

Collaboration for
Leadership in Applied
Health Research and
Care South London
(CLAHRC South London)

mental health
smoking
partnership

Supporting smokers with mental health problems

Ann McNeill, Professor of Tobacco Addiction
Dr Debbie Robson, Senior Post-Doc Researcher,
Addictions Department

**National
Addiction
Centre**

Institute of
Psychiatry

at The Maudsley

KING'S
College
LONDON

Declaration of Interests

- I receive no funding from tobacco, electronic cigarette or pharmaceutical companies
- Research is funded by voluntary and government sectors
- My salary is funded by King's College London

Contents

- Context
- What works?
- What else is needed?

CONTEXT

Smoking and mental health - a review of the literature

Dr Ann McNeill

Independent Consultant

&

Honorary Senior Lecturer in Public Health

St George's Hospital Medical School

London

Smoking and Mental Health Symposium

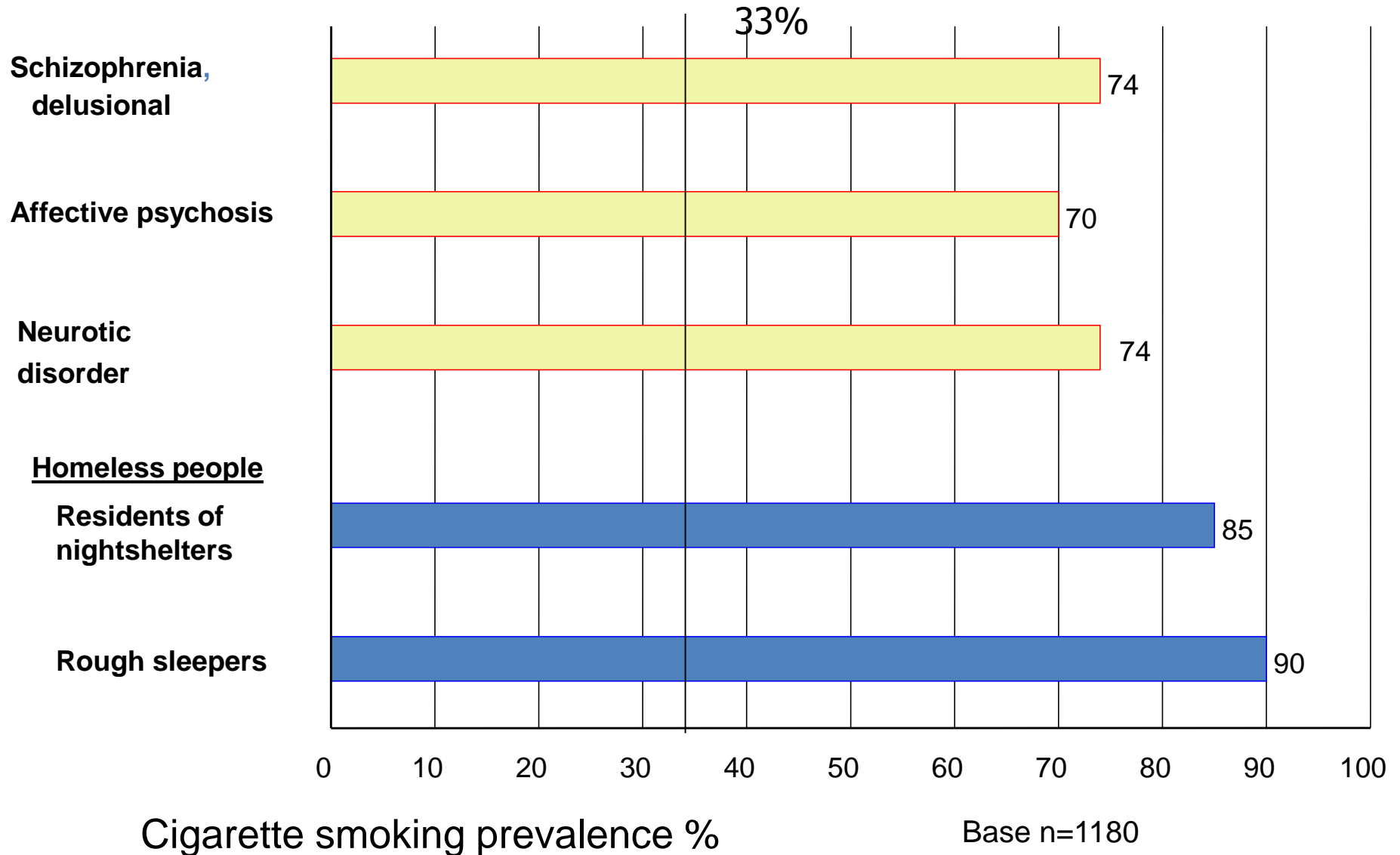
9th November, 2001

Agenda

Venue: Royal Pharmaceutical Society, 1 Lambeth High Street, SE1

- 9.30 Registration and refreshments
- 10.00 *Setting the scene*
Chair: Judith Watt, Head of Programme, SmokeFree London
- 10.05 **Mental health and smoking – an opening address**
Professor John Moxham, Vice-Dean, Guy's King's & St Thomas' Hospital School of Medicine, Professor of Respiratory Medicine, King's College Hospital.
- 10.20 **Service user perspective**
Diane Hackney

Cigarette smoking and psychiatric diagnosis in patients in institutions



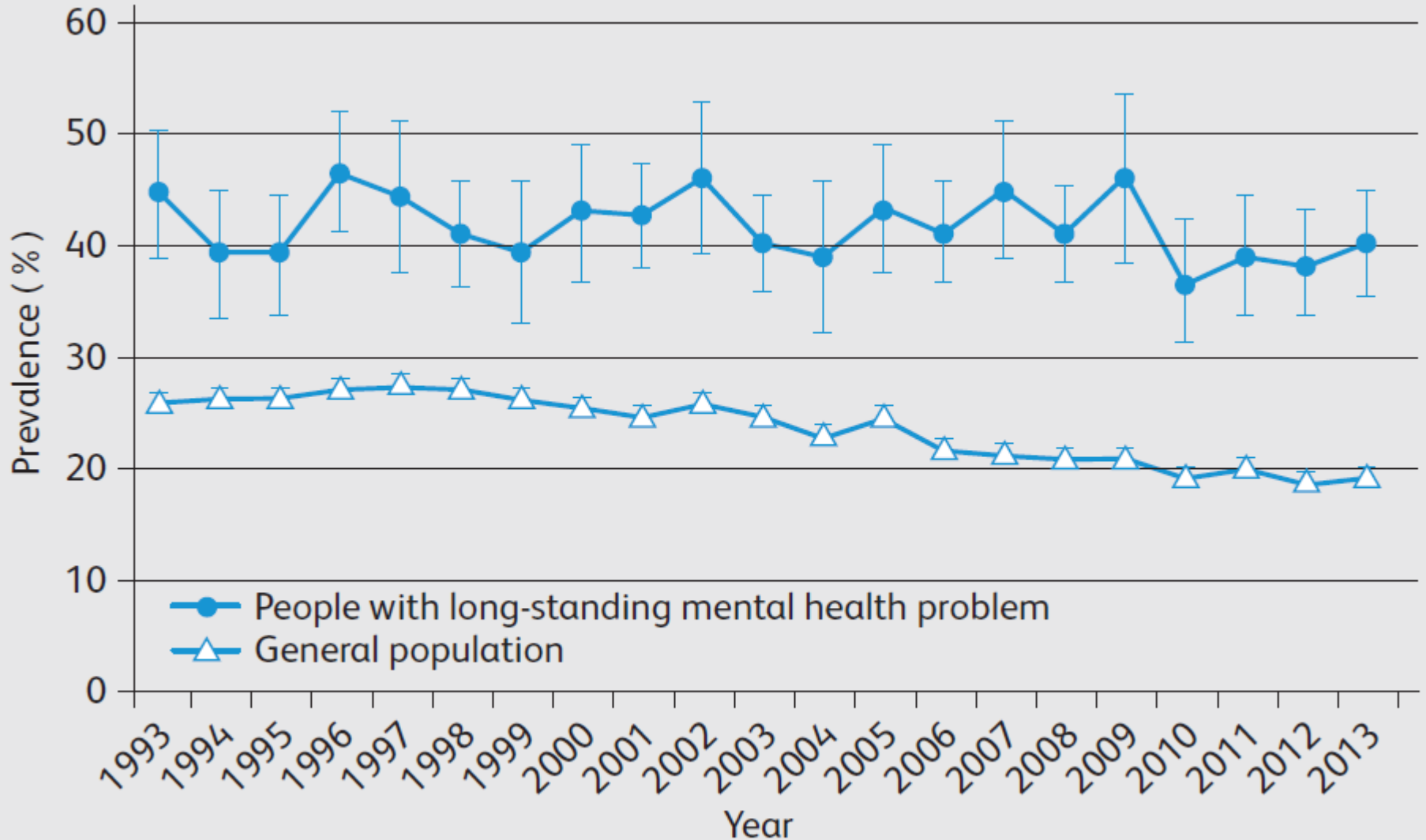
Smoking and mental health

(Adult Psychiatric Morbidity Study, UK, 2007) **Gen Pop prev 22%**

Diagnosis	Smoking prevalence (95% CI)
A common mental health disorder	34.0 (31.0–37.1)
Depressive episode	39.8 (33.2 - 46.8)
Phobias	42.8 (34.0 - 50.1)
Generalised anxiety disorder	37.4 (31.9 – 43.4)
Obsessive compulsive disorder	40.2 (28.3 – 53.5)
Panic disorder	28.9 (19.6 - 40.4)
Mixed anxiety and depression	31.1 (27.1 - 35.3)
Probable psychosis	56.0 (33.3 – 76.3)
Post-traumatic stress disorder	40.4 (33.1 - 48.2)
Attention deficit hyperactivity disorder	39.1 (23.4 - 57.5)
Eating disorder	25.3 (17.3 - 35.4)

Smoking & longstanding mental disorders over time

(Szatkowski & McNeill, 2014; Royal College of Physicians, 2016)





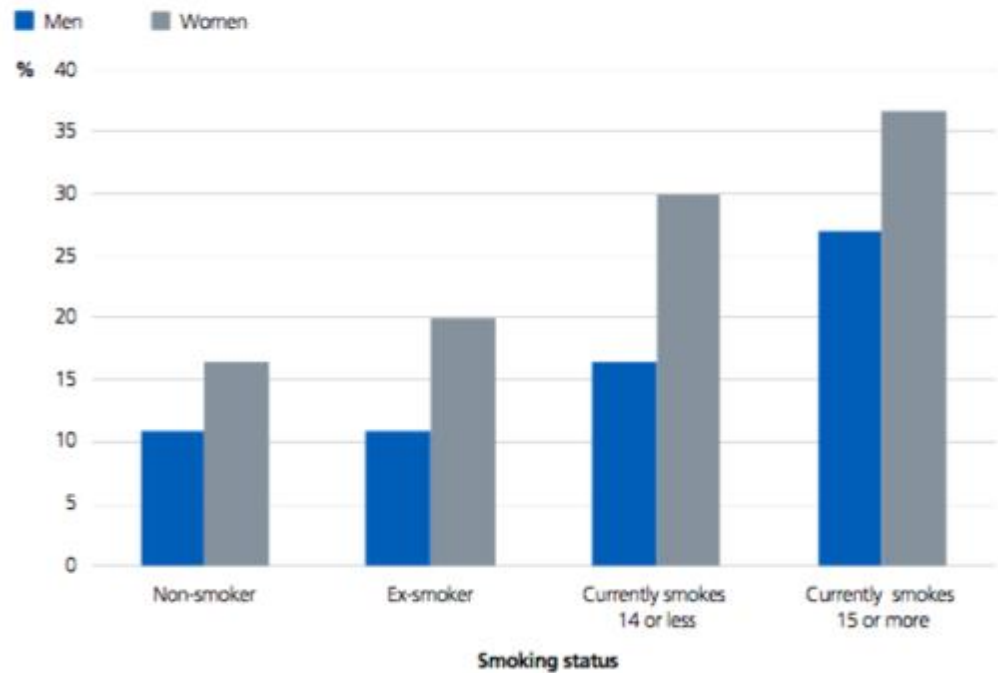
Mental Health and Wellbeing in England

Adult Psychiatric Morbidity Survey 2014

A survey carried out for NHS Digital by NatCen Social Research and the Department of Health Sciences, University of Leicester

Figure 20: Prevalence of common mental disorder (CMD), by smoking status (age-standardised)

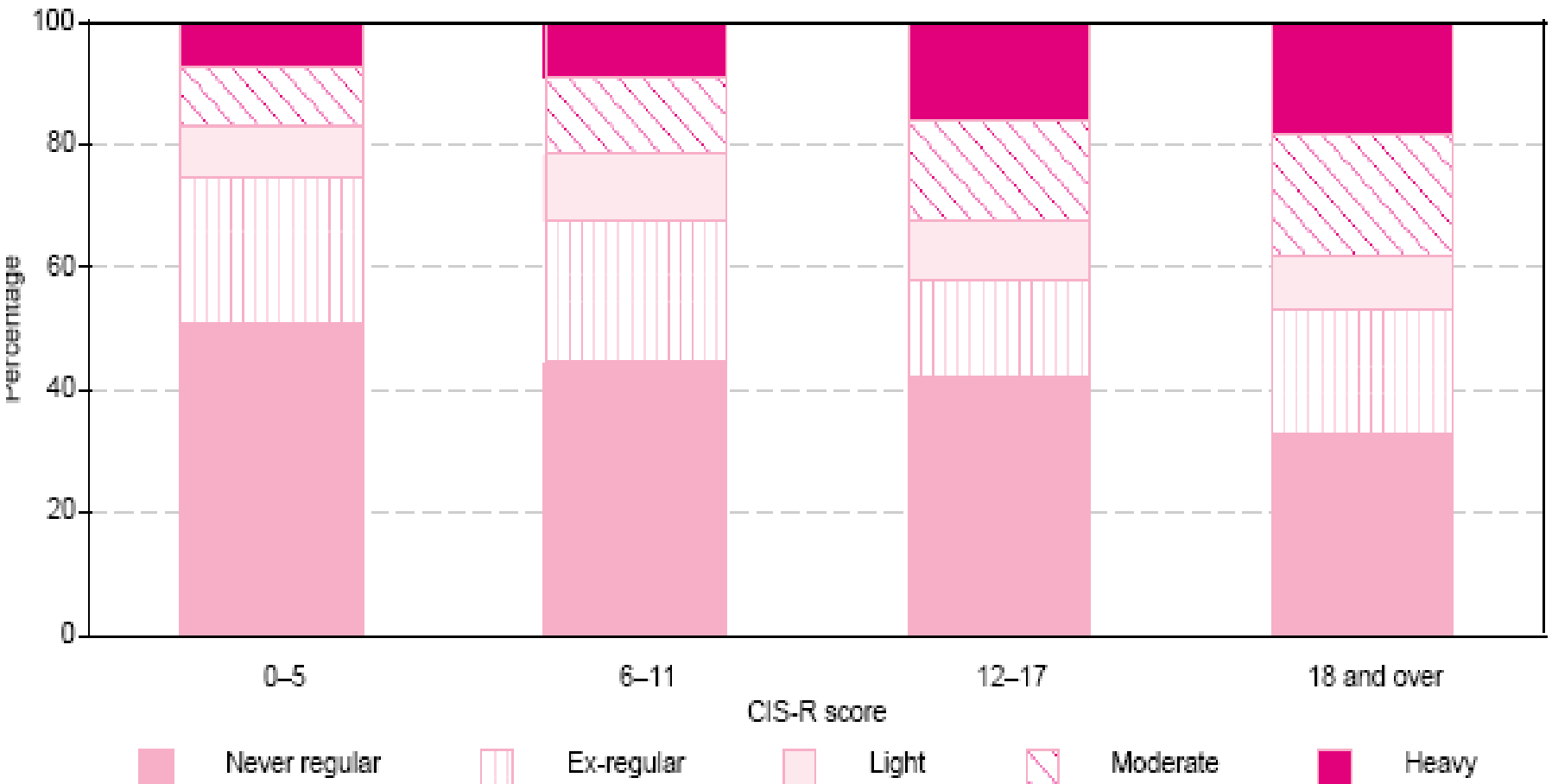
Base: all adults



McManus S, Bebbington P, Jenkins R, Brugha T. (eds.) (2016) *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014*. Leeds: NHS Digital.

Smoking status by severity of illness (APMS, 1995 data)

Figure 4.1 Smoking status by CIS-R score



Other ways smoking impedes recovery



- **Higher doses of drugs such as clozapine and olanzapine**
- **Poverty** (clients spent approx a third of their income on cigarettes)
- **Exploitation & stigma** (begging for cigarettes, picking up butts)
- 75% of psychiatric patients who smoke report smoking most/all of their cigarettes while **alone** (Prochaska et al, 2006)

Life expectancy of men with serious mental illness (Chang et al, 2011)

Diagnosis	Male	
	Life Expectancy (95% CI, number of deaths)	Difference from male UK population
Any Serious Mental Illness[^]	64.5 (63.3–65.6, n = 243)	– 12.9
Schizophrenia (F20) [^]	62.8 (61.6–64.10, n = 196)	– 14.6
Schizoaffective disorder (F25) [^]	69.4 (68.3–70.5, n = 16)	– 8.0
Bipolar affective disorder (F31) [^]	67.3 (66.1–68.5, n = 43)	– 10.1
Substance use disorders (F10–F19)[^]	63.9 (62.7–65.0, n = 254)	– 13.6
Depressive episode and recurrent depressive disorder (F32–F33)[^]	66.8 (65.6–67.9, n = 284)	– 10.6

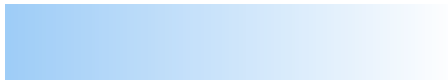
Smoking and the Reduced Life Expectancy of Individuals With Serious Mental Illness

Jamie Tam, MPH,¹ Kenneth E. Warner, PhD,¹ Rafael Meza, PhD²

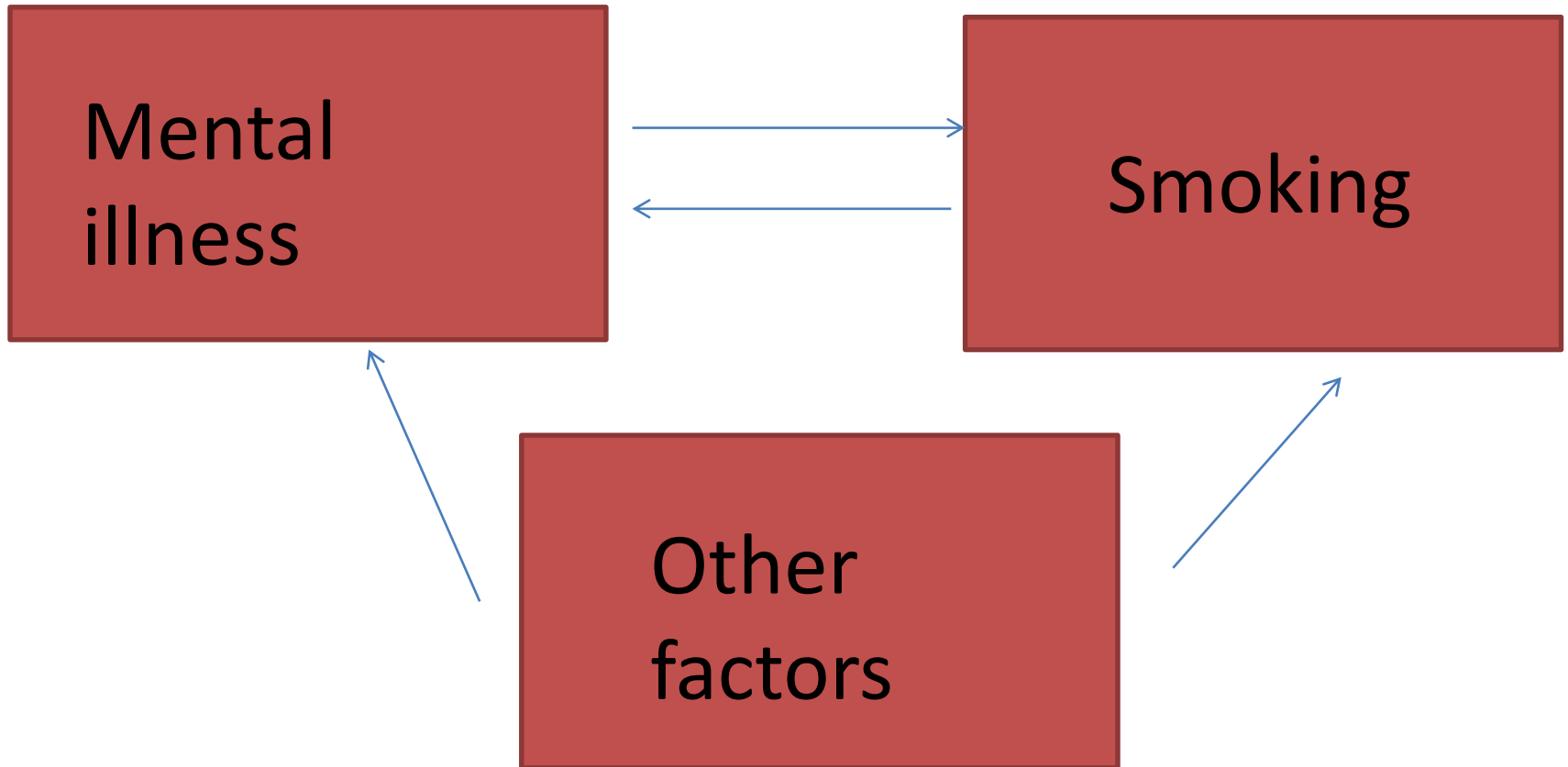
“The life expectancy difference between current smokers with SPD and never smokers without SPD is primarily due to smoking. Aiding individuals with serious mental illness to avoid smoking will translate into sizeable gains in life expectancy.”

Am J Prev Med 2016;51(6):958–966.

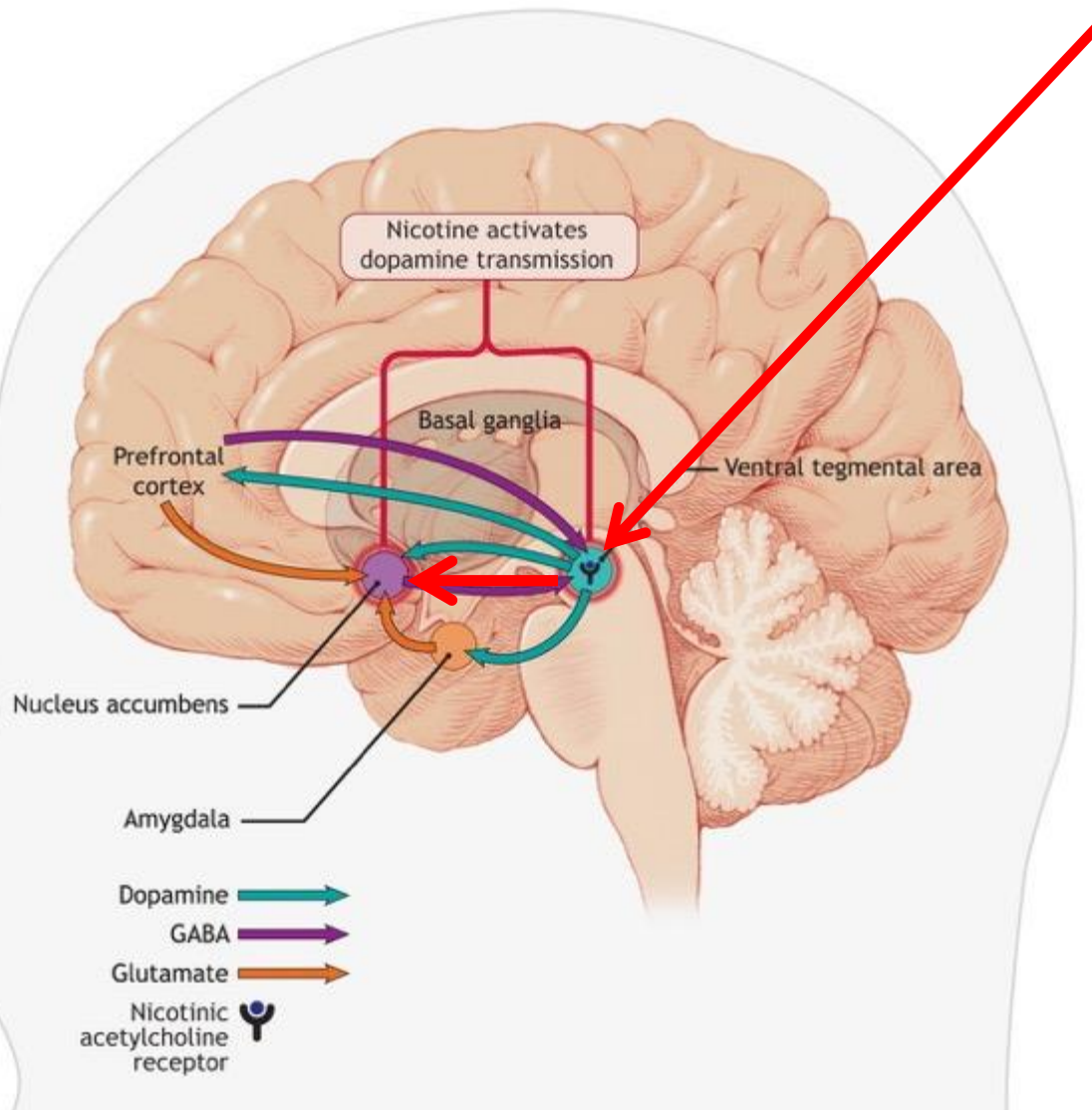
Why is there such a strong relationship between smoking and mental illness?



3 main hypotheses



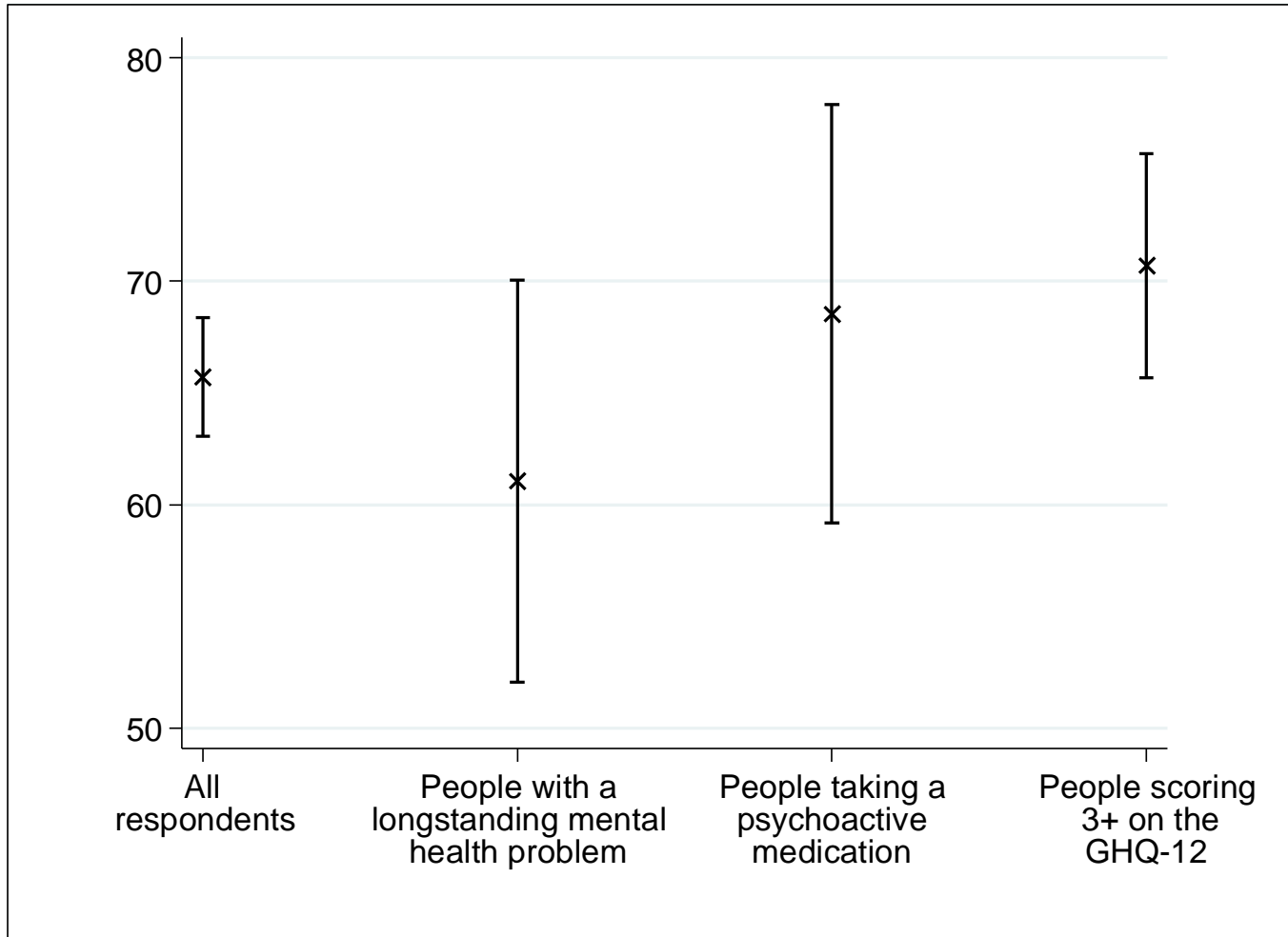
Smoking and mental illness



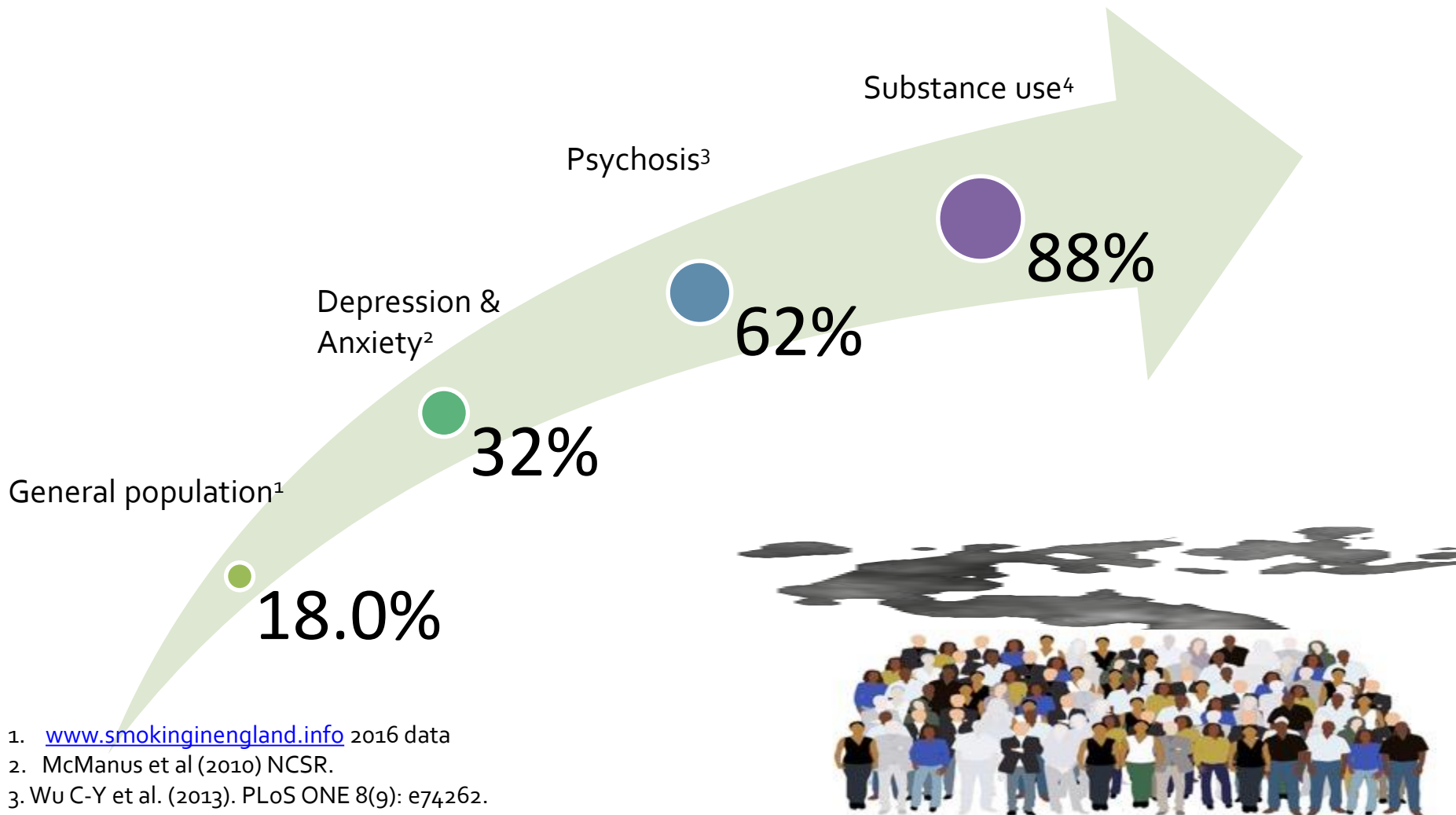
In smoking, **nicotine** is delivered to the brain within a few seconds. Then stimulates nicotinic acetylcholine receptors located in the ventral tegmental area, which leads to the release of **dopamine** in the **nucleus accumbens**. Other neurotransmitters are involved.

Similar neurotransmitters and pathways are involved in mental illness

Motivation to quit?



Summary so far



1. www.smokinginengland.info 2016 data

2. McManus et al (2010) NCSR.

3. Wu C-Y et al. (2013). PLoS ONE 8(9): e74262.

4. Cookson C, et al (2014) *BMC Health Services Research* 2014, 14:304

Summary so far

- Smoking prevalence declining in general population but not among those with longstanding mental disorders
- Health inequality impact – cost of smoking, stigma
- Smoking impeding recovery
- Smoking affecting life expectancy
- Smokers want to stop

WHAT WORKS?

Varenicline (Champix)

Bupropion (Zyban)



OR



Nicotine replacement therapy



+



Behavioural support
Patient education
Close monitoring of mood
Regular follow-up

Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): a double-blind, randomised, placebo-controlled clinical trial

Robert M Anthenelli, Neal L Benowitz, Robert West, Lisa St Aubin, Thomas McRae, David Lawrence, John Ascher, Cristina Russ, Alok Krishen, A Eden Evins



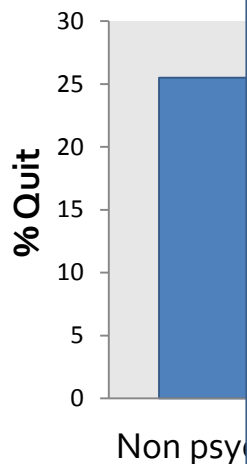
Neuropsychiatric side effects e.g. anxiety, depression, aggression, delusions, hallucinations, psychosis, suicidal behaviour

Depression or bipolar disorder = 70%
Anxiety = 20%
Psychosis = 10%

Efficacy: Quit rates at 9-24 weeks

Varenicline

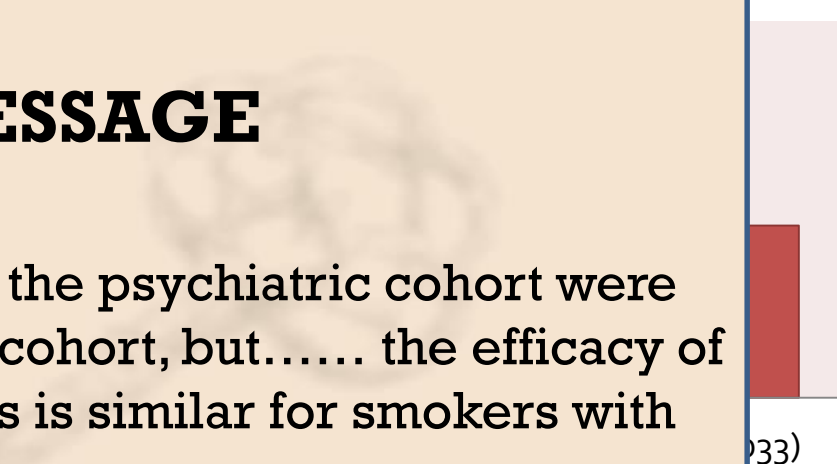
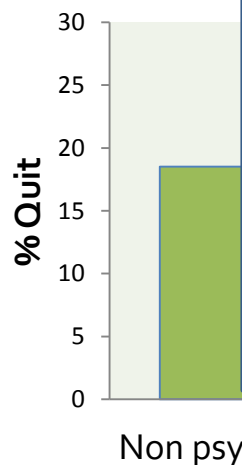
Bupropion



KEY MESSAGE

Overall the abstinence rates in the psychiatric cohort were lower than the non psychiatric cohort, but..... the efficacy of the medications in terms of ORs is similar for smokers with or without psychiatric disorders

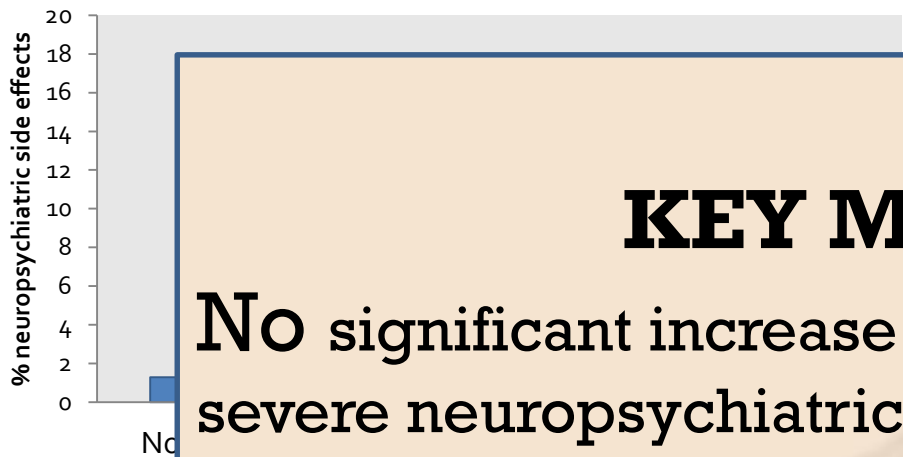
whether you have a psychiatric history or not, **varenicline** appears to be the most effective single medication of all the first line treatments; whereas bupropion and nicotine patch are more effective than placebo.



Non psychiatric (n=1009) Psychiatric (n=1026)

Safety: Neuropsychiatric effects

Varenicline

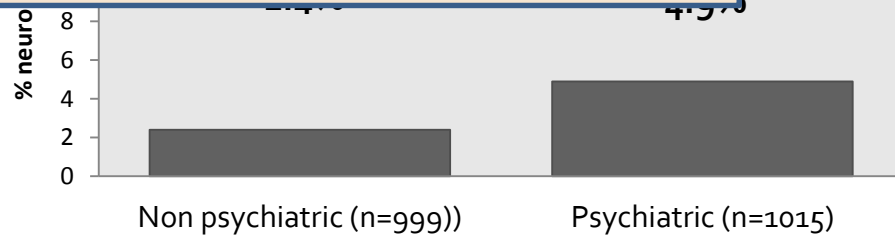
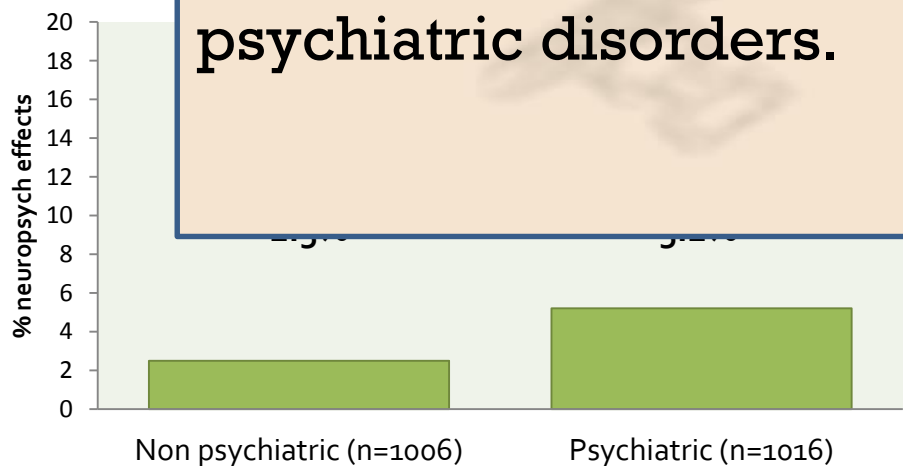


Bupropion



KEY MESSAGE

No significant increase in rates of moderate-to-severe neuropsychiatric adverse events with either varenicline or bupropion relative to nicotine patch or placebo in those with or without psychiatric disorders.



Efficacy and tolerability of pharmacotherapy for smoking cessation in adults with serious mental illness: a systematic review and network meta-analysis

Emmert Roberts¹, A. Eden Evins², Ann McNeill³ & Debbie Robson⁴

RR: 4.17 (1.61–10.78)

Varenicline for smoking cessation and reduction in people with severe mental illnesses: systematic review and meta-analysis

RR: 4.33 (1.96–9.56)

Qi Wu, Simon Gilbody, Emily Peckham, Sally Brabyn & Steve Parrott

Mental Health and Addiction Research Group, Department of Health Sciences, University of York, Heslington, York, UK

The delivery of smoking cessation interventions to primary care patients with mental health problems

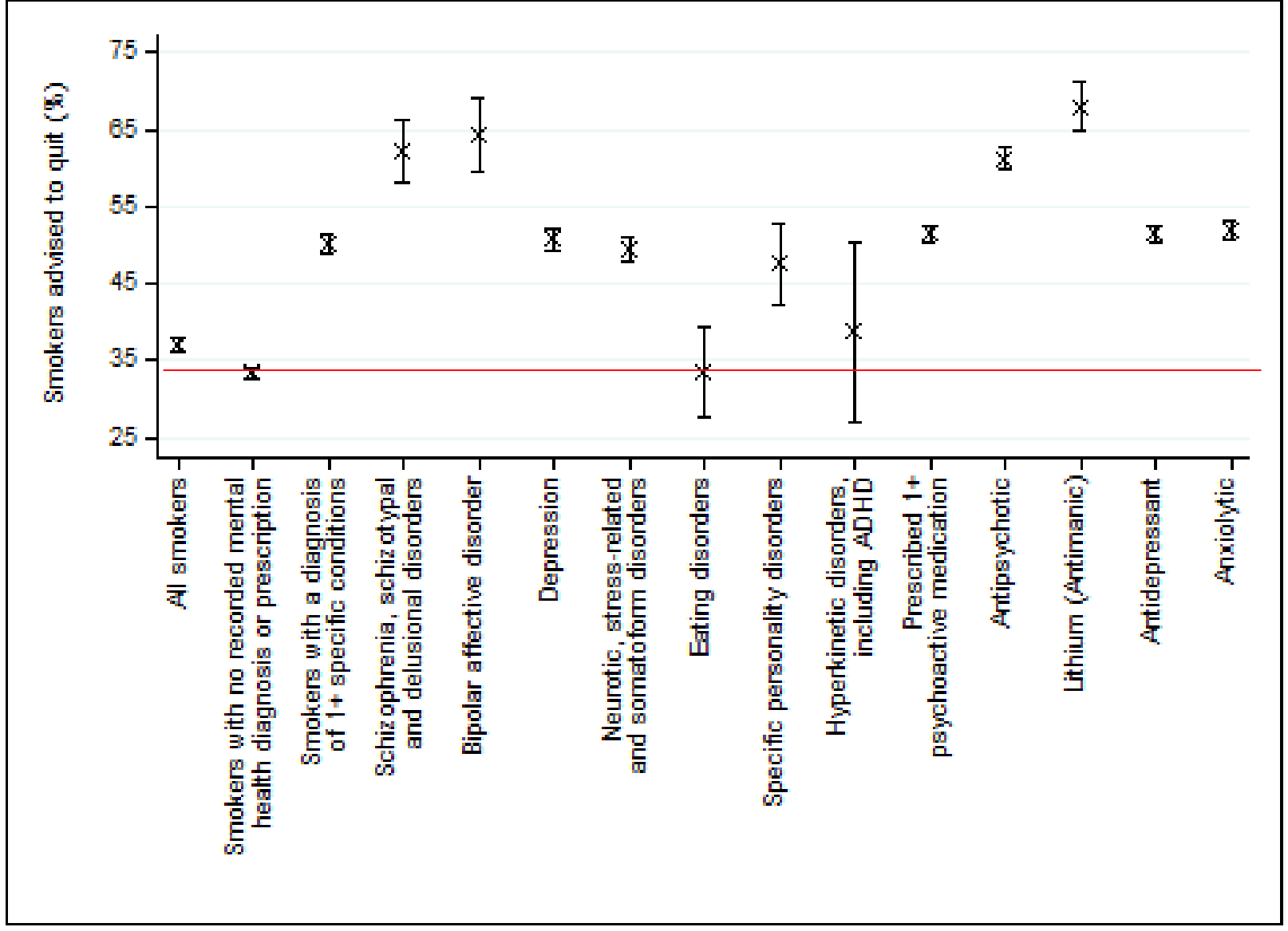
Lisa Szatkowski¹ & Ann McNeill²

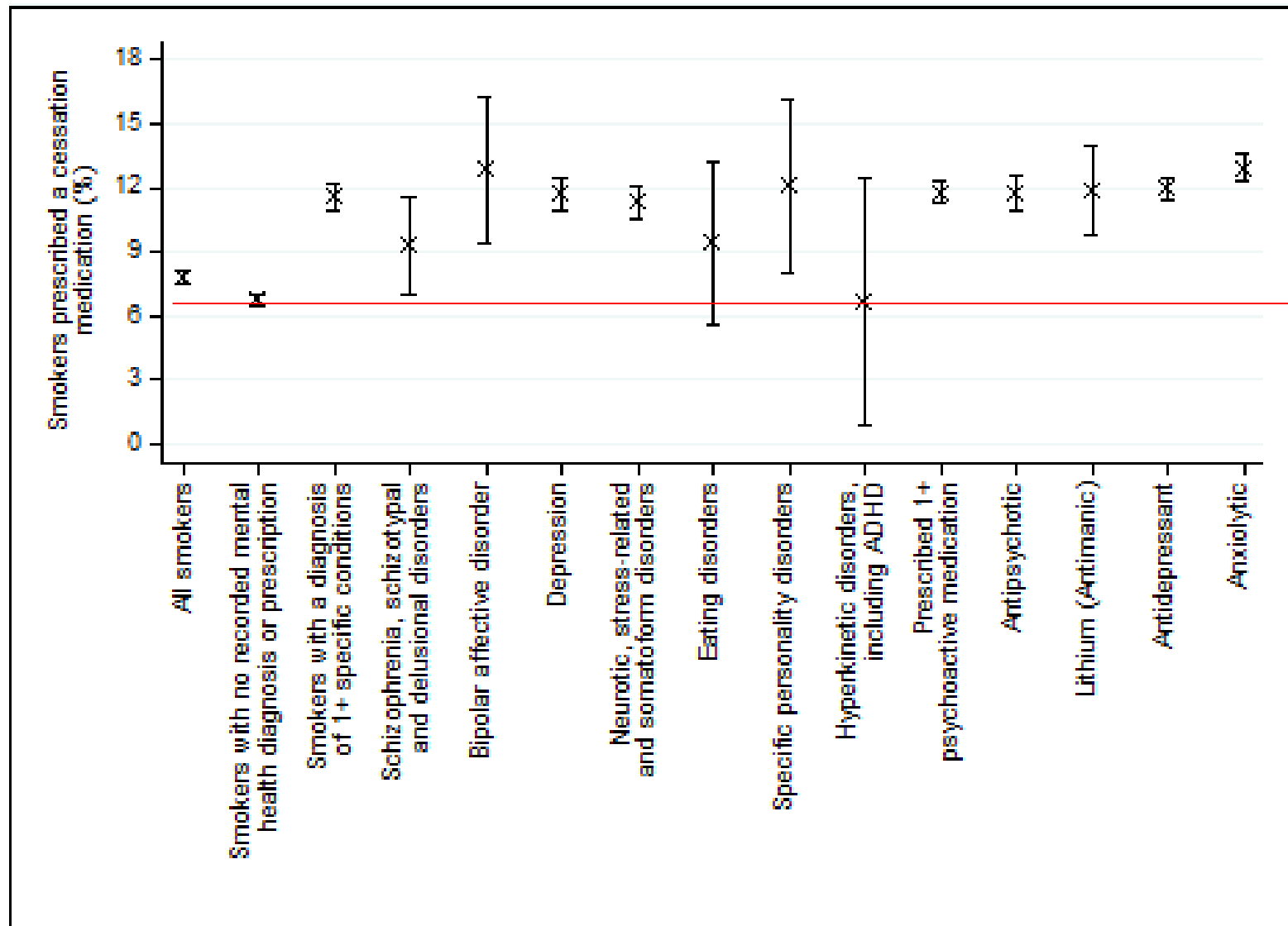
UK Centre for Tobacco Control Studies, University of Nottingham, Division of Epidemiology and Public Health, Nottingham, UK¹ and UK Centre for Tobacco Control Studies, Institute of Psychiatry, King's College London, London, UK²

ABSTRACT

Aims To quantify the extent to which smokers with indicators of poor mental health receive smoking cessation support in primary care consultations compared with those without. **Design** Cross-sectional study within a database of electronic primary care medical records. **Setting** A total of 495 general practices in the United Kingdom contributing data to The Health Improvement Network (THIN) database. **Participants** A total of 2 493 085 patients aged 16+ registered with a THIN practice for the year from 1 July 2009 to 30 June 2010. **Measurements** The proportion of patients with a diagnostic Read code or British National Formulary (BNF) drug code indicating a mental health diagnosis or psychoactive medication prescription, respectively, who smoke and who have cessation advice or a smoking cessation medication prescription recorded during consultations within the 1-year study period. **Findings** Of 32 154 smokers, 50.6% [95% confidence interval (CI): 50.0–51.2] with a mental health diagnosis and 49.3% (95% CI: 49.0–49.7) of 96 285 smokers prescribed a psychoactive medication had a record of cessation advice, higher than the prevalence of advice recording in smokers without these indicators (33.4%, 95% CI: 33.3–33.6). Similarly, smoking cessation medication prescribing was higher: 11.2% (95% CI: 10.8–11.6) of smokers with a mental health diagnosis and 11.0% (95% CI: 10.8–11.2) of smokers prescribed psychoactive medication received a prescription, compared with 6.73% of smokers without these indicators (95% CI: 6.65–6.81). Smoking cessation support was offered in a lower proportion of consultations for smokers with indicators of poor mental health than for those without. Advice was recorded in 7.9% of consultations with smokers with a mental health diagnosis, 8.2% of consultations with smokers prescribed psychoactive medication and 12.3% of consultations with smokers without these indicators; comparable figures for prescribing of cessation medication were 2.9%, 3.2% and 4.4%, respectively. **Conclusions** Approximately half of smokers with indicators of poor mental health receive advice to quit during primary care consultations in the United Kingdom, and one in 10 receive a cessation medication. Interventions are lower per consultation for smokers with mental health indicators compared with smokers without mental health indicators.

Keywords Mental health, primary care, smoking cessation.





Fewer interventions in primary care

(Szatkowski & McNeill, 2013)

- Cross sectional: 2.5m patients 495 GP Practices
- **Interventions lower per consultation for smokers with MI ****

Subgroup	Number of smokers	% consultations where advice was recorded	% consultations where medication prescribed
Patients WITHOUT a mental health condition	387,246	12.30	4.37
Patients WITH a mental health condition	32,154	7.90	2.90

Electronic cigarette studies in smokers with mental illness

Int. J. Environ. Res. Public Health 2013, 10, 446-461; doi:10.3390/ijerph10020446

OPEN ACCESS

International Journal of
Environmental Research and
Public Health
ISSN 16604-601
www.mdpi.com/journal/ijerph

Article

Impact of an Electronic Cigarette on Smoking Reduction and Cessation in Schizophrenic Smokers: A Prospective 12-Month Pilot Study

Pasquale Caponnetto ^{1,2,3,*}, Roberta Auditore ¹, Cristina Russo ^{1,2,3}, Giorgio Carlo Cappello ⁴ and Riccardo Polosa ^{2,3}

O'Brien DOI 10.1 ¹ CTA-Villa Chiara Psychiatric Rehabilitation Clinic and Research, Mascalucia (Catania) 95030, Italy; E-Mails: robertaauditore@virgilio.it (R.A.); kristina_russo@yahoo.com (C.R.)



RESEARCH

Open Access

E-cigarettes versus NRT for smoking reduction or cessation in people with mental illness: secondary analysis of data from the ASCEND trial

Brigid O'Brien, Oliver Knight-West, Natalie Walker*, Varsha Parag and Christopher Bullen

Abstract

Background: People with mental illness have higher rates of smoking than the general population and are at greater risk of smoking-related death and disability. In smokers from the general population, electronic cigarettes (e-cigarettes) have been shown to have a similar effect on quit rates as nicotine replacement therapy, but little is known about their effect in smokers with mental illness.

Addictive Behaviors 59 (2016) 30–34



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Addictive Behaviors

journal homepage: www.elsevier.com/locate/addictbeh

Appeal of electronic cigarettes in smokers with serious mental illness☆☆☆

Sarah I. Pratt ^{a,*}, James Sargent ^b, Luke Daniels ^a, Meghan M. Santos ^c, Mary Brunette ^{a,c}

^a Department of Psychiatry, The Geisel School of Medicine at Dartmouth, Hanover, NH, United States

^b Department of Pediatrics, The Geisel School of Medicine at Dartmouth, Hanover, NH, United States


^c Department of Community and Family Medicine, The Geisel School of Medicine at Dartmouth, Hanover, NH, United States

HIGHLIGHTS

- Electronic cigarettes may be appealing to chronic smokers with serious mental illness.
- Participants reduced use of combustible cigarettes when given e-cigarettes.
- Carbon monoxide levels decreased when people were given e-cigarettes for 4 weeks.

RESEARCH

Change in mental health after smoking cessation: systematic review and meta-analysis

 OPEN ACCESS

Gemma Taylor *doctoral researcher*^{1,2}, Ann McNeill *professor of tobacco addiction*^{2,3}, Alan Girling *reader in medical statistics*¹, Amanda Farley *lecturer in epidemiology*^{1,2}, Nicola Lindson-Hawley *research fellow*^{2,4}, Paul Aveyard *professor of behavioural medicine*^{2,4}

¹School of Health and Population Sciences, University of Birmingham, Birmingham B15 2TT, UK; ²UK Centre for Tobacco and Alcohol Studies, Epidemiology and Public Health, University of Nottingham, NG5 1PB, UK; ³Institute of Psychiatry, King's College London, London SE5 8AF, UK; ⁴Department of Primary Care Health Sciences, University of Oxford, Oxford OX1 2ET, UK

Abstract

Objective To investigate change in mental health after smoking cessation compared with continuing to smoke.

Design Systematic review and meta-analysis of observational studies.

Data sources Web of Science, Cochrane Central Register of Controlled Trials, Medline, Embase, and PsycINFO for relevant studies from inception to April 2012. Reference lists of included studies were hand searched, and authors were contacted when insufficient data were reported.

Eligibility criteria for selecting studies Longitudinal studies of adults that assessed mental health before smoking cessation and at least six weeks after cessation or baseline in healthy and clinical populations.

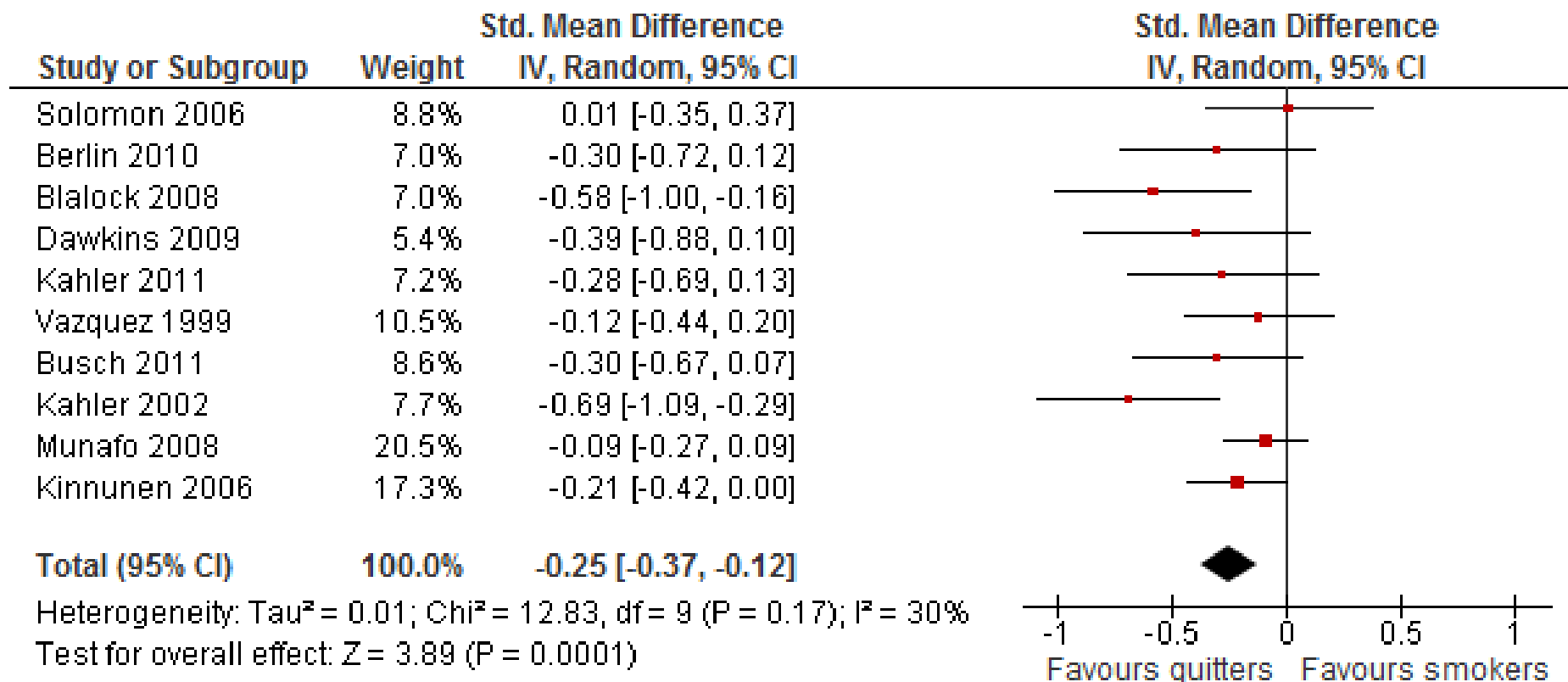
Results 26 studies that assessed mental health with questionnaires designed to measure anxiety, depression, mixed anxiety and depression, psychological quality of life, positive affect, and stress were included. Follow-up mental health scores were measured between seven weeks

Conclusions Smoking cessation is associated with reduced depression, anxiety, and stress and improved positive mood and quality of life compared with continuing to smoke. The effect size seems as large for those with psychiatric disorders as those without. The effect sizes are equal or larger than those of antidepressant treatment for mood and anxiety disorders.

Introduction

Tobacco is the leading global cause of preventable death, estimated to cause more than five million deaths a year, and this is predicted to rise.¹ The worldwide cost of healthcare from tobacco use has been estimated within the billion dollar range.² Smoking is a major risk factor for the development of cancers and cardiovascular and respiratory diseases³; stopping smoking substantially reduces these health risks.^{4,5} The association between smoking and mental health, however, is less clear cut. Although most smokers report wanting to quit,⁶ many continue

Example outcome: depression



Summary

- Good evidence that the same treatments work as with smokers without mental illness
- No significant difference in adverse effects between those with and without mental illness
- Some cautions and observe and follow up more closely
- Appears smokers with mental illness not being offered support as much as other smokers
- Smoking cessation is associated with improved mental health

WHAT ELSE IS NEEDED?

What else is needed?

- Smoke-free mental health settings
- National commitment

Smoke free mental health settings

- Smoking culture with regular smoking breaks Enforced cycle of nicotine withdrawal
- Cigarettes used to reward and punish behaviour, to de-escalate aggression, encourage compliance with medication, attend to personal hygiene , to keep patients occupied etc
- Staff time facilitating smoking rather than therapeutic



Brief report

Time to Smoke: Facilitating Smoking Breaks in Mental Health Inpatient Settings

Debbie Robson PhD, RMN^{1,2}, Mary Yates MSc³, Tom J. K. Craig PhD^{2,3},
Andy Healey PhD², Ann McNeill PhD^{1,4}

- Cross sectional Survey with 67 staff from 25 wards in 4 hospitals
- 18 wards had designated daily supervised smoking breaks
- Average number of breaks per ward = 7.6 (sd 3.9)
- Average daily clinical time dedicated to supervising smoking was **2 hours 23 minutes** a day per ward
- Opportunity cost was £18, 503 £86, 870 per ward per year.

Key message to clinicians and managers: every time staff facilitate smoking clinical time is diverted away from therapeutic activities that contribute to improved health.



Getting the balance right between treating tobacco dependence & implementing the smoke free policy



Enhanced infrastructure



Treatment pathway



Training pathway



Effect of implementation of a smoke-free policy on physical violence in a psychiatric inpatient setting: an interrupted time series analysis



Debbie Robson, Gilda Spaducci, Ann McNeill, Duncan Stewart, Tom J K Craig, Mary Yates, Lisa Szatkowski

Summary

Background Smoke-free policies are important to protect health and reduce health inequalities. A major barrier to policy implementation in psychiatric hospitals is staff concern that physical violence will increase. We aimed to assess the effect of implementing a comprehensive smoke-free policy on rates of physical assaults in a large UK mental health organisation.

Lancet Psychiatry 2017

Published Online

June 14, 2017

[http://dx.doi.org/10.1016/S2215-0366\(17\)30209-2](http://dx.doi.org/10.1016/S2215-0366(17)30209-2)

**Physical assaults perpetrated by patients
-towards staff and other patients.**

**Extracted data using Datix – online Patient Safety
Reporting System**

**Operationalised the definitions of physical assaults
according to NHS Protect**

Results (adjusted for time, seasonality & significant confounders)

Overall violence



39%

(IRR 0.61, 95% CI 0.53-0.70)

**Patient toward
staff**



47%

(IRR 0.53, 95% CI 0.44-0.63)

**Patient toward
patient**



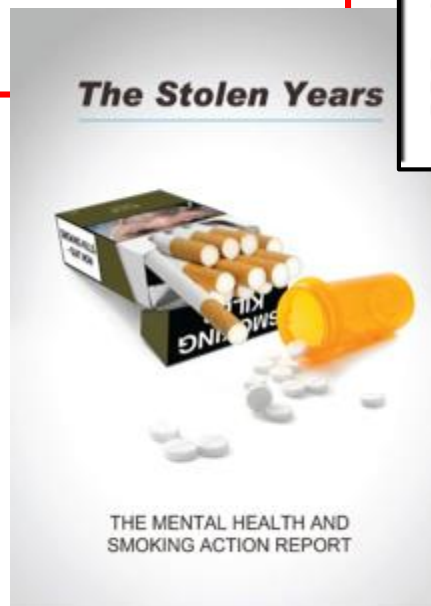
15%

(IRR 0.85, 95% CI 0.80-0.92)

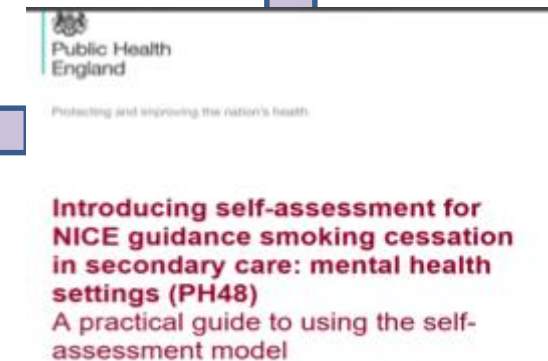
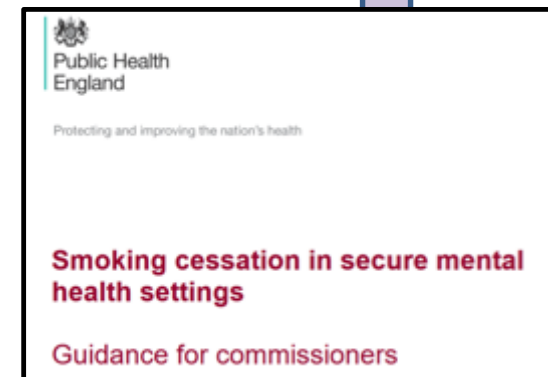
THE ABANDONED ILLNESS

A report by the Schizophrenia Commission

EXECUTIVE SUMMARY



mental health smoking partnership



The ambition of the Partnership, is to reduce smoking rates among people with a mental health condition: to 5% by 2035, with an interim target of 35% by 2020. It sets out clear recommendations for the actions needed to make this a reality



- <http://ash.org.uk/localtoolkit/webinar-the-use-of-e-cigarettes-among-people-with-a-mental-health-condition/>

mental health
smoking
partnership

Mental Health and Smoking Partnership

Statement on Electronic Cigarettes

Why smoking and mental health matters

Smoking is around twice as common among people with mental health conditions as in the general population.¹ Over the last 20 years smoking rates among the general population have declined steadily but smoking rates have barely changed among people with a mental health condition.² People with mental health conditions die on average 10 to 20 years earlier than the general population³ and smoking is the single largest reason for this shocking difference.⁴

The aim of the Mental Health and Smoking Partnership is to reduce smoking rates among people with a mental health condition to 5% by 2035, with an interim target of 35% by 2020.⁵

Tackling high smoking rates among people with a mental health condition is a national priority and will significantly reduce the burden of preventable morbidity and mortality. The