%) did not perceive a reduction of their exposure to SHS following the indoor ban. Enforcement issues were encountered during the implementation of the indoor ban, notably because of the amendment made to the original regulation (total smoking ban) and tolerance from smokers in the staff towards indoor smoking. They were also related to perceptions that banning indoor smoking is complex and poses management problems., CONCLUSION: This study's findings emphasize the importance of considering organizational and environmental factors when planning the implementation of an indoor smoking ban in correctional facilities.

Chang, C.-C., Huang, C.-L. & Chen, C.-Y. 2010. **The impact of implementing smoking bans among incarcerated substance users: a qualitative study**. *Evaluation & the health professions* 33(4) 473-9.

This article reports a study evaluating the effects of implementing smoking bans among drug-using prisoners in Taiwan. Seventy-seven new entrants were recruited in May 2008. Six focus groups were conducted in a prison-based treatment center, the only prison with a total smoking ban in Taiwan. All the subjects were male and their average age was 37 years. Three general reactions to the ban were identified across all focus groups: (a) unfair/hypocritical policy; (b) being forced to stop smoking; and (c) finding ways to smoke anyway. Future studies should compare the effects of total versus partial smoking bans among drug abusers in prison to better explore policy options.

Foley, K. L., Proescholdbell, S., Malek, S. H., et al. 2010. **Implementation and enforcement of tobacco bans in two prisons in North Carolina: A qualitative inquiry**. *Journal of Correctional Health Care* 16(2) 98-105.

Despite the national trend that 90% of prisons have smoke-free indoors policies, compliance and enforcement remain barriers to policy success. Key informant interviews about policy compliance and enforcement were conducted with 10 staff and inmates at two North Carolina prison facilities, one with a complete ban (indoors and outdoors) and one with a partial ban (indoors only). Communication of the tobacco bans was consistent and well understood in both facilities. Barriers to compliance and enforcement, especially in the complete ban facility, included policy "buy in," the emerging black market for cigarettes, staff support, and access to nicotine replacement therapy. Despite these barriers, most informants reported that implementation and enforcement of complete bans is possible with adequate communication about the policy and access to cessation therapy. © The Author(s) 2010.

Sosman, J., Seal, D., Kim, S. Y., et al. 2010. **The effect of a statewide prison smoking ban on smoking behavior after release to the community-quantitative findings**. *Journal of General Internal Medicine* 25(SUPPL. 3) S400.

BACKGROUND: Over 2 million persons are incarcerated in the US. Most are young, minority, men who will soon be released back to the community. The majority are also lifelong smokers with high rates of smoking related health problems. As the majority of US prisons implement smoking bans, it is important to consider whether a health behavior change that is mandated rather than selected by the individual can be maintained. The Wisconsin Department of Corrections smoking ban policy represents a unique opportunity to investigate possible determinants of smoking behavior after release from prison. METHODS: We recruited a convenience sample of 49 adult incarcerated men within two months of their release to the community in order to participate in two confidential quantitative interviews at 1-month prerelease performed face-to-face in the prison, and 1-month post release to the community via telephone. Descriptive analyses were performed on demographic, emotional, and behavioral factors and multivariate modeling was conducted to determine associations with post release smoking behavior. RESULTS: Forty-nine incarcerated men within one month of release were interviewed. They had a mean age of 36.7 years, 12.4 years of education and a 2.3 year length of incarceration. Forty-seven percent of the sample was African American and 41% White. They had smoked 14.5 years. Forty-four men (89.8%) completed 1-month post-release surveys by telephone. Most (67%) believed that their health was improved after the smoking ban. Paired t-tests revealed significant decreases in PANAS negative affect (p=0.001) and PHQ-8 depression (p= 0.009) scores post release. Univariate analysis revealed correlations of White race with smoking post release (p=0.045), reported better health since the prison smoking ban with non-smoking post release (p=0.01), and stated intent to smoke upon release to smoking post release (p= 0.001). A trend was seen towards use of alcohol with smoking post release (p=0.061). Forty men (91%) thought a program to help people remain quit on release from prison would be helpful, and 37 (84%) thought it would be helpful to them, personally. CONCLUSIONS: This is the first study to assess smoking relapse in men who experienced a state-wide prison smoking ban. In this study, intention to smoke was highly predictive of post-release behavior. A belief in improved health status after the prison smoking ban correlated with non smoking status post release. Prisons have the potential to make important contributions to public health by providing prevention services to this hard-to-reach high-risk population. Targeted smoking cessation interventions are needed for prisoners as they return to the community.

Thibodeau, L., Jorenby, D. E., Seal, D. W., et al. 2010. **Prerelease intent predicts smoking behavior postrelease following a prison smoking ban**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 12(2) 152-8.

INTRODUCTION: More than 2 million persons are incarcerated in the United States. Most are young minority men, soon to reenter the community. The majority are also lifelong smokers with high rates of health-related problems. As prisons implement smoking bans, it is not known whether health behavior change that is mandated, rather than selected, can be maintained. The Wisconsin Department of Corrections smoking ban is a unique opportunity to investigate determinants of smoking behavior after release from prison., METHODS: A convenience sample of 49 incarcerated men near release participated in two interviews (1-month prerelease, in prison, and 1-month postrelease via telephone). Descriptive analyses and multivariate modeling were conducted to determine associations with postrelease smoking., RESULTS: Participants had a mean age of 36.7 years, 12.4 years of education, and a 2.3-year incarceration; 47% were Black and 41% White. They had smoked 14.5 years. Most (67%) believed that their health was improved after the smoking ban. Paired t tests revealed decreases in Positive and Negative Affect Scale negative affect (p = .001) and Patient Health Questionnaire-8 depression (p = .009) postrelease. Univariate analysis showed correlations of intent to smoke upon release with smoking relapse postrelease (p = .001), White race with smoking relapse postrelease (p = .045), and perceived better health since the prison smoking ban with nonsmoking on release (p = .01). There was a trend toward use of alcohol with smoking relapse on release (p = .061)., DISCUSSION: Prerelease smoking intention predicted postrelease behavior. Belief in improved health after the prison smoking ban correlated with nonsmoking on release. Targeted relapse prevention interventions are needed for people reentering the community.

Cropsey, K. L., Weaver, M. F., Eldridge, G. D., et al. 2009. **Differential success rates in racial groups: results of a clinical trial of smoking cessation among female prisoners**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 11(6) 690-7.

INTRODUCTION: This study replicated prior observations of racial differences in smoking cessation in which Black smokers have demonstrated lower smoking cessation rates than White smokers., METHODS: The study used data from a smoking cessation intervention and compared White and Black female prisoners (N = 233) on a 10-week intervention of group psychotherapy and nicotine replacement (patch). Generalized estimating equations were used to model smoking cessation across the 12-month follow-up., RESULTS: Compared with an untreated control group, both Black and White smokers benefited from the cessation treatment. However, after controlling for potential confounds, White smokers had significantly higher overall smoking cessation rates across time compared with Black smokers (e.g., 30% vs. 24% abstinent at 6 weeks; 13% vs. 10% abstinent at 12 months). Smoking mentholated cigarettes was not associated with these differences in quit rates., DISCUSSION: Understanding differential treatment responses can lead to the development of more tailored and efficacious smoking cessation interventions that may reduce the morbidity and mortality associated with smoking in prison populations.

Eldridge, G. D. & Cropsey, K. L. 2009. **Smoking bans and restrictions in U.S. prisons and jails: consequences for incarcerated women**. *American journal of preventive medicine* 37(2 Suppl) S179-80.

Polito, J. 2009. **Prison smoking cessation, tobacco cessation and nicotine cessation**. *WhyQuit. com*.

Lawrence, S. & Welfare, H. 2008. **The effects of the introduction of the no-smoking policy at HMYOI Warren Hill on bullying behaviour**. *International journal of prisoner health* 4(3) 134-45.

The current research explores the prevalence of bullying behaviour at HMYOI Warren Hill and the Carlford Unit. The introduction of the no-smoking policy at the establishment was also explored in relation to its effect on bullying behaviour given that tobacco has historically been the main item that young people have been bullied for. The Direct and Indirect Prisoner behaviour Checklist--Revised (DIPC-R) and a questionnaire designed to identify the effect of the introduction of the no-smoking policy on bullying behaviour were used within this study to answer the following questions: what is the prevalence of bullying behaviour at Warren Hill and the Carlford Unit, and do young people at Warren Hill and the Carlford Unit think that the rate and nature of bullying has been affected by the introduction of the no-smoking policy? One hundred and fifteen young people took part in the study. At Warren Hill, Bully/Victims were the most prevalent type identified and this was significantly greater than the number of young people identified as Pure Victims or Not Involved. On the Carlford Unit, Not Involved was the most prevalent type identified, and this finding provides limited support for the theories of bullying behaviour identified within the present study. The study found that the rate of bullying decreased following the introduction of the no-smoking policy at Warren Hill. The findings from this study are being used in the development of a new Violence Reduction Policy at HMYOI Warren Hill.

Wilson, N., Thomson, G. & Edwards, R. 2008. **Use of four major tobacco control interventions in New Zealand: a review**. *NZ Med J* 121(1276) 71-86.

Abstract

Aims To identify the extent to which four major population-level tobacco control

interventions were used in New Zealand from January 2000 to June 2007.

Methods We selected the four population-based tobacco control interventions with

the strongest evidence base. For each intervention, we undertook literature searches to

identify the extent of their use in New Zealand during the study period and made

comparisons with the other 29 OECD countries.

Results Increasing the unit price of tobacco: New Zealand has high tobacco prices,

but the policy on tax has several limitations relative to best practice within OECD

countries. In particular, the high price appears to be shifting many smokers from

factory-made cigarettes to loose tobacco, rather than stimulating quitting.

Controls on marketing: While New Zealand compares favourably with most other

OECD countries for tobacco marketing controls, some jurisdictions have made more

progress in specific areas (e.g. eliminating point-of-sale product displays and

removing misleading descriptors on packaging).

Mass media campaigns: The country routinely invests in these campaigns, but the

budget is only around $1.20 per capita per year. Some design aspects of the

campaigns are progressive, but comparisons with other countries indicate potential for

improvements (e.g. learning from counter-industry campaigns in the USA).

Smokefree environments regulations: New Zealand was one of the first OECD

countries to implement comprehensive smokefree workplaces legislation (including

restaurants and bars) and it still compares well. But gaps remain when compared to

some other OECD jurisdictions (e.g. no smokefree car laws).

Conclusions There is still substantial scope for New Zealand to catch up to OECD

leaders in these key tobacco control areas. In particular, there needs to be higher tax

levels for loose tobacco (relative to factory-made cigarettes) and the elimination of

residual marketing. There are also important gaps in exploiting synergies between

interventions in this country.

Anonymous 2006. **Jail smoking ban 'is workable'**. *Nursing standard (Royal College of Nursing (Great Britain) : 1987)* 20(49) 8.

Prison nurses have held talks with government officials over smoking bans on inmates.

Richmond, R. L., Butler, T., Belcher, J. M., et al. 2006. **Promoting smoking cessation among prisoners: feasibility of a multi-component intervention**. *Australian and New Zealand journal of public health* 30(5) 474-8.

OBJECTIVE: To conduct a pilot study to determine the feasibility and effectiveness of a multi-component smoking cessation intervention among prison inmates., METHODS: A prospective study conducted within a maximum-security prison located near Sydney, New South Wales, and housing around 330 men. Participants received a smoking cessation intervention with six-month follow-up to determine abstinence. The smoking cessation intervention consisted of two brief cognitive behavioural therapy sessions, nicotine replacement therapy, bupropion and self-help resources. Point prevalence and continuous abstinence at follow-up were verified with expired carbon monoxide measures., RESULTS: Thirty male inmates participated in the intervention. At six months, the biochemically validated point prevalence and continuous abstinence rates were 26% and 22% respectively. Reasons for relapse to smoking included: transfers to other prisons without notice, boredom, prolonged periods locked in cells, and stress associated with family or legal concerns. Those inmates who relapsed, or continued to smoke following the intervention, smoked less tobacco than at baseline and 95% stated they were willing to try to quit again using our intervention., CONCLUSIONS: Prison inmates are able to quit or reduce tobacco consumption while in prison but any smoking cessation intervention in this setting needs to address prison-specific issues such as boredom, stress, transfers to other prisons, court appearances, and isolation from family and friends., IMPLICATIONS: The prevalence of smoking within Australian prisons is alarmingly high. Further work into how to encourage prisoners to quit smoking is required.

Cropsey, K. L. & Kristeller, J. L. 2005. **The effects of a prison smoking ban on smoking behavior and withdrawal symptoms**. *Addictive behaviors* 30(3) 589-94.

This study investigated symptoms of distress and nicotine dependence as predictors of nicotine withdrawal symptoms among 188 incarcerated male smokers during a mandated smoking ban. Participants completed a smoking history questionnaire and measures of nicotine dependence, withdrawal, cravings, and distress before the ban and two follow-up times. The majority of smokers (76%) continued to smoke following the smoking ban. Smokers after the ban were more nicotine dependent than were the participants who reported quitting. Smokers also reported more withdrawal symptoms than did participants who quit, even when accounting for nicotine dependence and baseline withdrawal scores. An interaction was found such that distressed smokers had the highest level of nicotine withdrawal. These results have implications for how smoking bans are instituted in prison settings.

Lincoln, T., Chavez, R. S. & Langmore-Avila, E. 2005. **US experience of smoke-free prisons**. *BMJ (Clinical research ed.)* 331(7530) 1473.

O'Dowd, A. 2005. **Smoking ban in prisons would lead to more assaults on staff**. *BMJ (Clinical research ed.)* 331(7527) 1228.

Cropsey, K. L. & Kristeller, J. L. 2003. **Motivational factors related to quitting smoking among prisoners during a smoking ban**. *Addictive behaviors* 28(6) 1081-93.

Motivational factors and initial stages of change (precontemplation vs. contemplation) were investigated among incarcerated male smokers forced to quit smoking due to a statewide smoking ban. All smokers completed a baseline questionnaire, which assessed smoking history, nicotine dependence [Fagerstrom Test for Nicotine Dependence (FTND)], nicotine withdrawal [Hughes-Hatsukami Withdrawal Scale (HHWS)], and depression [Center for Epidemiological Studies on Depression (CES-D)]. These measures were given again 4 days (Time 2) and 1 month (Time 3) following the smoking ban. At baseline (n=314), 31.2% of smokers were contemplating quitting within 6 months (contemplators), while the majority of smokers (68.8%) indicated they had not considered quitting (precontemplators). Contemplators at Time 2 reported more success with quitting smoking than precontemplators, although this was no longer significant by Time 3. Logistic regression was used to determine the probability of determining initial stages of change based on demographic and smoking history variables. Smokers in precontemplation scored higher on the FTND, reported less agreement with the smoking policy at baseline, reported more difficulty with their previous quit attempts, and reported increased smoking in anticipation of the smoking ban. The risk of being a precontemplator was over twice as high for smokers who reported increasing the amount they smoked prior to the smoking ban (odds ratio=2.42). Overall, this model correctly classified 70.7% of the smokers. This suggests that initial stages of change plays an important role in eventual quitting even in environments in which smoking has been recently prohibited.

Greenwood, L. 2003. **Fired up**. *Health Service Journal* 113(5884) 30-31.

Barnsley and Doncaster are both showing some of the best smoking-cessation rates in the country. Doncaster is having particular success with pregnant women and prisoners. Working with other agencies and local businesses can bring benefits to an overall tobacco strategy. [Summary]

Hempel, A. G., Kownacki, R., Malin, D. H., et al. 2002. **Effect of a total smoking ban in a maximum security psychiatric hospital**. *Behavioral sciences & the law* 20(5) 507-22.

An archival study was performed in a maximum security forensic hospital to evaluate the effects of a total ban on smoking and all tobacco products. One hundred and forty patients were characterized as nonsmokers or light, moderate or heavy smokers. Patient records for the four weeks prior to the ban were compared with their records for the four weeks subsequent to the ban. Numbers of sick calls, total disruptive behaviors and verbal aggression declined markedly and significantly following the ban in those patients previously classified as moderate or heavy smokers. Weight increased significantly, but almost equally regardless of previous smoking status. Patients, and eventually staff, tolerated the smoking ban without significant negative effects. Patients relied very little on treatment modalities to alleviate nicotine withdrawal. Pre-ban apprehension by staff and patients dissipated with time after the smoking ban started.Copyright 2002 John Wiley & Sons, Ltd.

MacAskill, S. & Eadie, D. 2002. **Evaluation of a pilot project on smoking cessation in prisons : final report**.

Anonymous 2001. **Maryland frees prisoners from smoke**. *Environmental Health Perspectives* 109(8) A367.

## Stop smoking services in prisons: 22 results

Wilson, A., Guillaumier, A., George, J., et al. 2017. **A systematic narrative review of the effectiveness of behavioural smoking cessation interventions in selected disadvantaged groups (2010-2017)**. *Expert review of respiratory medicine* 11(8) 617-630.

INTRODUCTION: Tobacco remains the key modifiable risk factor for the development of a number of diseases, including cardiovascular disease, cerebrovascular disease, lower respiratory infections, chronic obstructive pulmonary disease, tuberculosis and cancer. Among priority populations, smoking prevalence remains high, smokers tend to relapse more often and earlier and fewer are able to sustain quit attempts. This systematic review provides an update on the literature. Areas covered: Twenty-four randomized controlled trials published from 2010-2017, in English language, were identified after searching on Medline, Ovid, Embase and PsycINFO databases. Studies reported on the effectiveness of smoking cessation interventions among six disadvantaged groups known to have high smoking rates: (i) homeless, (ii) prisoners, (iii) indigenous populations, (iv) at-risk youth, (v) people with low income, and (vi) those with a mental illness. Narrative review and assessment of methodological quality of included papers was undertaken. Expert commentary: There is a growing evidence base of methodologically robust studies evaluating a variety of behavioural smoking cessation interventions for priority populations. Multi-component interventions and those examining behavioural interventions incorporating mindfulness training, financial incentives, motivational interviewing and extended telephone-delivered counseling may be effective in the short-term, particularly for smokers on low incomes and people with a mental illness.

de Andrade, D. & Kinner, S. A. 2016. **Systematic review of health and behavioural outcomes of smoking cessation interventions in prisons**. *Tobacco control* 26(5) 495-501.

OBJECTIVE: We conducted a systematic review to examine the impact of smoking cessation interventions, including smoking bans, on prisoners and prison staff., DATA SOURCES: We systematically searched health and criminal justice databases for relevant studies. Search strings were used to combine terms related to smoking cessation interventions with terms related to incarceration. We used forward and backward snowballing to capture additional studies., STUDY SELECTION: Studies were included if: they were published between 1 January 1994 and 23 May 2016; the population was incarcerated adults and/or prison staff; they had a quantitative component; they were published in English; and they reported outcomes of a smoking cessation programme/ban with regard to reported change in smoking behaviour and/or behavioural outcomes., DATA EXTRACTION: Studies were reviewed for methodological rigour using the Effective Public Health Practice Project's Quality Assessment Tool for Quantitative Studies. Data were independently reviewed for methodological quality by 1 author and a research assistant., DATA SYNTHESIS: Cessation programmes, including free nicotine replacement therapy and/or behavioural counselling can significantly increase the likelihood of quitting in prison and increase abstinence postrelease. Indoor bans have little impact on prisoner smoking behaviour. Prisoners who experience a complete smoking ban typically resume smoking shortly after release from prison. Bans may result in adverse behavioural outcomes, but these are generally minimal and short-lived., CONCLUSIONS: While there is limited evidence to inform tobacco control policies in custodial settings, outcomes of this review suggest that cessation programmes/bans can be an effective mechanism to interrupt prisoner smoking behaviour when properly enforced.Copyright Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://www.bmj.com/company/products-services/rights-and-licensing/.

Muir, S. & Marshall, B. 2016. **Changes in Health Perceptions of Male Prisoners Following a Smoking Cessation Program**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 22(3) 247-56.

The aim was to explore the changes in health perceptions of men in prison following a smoking cessation program. Interviews, lung age tests, and a quality-of-life questionnaire were carried out with prisoners. Four main themes emerged from the interviews: the increase in exercise tolerance with improvements in general health, an ability to taste food again, an acknowledgment of stress, and the reasoning behind beginning smoking. Lung age tests showed most prisoners had a lung age older than their chronological age. The quality-of-life survey showed that mean normalized results for physical functioning, general health, vitality, social functioning, and mental health were above 50%. Helping prisoners to remain smoke-free once they leave prison is a new challenge for health providers. Copyright © The Author(s) 2016.

Turan, O. & Turan, P. A. 2016. **Smoking-related behaviors and effectiveness of smoking cessation therapy among prisoners and prison staff**. *Respiratory care* 61(4) 434-438.

van den Berg, J. J., Bock, B. C., Roberts, M. B., et al. 2016. **Goals and Plans of Incarcerated Men Postrelease**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 22(2) 146-56.

Prior research has not examined the self-identified goals and plans of incarcerated people as they approach release from prison. This study analyzed the goals and plans generated during a motivational interviewing counseling session of incarcerated men who participated in a randomized controlled trial of a smoking abstinence intervention in a tobacco-free prison in the northeastern United States. Using thematic analysis, 53 written goals and plans were independently coded by trained research assistants to identify major themes that included (1) staying smoke-free or reducing the number of cigarettes smoked postrelease, (2) engaging in physical activities to improve health and wellness, and (3) spending time with family and/or friends. Implications for working with inmates to identify their plans and goals to remain smoke-free after incarceration are discussed. Copyright © The Author(s) 2016.

Clarke, J. G., Martin, S. A., Martin, R. A., et al. 2015. **Changes in smoking-related symptoms during enforced abstinence of incarceration**. *Journal of health care for the poor and underserved* 26(1) 106-18.

BACKGROUND: Tobacco use among prisoners is much higher than among the general population. Little is known about changes in smoking-related symptoms during periods of incarceration. The objective of this study is to evaluate changes in smoking-related symptoms during incarceration., METHODS: We recruited 262 inmates from a tobacco-free prison. At baseline, participants were asked about smoking-related symptoms prior to incarceration and then asked about recent symptoms., RESULTS: All symptom scores on the American Thoracic Society Questionnaire (ATSQ) improved during incarceration. Higher ATSQ scores were associated with asthma, depressive symptoms, stress, higher addiction and more pack years of smoking. Greater improvement in symptoms was not associated with smoking status after release., CONCLUSION: Forced tobacco abstinence leads to significant improvements in smoking-related symptoms. However, improvements in symptoms are not associated with smoking behavior changes. Addressing changes in symptoms during incarceration will require further evaluation in smoking cessation interventions for incarcerated populations.

Djachenko, A., St John, W. & Mitchell, C. 2015. **Smoking cessation in male prisoners: a literature review**. *International journal of prisoner health* 11(1) 39-48.

PURPOSE: The purpose of this paper is to review the available literature relating to smoking cessation (SC) for the male prisoner population., DESIGN/METHODOLOGY/APPROACH: Databases PubMed, CINAHL and MEDLINE were searched for English language studies from 1990 to 2012. The authors identified 12 papers examining SC in male prisoners. Full-text articles were analysed for inclusion., FINDINGS: A total of 12 studies were identified for inclusion. Four studies focused on forced abstinence (a smoking ban) while the remainder looked at various combinations of nicotine replacement, pharmacology and behavioural techniques. No robust studies were found that examined nursing approaches to SC for the prisoner population. The evidence shows a strong "pro-smoking" culture in prison and that many prisoners continue to smoke irrespective of an enforced ban. However, SC strategies can be successful if implemented systematically and supported by consistent policies., RESEARCH LIMITATIONS/IMPLICATIONS: Female-only prisoner studies were excluded as females comprise just 7 per cent of the Australian prisoner population. The analysis does not differentiate between maximum- or minimum-security prisons, or length of prison sentence. Results cannot be generalised to other forms of detention such as police custody or immigration detention centres. Studies were not appraised for quality, as exclusion on that basis would render further exploration untenable. The analysis was presented in a narrative rather than meta-analytical format and may be subject to interpretation., PRACTICAL IMPLICATIONS: This paper provides a foundation on which to build further research evidence into the smoking behaviour of prisoners. This information can be used to advocate for healthier public policy for a vulnerable and marginalised population., ORIGINALITY/VALUE: To the authors' knowledge, this is the first literature review into SC interventions in prisons. The authors apply the findings of this literature review to the five strategies for health promotion to propose a population approach to smoking cessation in male prisoners. Recommendations specific to the correctional environment are outlined for consideration by correctional health professionals.

Jalali, F., Afshari, R., Babaei, A., et al. 2015. **Comparing Motivational Interviewing-Based Treatment and its combination with Nicotine Replacement Therapy on smoking cessation in prisoners: a randomized controlled clinical trial**. *Electronic physician* 7(6) 1318-24.

BACKGROUND: The prevalence of smoking is much higher in prisoners than it is in the general population. Prisoners who smoke cause many health problems for themselves and other prisoners. Therefore, we should help them stop smoking., OBJECTIVE: To compare the effects of motivational interviewing-based (MI-based) treatment and its combination with nicotine replacement therapy (NRT) on smoking cessation in prisoners at Mashhad Central Prison., METHODS: The study was designed as a double-blind, randomized, controlled clinical trial, and it began in February 2013 and ended in February 2014. Two hundred and thirteen prisoners met the inclusion criteria and were enrolled in the study. They were divided randomly into three groups, i.e., MI-based treatment, MI with NRT, and the control group, which didn't receive any therapy. The outcome measures were reported after intervention and at a 90-day follow-up, and changes in the CO levels in expired air and nicotine dependency were measured., RESULTS: The average age of the subjects was 37.59 +/- 8.76, and their mean duration of imprisonment was 3.3 +/- 1.90 years. They smoked an average of 21.84 +/- 8.72 cigarettes per day. Analysis of the concentration of CO in expired air in the pre-test, post-test, and at the follow-up for the three groups showed that the variations in the mean CO concentrations in the MI group and the MI with NRT group at the pre-test and at the post-test were statistically significant (p < 0.001), but no significant changes occurred between the post-test and the follow-up (p > 0.050). In addition, the results indicated that CO concentration in expired air in the MI with NRT group was statistically significant, with better efficacy of smoking cessation, compared with control group and the MI group after the follow-up (p = 0.02)., CONCLUSIONS: Motivational interviewing combined with NRT for smoking cessation is more effective than MI alone, and it resulted in a significant decrease in the CO concentration in expired air at the 90-day follow-up.

Curry, L., Lee, Y. O. & Rogers, T. 2014. **E-cigarettes made especially for inmates**. *Tobacco Control* 23(e2) e87-e88.

The USA has the highest rate of incarceration in the world, at 751 per 100 000, and almost 12 million people are admitted to local jails annually. Smoking prevalence is estimated at 60-80% in US criminal justice populations, about four times higher than in the general population. Most jails ban conventional cigarette smoking to prevent contraband and associated violence, reduce the fire hazard and maintenance costs associated with cigarettes, and lower secondhand smoke exposure by non-smoking prisoners. Some jails, however, are experimenting with offering e-cigarettes for sale to inmates. Although some state correctional agencies have banned e-cigarette sales in prison commissaries (stores that sell provisions for inmates), policies vary for local (city or county) jails.

Naik, S., Khanagar, S., Kumar, A., et al. 2014. **Assessment of effectiveness of smoking cessation intervention among male prisoners in India: A randomized controlled trial**. *Journal of International Society of Preventive & Community Dentistry* 4(Suppl 2) S110-5.

BACKGROUND: Tobacco smoking is an integral part of prison life and an established part of the culture. Little attention has been paid to prevention of smoking in prison. Approximately 70-80% of prisoners have been identified as current smokers., AIM: To assess the effectiveness of smoking cessation intervention among male prisoners at Central Jail, Bangalore city., AIM: To assess the effectiveness of smoking cessation intervention among male prisoners at Central Jail, Bangalore city., MATERIALS AND METHODS: A randomized controlled trial was planned among male prisoners in Central Jail, Bangalore city. There were 1600 convicted prisoners. A self-administered questionnaire was given to the prisoners to assess their smoking behavior by which prevalence of tobacco smoking was found. Exactly 1352 tobacco users were studied. Among them, there were 1252 smokers. Based on inclusion criteria and informed consent given by the prisoners, a sample of 600 was chosen for the study by systematic random sampling. Among the 600 prisoners, 300 were randomly selected for the study group and 300 for the control group., RESULTS: Prevalence of tobacco smoking among the prisoners was 92.60%. In the present study, after smoking cessation intervention, 17% showed no change in smoking, 21.66% reduced smoking, 16% stopped smoking, and 45.33% relapsed (P < 0.0001) at the end of 6-month follow-up in the study group., CONCLUSION: Tobacco use was high among the prisoners. Tobacco reduction is possible in the prison even if the living conditions are not favorable. Relatively high rate of relapse in our study indicates that some policies should be adopted to improve smokers' information on consequences of tobacco on health and motivational intervention should be added to prisoners.

Berg, C. J., Ahluwalia, J. S. & Cropsey, K. 2013. **Predictors of adherence to behavioral counseling and medication among female prisoners enrolled in a smoking cessation trial**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 19(4) 236-47.

Smoking is highly prevalent among prison populations. Adherence to counseling and nicotine replacement therapy predicts successful cessation. The authors examined predictors of >= 80% adherence to counseling and nicotine patch in a cessation trial targeting female prisoners. Of the 202 participants included in these analyses, 66.8% were adherent to the patch, 51.2% were adherent to counseling, 16.3% were nonadherent to both, and 45.0% were adherent to both. Older age of smoking initiation (p = .01), higher baseline smoking (p = .03), and prior substance abuse treatment (p = .04) predicted counseling adherence. Predictors of patch adherence included greater prior smoking level (p = .07) and more quit attempts (p = .09). The predictors of adherence to both was more prior quit attempts (p = .04). Understanding adherence-related factors may increase effectiveness of cessation interventions.

Bock, B., Lopes, C. E., Van Den Berg, J. J., et al. 2013. **Social support and smoking abstinence among incarcerated adults in the United States: A longitudinal study**. *BMC Public Health* 13(1).

Background: In the United States, tobacco use among prisoners is nearly three times that of the general population. While many American prisons and jails are now tobacco-free, nearly all inmates return to smoking as soon as they are released back into the community. Methods. To better understand the role that personal relationships may play in enabling return to smoking, we enrolled former-smokers who were inmates in a tobacco-free prison. Baseline assessments were conducted six weeks prior to inmates' scheduled release and included measures of smoking prior to incarceration, motivation, confidence and plans for remaining quit after release. We also assessed global social support (ISEL) and a measure of social support specific to quitting smoking (SSQ). Smoking status was assessed three weeks after prison release and included 7-day point-prevalence abstinence validated by urine cotinine, days to first cigarette and smoking rate. Results: A diverse sample comprised of 35% women, 20% Hispanic, and 29% racial minorities (average age 35.5 years) provided baseline data (n = 247). Over 90% of participants provided follow up data at 3-weeks post-release. Prior to incarceration participants had smoked an average of 21.5 (SD = 11.7) cigarettes per day. Only 29.2% had definite plans to remain smoking-abstinent after release. Approximately half of all participants reported that "most" or "all" of their family (42.2%) and friends (68%) smoked, and 58.8% reported their spouse or romantic partner smoked.SSQ scores were not significantly predictive of smoking outcomes at three weeks, however, social support from family and friends were each significantly and positively correlated with motivation, confidence, and plans for remaining abstinent (all p values <0.05). These smoking-related attitudinal variables were significantly predictive of smoking outcomes (all p values <0.01). General social support (ISEL) was not associated with smoking-related attitudinal variables or smoking outcomes. Conclusions: Inmates of smoke-free prisons have a head-start on being smoke-free for life. They have been abstinent well past the duration of nicotine withdrawal and have great financial incentive not to begin smoking again. However, this advantage may be offset by a lack of non-smoking role models among their family and friends, and perceived lack of support for remaining smoke-free. Trial registration. ClinicalTrials.gov Identifier: NCT01684995. © 2013 Bock et al.; licensee BioMed Central Ltd.

Hiscock, R., Murray, S., Brose, L. S., et al. 2013. **Behavioural therapy for smoking cessation: the effectiveness of different intervention types for disadvantaged and affluent smokers**. *Addictive behaviors* 38(11) 2787-96.

BACKGROUND: Disadvantaged smokers are less likely to be successful when trying to stop smoking than more affluent smokers. In the UK, NHS Stop Smoking Services (SSS) provide a range of pharmacotherapy and behavioural support, delivered by advisors with a range of backgrounds. Whether the types of support provided and who provides it influence differences in quit rates amongst low SES smokers compared with high SES smokers has not previously been examined., METHODS: 202,084 records of smokers in England who attended a NHS Stop Smoking Service between July 2010 and June 2011 were acquired. Smokers were followed-up by services at four weeks post quit date. Multilevel logistic regression models of CO validated quits were employed. Disadvantage was explored through the National Statistics Socio-Economic Classification (NS-SEC) and by eligibility for free prescriptions, an indicator of low income amongst adults aged between 19 and 59 in England., RESULTS: Affluent smokers were more likely to quit than disadvantaged smokers (OR 1.38 (1.35 to 1.42) for clients who paid for prescriptions compared to those eligible for free prescriptions). 80% of service clients received one-to-one counselling but open group forms of behavioural therapy were more successful (main effect OR 1.26 (1.12 to 1.41)) except amongst some of the most disadvantaged clients (long-term unemployed and prisoners). Closed groups were little deployed and they were not significantly more successful than one-to-one behavioural therapy after controls. Who delivered treatment did make a difference for some clients, with all but the most affluent less likely to be successful if they had been treated by a nurse compared with other types of advisers, including smoking cessation specialists (main effect OR 0.73 (0.65 to 0.83))., CONCLUSION: This study provides further evidence that disadvantaged smokers find quitting more difficult even when they have attended a smoking cessation programme. The findings suggest that open groups should be promoted, although they may not be as effective as other forms of behavioural therapy for the long-term unemployed or prisoners. Further research is required to explore why most groups of smokers who attended services staffed by nurses were less likely to quit than those who received treatment from other types of advisors.Crown Copyright © 2013. All rights reserved.

Indig, D., Wodak, A. D., Richmond, R. L., et al. 2013. **Heroin use impairs smoking cessation among Australian prisoners**. *BMC public health* 13 1200.

BACKGROUND: Prisoners have extremely high rates of smoking with rates 3-4 times higher than the general community. Many prisoners have used heroin. The aims of this study were to investigate the impact of heroin use on smoking cessation and the social determinants of health among prisoners., METHODS: Secondary analysis of data from a randomised controlled trial of a multi-component smoking cessation intervention involving 425 Australian male prisoners. Inmates who, prior to imprisonment, used heroin regularly were compared to those who did not use heroin regularly. Self-reported smoking status was validated at baseline and each follow-up by measuring carbon monoxide levels. Readings exceeding 10 ppm were defined as indicating current smoking., RESULTS: Over half (56.5%) of the participants had ever used heroin while 37.7% regularly (daily or almost daily) used heroin in the year prior to entering prison. Prisoners who regularly used heroin had significantly worse social determinants of health and smoking behaviours, including lower educational attainment, more frequent incarceration and earlier initiation into smoking. Prisoners who regularly used heroin also used and injected other drugs significantly more frequently. At 12-month follow-up, the smoking cessation of prisoners who had regularly used heroin was also significantly lower than prisoners who did not regularly use heroin, a finding confirmed by logistic regression., CONCLUSIONS: Regular heroin use prior to imprisonment is an important risk factor for unsuccessful attempts to quit smoking among prisoners and is also associated with worse social determinants of health, higher drug use, and worse smoking behaviours. More effective and earlier smoking cessation interventions are required for particularly disadvantaged groups., TRIAL REGISTRATION: This trial is registered with the Australian New Zealand Clinical Trials Registry 12606000229572.

Richmond, R., Indig, D., Butler, T., et al. 2013. **A randomized controlled trial of a smoking cessation intervention conducted among prisoners**. *Addiction (Abingdon, England)* 108(5) 966-74.

AIM: To evaluate the efficacy of nortriptyline (NOR) added to a multi-component smoking cessation intervention, which included cognitive-behavioural therapy (CBT) and provision of nicotine replacement therapy (NRT)., DESIGN: Randomized controlled trial (RCT) comparing two study groups with blinded follow-up at 3, 6 and 12 months. Both groups received a multi-component smoking cessation intervention comprising two half-hour individual sessions of CBT and NRT with either active NOR or placebo., SETTING: Prisons in New South Wales (17) and Queensland (one), Australia., PARTICIPANTS: A total of 425 male prisoners met inclusion criteria and were allocated to either treatment (n=206) or control group (n=219)., MEASUREMENTS: Primary end-points at 3, 6 and 12 months were continuous abstinence, point prevalence abstinence and reporting a 50% reduction in smoking. Smoking status was confirmed by expired carbon monoxide, using a cut-point of <=10 parts per million., FINDINGS: Participants' demographics and baseline tobacco use were similar in treatment and control groups. Based on an intention-to-treat analysis, continuous abstinence between the treatment and control groups was not significantly different at 3 months (23.8 versus 16.4%), 6 months (17.5 versus 12.3%) and 12 months (11.7 versus 11.9%)., CONCLUSION: Adding nortriptyline to a smoking cessation treatment package consisting of behavioural support and nicotine replacement therapy does not appear to improve long-term abstinence rates in male prisoners.Copyright © 2012 The Authors, Addiction © 2012 Society for the Study of Addiction.

Makris, E., Gourgoulianis, K. I. & Hatzoglou, C. 2012. **Prisoners and cigarettes or 'imprisoned in cigarettes'? What helps prisoners quit smoking?** *BMC public health* 12 508.

BACKGROUND: The aim of the study was, despite the special characteristics of prisons, to identify the features which led prisoners who attended the Smoking Cessation Centre at the Kassavetia Detention Centre in Volos (region of Thessaly, in the central part of mainland Greece) to quit smoking., METHODS: Personal interviews with 204 male prisoners irrespective of smoking habitus over the period June 2008 to December 2010 were obtained. Information about medical history, history of tobacco use and addiction to narcotic use was obtained and imprisonment status was recorded. Pharmaceutical treatment (Varenicline) and counselling or only counselling were suggested as alternative strategies to them in order to help quit smoking. SPSS v15.0 software was employed, descriptive statistics were used, and a X2 independence test and Student'st-test were performed., RESULTS: Of the sample examined, 75.5% (154) were smokers. They were mainly Greeks (51.5%), single (53.4%) and had not gratuated from a high school (secondary education level) (70.6%). 59.75% begun smoking early ( <=14years of age ) and 64.9% were highly addicted according to Fagerstrom Tolerance Questionnaire. 74% (114) of all smokers at the prison attended the Smoking Cessation Centre. Of them, 30.7% were able to quit smoking at 3months but 1year later there were 20.2% ex-smokers. The key characteristics of those who were able to be ex-smokers were a change in smoking habits (decreased) compared to when free (p=.001), previous attempts to quit (while incarcerated and in general) (p=.001), average dependence levels (p<.001), started smoking after 21years of age (p=.032), no history of addictive substance use (p=.029), being already prisoners for a longer period of time (p=.019), a limited number (3.9+/-3.4) of prisoners per cell (p<.001) and in particular a limited number (2.8+/-3.2) of smokers in the cell (p<.001)., CONCLUSIONS: Average dependence, a past free of addictive substance abuse and a better environment of daily living for certain prisoners (as far as the number of cellmates was concerned) had a catalytic impact on prisoners finally managed to quit smoking.

Richmond, R. L., Butler, T. G., Indig, D., et al. 2012. **The challenges of reducing tobacco use among prisoners**. *Drug and alcohol review* 31(5) 625-30.

ISSUE: The prevalence of smoking among prisoners is exceptionally high and is often comorbid with alcohol and drug problems, mental illness and other health problems. This review paper summarises the literature and available research related to smoking prevalence and smoking cessation initiatives among prisoners and identifies areas of need for further research and intervention., APPROACH: This paper highlights three studies conducted in the New South Wales prison system which attempt to address these high rates of smoking including a feasibility study, a focus group study and a randomised controlled trial., KEY FINDINGS: The challenges of making systems-level changes to address these high rates of smoking are discussed including a recent National Summit on Tobacco Smoking in Prisons., IMPLICATIONS: Dissemination of research findings has assisted in highlighting the importance of tobacco smoking among prisoners and the need to develop culturally and setting appropriate smoking cessation initiatives for prisoners., CONCLUSIONS: As one of the most marginalised and socially disadvantaged populations in Australia, prisoners represent an important population to target for smoking cessation programs and interventions. This paper highlights a number of initiatives undertaken to address this problem and suggests directions for the future.Copyright © 2012 Australasian Professional Society on Alcohol and other Drugs.

Ritter, C., Stover, H., Levy, M., et al. 2011. **Smoking in prisons: the need for effective and acceptable interventions**. *Journal of public health policy* 32(1) 32-45.

Tobacco-smoking prevalence has been decreasing in many high-income countries, but not in prison. We provide a summary of recent data on smoking in prison (United States, Australia, and Europe), and discuss examples of implemented policies for responding to environmental tobacco smoke (ETS), their health, humanitarian, and ethical aspects. We gathered data through a systematic literature review, and added the authors' ongoing experience in the implementation of smoking policies outside and inside prisons in Australia and Europe. Detainees' smoking prevalence varies between 64 per cent and 91.8 per cent, and can be more than three times as high as in the general population. Few data are available on the prevalence of smoking in women detainees and staff. Policies vary greatly. Bans may either be 'total' or 'partial' (smoking allowed in cells or designated places). A comprehensive policy strategy to reduce ETS needs a harm minimization philosophy, and should include environmental restrictions, information, and support to detainees and staff for smoking cessation, and health staff training in smoking cessation.

Cropsey, K., Eldridge, G., Weaver, M., et al. 2008. **Smoking cessation intervention for female prisoners: addressing an urgent public health need**. *American journal of public health* 98(10) 1894-901.

OBJECTIVES: We tested the efficacy of a combined pharmacologic and behavioral smoking cessation intervention among women in a state prison in the southern United States., METHODS: The study design was a randomized controlled trial with a 6-month waitlist control group. The intervention was a 10-week group intervention combined with nicotine replacement therapy. Two hundred and fifty participants received the intervention, and 289 were in the control group. Assessments occurred at baseline; end of treatment; 3, 6, and 12 months after treatment; and at weekly sessions for participants in the intervention group., RESULTS: The intervention was efficacious compared with the waitlist control group. Point prevalence quit rates for the intervention group were 18% at end of treatment, 17% at 3-month follow-up, 14% at 6-month follow-up, and 12% at 12-month follow-up, quit rates that are consistent with outcomes from community smoking-cessation interventions., CONCLUSIONS: Female prisoners are interested in smoking cessation interventions and achieved point-prevalence quit rates similar to community samples. Augmenting tobacco control policies in prison with smoking cessation interventions has the potential to address a significant public health need.

MacAskill, S. & Hayton, P. 2007. **Stop smoking support in HM prisons: the impact of nicotine replacement therapy**. *Stirling: University of Stirling and Open University*.

Sieminska, A., Jassem, E. & Konopa, K. 2006. **Prisoners' attitudes towards cigarette smoking and smoking cessation: a questionnaire study in Poland**. *BMC Public Health* 6(181) (07 July 2006)-(07 July 2006).

Background: In the last decade Poland has successfully carried out effective anti-tobacco campaigns and introduced tobacco control legislation. This comprehensive strategy has focused on the general population and has led to a considerable decrease in tobacco consumption. Prisoners constitute a relatively small part of the entire Polish population and smoking habits in this group have been given little attention. The aim of the study was to assess the prevalence of cigarette smoking in Polish male prisoners, factors determining smoking in this group, prisoners' attitudes towards smoking cessation, and to evaluate prisoners' perception of different anti-tobacco measures. Methods: An anonymous questionnaire including personal, demographic and smoking data was distributed among 944 male inmates. Of these, 907 men aged between 17 and 62 years (mean 32.3 years) met the inclusion criteria of the study. For the comparison of proportions, a chi-square test was used with continuity correction whenever appropriate. Results: In the entire group, 81% of the subjects were smokers, 12% - ex-smokers, and 7% - never smokers. Current smokers had significantly lower education level than non-smokers (p&lt;0.0001) and ever-smokers more frequently abused other psychoactive substances than never smokers (p&lt;0.0001). Stress was reported as an important factor in prompting smoking (77%). Forty-nine percent of daily smokers were aware of the adverse health consequences of smoking. The majority of smokers (75%) had attempted to quit smoking in the past. Forty percent of smoking prisoners considered an award for abstaining from cigarettes as the best means to limit the prevalence of smoking in prisons. Conclusion: The prevalence of cigarette smoking among Polish prisoners is high. However, a majority of smokers attempt to quit, and they should be encouraged and supported. Efforts to reduce cigarette smoking in prisons need to take into consideration the specific factors influencing smoking habits in prisons.

2003. **Acquitted : best practice guidance for developing smoking cessation services in prisons**.

## Prevalence of smoking in prisons: 15 results

Kennedy, S. M., Sharapova, S. R., Beasley, D. D., et al. 2016. **Cigarette Smoking Among Inmates by Race/Ethnicity: Impact of Excluding African American Young Adult Men From National Prevalence Estimates**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 18 Suppl 1 S73-8.

INTRODUCTION: Cigarette smoking prevalence is more than two times greater among incarcerated adults, a population usually excluded from national health surveys. African American young adult (18-25) men are less likely to smoke cigarettes than their white counterparts. However, they are two and a-half-times more likely to be incarcerated. This study estimated smoking prevalence with noninstitutionalized and incarcerated samples combined to determine if excluding incarcerated adults impacts smoking prevalence for certain populations., METHODS: The Bureau of Justice Statistics last fielded the Survey of Inmates in State and Federal Correction Facilities in 2003-2004. We combined data from Survey of Inmates in State and Federal Correction Facilities (n = 17 910) and the 2003 and 2004 National Health Interview Survey (n = 61 470) to calculate combined cigarette smoking estimates by race/ethnicity, sex, and age., RESULTS: Inmates represented the greatest proportion of smokers among African American men. Among African American young adult men, inmates represented 15.2% of all smokers in the combined population, compared to 2.0% among white young adult men. Cigarette smoking prevalence was 17.6% in the noninstitutionalized population of young adult African American men and 19.7% in the combined population. Among white young adult men, cigarette smoking prevalence was 29.8% in the noninstitutionalized population, and 30.2% in the combined population. There was little difference in estimates among women., CONCLUSIONS: The exclusion of incarcerated African American young adult men may result in a small underestimation of cigarette smoking prevalence in this population. Increasing access to smoking cessation support among inmates may reduce smoking prevalence in disproportionately incarcerated segments of the US population., IMPLICATIONS: The exclusion of incarcerated adults from national survey data should be considered when examining differences in cigarette smoking prevalence estimates between African American and white young adult men. Approximately one in six African American young adult men who smoke were incarcerated. Increasing access to smoking cessation support among inmates may reduce smoking prevalence among disproportionately incarcerated segments of the population.Copyright © The Author 2016. Published by Oxford University Press on behalf of the Society for Research on Nicotine and Tobacco. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

Lantini, R., van den Berg, J. J., Roberts, M. B., et al. 2015. **Characteristics of smoking used cigarettes among an incarcerated population**. *Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors* 29(1) 254-8.

Little is known about smoking behaviors involving shared and previously used cigarettes, which we refer to as "smoking used cigarettes." Examples include: cigarette sharing with strangers, smoking discarded cigarettes ("butts"), or remaking cigarettes from portions of discarded cigarettes. The current study focuses on the prevalence of and factors associated with smoking used cigarettes prior to incarceration among a U.S. prison population. Questionnaires were administered to 244 male and female inmates at baseline. Prevalence of smoking used cigarettes was assessed using 3 questions; 1 about sharing cigarettes with strangers, 1 about smoking a "found" cigarette, and 1 about smoking previously used cigarettes. Factors associated with those who engaged in smoking used cigarettes were then compared with those who did not engage in smoking used cigarettes. A majority of participants (61.5%) endorsed engaging in at least 1 smoking used cigarette behavior in the past prior to incarceration. Those who engaged in these behaviors were more likely to have a higher degree of nicotine dependence, to have started smoking regularly at a younger age, and to have lived in an unstable living environment prior to incarceration. Our results indicate that a history of smoking used cigarettes is common among incarcerated persons in the United States. Consistent with our hypothesis, engaging in smoking used cigarettes was found to be associated with a higher degree of nicotine dependence. (PsycINFO Database Record Copyright (c) 2015 APA, all rights reserved).

Sweeting, H. & Hunt, K. 2015. **Evidence on smoking and smoking restrictions in prisons. A scoping review for the Scottish Prison Service's Tobacco Strategy Group**. *Occasional Paper - Social and Public Health Sciences Unit*.

The findings of this review of evidence on smoking and smoking restrictions in prisons, including individual case study experiences of partial and total bans in prisons and high security hospitals in Victoria (Australia), Quebec (Canada), Isle of Man, New Zealand, California (USA) and UK, can be summarized as follows. Smoking rates among prisoners are very high, at around 2 to 4 times those of the general population, in all studies internationally. Evidence of smoking rates among prison staff is scarce, but with some suggestions of higher rates than among the general population. High prisoner smoking rates can be explained by both prisoner characteristics (generally from population groups with high smoking rates and high resistance to cessation) and prison characteristics (smoking is a part of prison culture, historically permitted/encouraged, cigarettes/tobacco are used as currency and prisons are challenging settings for cessation services). The impact of tobacco on health is well-known, and some studies draw on this to suggest the impact of smoking on prisoner health. The small number of studies to examine direct associations all show negative impacts of smoking on the health of prisoners who smoke. Objective measurements show high levels of second-hand smoke (SHS) in prisons. Evidence that SHS causes diseases and death has been used to make the point that prisoner smoking will impact on the health of all prisoners and prison staff, regardless of their own smoking status. Prison smoking bans vary in respect of who (staff and/or prisoners) and where (all/some indoor/outdoor areas) they cover, and have been gradually introduced, in a number of countries, over the past 25 years. Rationales for bans include health, economic costs, and concerns about litigation and safety. The few studies to have taken objective measurements have generally found reductions in SHS following implementation of indoor bans. There is evidence of positive impacts on prisoner health following the introduction of prison smoking bans. Pre-ban concerns relating to violence or riots generally prove unfounded. Tobacco black markets are the most frequently reported negative outcome following a ban. Staff enforcement is key to the success of any ban. The little available evidence suggests that simply banning smoking has no impact on longer-term cessation. A series of detailed case studies suggests that: total bans are more effective both managerially and in terms of reducing SHS exposure; it is possible to identify processes associated with successful introduction of a smoking ban; there is no evidence that smoking bans significantly increase disorder; it has been established that there is no legal right to smoke (Rampton case); and bans should be accompanied by cessation support. A majority of prisoners report that they want to quit smoking. Although prison represents an ideal opportunity to quit, cessation service provision tends to be patchy and inconsistent. Studies of prison-based smoking cessation interventions suggest that it is possible to identify operational, staff-related and cessation service/support-related factors which impact on their success. Although relatively new phenomena, rates of e-cigarette use have increased rapidly in the general population. E-cigarette use is associated with both smoking and with quit-smoking attempts. There is evidence of e-cigarette use within criminal justice settings internationally (USA) and in England and Wales. While one recent opinion piece suggests prisoners who smoke should have access to e-cigarettes, another urges caution; this disagreement reflecting divided opinion among public health researchers and advocates about e-cigarettes more generally.

Young-Wolff, K. C., Karan, L. D. & Prochaska, J. J. 2015. **Electronic cigarettes in jails: A panacea or public health problem?** *JAMA Psychiatry* 72(2) 103-104.

van den Berg, J. J., Bock, B., Roberts, M. B., et al. 2014. **Cigarette smoking as an expression of independence and freedom among inmates in a tobacco-free prison in the United States**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 16(2) 238-42.

INTRODUCTION: Most adults report initiation of cigarette smoking during adolescence, a time also marked by developmental striving for independence and freedom. Tobacco use may retain its association with independence and/or freedom into adulthood. This association may contribute to continued tobacco use and/or increased risk of relapse to smoking among some individuals. This study examines the relationship between cigarette smoking and perceptions of independence and freedom among inmates in a tobacco-free prison in the northeastern United States., METHODS: Questionnaires administered to 247 male and female inmates 6 weeks prior to scheduled prison release assessed demographics, smoking history, nicotine dependence, attitudes toward smoking, and plans for tobacco use or abstinence after prison release. Perceptions of smoking as an expression of independence and freedom were measured using 2 items. Smoking was assessed 3 weeks postrelease., RESULTS: Constructs of freedom and independence were correlated but did not overlap completely. Both constructs were negatively associated with plans for smoking abstinence after prison release, and with perceived costs of continued smoking. Number of cigarettes smoked postrelease and perception of the pros of smoking were associated with freedom, but not independence., CONCLUSIONS: Associations of smoking as an expression of freedom and independence may negatively influence plans for renewed smoking after a forced abstinence. Additional research is needed to determine the degree to which these 2 constructs predict smoking behavior and whether they can be used to improve interventions for incarcerated smokers.

Ritter, C., Huynh, C. K., Etter, J.-F., et al. 2012. **Exposure to tobacco smoke before and after a partial smoking ban in prison: indoor air quality measures**. *Tobacco control* 21(5) 488-91.

UNLABELLED: Although exposure to secondhand smoke (SHS) is reportedly high in prison, few studies have measured this in the prison environment, and none have done so in Europe. We measured two indicators of SHS exposure (particulate matter PM10 and nicotine) in fixed locations before (2009) and after (2010) introduction of a partial smoking ban in a Swiss prison. Access to smoking cessation support was available to detainees throughout the study., OBJECTIVES: To measure SHS before and after the introduction of a partial smoking ban., METHODS: Assessment of particulate matter PM10 (suspended microparticles of 10 mum) and nicotine in ambient air, collected by real-time aerosol monitor and nicotine monitoring devices., RESULTS: The authors observed a significant improvement of nicotine concentrations in the air after the introduction of the smoking ban (before: 7.0 mug/m(3), after: 2.1 mug/m(3), difference 4.9 mug/m(3), 95% CI for difference: 0.52 to 9.8, p=0.03) but not in particulate matter PM10 (before: 0.11 mg/m(3), after: 0.06 mg/m(3), difference 0.06 mg/m(3), 95% CI for difference of means: -0.07 to 0.19, p=0.30)., CONCLUSIONS: The partial smoking ban was followed by a decrease in nicotine concentrations in ambient air. These improvements can be attributed to the introduction of the smoking ban since no other policy change occurred during this period. Although this shows that concentrations of SHS decreased significantly, protection was still incomplete and further action is necessary to improve indoor air quality.

Clarke, J. G., Martin, R. A., Stein, L., et al. 2011. **Working Inside for Smoking Elimination (Project W.I.S.E.) study design and rationale to prevent return to smoking after release from a smoke free prison**. *BMC public health* 11 767.

BACKGROUND: Incarcerated individuals suffer disproportionately from the health effects of tobacco smoking due to the high smoking prevalence in this population. In addition there is an over-representation of ethnic and racial minorities, impoverished individuals, and those with mental health and drug addictions in prisons. Increasingly, prisons across the U.S. are becoming smoke free. However, relapse to smoking is common upon release from prison, approaching 90% within a few weeks. No evidence based treatments currently exist to assist individuals to remain abstinent after a period of prolonged, forced abstinence., METHODS/DESIGN: This paper describes the design and rationale of a randomized clinical trial to enhance smoking abstinence rates among individuals following release from a tobacco free prison. The intervention is six weekly sessions of motivational interviewing and cognitive behavioral therapy initiated approximately six weeks prior to release from prison. The control group views six time matched videos weekly starting about six weeks prior to release. Assessments take place in-person 3 weeks after release and then for non-smokers every 3 months up to 12 months. Smoking status is confirmed by urine cotinine., DISCUSSION: Effective interventions are greatly needed to assist these individuals to remain smoke free and reduce health disparities among this socially and economically challenged group., TRIAL REGISTRATION: NCT01122589.

Cropsey, K. L., Jackson, D. O., Hale, G. J., et al. 2011. **Impact of self-initiated pre-quit smoking reduction on cessation rates: results of a clinical trial of smoking cessation among female prisoners**. *Addictive behaviors* 36(1-2) 73-8.

OBJECTIVES: This study examined differences in cessation success based on smokers' self-initiated pre-quit reductions in cigarettes per day (cpd)., METHODS: The study utilized data from a nicotine replacement+behavioral therapy smoking cessation intervention conducted in a female prison facility with 179 participants who were wait-listed for 6 months prior to intervention. We compared two groups of smokers based on whether they self-selected to reduce smoking prior to their cessation attempt (n=77) or whether they increased smoking or did not reduce (n=102). General Estimating Equations (GEE) were used to model smoking cessation through 12-month follow-up., RESULTS: Examination of pre-cessation cpd showed that those who reduced were heavier smokers at baseline, relative to those who did not reduce (p<0.001). By the week prior to the quit attempt (week 3) heavier smokers at baseline smoked significantly fewer cigarettes (p<0.001) and had lower CO levels (p<0.05) compared to baseline lighter smokers. GEE analyses showed that individuals who reduced prior to their quit attempt had significantly higher quit rates during early treatment but these gains were not sustained by follow-up points., CONCLUSIONS: Participant-initiated pre-cessation smoking reduction may be initially helpful in preparing to quit smoking, or may serve as a marker for participant motivation to quit smoking, but these differences do not sustain over time. More intensive interventions are still needed for successful cessation.Copyright © 2010 Elsevier Ltd. All rights reserved.

Corcoran, K., Seal, D., Thibodeau, L., et al. 2010. **Smoking intention, motivation, and behavior of men awaiting release from prison-qualitative findings**. *Journal of General Internal Medicine* 25(SUPPL. 3) S391.

BACKGROUND: Over 2 million persons are incarcerated in the US. Most are young minority men, soon to be released back to the community. The majority are also lifelong smokers with high rates of smoking related health problems. Most US prisons (60%) have smoking bans, but few report tobacco cessation programs. It is important to consider whether a health behavior change that is mandated rather than selected by the individual can be maintained, especially during community reentry, when there are numerous competing challenges. The Wisconsin statewide prison smoking ban presented the opportunity to characterize smoking intent, motivation, and behavior in order to develop effective smoking relapse prevention interventions targeted to persons being released to the community. METHODS: A convenience sample of 49 incarcerated men near release,with demographic characteristics similar to the general prison population, participated in a semi-structured 1-hour confidential interview. Audio tapes were transcribed and analyzed to identify coding categories and themes. Themes relating smoking to prison or prison to smoking were explored. The coders discussed and resolved inter-rater discrepancies. RESULTS: Forty-nine men within one month of release were interviewed. They had a mean age of 36.7 years, 12.4 years of education and a 2.3 year length of incarceration. Forty-seven percent of the sample was African American and 41% White. They had smoked 14.5 years. Despite the availability of contraband tobacco after the smoking ban, many men mentioned reasons to abstain, such as the penalties for being caught, cost, negative images of contraband smoking, inability to relax while smoking, stress of obtaining cigarettes, and the low quality of contraband cigarettes. Some participants emphasized that personal change occurred during imprisonment, such as getting a medical diagnosis, becoming a regular exerciser, or undergoing spiritual growth. Some men, however, chose to smoke despite the ban. They mentioned a sense of rebellion or defiance as motivators to smoking. "Mindset" was an important concept referenced during interviews. This applied to the idea of quitting and maintaining abstinence, as well as the relative ease many reported in adapting to a tobacco free existence during incarceration. Many men expressed pride in their abstinence from smoking, and viewed the smoking ban as providing them with a choice of whether to smoke or not upon release. Men sometimes associated their smoking behavior with a lifestyle that led them to prison or a belief that relapse to smoking on release would lead them back to prison, although others cited smoking cigarettes as a way for themselves or others to avoid committing crimes (through emotional regulation). CONCLUSIONS: A relapse prevention intervention for the prison to community transition should capitalize on the motivations, intentions, and behaviors participants reported in this study.Helping to maintain or increase the sense of control that is related to the reported "mindset" to remain quit and the perception of choice would likely resonate with many. Education tailored to each individual's health problems and the effects of smoking on their health condition might be incorporated. Additionally, strategies to cope with anticipated stimulus cravings on release, as well as information on relapse and accessing quit medications would be critical.

Kauffman, R. M., Ferketich, A. K., Murray, D. M., et al. 2010. **Measuring tobacco use in a prison population**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco* 12(6) 582-8.

INTRODUCTION: Widespread tobacco use and high interest in quitting make prisons an ideal environment for smoking cessation interventions; however, little has been done to assist prisoners in their efforts to quit. Valid measurement of tobacco use is a prerequisite to evaluation of cessation programs, yet there has been only one published examination of tobacco use measures among prisoners., METHODS: Tobacco use interviews were conducted with 200 male prisoners. Three measures of tobacco use, exhaled carbon monoxide (eCO), salivary cotinine measured by enzyme immunoassay (EIA), and salivary cotinine measured by liquid chromatography/tandem mass spectrometry (LC/MS/MS), were evaluated using self-reported tobacco use as the reference. Optimum cutpoints were identified by maximization of the Youden index., RESULTS: Carbon monoxide breath testing, though the poorest performing of the three measures examined, still had excellent discrimination (cutpoint >or= 4 ppm, sensitivity = 88.3%, specificity = 94.9%). Cotinine EIA performed better than eCO (cutpoint >or= 10 ng/ml, sensitivity = 92.2%, specificity = 94.3%) but poorer than cotinine LC/MS/MS (cutpoint >or= 9 ng/ml, sensitivity = 98.6%, specificity = 97.8%)., DISCUSSION: eCO had the poorest performance as a standalone test, though validity of the test may be improved with increased frequency of testing. False-negative results using cotinine EIA limit its utility as a standalone test, however, as part of a two-stage screening process it may reduce the cost of testing. Cotinine LC/MS/MS, while most expensive, was the most accurate standalone measure of prisoners' tobacco use.

Lincoln, T., Tuthill, R. W., Roberts, C. A., et al. 2009. **Resumption of smoking after release from a tobacco-free correctional facility**. *Journal of correctional health care : the official journal of the National Commission on Correctional Health Care* 15(3) 190-6.

Approximately 70% of incarcerated people smoke tobacco, and an estimated 12% of all smokers in the United States leave correctional facilities annually. Many facilities prohibit smoking, but no published study has measured the relapse to tobacco after release. In a study of 200 people with chronic health conditions reentering the community from jail, 165 (83%) were cigarette smokers. Of these, 129 were interviewed at 1 and/or 6 months after release. Self-reported sustained abstinence rates were 37.3% at the end of the first day, 17.7% for the first week, 13.7% for 1 month, and 3.1% for 6 months. These abstinence rates are lower than those reported after military basic training and medical hospitalization but similar to rates after inpatient psychiatric and addiction programs. More efforts and resources are needed to determine successful tobacco cessation interventions during incarceration and after release.

Richmond, R., Butler, T., Wilhelm, K., et al. 2009. **Tobacco in prisons: a focus group study**. *Tobacco control* 18(3) 176-82.

OBJECTIVE: To examine the role of tobacco use in prison and possible influences of the prison environment on smoking among inmates in the context of developing inmate smoking cessation programmes., METHOD: Qualitative study based on seven focus groups with prisoners and ex-prisoners., SETTINGS: A maximum security prison in rural New South Wales (NSW), Australia, and a community justice restorative centre and accommodation service for ex-prisoners in Sydney, NSW, Australia., PARTICIPANTS: 40 participants (28 men and 12 women) comprising nine prisoners (including four Indigenous inmates) and 31 ex-prisoners., RESULTS: Prisoners reported that tobacco serves as a de facto currency in correctional settings and can be exchanged for goods, used to pay debts and for gambling. Smoking helps manage the stressful situations such as transfers, court appearances and prison visits. Inmate smoking cessation programmes need to address the enmeshment of tobacco in prison life, improve availability of pharmacotherapies (for example, nicotine patches, bupropion) and the quitline (a free telephone helpline providing information on stopping smoking), provide non-smoking cells and areas within prisons, encourage physical activity for inmates and maintain monitoring of smoking cessation status after release., CONCLUSIONS: Tobacco is integrally bound up in the prison "culture". Our findings are relevant to inform prison health authorities concerned with improving the health of prisoners, and for support organisations attempting to facilitate smoking cessation both in prison and after release. Smoking cessation programmes in prisons should be tailored to the unique stresses of the prison environment. Programmes need to acknowledge the difficulties of quitting smoking in prison arising from the stresses posed by this setting.

Proescholdbell, S. K., Foley, K. L., Johnson, J., et al. 2008. **Indoor air quality in prisons before and after implementation of a smoking ban law**. *Tobacco Control* 17(2) 123-127.

Objective: To ascertain whether a new indoor smoking ban law in North Carolina correctional facilities was successfully implemented and whether the indoor air quality has improved as a result. Method: Before the law came into effect, we tested the air quality of 22 dormitory and common areas within six North Carolina prisons using standard protocols for testing particulate matter. We measured particulate matter 2.5 μm in diameter (PM2.5) using state of the art TSI SidePak monitors. After the law went into effect, the same locations within each prison were tested again. Written inmate surveys were also conducted at two prisons, one with partial smoking ban (indoors only) and one with a total smoking ban (indoors and outdoors). Results: The findings indicate that, on average, levels of respirable suspended particulates (RSPs), an accepted marker for secondhand smoke (SHS) levels, decreased 77% in these prisons after the law took effect compared to levels obtained before ban implementation. Several areas were tobacco-free before the implementation of this ban. In those areas no significant decreases in RSPs were noted. Conclusion: Laws banning tobacco use in correctional facilities can significantly reduce indoor SHS exposure among inmates, visitors and staff and potentially lead to reduced use. To date, 24 US states have enacted 100% smoke-free correctional facility polices for all indoor areas even though inmates and staff have much higher tobacco use prevalence rates than the general population. With an estimated nine million people incarcerated worldwide, prison smoking bans could have a substantial impact in terms of health outcomes and long-term costs if they can effectively reduce exposure to secondhand smoke.

Hammond, S. K. & Emmons, K. M. 2005. **Inmate exposure to secondhand smoke in correctional facilities and the impact of smoking restrictions**. *Journal of exposure analysis and environmental epidemiology* 15(3) 205-11.

This study was undertaken to measure the passive smoking exposure of prisoners at three correctional facilities in the US and to evaluate the effectiveness of a ban on smoking in reducing these exposures at two of these facilities. The average weekly concentration of nicotine was measured in fixed locations within the correctional facilities using passive samplers. Samples were collected before and after a smoking ban was instituted, and after the policy was modified to allow smoking outdoors. Samples were collected in the living areas, near where inmates slept and watched TV, and in selected central facilities, including dining halls, visiting rooms, booking areas, and learning centers. Average weekly concentrations of nicotine were measured in 84 locations while smoking was allowed; changes in these concentrations were measured with 112 weekly samples 4 and 9 months after the policy restricting smoking was implemented The average concentrations of nicotine were high while smoking was allowed: most living and sleeping areas averaged 3-11 microg/m(3), but the gym that was used as a bunkroom averaged 25 microg/m(3); these values compare to an average of 2 microg/m(3) in the homes of smokers. The smoking ban significantly reduced nicotine concentrations in the living areas (P<0.01 at facility A and P<0.05 at facility B) to averages of 1.5-2.2 microg/m(3); all postban samples were less than 5 microg/m(3). In conclusion, secondhand smoke concentrations in correctional facilities can be quite high; however, policies banning smoking are effective in reducing, but not eliminating, these exposures.

Voglewede, J. P. & Noel, N. E. 2004. **Predictors of current need to smoke in inmates of a smoke-free jail**. *Addictive behaviors* 29(2) 343-8.

A popular correctional policy has been the implementation of smoking bans for inmates. Although there is little cigarette smoking research with this population, research with other groups suggests that high levels of post-cessation cravings are associated with smoking relapse. The present study analyzed the relationship of demographic and smoking history variables, length of time incarcerated, and future intention to smoke upon release with current need to smoke in jail inmates. Participants were 150 male inmates housed in a smoke-free county jail who were intensively interviewed about smoking behavior as part of a larger study. Results indicated that stated future intention to smoke predicted current need to smoke in inmates, while length of time in jail did not. Nicotine dependence was not related either to the current need to smoke or future intention to smoke. These findings were consistent with previous inmate smoking research and have clinical implications for inmate smokers.

## Other / may be of interest: 15 results

2018. **Second-hand smoke levels in Scottish prisons equivalent to living with a smoker**. *NIHR Dissemination Centre*.

Brose, L. S., Simonavicius, E. & McNeill, A. 2017. **Maintaining abstinence from smoking after a period of enforced abstinence – systematic review, meta-analysis and analysis of behaviour change techniques with a focus on mental health**. *Psychological Medicine* 1-10.

Background: Smoking prevalence is doubled among people with mental health problems and reaches 80% in inpatient, substance misuse and prison settings, widening inequalities in morbidity and mortality. As more institutions become smoke-free but most smokers relapse immediately post-discharge, we aimed to review interventions to maintain abstinence post-discharge. Methods: MEDLINE, EMBASE, PsycINFO, CINAHL and Web of Science were searched from inception to May 2016 and randomised controlled trials (RCTs) and cohort studies conducted with adult smokers in prison, inpatient mental health or substance use treatment included. Risk of bias (study quality) was rated using the Effective Public Health Practice Project Tool. Behaviour change techniques (BCTs) were coded from published papers and manuals using a published taxonomy. Mantel–Haenszel random effects meta-analyses of RCTs used biochemically verified point-prevalence smoking abstinence at (a) longest and (b) 6-month follow-up. Results: Five RCTs (n = 416 intervention, n = 415 control) and five cohort studies (n = 471) included. Regarding study quality, four RCTs were rated strong, one moderate; one cohort study was rated strong, one moderate and three weak. Most common BCTs were pharmacotherapy (n = 8 nicotine replacement therapy, n = 1 clonidine), problem solving, social support, and elicitation of pros and cons (each n = 6); papers reported fewer techniques than manuals. Meta-analyses found effects in favour of intervention [(a) risk ratio (RR) = 2.06, 95% confidence interval (CI) 1.30–3.27; (b) RR = 1.86, 95% CI 1.04–3.31]. Conclusion: Medication and/or behavioural support can help maintain smoking abstinence beyond discharge from smoke-free institutions with high mental health comorbidity. However, the small evidence base tested few different interventions and reporting of behavioural interventions is often imprecise. Copyright © Cambridge University Press 2017

Fallin-Bennett, A., Parker, K. A., Miller, A., et al. 2017. **Smoking and tobacco-free policies in women's residential substance use disorder treatment facilities: A community engaged approach**. *Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco*.

INTRODUCTION: The purpose of this study was to: (1) describe the role of smoking in the lives of women in residential SUD treatment; (2) explore perceptions of the facilitators and barriers to tobacco-free policy among women in residential SUD treatment., METHODS: This was a community engaged study using qualitative descriptive methods. We first recruited women in a residential SUD treatment facility to participate on a community research team. Interviews with staff (N=10) and focus groups with clients (N=42) were conducted using guides informed by the community research team. Interviews and focus groups were analyzed using content analysis., RESULTS: There were two themes related to the role of smoking in the women's lives: (1) smoking facilitates socialization; and (2) smoking as a coping mechanism. There were three themes related to the benefits of tobacco-free policy: (1) improved health; (2) support for continued abstinence from a previous tobacco-free placement (e.g, prison); and (3) less grounds up-keep. Barriers to tobacco-free policy included: (1) lack of an alternative coping mechanism to smoking; (2) fear that a tobacco-free policy would drive clients away; and (3) anticipation of implementation challenges., CONCLUSIONS: Many women in residential SUD treatment smoke, which they attribute to the fact that smoking is used to facilitate socialization and cope with stress. Future research is needed to develop and test messages to counter the misperception that smoking is an effective method to cope with stress. Ultimately, evidence based tobacco-free policies are needed to reduce tobacco-related disease among women with SUDs., IMPLICATIONS: To promote smoking cessation among women with substance use disorders through evidence based tobacco policy, it is necessary to first understand the role of smoking in their lives as well as facilitators and barriers to tobacco-free policy in residential treatment facilities. Participants reported that smoking facilitated socialization and served as a coping mechanism. Tobacco-free policies have many benefits, including improved health, support for continued abstinence from a previous tobacco-free placement (e.g, prison), and less grounds up-keep. Barriers include the lack of an alternative coping mechanism, fear that a tobacco-free policy would drive away clients and anticipation of implementation challenges. To reduce the burden of tobacco related morbidity and mortality among women and their children, it is necessary to catalyze a culture change in behavioral health settings to prioritize the treatment of tobacco alongside treatment of other addictions.

Onyechi, K. C. N., Eseadi, C., Umoke, P. C. I., et al. 2017. **Effects of a group-focused cognitive behavioral health education program on cigarette smoking in a sample of Nigerian prisoners**. *Medicine* 96(1) e5158.

BACKGROUND: Smoking is a learned habit that has an impact on the psychological and biochemical health of individuals. It is the leading preventable cause of chronic illness worldwide. The purpose of this study was to examine the effects of a group-focused cognitive behavioral health education program (GCBHEP) on cigarette smoking in a sample of Nigerian prisoners., METHODS: The study used a pretest-posttest randomized control group design. Twenty inmates were identified through self-reporting, 1-to-1 counseling, and observation. The treatment group took part in a GCBHEP for 10 weeks, while the control group received 10 weeks' conventional counseling. After the intervention program, both the treatment and control groups were evaluated. The repeated measures analysis of variance was used for data analysis and partial eta was also used as a measure of effect size., RESULTS: The findings showed that the GCBHEP had a strong effect on cigarette-smoking habits among the inmates in the treatment group compared with those in the control group. The effect of the GCBHEP by age was moderate, and modest by educational qualification., CONCLUSION: Group-focused cognitive behavioral health education is effective in breaking the habit of cigarette smoking among Nigerian prisoners. Therefore, future researchers are encouraged to adopt this approach in helping individuals with a smoking problem and other drug-abuse behaviors in Nigerian prisons.

Semple, S., Sweeting, H., Demou, E., et al. 2017. **Characterising the exposure of prison staff to second-hand tobacco smoke**. *Annals of Work Exposures and Health* 61(7) 809-821.

Second-hand tobacco smoke (SHS) is an avoidable and harmful exposure in the workplace but >25 000 prison staff continue to be exposed on a daily basis in the UK and many more worldwide. SHS exposures in prisons are incompletely understood but may be considerable given the large proportion of smoking prisoners and limited ventilation. This study characterized the exposure of prison staff to SHS in all 15 prisons in Scotland using multiple methods. Exposure assessment strategies included 6-day area measurement of fine Particulate Matter (PM2.5) and airborne nicotine in each prison together with short (30-minute) measurements of PM2.5 covering a range of locations/activities. Pre- and post-shift saliva samples were also gathered from non-smoking staff and analysed for cotinine to estimate exposure. There was evidence of exposure to SHS in all prisons from the results of PM2.5 and nicotine measurements. The salivary cotinine results from a sub-sample of non-smoking workers indicated SHS exposures of similar magnitude to those provided by the 6-day area measurements of PM2.5. There was a high degree of exposure variability with some locations/activities involving exposure to SHS concentrations that were comparable to those measured in bars in Scotland prior to smoke-free legislation in 2006. The median shift exposure to SHS-PM2.5 was ~20 to 30 μg m-3 and is broadly similar to that experienced by someone living in a typical smoking home in Scotland. This is the most comprehensive assessment of prison workers' exposure to SHS in the world. The results are highly relevant to the development of smoke-free policies in prisons and should be considered when deciding on the best approach to provide prison staff with a safe and healthy working environment. © The Author 2017. Published by Oxford University Press on behalf of the British Occupational Hygiene Society.

Jayes, L. R., Ratschen, E., Murray, R. L., et al. 2016. **Second-hand smoke in four English prisons: An air quality monitoring study**. *BMC Public Health* 16(1).

Background: To measure levels of indoor pollution in relation to smoking in four English prisons. Methods: TSI SidePak AM510 Personal Aerosol Monitors were used to measure concentrations of particulate matter less than 2.5 μm in diameter (PM2.5) for periods of up to 9 h in selected smoking and non-smoking areas, and personal exposure monitoring of prison staff during a work shift, in four prisons. Results: PM2.5 data were collected for average periods of 6.5 h from 48 locations on 25 wing landings where smoking was permitted in cells, on 5 non-smoking wings, 13 prisoner cells, and personal monitoring of 22 staff members. Arithmetic mean PM2.5 concentrations were significantly higher on smoking than non-smoking wing landings (43.9 μg/m3 and 5.9 μg/m3 respectively, p &lt; 0.001) and in smoking than non-smoking cells (226.2 μg/m3 and 17.0 μg/m3 respectively, p &lt; 0.001). Staff members wore monitors for an average of 4.18 h, during which they were exposed to arithmetic mean PM2.5 concentration of 23.5 μg/m3. Conclusions: The concentration of PM2.5 pollution in smoking areas of prisons are extremely high. Smoking in prisons therefore represents a significant health hazard to prisoners and staff members. © 2016 Jayes et al.

Sullivan, D. H. & Rees, M. A. 2014. **Smoking bans in secure psychiatric hospitals and prisons**. *Journal of law and medicine* 22(1) 22-30.

The proposal of complete smoking bans in closed institutions, such as prisons and psychiatric hospitals, creates a tension between individual "rights" and the health of all members of that community. Smokers in closed institutions generally smoke more, suffer more health consequences and are less likely to quit than smokers in other settings. Complete smoking bans do not cause an increase in behavioural problems, nor do bans cause worsening of mental illness or quality of life. Although infrequently tested, the responsibility of public institutions to protect others from second-hand smoke has usually outweighed any individual "right to smoke" in legal judgments. A substantial cultural shift may be required from considering smoking a "rare pleasure" during detention to the realisation that smoking is the most significant reversible health risk factor for this population. The implementation of complete smoking bans in closed institutions is challenging and requires careful and proactive planning by staff. As complete smoking bans are being considered in many institutions and jurisdictions, this column presents a review of the evidence base and ethical issues involved.

Turan, O. 2014. **Investigation of smoking behaviours and the presence of COPD in a prison**. *European respiratory journal* 44.

INTRODUCTION: Smoking and second hand smoke(SHS) are frequently seen in prisons. MATERIAL-METHODS: This study included prisoners and staff in Bolvadin Closed and Open Prison. All volunteers underwent standard spirometry(PFT).A questionnaire about smoking behaviours was performed. RESULTS:179 volunteers with 109 prisoners and 70 of prison stuff were included.18 immates and 2 prison stuff had the diagnosis of COPD; 22 prisoners(20.2%) and 4 prison stuff(5.7%) had COPD. There were 123 smokers(68.7%),26 ex-smokers(14.5%) and 30 non-smokers(16.8%). There was an increase in the rate of smoking in 41.8% of inmates(the most seen reason: stress),no change in 39.6% and decrease in 18.7%.89.4% of participants told that they were exposed to SHS in prison. Pulmonary symptoms(49.2%) were statistically high in smokers compared with non-smokers and ex-smokers(p=0.000). There was a statistically significant relationship between exposure to SHS and presence of COPD(p=0.043),and pulmonary symptoms(p=0.008). The number of cigarettes smoked per day increased statistically significant at the prisoners with COPD(p=0.05). DISCUSSION: The frequency of smoking and SHS in prison was considerably high. The restriction of smoking areas and the existence of non-smoking wards may reduce it. The rate of COPD was found also high. Therefore, typical symptoms about COPD should be examined carefully and routine screening of prisoners with PFT about COPD should be considered. (Table Presented).

Twyman, L., Bonevski, B., Paul, C., et al. 2014. **Perceived barriers to smoking cessation in selected vulnerable groups: a systematic review of the qualitative and quantitative literature**. *BMJ open* 4(12) e006414.

OBJECTIVES: To identify barriers that are common and unique to six selected vulnerable groups: low socioeconomic status; Indigenous; mental illness and substance abuse; homeless; prisoners; and at-risk youth., DESIGN: A systematic review was carried out to identify the perceived barriers to smoking cessation within six vulnerable groups., DATA SOURCES: MEDLINE, EMBASE, CINAHL and PsycInfo were searched using keywords and MeSH terms from each database's inception published prior to March 2014., STUDY SELECTION: Studies that provided either qualitative or quantitative (ie, longitudinal, cross-sectional or cohort surveys) descriptions of self-reported perceived barriers to quitting smoking in one of the six aforementioned vulnerable groups were included., DATA EXTRACTION: Two authors independently assessed studies for inclusion and extracted data., RESULTS: 65 eligible papers were identified: 24 with low socioeconomic groups, 16 with Indigenous groups, 18 involving people with a mental illness, 3 with homeless groups, 2 involving prisoners and 1 involving at-risk youth. One study identified was carried out with participants who were homeless and addicted to alcohol and/or other drugs. Barriers common to all vulnerable groups included: smoking for stress management, lack of support from health and other service providers, and the high prevalence and acceptability of smoking in vulnerable communities. Unique barriers were identified for people with a mental illness (eg, maintenance of mental health), Indigenous groups (eg, cultural and historical norms), prisoners (eg, living conditions), people who are homeless (eg, competing priorities) and at-risk youth (eg, high accessibility of tobacco)., CONCLUSIONS: Vulnerable groups experience common barriers to smoking cessation, in addition to barriers that are unique to specific vulnerable groups. Individual-level, community-level and social network-level interventions are priority areas for future smoking cessation interventions within vulnerable groups., TRIAL REGISTRATION NUMBER: A protocol for this review has been registered with PROSPERO International Prospective Register of Systematic Reviews (Identifier: CRD42013005761).Copyright Published by the BMJ Publishing Group Limited. For permission to use (where not already granted under a licence) please go to http://group.bmj.com/group/rights-licensing/permissions.

Gavigan, A., Goodman, P., Young, K., et al. 2011. **Exposure of prison officers to Second Hand Smoke (SHS) in the workplace**. *Irish Journal of Medical Science* 180(SUPPL. 12) S462-S463.

Prisons were classified as exempted areas in the 2004 workplace smoking ban legislation, because considered as "home" of inmates. Prison officers are therefore potentially exposed to SHS at their workplace. Prison officers were surveyed by questionnaire, 100 were recruited, 90 completed the study. A subset of these (30) also completed a measurement of exhaled breath carbon monoxide (CO). 33% of prison officers were active smokers (47% for females) which is well above the national average overall and for each gender. When asked if there should be a complete smoking ban in prisons, 47% no, 41% yes and 12% do not know, 66% agreed with ban in all enclosed places. (Graph presented) Graph shows number of non-smoking POs (n = 25) with exhaled CO categorised into expected levels in smokers. 44% met criteria for light to heavy smokers, of these 36% had home exposure. The remaining 64% of non-smokers having high exhaled CO levels which were due to exposure to SHS at work. Prison officers are exposed to second hand smoke in the workplace, with exhaled CO levels equivalent to levels in smokers. A complete smoking ban in prisons may be associated with behavioural problems; however staff should not be exposed to SHS at work.

O'Kane, M., Ryan, B. & Taylor, M. 2011. **Can mental health facilities become smoke free? Creating a safer working environment**. *Journal of Health, Safety and Environment* 27(1) 27-35.

Direct and indirect tobacco related harm is one of the greatest public health concerns being addressed in most western countries. Public pressure and legislation has enabled tobacco smoke to be eliminated from most public venues and workplaces. However prisons and mental health facilities are among the last workplaces where smoking is commonplace and often condoned. As a result of considerable occupational health & safety (OHS) concerns and increased focus on patient, staff and visitor health and wellbeing, a 30-bed secure forensic mental health facility examined issues regarding smoking within the service. A working party concluded the only safe way to prevent risk from exposure to tobacco smoke was to implement a facility wide smoke-free policy. Management gave a clear directive; the service would lead the way to become the first smoke free mental health inpatient unit in Western Australia. © 2011 CCH Australia Limited.

Verity, C., N, G. F. & T, A. R. 2011. **An audit of a smoking cessation programme for people with an intellectual disability resident in a forensic unit**. *Advances in Mental Health and Intellectual Disabilities* 5(1) 33-41.

This article first briefly reviews the literature on smoking and smoking cessation programmes for people with intellectual disability. A smoking cessation programme in place in a forensic in-patient service for people with intellectual disabilities in the East of England is then described together with the findings of an audit to establish the prevalence and significant associations of smoking in this group and the effect of the intervention. The intervention focused on health education and nicotine replacement therapies. The audit included 79 patients, 48 of whom were smokers on admission. Fifteen subjects gave up smoking while resident in the service. Those who did not give up significantly reduced the number of cigarettes they smoked per day. Female smokers appeared less likely to give up than men. Length of stay and treatment with antipsychotic medication were not significantly linked to smoking behaviour. There was a significant relationship between the level of security in which a patient was resident and smoking. Patients treated on medium secure wards were significantly more likely to be smokers than those in lower levels of security. The authors conclude that this simple smoking cessation programme appeared to be effective in cutting down smoking rates and tobacco consumption in this population. They comment that the findings need to be viewed with caution as the audit was limited by the lack of a control group and conducted in a single service.

Condon, L., Hek, G. & Harris, F. 2008. **Choosing health in prison: Prisoners' views on making healthy choices in English prisons**. *Health Education Journal* 67(3) 155-166.

Objective: To explore the views of prisoners on making healthy choices in prison. Design: In-depth semi-structured interviews were carried out with 111 prisoners in 12 prisons between September and November 2005. Prisoners interviewed included women, older prisoners, young offenders and prisoners from Black and minority ethnic groups. Setting: Prisons in the north and south of England, including men's prisons (categories A-D), young offenders' institutions and a women's prison. Method: Prisoners were interviewed individually by pairs of interviewers, using a topic guide concerned with experiences of health care in prison. Interviews were audiotaped and transcribed. Data were analysed thematically. This article presents prisoners' views on making healthy choices in the areas identified in the 2004 white paper Choosing Health, as priorities for action in public health. Results: All the priority areas of Choosing Health were relevant to the self-identified health needs of prisoners. Opportunities to make healthy choices varied between prisons, particularly in relation to diet, exercise and access to smoking cessation support. Alcohol misuse was considered insufficiently addressed in prison. Conclusion: While imprisonment offers prisoners an opportunity to access health promotion services, in the priority areas identified in Choosing Health prisoners are often prevented from making healthy choices by the prison setting. Barriers exist within the prison setting which limit the ability of prisoners to maintain and improve their health. © SAGE 2008.

Lekka, N. P., Lee, K.-H., Argyriou, A. A., et al. 2007. **Association of cigarette smoking and depressive symptoms in a forensic population**. *Depression and anxiety* 24(5) 325-30.

The link between mental health issues and smoking has been an important area of investigation. However, little is known about this association in a general adult, male forensic population. The aim of this study was to identify demographic and clinical (depression and anxiety) variables that predict smoking in a forensic population. A large cohort of 353 inmates in a high-security prison underwent a psychiatric interview, including administration of the Montgomery-Asberg Rating Scale for Depression (MADRS) and Hamilton's Rating Scale for Anxiety (HAM-A). Multiple regression analysis suggested that younger age and higher depression scores might predict the amount of daily smoking in this population. In contrast, anxiety symptoms were not an independent predictor for smoking in our study. These findings support the need for additional research to focus on those factors associated with smoking in forensic populations. Psychiatric screening for younger male individuals in forensic settings and targeted cognitive-behavioral interventions to treat depressed smokers may ameliorate the smoking abstinence rate in prisons.

Spurgeon, D. 2000. **Canadian prisoners strike over smoking ban**. *BMJ (Clinical research ed.)* 321(7258) 402.

**Other links that may be of interest**

**NIHR Blog**

**Measuring for change: the road to smoke-free prisons**

<https://www.nihr.ac.uk/blogs/measuring-for-change-the-road-to-smoke-free-prisons/7117>

**Smoking bans in Australian prisons**

<http://asiapacific.anu.edu.au/regarding-rights/2014/05/15/smoking-bans-in-australian-prisons/>

**Families Outside: creating a smoke-free prison environment (consultation responses)**

<https://www.familiesoutside.org.uk/content/uploads/2017/10/SmokeFreeFOResponse.pdf>

**Why banning smoking in prisons is a good idea**

<http://theconversation.com/why-banning-smoking-in-prisons-is-a-good-idea-44139>

**Attacks on Queensland prison guards have doubled since the introduction of smoking ban**

<http://www.abc.net.au/news/2014-10-14/attacks-on-guards-in-qld-prisons-doubled-since-smoking-ban/5812822>

**NT prison study finds smoke ban created black market in nicotine patches**

<http://www.abc.net.au/news/2016-04-15/black-market-in-nicotine-patches-in-nt-jails/7329804>

## Appendix: Search strategies

* **Ovid Embase 1996 to 2018 Week 07**
* **Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily, Ovid MEDLINE and Versions(R) 1946 to February 07, 2018**
* **HMIC**

1. Prison/
2. prison\* or jail\* or incarcerat\* or custody or custodial or offender\* or inmate\* or convict\* or detention\* or detain\* or penitentiary or "correctional facilit\*" or "penal institution\*" or YOI or "secure environment\*" or probation
3. 1 or 2
4. Smoking cessation/
5. Smoking ban/
6. "smoke free" or smokefree or smoke-free or (smoking adj2 ban\*) or (tobacco adj2 ban\*) or (smoking adj2 (cessation or stop\* or quit\*)) or (tobacco adj2 (cessation or stop\* or quit\*))
7. 4 or 5 or 6
8. 3 and 7

* **Scopus**
* **Social Policy and Practice**

prison\* or jail\* or incarcerat\* or custody or custodial or offender\* or inmate\* or convict\* or detention\* or detain\* or penitentiary or "correctional facilit\*" or "penal institution\*" or YOI or "secure environment\*" or probation

AND

"smoke free" or smokefree or smoke-free or (smoking w2 ban\*) or (tobacco w2 ban\*) or (smoking w2 cessation) or (stop\* w2 smoking) or (quit\* w2 smoking) or (tobacco w2 cessation) or (quit\* w2 tobacco)

* **Global Health**

prison\* or jail\* or incarcerat\* or custody or custodial or offender\* or inmate\* or convict\* or detention\* or detain\* or penitentiary or "correctional facilit\*" or "penal institution\*" or YOI or "secure environment\*" or probation

AND

"smoke free" or smokefree or smoke-free or (smoking n2 ban\*) or (tobacco n2 ban\*) or (smoking n2 cessation) or (stop\* n2 smoking) or (quit\* n2 smoking) or (tobacco n2 cessation) or (quit\* n2 tobacco)