Component 3 "Smokefree Secondary Care Settings"

Review 7
A review of the barriers and facilitators to implementing smokefree strategies and interventions in secondary care settings

To inform the NICE guidance on:
'Smoking cessation in secondary care: acute and maternity services'
'Smoking cessation in secondary care: mental health services'

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Review Team
Douglas Eadie (University of Stirling)
Laura Macdonald (University of Stirling)
Kathryn Angus (University of Stirling)
Rachael Murray (University of Nottingham)
Alison O'Mara-Eves (Evidence for Policy and Practice Information and Co-ordinating Centre)
Claire Stansfield (Evidence for Policy and Practice Information and Co-ordinating Centre)
Jo Leonardi-Bee (University of Nottingham)

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Abbreviations

ASH	Alice Springs Hospital
BAS	before and after study
BHS	broader health care setting
CAMH	Centre for Addiction and Mental Health
CEO	chief executive officer
CI	confidence interval
CPHE	Centre for Public Health Excellence (in NICE)
CS	case study
EPPI-Centre	Evidence for Policy and Practice Information and Co-ordinating Centre
ER4	Eppi-Reviewer version 4.0 software
ETS	environmental tobacco smoke
FMC	Flinders Medical Centre
FT	full text
GP	general practitioner
HCP	health care professional
HR	human resources
HUG	Highland Users' Group
IARC	International Agency for Research on Cancer
IQR	interquartile ranges
ISM	Institute for Social Marketing
HI	high income [country]
MHS	mental health setting
MMS	mixed methods study
NA	not applicable
NCSCT	National Centre for Smoking Cessation and Training
NICE	National Institute for Health and Clinical Excellence
NHS	National Health Service (UK)
NR	not reported
NRT	nicotine replacement therapy
OR	odds ratio
PRN	*pro re nata* – as required (used as a direction in prescriptions)
QS	qualitative study
RAH	Royal Adelaide Hospital
RCSS	repeat cross-sectional study
Rev 6	Review 6
Rev 7	Review 7
SCSS	single cross-sectional study
SD	standard deviation
SHS	second-hand smoke
TQEH	The Queen Elizabeth Hospital
UAMS	University of Arkansas Medical Sciences University Hospital
UK	United Kingdom
UKCTCS	UK Centre for Tobacco Control Studies
US	Unites States (of America)
USA	United States of America
VA hospital	United States Department of Veterans Affairs hospital
WHO	World Health Organization

Executive summary

The National Institute for Health and Clinical Excellence (NICE) commissioned this review to inform two separate pieces of complementary guidance on smoking cessation in secondary care, one relating to acute and maternity services and the other to mental health services. The guidance will address smokefree policies and smoking cessation and make recommendations on approaches to help secondary care commissioners, professionals and managers working in these two areas of healthcare.

The Health Act 2006 was passed on 16th July 2006 and required that all indoor and substantially enclosed outdoor workplaces and public places in England and Wales became smoke-free by 1st July 2007, specifically banning smoking tobacco. In March 2007, residential mental health settings were given a temporary one year exemption from the implementation date, thus were required to become smoke-free by 1st July 2008. There is no legislative requirement for smokefree grounds in England and Wales, although some individual institutions and Trusts have introduced and trialled policies requiring smokefree grounds.

The aim of this review was to systematically review the barriers to and facilitators for implementing smokefree strategies and interventions in secondary care settings (acute, maternity and mental health settings) from service users' and service providers' perspectives. The initial search and screening stages were combined with a parallel review of the effectiveness of smokefree strategies and interventions in secondary care settings conducted by members of the same research team.

This review aimed to address one overarching question; what are the barriers and facilitators affecting adoption of, support for, and compliance with smokefree policies in secondary care settings?; and was guided by three subsidiary questions:

- How does support for smokefree policy differ by population group, service provider and type of policy?
- What factors have an impact on acceptance of smokefree policies?
- What are the adverse events and other consequences associated with smokefree policies?

Sensitive search strategies were developed by an information specialist in conjunction with the research team and peer-reviewed by information specialists at NICE. Searches were run in February 2012 across 22 databases and 26 selected websites. All of the literature searches were conducted for papers published in English from 1990 onwards.

All study data were uploaded and managed using the EPPI-Centre's online review software. Initial inclusion criteria were refined using four rounds of pilot screening to identify 229 papers for full-text screening from more than 17,000 title and abstract records. Papers were then re-screened in full for relevance and applicability and 53 studies (54 papers) identified for data extraction. Data were extracted and assessed for quality using recommended NICE templates and critical appraisal checklists. At all stages of the screening process two or more members of the researcher team conducted assessments and a third member adjudicated on any unresolved disagreements.

Forty-eight of the included studies were published in academic or practitioner journals, four were published as reports and one was an unpublished report. Nineteen studies used qualitative designs, 29 used quantitative designs and five used a mixed methods approach. The majority (n=20) of the included studies were conducted in the UK: 16 in England, two in Scotland and one in Wales. All of

the included studies were conducted in a high-income country to ensure relevance to UK secondary care settings.

Thirty-one of the 53 included studies were conducted exclusively in mental health settings, all but one of which (n=24) was published in the last decade. The other twenty-two studies were conducted in broader secondary care settings likely to include acute and maternity services. In some cases these studies may also include the views of service users and providers working in mental health services. The overall quality of the included studies was judged to be moderate.

The review provided a large body of qualitative and quantitative data relating to factors affecting the adoption of, support for and compliance with smokefree policies and interventions in secondary care settings. This enabled the team to conduct a narrative synthesis of related evidence incorporating both staff and patient perspectives, leading to the construction of 52 separate evidence statements. Forty-seven of the statements were judged to provide conclusive views-based evidence of barriers and facilitators to implementation of smokefree policy, and included conclusive evidence of seven perceived adverse consequences. The evidence statements are generally judged to have high applicability with the majority (36 out of 52) derived from data drawn predominantly from UK studies.

The evidence statements addressing each review question are as follows:

1. How does support for smokefree policy differ by population group, service provider and type of policy?

1.1 **Facilitator: exposure to the policy brings about a positive shift in levels of staff support.** Eight studies (one UK, seven non-UK), five relating to mental health and three to broader secondary care settings found that staff support for smokefree policy increased post-implementation (**Cormac 2010 [England, MHS, BAS+]; Erwin 1991 [USA, MHS, BAS-]; Haller 1996 [USA, MHS, BAS+]; Matthews 2005 [USA, MHS, BAS-]; Sheffer 2009 [USA, BHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]; Hudzinski 1990 [USA, BHS, BAS+]**). One study conducted in a US mental health setting found that staff support declined post-implementation (**Steiner 1991 [USA, MHS, BAS+]**).

1.2 **Barrier: differences in level of support by smoking status and occupational group.** Nine studies (three UK, six non-UK), four conducted in mental health settings and five in broader secondary care settings, found that staff who smoked were less likely than staff who were non-smokers to support smokefree policy (**Bloor 2006 [England, MHS, SCSS+]**; **Daughton 1992 [USA, BHS, RCSS-]; Donchin 2004 [Israel, BHS, BAS+]; Garg 2009 [England, MHS, SCSS+]; Kannegaard 2005 [Denmark, BHS, RCSS++]; Parks 2009 [England, BHS, SCSS+]; Steiner 2009 [USA, MHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**). Five studies (three UK, two non-UK), two conducted in mental health settings and three in broader secondary care settings found that nurses were less likely to support smokefree policy than other healthcare workers (**Garg 2009 [England, MHS, SCSS+]; Lewis 2011 [Wales, BHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+])**.

1.3 **Inconclusive: exposure to the policy brings about a positive shift in levels of patient support.** One UK study conducted in a mental health setting found that patient support for

smokefree policy increased post-implementation (**Cormac 2010 [England, MHS, BAS+]**), while another study conducted in a broad secondary setting in the USA found that patient support had increased in the short-term (i.e. at 6 months post implementation) but then decreased in the longer-term (i.e. by 12 months support had fallen below pre-implementation levels) (**Hudzinski 1990 [USA, BHS, BAS+]**).

1.4 **Barrier: differences in level of support by patient smoking status.** One US study conducted in a broad secondary care setting found that patients who smoked were significantly less likely than patients who were non-smokers to support a smokefree policy (**Rosen 1995 [USA, BHS, SCSS+])**.

1.5 **Facilitator: greater support for smoking bans where designated smoking areas are provided.** One Australian study found a strong preference amongst staff for a partial outdoor ban incorporating designated smoking areas on hospital grounds (**Jones 2010 [Australia, BHS, SCSS+]**) while two studies (one UK, one non-UK), one conducted with staff and the other with patients found a strong preference for a smokefree indoor policy incorporating designated indoor smoking areas to a total ban on smoking indoors (**Vardavas 2009 [Greece, BHS, SCSS-]; Smith 2008 [England, MHS, SCSS+]**). One UK study conducted in a broad secondary care setting found a marginal preference amongst staff for a total ban on hospital grounds to a partial outdoor ban (**Lewis 2011 [Wales, BHS, SCSS+])**. Of the three studies (two UK, one non-UK) supporting the provision of designated smoking areas, one was conducted in a mental health setting (**Smith 2008 [England, MHS, SCSS+]**) and two were conducted in broader secondary care settings (**Jones 2010 [Australia, BHS, SCSS+]**; **Lewis 2011 [Wales, BHS, SCSS+]**).

1.6 **Barrier: differences in level of support for a total ban on smoking by smoking status and occupational group.** One UK study conducted in a mental health setting found staff who were smokers to be less likely to support a total ban on smoking than staff who were non-smokers, and healthcare and clinical staff to be less likely to support a total ban than managers **(Praveen 2009 [England, MHS, SCSS+]**).

2. What factors have an impact on acceptance of smokefree policies?

2.1 **Barrier: negative association between perceptions of smoking as a right and readiness to support smokefree policy by staff and patients.** Eight studies (six UK, two non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, and six of which were conducted with staff and two with patients, found a negative association between readiness to support smokefree policy and perceptions of smoking as a right (**Johnson 2010 [Canada, MHS, QS++]; Arack 2009 [England, BHS, SCSS-]**; **Kotz 1993 [USA, MHS, CS-]**; **McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**).

2.2 **Barrier: differences in belief by smoking status that smokers' have a right to smoke.** Two UK studies, both conducted in mental health settings, found that staff who smoke are more likely to believe in the 'right to smoke' and are less likely to support the right of non-smokers to be protected from second-hand smoke compared to non-smokers [**Bloor 2006 [England, MHS, SCSS+]**; **Ratschen 2009b [UK, MHS, SCSS++]**).

2.3 **Barrier: negative association between staff perceptions of smoking as a right and providing cessation support.** Two non-UK studies both conducted in mental health settings, found a negative association between perceptions of smoking as a right and staff readiness to provide cessation support to patients (**Drach 2012 [USA, MHS, QS-]; Johnson 2010 [Canada, MHS, QS++]**).

2.4 **Facilitator: positive association between staff recognition of smoking as an addiction and readiness to provide cessation support.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary care setting, reported a belief that staff are more likely to support the provision of cessation treatments when smoking is framed as an addiction or is acknowledged as having an impact on patient physical health worthy of treatment (**McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**; **Schultz 2011 [Canada, BHS, QS++]**].

2.5 **Facilitator: timing implementation to take advantage of prevailing weather conditions.** Two UK studies, both conducted in mental health settings, reported that giving consideration to seasonal weather conditions at the time of implementation may have an impact on smokers willingness to smoke outdoors (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]**).

2.6 **Inconclusive: introducing smokefree policy in one or more steps.** Two UK studies, both conducted in mental health settings, considered the effectiveness of phasing the introduction of smokefree policy against implementing policy in one single step. There was no consensus on the more effective approach. (**McNeill 2007 [Scotland, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**).

2.7 **Barrier: settings where smoking has not previously been contested.** Three studies (one UK, two non-UK), all conducted in mental health settings, attribute difficulties in implementing and acceptance of smokefree policy to policies of this kind being new and smoking not having previously been contested (**Seymour 2000 [England, BHS, CS-]; Karan 1993 [USA, MHS, CS-]**; **Jessup 2007 [USA, MHS, QS++]).**

2.8 **Facilitator: context where smokefree norms are already widely established.** Five studies (two UK, three non-UK), two conducted in mental health settings and three in broader health care settings, suggest that acceptance of smokefree policy is greater where smokefree norms are already established in adjacent communities and where implementation forms part of a broader initiative (**Fitzpatrick 2009 [Ireland, BHS, MMS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Sheffer 2009 [USA, BHS, BAS+]**; **Drach 2012 [USA, MHS, QS-]**).

2.9 **Facilitator: strong leadership.** Five studies (three UK, two non-UK), four conducted in mental health settings and one in a broader secondary care setting, made specific reference to the importance of strong leadership in supporting implementation of smokefree policy, and this was found to be particularly important to securing resources, preparing the service for change and persuading sceptics and detractors**.** (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]; Wareing 2012 [England, MHS, QS+]; Seymour 2000 [England, BHS, CS-]**].

2.10 **Facilitator: clear planning process.** Four studies (three UK, one non-UK), all conducted in mental health settings, highlight the importance of having a clear planning process and sufficient time for policy development, stakeholder consultation, consensus building and preparing the service for change. (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**]. Three studies (two UK, one non-UK), two conducted in a mental health settings and one in a broader secondary care setting, suggest that having in place comprehensive mechanisms for consulting with staff and patients, and informing them of rule changes are also important (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Ratschen 2008 [England, BHS, MHS, MMS+])**.

2.11 **Barrier: lack of staff consultation.** One UK study conducted in a broad secondary care setting illustrates how lack of staff consultation and a failure to listen to staff can hamper implementation [**Seymour 2000 [England, BHS, CS-]**].

2.12 **Facilitator: culture of critical evaluation.** One Australian study conducted in a mental health setting highlights the value of developing a culture of critical evaluation, where staff can review and modify practice in accordance with lessons acquired from implementing policy (**Campion 2008 [Australia, MHS, QS+]**).

2.13 **Barrier: poor management commitment.** Two UK studies conducted in mental health settings illustrate how a lack of management commitment to actively addressing problems with implementation can act as an organisational barrier (**McNeill 2007 [Scotland, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**].

2.14 **Facilitator: easier to enforce in secure mental health facilities compared to open facilities.** Two UK studies reported enforcement of smokefree rules to be easier in secure mental health facilities compared with open facilities, which was attributed to smaller numbers of patients and greater control over patient movement in secure settings [**Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**]. However, despite being more straightforward to enforce in secure settings, three UK studies reported that policing in these settings required additional resources (**McNeill 2007 [Scotland, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.15 **Barrier: willingness to accept responsibility for enforcement.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary care setting, found a reluctance amongst healthcare staff to assume responsibility for escorting patients and enforcing smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]**; **Kotz 1993**

[USA, MHS, CS-]; Shipley 2008 [England, BHS, SCSS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]).

2.16 **Barrier: perceived ability to enforce smokefree policy.** Four studies (three UK, one non-UK), one conducted in a mental health setting and the three in broader secondary care settings, reported that staff felt they lacked confidence in their ability to enforce the policy and in particular to deal with patients who challenged their authority (**Schultz 2011 [Canada, BHS, QS++]**; **Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+])**.

2.17 **Barrier: inadequate guidance and training on dealing with violations.** Six studies (four UK, two non-UK), five conducted in mental health settings and one in a broader secondary care setting, reported instances where staff expressed a need for better guidance and training on how to deal with violations and to de-escalate smoking-related situations (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Campion 2008 [Australia, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.18 **Barrier: lack of clarity and inconsistency in application of rules.** Eight studies (five UK, three non-UK), seven conducted in mental health settings and one in a broader secondary care setting, found that lack of clarity on policy and inconsistencies in the way in which smokefree rules are applied can adversely affect compliance and the wider therapeutic environment (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wareing 2012 [England, MHS, QS+]**; **Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Parle 2004 [Canada, MHS, CS-]; Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-])**.

2.19 **Facilitator: a belief that designated smoking areas are necessary to support compliance.** Four studies (two UK, two non-UK), one conducted in a mental health setting and three in broader secondary care settings, suggest staff support for smokefree policy is predicated on a belief that designated areas are necessary to support compliance (**Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+])**. Two UK studies, both conducted in mental health settings, reported unofficial smoking areas becoming established on hospital grounds in the absence of designated smoking areas [**Ratschen 2009a [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**).

2.20 **Barrier: association between poorly designed smoking areas and poor compliance.** Two UK studies, both conducted in mental health settings, suggest that poor compliance is associated with poorly equipped and positioned smoking areas (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**].

2.21 **Facilitator: association between well-designed smoking areas and good compliance.** Two UK studies, one conducted in a mental health setting and another in a broader secondary care setting, reported a positive association between compliance and well equipped and positioned outdoor smoking areas **Arack 2009 [England, BHS, SCSS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**].

2.22 **Barrier: insufficient staff resources to police smokefree policy on hospital grounds.** Seven studies (six UK, one non-UK), six conducted in mental health settings and one in a broader

secondary care setting, reported a lack of staff resources to escort patients and patrol hospital grounds as a reason for poor compliance (**McNeill 2007 [Scotland, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2009a [England, MHS, QS++]**; **Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]**].

2.23 **Barrier: structural limitations adversely affect compliance and enforcement.** Three UK studies, all conducted in mental health settings, identified poor access to outside areas and large, shared grounds as factors responsible for poor compliance and difficulties in policing (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wareing 2012 [England, MHS, QS+]**].

2.24 **Barrier: emergence of underground markets creates additional challenges for enforcement.** Three studies (one UK, two non-UK), all conducted in mental health settings, report the emergence of an underground market for tobacco products following implementation, with visitors and relatives posing a particular problem in supplying contraband tobacco (**Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**).

2.25 **Facilitator: implementing search policies more straightforward in secure settings.** One UK study conducted in a secure forensic mental health facility reported that reclassifying tobacco as a contraband item had facilitated routine searches of visitors, patients and staff members entering the premises (**Pritchard 2008 [England, MHS, QS++]**).

2.26 **Facilitator: belief that take-up of cessation support can be influenced by the way in which advice is framed.** Three studies (two UK, one non-UK), all conducted in metal health settings, suggest that patients are more likely to engage with cessation services when advice is delivered in a non-coercive manner and is motived by a desire to improve patient health, and not merely to support the smokefree policy (**HUG 2007 [Scotland, MHS, QS-]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Jessup 2007 [USA, MHS, QS++])**.

2.27 **Barrier: belief that take-up of cessation support is dependent upon patient readiness to quit.** One UK study conducted in relation to mental health settings reported that smokefree facilities can act as a trigger to consider quitting but also found patient willingness to engage with cessation support is dependent upon their readiness to stop (**HUG 2007 [Scotland, MHS, QS-]**). Two UK studies, both conducted in mental health settings, found some patients were motivated to take up support for temporary abstinence and to reduce consumption rather than to quit [**Ratschen 2010 [England, MHS, QS++]; Wareing 2012 [England, MHS, QS+]**].

2.28 **Barrier: poor continuity with cessation support in the community.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary care setting, found that poor communication and continuity of support with cessation services in the community made providing cessation support for inpatients as part of a smokefree policy harder to plan and implement [**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Schultz 2011 [Canada, BHS, QS++]; McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**].

2.29 **Facilitator: provision of cessation support for staff.** Two studies (one UK, one non-UK), both conducted in mental health settings, suggest that providing cessation support to staff as well

as patients is important to successful implementation of smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++])**. Two other studies (one UK, one non-UK), both conducted in broader secondary care settings, found that take-up of such services by staff to be low (**Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.30 **Barrier: gaps in provision of cessation resources.** Seven studies (six UK, one non-UK), five conducted in mental health settings and two in broader secondary care settings, reported gaps and inequities in the provision of important cessation resources and support as part of a smokefree policy relating to four mains areas; information materials, pharmacotherapies, trained staff and diversionary activities (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**; **Schultz 2011 [Canada, BHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+])**.

2.31 **Barrier: belief that some mental health patients require special consideration and support.** Eleven studies (seven UK, four non-UK) identified specific types of mental health patient as requiring special consideration and potential exemption status from smokefree policy: long-stay psychiatric patients receiving continuing care who may regard the mental health facility as their home (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**]; cognitively impaired and acutely ill psychiatric patients who have limited capacity to understand and to retain the information surrounding the policy and who can be disruptive and present an increase risk to staff (**McNeill 2007 [Scotland, MHS, QS+]**; **Campion 2008 [Australia, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **Karan 1993 [USA, MHS, CS-]);** and patients being treated for other addictive disorders who may find stopping smoking whilst simultaneously giving up other substances interferes with their treatment and recovery (**Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]; Hill 2007 [England, MHS, SCSS++]**).

3. What are the adverse events and other consequences associated with smokefree policies?

3.1 **Barrier: belief that smokefree policy would adversely affect psychiatric patients' mental health.** Two studies (one UK, one non-UK) found that staff expected smokefree policy to have a negative impact on patient mental health (**Praveen 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**) while two other Canadian studies found that withdrawal of tobacco was believed to risk exacerbating the symptoms of mental illness (**Johnson 2010 [Canada, MHS, QS++]; Parle 2004 [Canada, MHS, CS-]**). Four studies (one UK, three non-UK) found that beliefs about these adverse effects had diminished following implementation of the policy or that the effects were not believed to be as significant as had been anticipated (**Cormac 2010 [England, MHS, BAS+]; Haller 1996 [USA, MHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]; Steiner 1991 [USA, MHS, BAS+]**).

3.2 **Inconclusive: belief that smokefree policy would be beneficial to psychiatric patients' physical health.** Two studies (one UK, one non-UK) found that mental health staff believed smokefree policy would benefit patients physical health (**Praveen 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**), while one UK study reported that psychiatric patients believed it would adversely affect patient physical health, a belief that remained unchanged after implementation (**Cormac 2010 [England, MHS, BAS+]**).

3.3 **Barrier: belief that enforcement of smokefree policy would result in abuse and aggression.** Seven studies (five UK, two non-UK), four conducted in mental health settings and three in broader secondary care settings, reported concerns that enforcing smokefree policy is a potential source of conflict, and could result in abuse and increased risk of assault (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; HUG 2007 [Scotland, MHS, QS-]; Wye 2010 [Australia, MHS, SCSS++]; Shipley 2008 [England, BHS, SCSS+]**). Two UK studies, one conducted in a mental health setting and the other in a broader secondary care setting, reported cases where staff specifically reported not enforcing the policy for fear of conflict (**Ratschen 2009a [England, MHS, QS++]**; **Shipley 2008 [England, BHS, SCSS+]**).

3.4 **Barrier: cases of abuse and aggression can be a feature of implementation but often not at the frequency or severity anticipated.** Five qualitative studies (two UK, three non-UK), four conducted in a mental health setting and one in a broader secondary care setting, reported that fear of abuse and aggression were not realised following the introduction of a smokefree policy (**Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Cooke 1991 [Canada, MHS, CS-]; Parle 2004 [Canada, MHS, CS-]**). Three UK studies conducted in mental health settings reported an increase in incidents related to the introduction of the smokefree policy (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Ratschen 2009a [England, MHS, QS++]; Pritchard 2008 [England, MHS, QS++]**]. However, one of these studies indicated that these changes were restricted to lower level effects such as verbal abuse (**Pritchard 2008 [England, MHS, QS++]**). Similarly, of the two quantitative studies that assessed changes over time for this issue, both of which were conducted in mental health settings, one UK study reported significantly lower numbers of staff expressing concerns after implementation compared to before implementation of the policy (**Cormac 2010 [England, MHS, BAS+]**). The other quantitative study (non-UK) found that while there was agreement that verbal assaults and aggression had increased after implementation there was general disagreement that other more serious incidents such as physical assaults had increased (**Voci 2010 [Canada, MHS, RCSS++]**).

3.5 **Barrier: belief that smokefree policies were damaging to the patient-carer relationship and the therapeutic environment.** Eight studies (five UK, three non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, reported a belief amongst healthcare staff that policing and enforcing smokefree policy was detrimental to establishing therapeutic relationships with patients (**McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008**

[England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]). One UK study conducted in a mental health setting found that staff who smoked were more likely to believe that there were therapeutic benefits to staff smoking with patients than staff who were non-smokers (**Praveen 2009 [England, MHS, SCSS+]**). Three studies (two UK, one non-UK), all conducted in mental health settings, found that smokefree policies could be detrimental to establishing a positive therapeutic environment (**Ratschen 2009a [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]; Kotz 1993 [USA, MHS, CS-])**.

3.6 **Facilitator: belief that smokefree policies can make positive contributions to the patient-carer relationships and therapeutic environment.** One UK mental health study reported that escorting patients to outside areas to smoke can provide new opportunities to interact with patients [**Pritchard 2008 [England, MHS, QS++]**], while another UK study conducted in broader secondary care settings reported that new recreational spaces created from former smoking rooms can have a positive impact on patient behaviour and sense of well-being (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

3.7 **Inconclusive: belief that smokefree policy leads to longer staff breaks and tension between smoking and non-smoking staff.** Three UK studies, one conducted in a mental health setting and two in broader secondary care settings, suggest that smokefree policy leads to staff who are smokers taking more break time (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Wareing 2012 [England, MHS, QS+]**). Two of these studies also report that these changes can lead to tension between smoking and non-smoking staff (**Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]**)**.** Two non-UK studies, both conducted in broad secondary care settings, report that smokefree policy may lead to greater equity in break patterns (**Schultz 2011 [Canada, BHS, QS++]; Sheffer 2009 [USA, BHS, BAS+]**).

3.8 **Barrier: belief that changing break patterns places extra demands on staff resources and disrupts healthcare delivery.** Two studies (one UK, one non-UK), one conducted in a mental health setting and the other in a broader secondary care setting, report that the need to supervise patients smoking, places extra demands on staff time and resources and disrupts patient attendance for treatment and participation in therapeutic activity (**Schultz 2011 [Canada, BHS, QS++]; Wareing 2012 [England, MHS, QS+]**).

3.9 **Barrier: lack of understanding about the interaction between stopping smoking and antipsychotic medication**. Three UK studies, two conducted in mental health settings and one in broader secondary care settings, reported a lack of understanding by staff about the interaction between stopping smoking and dose requirements for antipsychotic medications (**McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+])**.

3.10 **Barrier: belief that smokefree policy has an adverse impact on the amount of medication required by patients.** Two studies (one UK, one non-UK), both conducted in mental health settings, reported that implementation of smokefree policy would result in an increase in the amount of medication required by mental health patients (**Cormac 2010 [England, MHS,**

BAS+]; **Haller 1996 [USA, MHS, BAS+]**), while another study (non-UK), also conducted in a mental health setting, reported general disagreement that smokefree policy would reduce medication use (**Wye 2010 [Australia, MHS, SCSS++]**). However, of the two studies (one UK, one non-UK) that conducted post-implementation follow-up surveys, both found that increases in medication use were believed to be significantly less than had been anticipated (**Cormac 2010 [England, MHS, BAS+]**; **Haller 1996 [USA, MHS, BAS+]**). One further study (non-UK) conducted in a mental health setting found a marginal level of agreement that use of medication had increased following implementation of smokefree policy (**Voci 2010 [Canada, MHS, RCSS++]**), while another qualitative study (non-UK) conducted in a mental health setting reported that use of medication had not increased post-implementation (**Cooke 1991 [Canada, MHS, CS-]**).

3.11 **Barrier: belief that smokefree policy discourages patients from attending for outpatient appointments.** Two studies (one UK, one non-UK) conducted in mental health settings reported concerns by mental health staff and patients that implementing smokefree policy would discourage patients who smoke from attending for outpatient appointments (**Campion 2008 [Australia, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]**). However, patient experiences reported by one of these studies (UK) indicates that any fall-off in attendance to be short-term (**HUG 2007 [Scotland, MHS, QS-]**).

3.12 **Barrier: belief that smokefree policy results in patients refusing admission and discharging against medical advice.** Eight studies (three UK, five non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, reported staff and patient concerns that the implementation of smokefree policy would result in patients refusing admission and treatment, and discharging against medical advice (**HUG 2007 [Scotland, MHS, QS-]**; **Parle 2004 [Canada, MHS, CS-]; McNeill 2007 [Scotland, MHS, QS+]**; **Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Wheeler 2007 [USA, BHS, MMS-]**; **Haller 1996 [USA, MHS, BAS+]**; **Hill 2007 [England, MHS, SCSS++]**). However, in three cases (all non-UK), all relating to mental health settings, examination of patient records failed to indicate any negative impact (**Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]**; **Parle 2004 [Canada, MHS, CS-]**). In three of these cases (one UK, two non-UK), again all relating to mental health settings, staff observations post-implementation were consistent with prior concerns that smokefree policy would have a negative impact on patient retention (**McNeill 2007 [Scotland, MHS, QS+]**; **Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-])**, while in two other cases (both non-UK), one conducted in a mental health setting and the other a broader secondary care setting, concerns about negative impact on patient retention were significantly reduced or no longer existed (**Haller 1996 [USA, MHS, BAS+]**; **Wheeler 2007 [USA, BHS, MMS-]**). One other mental health study (non-UK) found a marginal level of disagreement with statements that elopements' and discharges against medical advice had increased as a result of the smokefree policy (**Voci 2010 [Canada, MHS, RCSS++]**).

3.13 **Barrier: belief that clandestine smoking constitutes an enhanced fire hazard risk.** Eight studies (five UK, three non-UK), seven conducted in mental health settings and one conducted in broader secondary care settings, found that clandestine smoking in

unsupervised, private spaces constituted an enhanced fire hazard risk (**HUG 2007 [Scotland, MHS, QS-]; Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**). Three of these studies (two UK, one non-UK), all related to mental health settings, substantiated these risks with reports of patient injuries, burns found on carpets and furniture, and patients extinguishing cigarettes in a dangerous manner in an attempt to evade detection (**Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**). None of the studies reported fires resulting from clandestine smoking.

3.14 **Barrier: belief that smokefree policy creates additional challenges for patient safety and security.** Eight studies (three UK, five non-UK), four conducted in mental health settings and four in broader secondary care settings, reported staff concerns for patient security and safety relating to patients leaving premises to smoke unsupervised (**Fitzpatrick 2009 [Ireland, BHS, MMS+]; Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Campion 2008 [Australia, MHS, QS+]; Pritchard 2008 [England, MHS, QS++]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Wye 2010 [Australia, MHS, SCSS++]; Ratschen 2008 [England, BHS, MHS, MMS+])**. Two of these studies (one UK, one non-UK), both conducted in broader secondary care settings, reported cases of patients expressing security and safety concerns [**Schultz 2011 [Canada, BHS, QS++]; Ratschen 2010 [England, MHS, QS++]**]. None of the studies provided evidence of any of these concerns being realised.

3.15 **Inconclusive: belief that smokefree policy has a positive impact on the physical environment.** Five studies (one UK, three non-UK), four conducted in mental health settings and one in broader secondary care settings, found that smokefree policy was believed to have a positive impact on the physical environment, for example, through the removal of smoke from rooms, cleaner facilities, fewer smokers on hospital grounds and improved work conditions (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**; **Steiner 1991 [USA, MHS, BAS+]**; **Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]**). Four other studies (two UK, two non-UK), one conducted in mental health settings and three in broader secondary care settings, found that displacement of smoking to perimeter areas following implementation of smokefree policies had an adverse impact on the physical environment through increased congestion and littering around entrances, and people feeling intimidated entering and leaving buildings (**Schultz 2011 [Canada, BHS, QS++]; Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**).

Contents

1. Introduction

The National Institute for Health and Clinical Excellence (NICE) has been requested by the Department of Health to develop two separate pieces of complementary guidance on:

- 'Smoking cessation in secondary care: acute and maternity services' (NICE, 2011a)
- 'Smoking cessation in secondary care: mental health services' (NICE, 2011b).

The guidance will address smokefree policies and smoking cessation and make recommendations on approaches to help secondary care commissioners, professionals and managers (including patients and service users and their family or carers, visitors and staff) in hospitals and other acute, maternity or mental healthcare settings (including emergency care, planned specialist medical care or surgery, and maternity care provided in hospitals, outpatient clinics, community outreach and rural units, as well as intensive services in psychiatric units and secure hospitals).

There are **five components** of work associated with the guidance development that the CPHE has commissioned:

1. Smoking cessation in acute and maternity services: one review of effectiveness and one review of barriers and facilitators (Reviews 2 & 3).
2. Smoking cessation in mental health services: one review of effectiveness and one review of barriers and facilitators (Reviews 4 & 5).
3. **Smokefree strategies and interventions in secondary care settings: one review of effectiveness and one review of barriers and facilitators (Reviews 6 & 7).**
4. An economic analysis (cost effectiveness review and economic model)
5. Review of effects of nicotine in secondary care (Review 1)

This systematic review is Review 7 for Component 3.

Background and rationale

Awareness of the dangers of second hand smoke (SHS) exposure has been accumulating since the 1970s and it is now well established that SHS causes death and disease (IARC, 2004). Indeed in 2002, the World Health Organization declared that SHS was a human carcinogen (WHO, 2005).
For these reasons smokefree policies and legislation have now been introduced in a number of countries including the UK. The White Paper 'Choosing health: making healthier choices easier' (Department of Health 2004) set a requirement for the NHS to become smoke-free by the end of 2006.

In the UK, the implementation of national legislation varied slightly by country. The Health Act 2006[1] was passed on 16th July 2006 and required that all indoor and substantially enclosed outdoor workplaces and public places in England and Wales became smoke-free by 1st July 2007, specifically banning smoking tobacco. In March 2007, residential mental health settings were given a temporary one year exemption from the implementation date, thus were required to become smoke-free by 1st July 2008[2]. In Northern Ireland, the Smoking (Northern Ireland) Order 2006[3] was made on the 14th

[1] *The Health Act 2006 (c.28)*. Online http://www.legislation.gov.uk/ukpga/2006/28/pdfs/ukpga_20060028_en.pdf
[2] *The Smoke-free (Exemptions and Vehicles) Regulations 2007*. Statutory Instruments 2007 No. 765. Online: http://www.legislation.gov.uk/uksi/2007/765/pdfs/uksi_20070765_en.pdf

November 2006, and enacted as being against the law to smoke in enclosed and substantially enclosed workplaces and public places, and in certain vehicles from 30th April 2007. A temporary one year exemption for designated rooms in residential accommodation in mental health units (for patients 16 years and over) ceased to be in effect from 30th April 2008[4]. And in Scotland, the Smoking, Health and Social Care (Scotland) Act 2005[5] was passed on 30th June 2005, and established that, from 26th March 2006, it was an offence to smoke in any wholly or substantially enclosed public space in Scotland. Under the Act, no-smoking premises in Scotland include hospitals, hospices, psychiatric hospitals, psychiatric units and health care premises, however exemptions were put in place on 26th February 2006 for designated rooms in adult care homes, adult hospices and designated rooms in psychiatric hospitals and psychiatric units[6]. (Information regarding the legislative context for other countries is provided in Appendix 1).

The application of smokefree legislation to mental health units in England was legally challenged by three patients in 2008 on the basis that the legislation was incompatible with the human rights of patients detained under Mental Health Act 1983.[7] It was argued that preventing detained mental health patients from smoking, particularly those patients detained on a long-term basis and in mental health units where it is not feasible to permit patients to smoke outdoors, was a breach of Article 8 of the European Convention on Human Rights, the right to respect for private and family life, as the mental health facility could be considered to be their home. A High Court ruling established that smoking is not a basic human right, and did not uphold the patients' challenge.[8]

Smokefree hospitals are a particularly important component of smokefree legislation because in addition to the links between SHS exposure and leading causes of death such as lung cancer and heart disease, evidence also exists of greater risk of preoperative and postoperative complications for smokers. These complications contribute to longer hospital stays and higher treatment costs (SCoTH, 2004). There is a significantly higher prevalence of smoking among people with mental health problems than among the general population (McNeill, 2001).

Most NHS secondary care settings have smokefree policies that apply to their grounds (as well as enclosed areas), although there have been problems with compliance and enforcement (Ratschen et al 2009c; Shipley and Allcock 2008). Achieving smokefree environments in hospital buildings is challenging, as a number of studies have shown (Lawn and Pols, 2005; Kunyk et al, 2007). This is particularly the case for mental health facilities and for this reason not all psychiatric hospitals in the UK (most notably in Scotland) are smokefree. Variability also exists regarding the extent to which hospital grounds are covered by smokefree policies and the extent to which the introduction of smokefree is linked to services to stop smoking for patients and staff (Ratschen et al 2009c).

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[3] *Smoking (Northern Ireland) Order 2006*. Statutory Instruments 2006 No.2957 (NI 20). Online: http://www.dhsspsni.gov.uk/ifh-smoking-ni-order-2007.pdf

[4] *The Smoke-free (Exemptions, Vehicles, Penalties and Discounted Amounts) Regulations (Northern Ireland) 2007*. Statutory Rules of Northern Ireland 2007 No. 138. Online: http://www.dhsspsni.gov.uk/ifh-smoke-free-_exemptions_-vehicles_-penalties-and-discounted-amounts_-regulations-2008.doc

[5] *The Smoking, Health and Social Care (Scotland) Act 2005 (asp 13)*. Online: http://www.legislation.gov.uk/asp/2005/13/pdfs/asp_20050013_en.pdf

[6] *The Prohibition of Smoking in Certain Premises (Scotland) Regulations 2006*. Scottish Statutory Instruments 2006 No.90. Online: http://www.legislation.gov.uk/ssi/2006/90/pdfs/ssi_20060090_en.pdf

[7] *Mental Health Act 1983 (c.20).* Online: http://www.legislation.gov.uk/ukpga/1983/20/pdfs/ukpga_19830020_en.pdf

[8] R (G) v Nottinghamshire Healthcare NHS Trust [2008] EWHC 1096 (Admin). Online: http://www.bailii.org/ew/cases/EWHC/Admin/2008/1096.html; R (N) v Secretary of State for Health; R (E) v Nottinghamshire Healthcare NHS Trust [2009] EWCA Civ 795. Online: http://www.bailii.org/ew/cases/EWCA/Civ/2009/795.html

Secondary care is defined as “acute healthcare and can be either elective care or emergency care. Elective care means planned specialist medical care or surgery, usually following referral from a primary or community health professional such as a GP” (NHS 2011).

The aim of the study is to systematically review the barriers to and facilitators for implementing smokefree strategies and interventions in secondary care settings (acute, maternity and mental health settings) from the users’ and the providers’ perspectives.

Alongside a related systematic review of the effectiveness of smokefree strategies and interventions in secondary care settings (acute, maternity and mental health settings), its purpose is to support the development by NICE of two separate pieces of complementary public health guidance: a) smoking cessation in secondary care: acute and maternity services, and b) smoking cessation in secondary care: mental health services. The reviews will provide the best available evidence on smokefree strategies and interventions in these settings.

Review questions

Question 1: What are the barriers and facilitators affecting adoption of, support for, and compliance with smokefree policies in secondary care settings?

Subsidiary questions:

- How does support for smokefree policy differ by population group, service provider and type of policy?
- What factors have an impact on acceptance of smokefree policies?
- What are the adverse events and other consequences associated with smokefree policies?

The following sections of the review report on the methodology (Section 2); the review findings, structured around the review questions (Section 3); and the Discussion (Section 4). Lists of the included and excluded papers follow this. Finally, the eight appendices are in a separate document.

2. Methodology

The following methodological stages were conducted at the same time for Reviews 6 (Effectiveness) and 7 (Barriers and Facilitators): the search strategy, title and abstract screening, full text retrieval and full text screening stages. The process was then split for the subsequent stages of the two reviews, Review 7 being reported here.

Search strategy

Sensitive search strategies were developed by an information specialist in conjunction with the research team and peer-reviewed by information specialists at NICE, using a combination of controlled vocabulary and free-text terms. The search strategy was initially developed in MEDLINE and was then adapted to meet the syntax and character restrictions of each database. Searches were run in February 2012. All the literature searches were conducted from 1990 onwards. Sample search strategies can be found in Appendix 2.

The following databases were searched:

AMED (Allied and Complementary Medicine)
ASSIA (Applied Social Science Index and Abstracts)
British Nursing Index
CDC Smoking & Health Resource Library database
CINAHL (Cumulative Index of Nursing and Allied Health Literature)
Cochrane Central Register of Controlled Trials (includes the Cochrane Tobacco Addiction Group Specialist Register)
Cochrane Database of Systematic Reviews (CDSR)
Conference Papers Index (years: 2008-2012)
Database of Abstracts of Reviews of Effectiveness (DARE; 'other reviews' in CDSR database)
Database of Promoting Health Effectiveness Reviews (EPPI Centre DoPHER)
EMBASE
Health Evidence Canada
Health Technology Assessment (HTA) database in the CDSR database
HMIC
International Bibliography of Social Sciences
Medline, including Medline in Process
PsycINFO
Social Policy and Practice
Social Science Citation Index and Conference Proceedings Citation Index
Sociological Abstracts
Trials Register of Promoting Health Interventions (EPPI Centre TRoPHI)
UK Clinical Research Network Portfolio Database

The following websites were also searched for research papers relevant to the review questions (see also, Appendix 4):

Action on Smoking and Health (ASH) http://www.ash.org.uk
Association for the Treatment of Tobacco Use and Dependence (ATTUD) www.attud.org

Canadian Council for Tobacco Control*http://www.cctc.ca/cctc/EN/tcrc/articles/tcarticle.2010-12-24.4349020582
CDC tobacco control and prevention* http://www.cdc.gov/tobacco/
Current controlled trials www.controlled-trials.com
Globalink* http://www.globalink.org/
International Tobacco Control Policy Evaluation Project http://www.itcproject.org
International Union against Cancer http://www.uicc.org
Joseph Rowntree Foundation http://www.jrf.org.uk/publications
National Institute on drug abuse- the science of drug abuse and addiction http://www.nida.nih.gov/nidahome.html
NHS Centre for Smoking Cessation and Training http://www.ncsct.co.uk/
NHS Evidence https://www.evidence.nhs.uk/
NICE http://www.nice.org.uk/
Public health observatories http://www.apho.org.uk/resource/advanced.aspx
Scottish Government http://www.scotland.gov.uk/topics/research
Smoke free http://smokefree.nhs.uk
Society for Research on Nicotine and Tobacco http://www.srnt.org
Tobacco Harm Reduction http://www.tobaccoharmreduction.org/index.htm
Tobacco Information Scotland* http://www.tobaccoinscotland.com/page.cfm?pageid=71
Treat tobacco.net http://www.treatobacco.net/en/index.php
UK Centre for Tobacco Control Studies http://www.ukctcs.org/ukctcs/index.aspx
Welsh Government http://wales.gov.uk/
WHO Tobacco Free Initiative (TIF) http://www.who.int/tobacco/en
World Conference on Tobacco or Health abstracts from 2006, 2009, 2012 conferences* http://2006.confex.com/uicc/wctoh/techprogram; http://www.indianjcancer.com/article.asp?issn=0019-509X;year=2010;volume=47;issue=5;spage=109;epage=210;aulast=#Smokefree%20implementation%20and%20enforcement; http://wctoh2012.org
(*Searched in addition to those listed in Reviews 6 and 7's protocols.)

Electronic files of papers identified from Reviews 1, 2, 3, 4 and 5 that have potential relevance— supplied by those project teams— were also screened for eligibility. The bibliographies of other reviews identified by the search strategy were searched for further studies. As noted above, the World Conference on Tobacco or Health abstracts from the 2006, 2009 and 2012 conferences were searched online.

Studies were managed during the review using the EPPI-Centre's online review software EPPI-Reviewer version 4.0 (ER4) (Thomas et al. 2010). An initial de-duplication procedure was run using EndNote software before uploading the records to ER4.

Title and abstract screening

All records from the searches were uploaded into a database and duplicate records were removed. Where no abstract was available, a web search was first undertaken to locate one; if no abstract could be found, records were screened on title alone and full-text documents were retrieved where there was any doubt.

To trial the inclusion criteria, a pilot round of screening was conducted on a random selection of 30 document titles and abstracts. Piloting was conducted by three reviewers. A reconciliation meeting was then held to discuss disagreements and suggest changes to the inclusion criteria. An additional

three rounds of piloting, with random samples of 25, 25, and 113 records, respectively were conducted to further refine the criteria and achieve consensus. By the fourth round of piloting, a high level of agreement was achieved.

Following the pilot screening, 2,200 records (20%) were double screened. The agreement rate for double-screening was 98.3%, which was considered by the project team and NICE to be sufficiently high. As such, the remaining documents were split between the three reviewers who independently screened their allocated records. Of the double-screened items, any disagreements were resolved by a third reviewer. Throughout the entire process, the reviewers discussed difficult and ambiguous records to ensure consistency.

The final inclusion criteria for Reviews 6 and 7 are presented below (also see Appendix 3 for detailed guidance and definitions used for each criterion). The criteria were applied in a hierarchical manner.

1. The document must be published during or after 1990
2. The document must be published in English
3. The document must report on a piece of empirical research
4. The title and/or abstract must refer to smokefree strategies or interventions (including smoking bans, smoking reduction policies, or programs to reduce environmental tobacco smoke)
5. The study (or a component of it) must be conducted in a secondary care setting or with secondary care staff.
6. If the study is conducted in a community or private residence setting, it must explicitly refer to smokefree policies and be clearly relevant to secondary care workers or services in the title and/or abstract
7. The study design must involve a comparison (e.g. controlled trials, before-and-after) and/or views or process evaluation (e.g. interviews, surveys).

If the study met the above criteria and evaluated the effectiveness of an intervention, it was marked as relevant to Review 6. If the study met the above criteria and included evidence on barriers or facilitators (including knowledge, attitudes and beliefs) to using or implementing smokefree policy it was marked as relevant to Review 7.

After the title and abstract screening stage, full text documents were retrieved for the remaining records.

Full text screening

The retrieved full-text documents were all re-screened for relevance and applicability for inclusion in Review 6 and/or 7 on the basis of the detail available in the full-text article.

The full-text screening process was piloted using ten studies and refined using a further ten studies by four reviewers. Following this, the rest of the studies were divided between different pairings of the same four reviewers and all double-coded in batches. Early inter-rater consistency levels were below the agreed cut-off point, thus double-coding between different pairs maintained a more rigorous process. The reviewers met regularly to discuss uncertain inclusions for both Reviews 6 and 7, and disagreements were resolved by group discussion.

The final inclusion criteria for Review 7 (Barriers and Facilitators) are presented below (also see Appendix 5 for detailed guidance and definitions used for each criterion). The criteria were applied in a hierarchical manner and were the same as points 1 to 6, above, then:

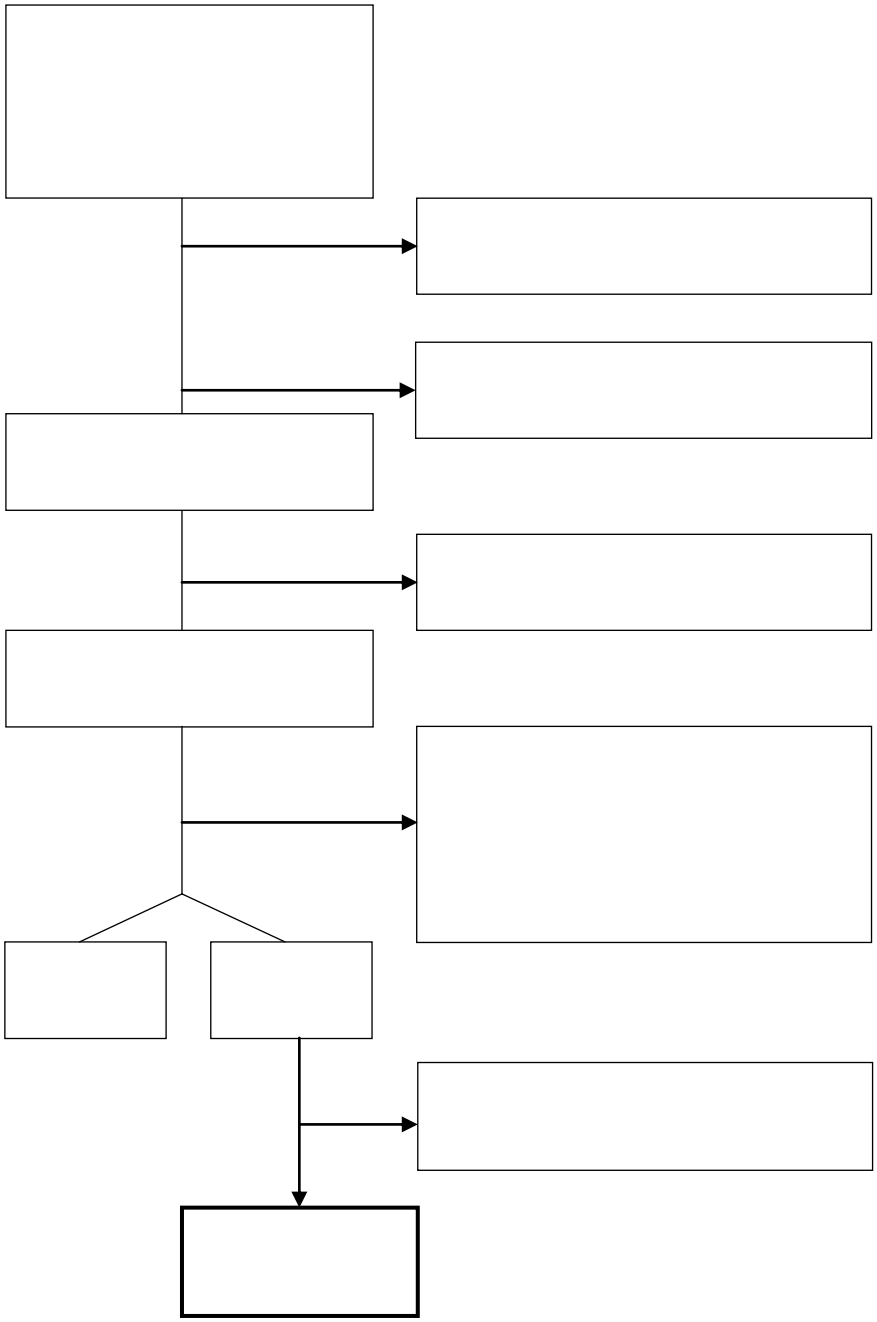
7. The study design must involve views or process evaluation (e.g. interviews, surveys).
8. The study must have been conducted in a high income country as defined by the World Bank (2011) (see Appendix 5 for the list of high income countries used for the purposes of this review).
9. The study must include views (including measures of knowledge, attitudes and beliefs) on any factors that act as barriers or facilitators for secondary care staff in adopting or supporting implementation of smokefree interventions and policies or views (including measures of knowledge, attitudes and beliefs) on any factors that act as barriers or facilitators for service users (including patients and those within their households, carers and service visitors) supporting and complying with smokefree interventions and policies.

The documents that passed the inclusion criteria on the basis of full-text screening were included in Review 7. See Figure 1 for the flow of literature through the review stages.

Data extraction

Data were extracted into an evidence table using the template provided in the methods manual (NICE 2009). Included studies were shared among three reviewers, with the data extracted from the original paper by one reviewer and checked for accuracy by a second. Evidence tables for the included qualitative studies are presented in Appendix 7, and evidence tables for the included quantitative studies are presented in Appendix 8.

Figure 1: Flow of literature chart



1. Teams conducting other reviews to inform guidance on smoking cessation in secondary care.
2. Including an initial de-duplication in EndNote before entering records into Eppi-Reviewer 4 (ER4).
3. Bibliographies' of the reviews were checked for additional relevant studies. Six new studies were identified for full text assessment (two of which were subsequently included in Review 7 (HUG, 2007; Parle, 2004)).

Quality assessment

Included quantitative full-text studies were rated using critical appraisal checklists provided in the methods manual (NICE 2009). Each item on the checklist was coded using the ratings below (see Appendix 6).

++ for that aspect, the study has been designed/conducted in such a way as to minimise the risk of bias
+ the answer is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that aspect
– for those aspects of the study design in which significant sources of bias may persist.
NR not reported
NA not applicable

The full critical appraisal checklists and the score for each checklist item for each study are given in Appendix 6. An overall quality grading score was assigned using the following ratings for internal validity (whether the study's results were unbiased) and external validity (whether the study's findings were generalisable to the source population):

Quantitative: Quality grading for internal validity and external validity

++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
+ Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.
– Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Included qualitative full-text studies were quality assessed using the qualitative studies critical appraisal checklist in the methods manual (NICE 2009). Studies were given an overall rating (see Appendix 6) on the basis of how well the study was conducted using the criteria below. The overall score for each study is reported in the evidence table, and as part of each study's citation.

Qualitative: Overall grading of how well the study was conducted

++ all or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter
+ some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter
- few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

The quality assessment process was piloted with a pair of studies by four reviewers followed by discussions about completion. Each study was rated by one reviewer. Through the process of synthesising the review findings the review team familiarised themselves with the details of all the included studies. Two members for the team then collaboratively considered, calibrated and finalised the scores, with disagreements resolved by a third reviewer.

As part of the quality assessment, a study typology was developed for classification purposes. Six study categories and codes were identified as follows:

- **Qualitative study (QS):** Studies which use one or more qualitative data collection methods.
- **Case study (CS):** Studies which describe policy implementation in one or more sites.
- **Single cross-sectional study (SCSS)**: Studies which take quantitative measures at a single time point either before or after implementation; may also incorporate analysis of open-ended survey questions.

- **Repeat cross-sectional study (RCSS):** Studies which take quantitative measures at multiple time points either all before or all after implementation of smokefree; may also incorporate analysis of open-ended survey questions.
- **Before and after study (BAS):** Studies which take quantitative measures at one or more points before implementation and at one or more points after implementation of smokefree; may also incorporate analysis of open-ended survey questions.
- **Mixed methods study (MMS):** Studies which combine qualitative and quantitative data collection methods.

Synthesis methods

Fifty-three studies (with data extracted from 54 papers), published in English since 1990, were included in Review 7 to answer the review questions on the barriers and facilitators affecting the adoption of, support for and compliance with smokefree policies and interventions in secondary care settings. Full study details are provided in the Evidence Tables (Appendices 6 and 7). Summaries of the studies by date order and country relevance are provided in Table 1a for studies conducted in mental health settings and Table 1b for studies conducted in broader secondary healthcare settings. These table also summaries the smokefree context and patients groups covered by each study. Studies are ordered by type of smokefree policy.

Table 1a: Studies conducted in mental health settings by date order and country relevance

Date Range	UK Setting	Non-UK Setting
1990-2000		**Indoor and outdoor smokefree policy** • Haller 1996 [USA, MHS, BAS+]/ **Inpatients/indoor and outdoor smokefree policy** **Indoor only smokefree policy** • Cooke 1991 [Canada, MHS, CS-]/ **Inpatients/indoor smokefree policy** • Erwin 1991 [USA, MHS, BAS-]/ **Inpatients/indoor smokefree policy** • Karan 1993 [USA, MHS, CS-]/ **Inpatients/indoor smokefree policy** (with requirement for inpatients to be abstinent from tobacco) • Kotz 1993 [USA, MHS, CS-]/ **Inpatients/indoor smokefree policy** • Patten 1995 [USA, MHS, BAS+]/ **Inpatient/indoor smokefree policy** (patients with off-unit privileges, at an appropriate level, were granted brief passes to leave the building unaccompanied to smoke) • Steiner 1991 [USA, MHS, BAS+]/ **Inpatients/indoor smokefree policy**
2001-2005		**Indoor and outdoor smokefree policy** • Parle 2004 [Canada, MHS, CS-]/**Inpatients and outpatients /smokefree indoor and outdoor** **Extent of smokefree policy unclear** • Matthews 2005 [USA, MHS, BAS-]/ **Inpatients/extent of smokefree policy unclear**
2006-2012	**Indoor and outdoor smokefree policy** • Cormac 2010 [England, MHS, BAS+]/ **Inpatients/smokefree indoor and outdoor policy** • Pritchard 2008 [England, MHS, QS++]/**inpatients and outpatients/indoor and outdoor smokefree policy** • Ratschen 2009a [England, MHS, QS++]/ **Inpatients/indoor and outdoor smokefree policy** • Ratschen 2009b [UK, MHS, SCSS++]/ **Inpatients/indoor and outdoor smokefree policy**	**Indoor and outdoor smokefree policy** • Drach 2012 [USA, MHS, QS-]/ **Inpatients/indoor and outdoor smokefree policy** • Jessup 2007 [USA, MHS, QS++]/ **Inpatients/ indoor and outdoor smokefree** (clients were required to abstain from smoking entirely while enrolled in the residential program) • Johnson 2010 [Canada, MHS, QS++]/ **Outpatients/indoor and outdoor smokefree policy** • Steiner 2009 [USA, MHS, SCSS+]/**inpatients and outpatients/indoor and outdoor**

	• Ratschen 2010 [England, MHS, QS++]/ **Inpatients/indoor and outdoor smokefree policy** **Indoor only smokefree policy** • Garg 2009 [England, MHS, SCSS+]/ **Inpatients/indoor smokefree policy** • Hill 2007 [England, MHS, SCSS++]/ **Inpatients/indoor smokefree policy (proposed)** • Mental Health Foundation 2009 [England, MHS, SCSS+]/ **Inpatient/indoor smokefree legislation** • Praveen 2009 [England, MHS, SCSS+]/ **Inpatient/indoor smokefree legislation** • Smith 2008 [England, MHS, SCSS+]/ **Inpatients/indoor smokefree policy** • Wareing 2012 [England, MHS, QS+]/**inpatients and outpatients/indoor smokefree legislation** **Extent of smokefree policy unclear/not applicable** • Bloor 2006 [England, MHS, SCSS+]/**not specified/ extent of smokefree policy unclear** • HUG 2007 [Scotland, MHS, QS-]/ **Outpatients/not applicable** • McNeill 2007 [Scotland, MHS, QS+]/**not specified/not applicable**	**smokefree policy** • Wye 2010 [Australia, MHS, SCSS++]/**Inpatients/indoor and outdoor smokefree policy** **Indoor only smokefree policy** • Campion 2008 [Australia, MHS, QS+]/ **Inpatients/indoor smokefree policy** • Etter 2008 [Switzerland, MHS, BAS+]/ **Inpatients/indoor smokefree policy** • Voci 2010 [Canada, MHS, RCSS++]/**inpatients and outpatients/indoor smokefree policy** (smoking prohibited within a 9 meter radius of any building entrance)

Table 1b: Studies conducted in broader secondary healthcare settings by date order and country relevance

Date Range	UK Setting	Non-UK Setting
1990-2000	**Indoor only smokefree policy** • Seymour 2000 [England, BHS, CS-]/**inpatients and outpatients/indoor smokefree** (some Trusts had policies that included outdoor smoking restrictions)	**Indoor and outdoor smokefree policy** • Hudzinski 1990 [USA, BHS, BAS+]/**not specified/indoor and outdoor smokefree policy** (exclusion: smoking permitted on the acute psychiatry inpatient unit by physician approval) **Indoor only smokefree policy** • Baile 1991 [USA, BHS, SCSS+]/**not specified/indoor smokefree** • Daughton 1992 [USA, BHS, RCSS-]/**not specified/indoor smokefree** • Rosen 1995 [USA, BHS, SCSS+]/**not specified/indoor smokefree policy** • Stillman 1995 [USA, BHS, SCSS+]/**inpatients/indoor smokefree policy** • Tillgren 1998 [Sweden, BHS, QS-]/**inpatients and outpatients/indoor smokefree policy**
2001-2005		**Indoor only smokefree policy** • Donchin 2004 [Israel, BHS, BAS+]/**inpatients and outpatients/indoor smokefree policy** • Kannegaard 2005 [Denmark, BHS, RCSS++]/**not specified/indoor smokefree policy** • Ullen 2002 [Sweden, BHS, RCSS+]/**inpatients and outpatients/indoor smokefree policy**
2006-2012	**Indoor and outdoor smokefree policy** • Lewis 2011 [Wales, BHS, SCSS+]/**inpatients and**	**Indoor and outdoor smokefree policy** • Sheffer 2009 [USA, BHS, BAS+]/**inpatients and**

	outpatients/indoor and outdoor smokefree policy • Parks 2009 [England, BHS, SCSS+]/**inpatients and outpatients/indoor and outdoor smokefree policy** **Indoor only smokefree policy** • Ratschen 2008 [England, BHS, MHS, MMS+]/**inpatients/indoor smokefree** (some Trusts also had outdoor smokefree policies, and some Trusts had exclusions) **Extent of smokefree policy unclear** • Arack 2009 [England, BHS, SCSS-]/**inpatients and outpatients/extent of smokefree policy not reported** • Shipley 2008 [England, BHS, SCSS+]/**inpatients and outpatients/extent of smokefree policy not reported**	**outpatients/indoor and outdoor smokefree policy** • Wheeler 2007 [USA, BHS, MMS-]/**not specified/indoor and outdoor smokefree** (and smokefree vehicles) **Indoor only smokefree policy** • Fitzpatrick 2009 [Ireland, BHS, MMS+]/**inpatients and outpatients/indoor smokefree** (outdoor smokefree impending) • Jones 2010 [Australia, BHS, SCSS+]/**inpatients and outpatients/indoor smokefree** • Patterson 2008 [Canada, BHS, QS++]/**inpatients and outpatients/indoor smokefree** • Schultz 2011 [Canada, BHS, QS++]/**inpatients/indoor smokefree and smokefree doorways** (exclusions: Wards providing palliative, hospice or psychiatric care or care for chemical-dependence) • Vardavas 2009 [Greece, BHS, SCSS-]/**inpatients and outpatients/indoor smokefree policy**

Sample characteristics

Forty-eight of the studies included in this review were published in academic or practitioner journals, four were published as reports and one is an unpublished report. Nineteen of the included studies used designs that provided qualitative evidence and 29 of the studies used a study design that provided quantitative evidence relevant for this review. Five studies produced both qualitative and quantitative data relevant to the review.

Year of publication: Thirteen of the 53 included studies were published in the 1990s, with only one of these (a Swedish study) conducted outside North America (one from 1990, four from 1991, one from 1992, two from 1993, three from 1995, one from 1996 and one from 1998). Forty included studies were published in the last 12 years, with most (n=28) published since 2008 and mostly conducted in European countries (see the country summary below): (one from 2000, one from 2002, two from 2004, two from 2005, one from 2006, five from 2007, seven from 2008, eleven from 2009, six from 2010, two from 2011 and two from 2012).

Country: The majority (n=20) of the 53 included studies were from the **UK**: 16 were conducted in **England** [Seymour 2000 [England, BHS, CS-], Bloor 2006 [England, MHS, SCSS+], Hill 2007 [England, MHS, SCSS++], Pritchard 2008 [England, MHS, QS++], Shipley 2008 [England, BHS, SCSS+], Smith 2008 [England, MHS, SCSS+], Ratschen 2008 [England, BHS, MHS, MMS+], Arack 2009 [England, BHS, SCSS-], Garg 2009 [England, MHS, SCSS+], Parks 2009 [England, BHS, SCSS+], Praveen 2009 [England, MHS, SCSS+], Mental Health Foundation 2009 [England, MHS, SCSS+], Ratschen 2009a [England, MHS, QS++], Cormac 2010 [England, MHS, BAS+], Ratschen 2010 [England, MHS, QS++], Wareing 2012 [England, MHS, QS+]], two in **Scotland** [HUG 2007 [Scotland, MHS, QS-], McNeill 2007 [Scotland, MHS, QS+]], one in **Wales** [Lewis 2011 [Wales, BHS, SCSS+]] and one was not specified [Ratschen 2009b [UK, MHS, SCSS++]]. A further six studies were from Europe, two from **Sweden** [Tillgren 1998 [Sweden, BHS, QS-], Ullen 2002 [Sweden, BHS, RCSS+]] one from **Denmark** [Kannegaard 2005 [Denmark, BHS, RCSS++]], one from **Greece** [Vardavas 2009 [Greece, BHS, SCSS-]], one from **Ireland** [Fitzpatrick 2009 [Ireland, BHS, MMS+]] and one from **Switzerland** [Etter 2008 [Switzerland, MHS,

BAS+]]. Seventeen of the included studies were conducted in the **USA** [Hudzinski 1990 [USA, BHS, BAS+], Baile 1991 [USA, BHS, SCSS+], Erwin 1991 [USA, MHS, BAS-], Steiner 1991 [USA, MHS, BAS+], Daughton 1992 [USA, BHS, RCSS-], Karan 1993 [USA, MHS, CS-], Kotz 1993 [USA, MHS, CS-], Patten 1995 [USA, MHS, BAS+], Stillman, 1995 +, Rosen 1995 [USA, BHS, SCSS+], Haller 1996 [USA, MHS, BAS+], Matthews 2005 [USA, MHS, B&A-], Jessup 2007 [USA, MHS, QS++], Wheeler 2007 [USA, BHS, MMS-], Sheffer 2009 [USA, BHS, BAS+], Steiner 2009 [USA, MHS, SCSS+], Drach 2012 [USA, MHS, QS-]]; six studies were conducted in **Canada** [Cooke 1991 [Canada, MHS, CS-], Parle 2004 [Canada, MHS, CS-], Patterson 2008 [Canada, BHS, QS++], Johnson 2010 [Canada, MHS, QS++], Voci 2010 [Canada, MHS, RCSS++], Schultz 2011 [Canada, BHS, QS++]]; three in **Australia** [Campion 2008 [Australia, MHS, QS+], Jones 2010 [Australia, BHS, SCSS+], Wye 2010 [Australia, MHS, SCSS++]]; and one in **Israel** [Donchin 2004 [Israel, BHS, BAS+]]. It was an inclusion criterion that studies were required to be conducted in a high-income country to ensure relevance to a UK secondary care settings.

Secondary healthcare setting: Thirty-one of the 53 included studies were conducted exclusively in **mental health settings** [Drach 2012 [USA, MHS, QS-], Wareing 2012 [England, MHS, QS+], Cormac 2010 [England, MHS, BAS+], Johnson 2010 [Canada, MHS, QS++], Ratschen 2010 [England, MHS, QS++], Voci 2010 [Canada, MHS, RCSS++], Wye 2010 [Australia, MHS, SCSS++], Garg 2009 [England, MHS, SCSS+], Mental Health Foundation 2009 [England, MHS, SCSS+], Praveen 2009 [England, MHS, SCSS+], Ratschen 2009a [England, MHS, QS++], Ratschen 2009b [UK, MHS, SCSS++], Steiner 2009 [USA, MHS, SCSS+], Campion 2008 [Australia, MHS, QS+], Etter 2008 [Switzerland, MHS, BAS+], Pritchard 2008 [England, MHS, QS++], Smith 2008 [England, MHS, SCSS+], Hill 2007 [England, MHS, SCSS++], HUG 2007 [Scotland, MHS, QS-], Jessup 2007 [USA, MHS, QS++], McNeill 2007 [Scotland, MHS, QS+], Bloor 2006 [England, MHS, SCSS+], Matthews 2005 [USA, MHS, BAS-], Parle 2004 [Canada, MHS, CS-], Haller 1996 [USA, MHS, BAS+], Patten 1995 [USA, MHS, BAS+], Karan 1993 [USA, MHS, CS-], Kotz 1993 [USA, MHS, CS-], Cooke 1991 [Canada, MHS, CS-], Erwin 1991 [USA, MHS, BAS-], Steiner 1991 [USA, MHS, BAS+]]. The majority of these were studies from the UK (n=14), ten were from the USA, four from Canada, two from Australia and one from Switzerland. Most of the included studies conducted in mental health settings were published in the last decade, since 2004 (n=24). Sixteen studies provided quantitative views data and 15 studies in this setting provided qualitative views data.

Twenty-one of the 53 included studies were conducted in secondary care settings that may have also included mental health services or wards but the authors were not specific about this. For the purpose of this review, these settings are referred to as **broader secondary care settings**, and include acute and maternity secondary care [Lewis 2011 [Wales, BHS, SCSS+], Schultz 2011 [Canada, BHS, QS++], Jones 2010 [Australia, BHS, SCSS+], Arack 2009 [England, BHS, SCSS-], Fitzpatrick 2009 [Ireland, BHS, MMS+], Parks 2009 [England, BHS, SCSS+], Sheffer 2009 [USA, BHS, BAS+], Vardavas 2009 [Greece, BHS, SCSS-], Patterson 2008 [Canada, BHS, QS++], Shipley 2008 [England, BHS, SCSS+], Wheeler 2007 [USA, BHS, MMS-], Kannegaard 2005 [Denmark, BHS, RCSS++], Donchin 2004 [Israel, BHS, BAS+], Ullen 2002 [Sweden, BHS, RCSS+], Seymore 2000 -, Tillgren 1998 [Sweden, BHS, QS-], Stillman, 1995 +, Rosen 1995 [USA, BHS, SCSS+], Daughton 1992 [USA, BHS, RCSS-], Baile 1991 [USA, BHS, SCSS+], Hudzinski 1990 [USA, BHS, BAS+]]. The majority of the included studies were from the UK (n=6) and the USA (n=6); the UK studies being published more recently (2000 and 2008-2011) and the USA published over two decades (1990-1995 and 2007-2009). Two studies were from Canada, two from Sweden and one each from Australia, Denmark, Greece, Ireland and Israel. Seventeen studies provided quantitative views data and 9 studies in this setting provided qualitative views data.

One of the studies included in the review collected and reported both quantitative and qualitative data for NHS Acute Trusts and NHS mental health settings separately in the UK [Ratschen 2008 [England, BHS, MHS, MMS+]].

None of the studies included in the review specifically referred to a maternity secondary care setting, however one study was set in a residential perinatal drug and alcohol treatment and recovery services centre [Jessup 2007 [USA, MHS, QS++]].

Study design: Of the 34 included studies which provided relevant quantitative results, all were observational studies. Twenty-three of the studies used a cross-sectional design to collect views data, 10 used a before-and-after design, and one study collected some before-and-after smokefree data and some cross-sectional data. Of the 24 included studies which provided relevant qualitative results, a range of study designs were used and nine used mixed qualitative methods to collect relevant views data. Fifteen studies conducted interviews with participants and seven used questionnaires; six were described as case studies; five studies used observation techniques; three studies used focus groups and one a 'discussion meeting'; and one study used document analysis.

Quality

Qualitative Studies: On the basis of the quality assessment of the 24 studies that used qualitative methods, ten studies were rated as providing low quality (-) qualitative evidence; seven studies were rated as providing high quality (++) qualitative evidence; and seven studies were rated as providing moderate quality (+) qualitative evidence. See Appendix 6 for the quality scores of individual studies.

Quantitative Studies: On the basis of the quality assessment of the 34 studies that used quantitative methods, 23 studies were rated as '+'for overall internal validity; six were rated as '-'for overall internal validity; and five studies were rated as '++'for overall internal validity. Twenty-two studies were rated as '+' for external validity, six studies were rated as '-' and six studies were rated as '++' for external validity. See Appendix 6 for the quality scores of individual studies.

Narrative Synthesis

A narrative synthesis approach is used to address the review's research question 'What are the barriers and facilitators affecting adoption of, support for, and compliance with smokefree policies in secondary care settings?' This broad question is addressed by answering three subsidiary questions:

1. How does support for smokefree policy differ by population group, service provider and type of policy?
2. What factors have an impact on acceptance of smokefree policies?
3. What are the adverse events and other consequences associated with smokefree policies?

The findings of the review are structured around these three subsidiary questions. These were reorganised from those in the Protocol when the final data set was identified, with agreement from NICE. Under each question, short summaries describing the key features of the studies that answer that question are presented. Then, for each question, the identified evidence is presented under appropriate barrier/facilitator sub-themes. Themes and sub-themes were derived from factors relating to acceptance of smokefree policy, including factors affecting adoption of, support for, and compliance with smokefree policies. Initially, the reviewers drew on factors already identified in the

protocol, and some of those acknowledged in findings from a recent implementation guidance document (The Research Shop 2010) to develop a thematic framework which formed the basis for the evidence tables. The data grouped under these themes were then re-read by members of the team and through a process of discussion and synthesis the subsidiary questions were reorganised and the framework gradually refined to identify 18 main themes. In some cases this process involved re-reading the original article in order to better understand the context for some findings. Given the greater diversity of qualitative data, the framework was initially devised to represent these data and then subsequently reassessed and further modified to accommodate the quantitative data. Quantitative outcome measures of views and attitudes included in the review comprise of: attitudes towards current and proposed smokefree regulations; attitudes towards implementation process; beliefs about smoking as a right; challenges anticipated and experienced; and perceived benefits. Qualitative and quantitative evidence is presented separately for each sub-theme. Evidence statements for each sub-theme are given, drawn from both the qualitative and quantitative evidence together. Statements on the applicability of the evidence statements to the UK setting are given. Citations throughout the findings section are of the format: (Lead author, publication date, country, setting code, study type code, internal validity score [for quantitative evidence]/overall quality score [for qualitative evidence]).

3. Findings

Q1: How does support for smokefree policy differ by population group, service provider and type of policy?

Views on support of smokefree policy are grouped under three themes: level of staff support for smokefree policy; level of patient support for smokefree policy; and preferences for type of smokefree policy. Brief summaries of the studies used to answer this research question are given in **Figure 2**.

Figure 2: Question 1 study summaries

Qualitative and quantitative evidence

Arack 2009 [England, BHS, SCSS-] conducted a survey to explore the effect of a complete smoking ban at an NHS Trust, focusing on staff attitudes, staff compliance, and staff smoking behaviour. The survey took place 17 months after implementation of the ban. A total of 160 staff were recruited to take part in the survey through opportunity sampling. Outcome measures were support for smoking ban, and opinions about enforcement of the ban. Thematic analysis was used to identify the main themes emerging from responses to the survey's open-ended questions.

Fitzpatrick 2009 [Ireland, BHS, MMS+] carried out a survey of staff and patient attitudes at an acute general hospital with an indoor ban in place, and plans to transition to a complete campus-wide ban. A total of 295 patients and 225 staff took part in the study. The relevant attitudinal result was support for the planned introduction of a campus-wide ban. In addition, short 5-15 minute attitudinal interviews were conducted with smoking patients (n=28) and staff (n=30).

Ratschen 2008 [England, BHS, MHS, MMS+] explored the impact and challenges of implementation of smokefree policy in NHS acute and mental health Trusts. Questionnaire based surveys were sent to all NHS acute and mental health Trusts, of which representatives from 186 Trusts completed questionnaires (72 mental health trusts and 114 Acute Trusts). At the time of the survey, the majority of Trusts had implemented smokefree policies. Relevant attitudinal results included: views about experience of staff support; views about the effect of smokefree on patient mental health (mental health settings only); beliefs about the effect of smokefree on patient medication needs (mental health settings only); views about the effect of smokefree policies on the staff-patient relationship; views about enforcement and compliance. Questionnaires were supplemented with semi-structured telephone interviews with 22 respondents and direct observation at a sample of 15 Trusts (22 different sites).

Sheffer 2009 [USA, BHS, BAS+] explored the attitudes and beliefs of hospital CEOs (Chief Executive Officers)/administrators in one US State towards smokefree legislation 6 months before (n=84) and 1 year after (n=68) legislation became effective. The surveys assessed support for the legislation, support for and resistance to smokefree anticipated/experienced from stakeholders (staff, patients, visitors etc.), and views about the challenges of implementing the legislation. The surveys included a number of open-ended questions.

Wheeler 2007 [USA, BHS, MMS-] evaluated the impact of a total smoking ban at a university hospital (site 1), and an employee smoking ban at a private children's hospital on the hospital campus (site 2). Staff were surveyed at site 1 three months before implementation of the ban (n=842) and 10 months after implementation (n=912). Staff were surveyed at site 2 two months after implementation of the staff smoking ban (n=183). The surveys assessed: support for policy; belief that the policy would make/made the site healthier and safer; belief that the policy would set/set a good example for patients. In addition, focus group discussions were conducted with supervisors (n=7) and security personnel (n=4), and key informant interviews were carried out with hospital administrators (n=8) at site 1 after implementation of the ban.

Quantitative evidence only

Bloor 2006 [England, MHS, SCSS+] conducted a questionnaire survey to investigate the impact of a smokefree policy in a newly opened English mental health hospital on the smoking behaviour and attitudes of nursing staff. A total of 92 nurses completed the questionnaire. Relevant outcome measures were support for ban, beliefs about right to smoke, and attitudes towards enforcement of the policy.

Cormac 2010 [England, MHS, BAS+] evaluated the impact of a total smoking ban in a high security long-stay psychiatric hospital. Postal surveys of staff were conducted at two time points: 1 pre-implementation (n=1038), and 1 post-implementation (n=670). Relevant outcome measures were support for the ban, beliefs about the effect of the ban on

patient aggression and patient management, beliefs about the effect of the ban on patient medication needs. Postal surveys of patients were conducted at two time points: 1 pre-implementation (n=175), and 1 post-implementation (n=115). Relevant outcome measures were support for ban, and beliefs about the effect of the ban on patient and physical and mental health.

Daughton 1992 [USA, BHS, RCSS-] explored the effects of an indoor smoking ban in a hospital on hospital employees. The first survey was conducted 5 months before policy implementation (n=1070), and the follow up was carried out 17 months after implementation (n=88). Relevant attitudinal outcome measures were support for the ban, and views about the perceived difficulty complying with the ban.

Donchin 2004 [Israel, BHS, BAS+] evaluated the implementation of an indoor smoking ban at a university hospital. Staff surveys were carried out 3 months before implementation (n=368), and 6-9 months post implementation (n=364). Simple random sampling was used to select participants. Relevant attitudinal outcome measures were attitudes towards extant hospital smoking regulations, and attitudes towards smoking in the workplace.

Erwin 1991 [USA, MHS, BAS-] assessed the attitudes of nursing staff (n=29) of two inpatient psychiatric wards to the implementation of smokefree policy. Questionnaire surveys were carried out before implementation, 1 week after implementation, and 4 weeks after implementation. The relevant attitudinal result was staff support for smokefree policy.

Etter 2008 [Switzerland, MHS, BAS+] compared the attitudes of staff and patients towards a partial smoking ban and a complete smoking ban in two adult psychiatric units. Questionnaire surveys were carried out at 2 time points: before implementation of the indoor ban (n=106: n=49 patients, n=57 staff); after implementation of complete ban (n=134: n=77 patients; n=57 staff). Relevant outcome measures were attitudes towards extant smoking restrictions, and knowledge and understanding of hospital smokefree policy.

Garg 2009 [England, MHS, SCSS+] explored staff attitudes towards an indoor smoking ban at a medium secure psychiatric unit. Staff (n=116) were interviewed 4 months after policy implementation. Relevant outcome measures were: support for the ban; beliefs about the success of implementation; and views about positive effects of the ban.

Haller 1996 [USA, MHS, BAS+] studied the effects of a complete smoking ban in a locked psychiatric unit. Staff and patients were surveyed 1 month before implementation (staff n=67; patients n=21). Staff were also surveyed 1 month after implementation (n=53), and patients were surveyed 2-4 months after implementation (n=93). The survey measured attitudes towards the ban, and its perceived impact on patients and the ward.

Hudzinski 1990 [USA, BHS, BAS+] assessed staff and patient support for a smoking ban in a healthcare institution. Questionnaire surveys were mailed to all staff and to randomly selected patients at three time points: 6 months before implementation of the ban (n=607 patients, n=1946 staff); 6 months after implementation of the ban (n=397 patients; n=1608 staff); 12 months after implementation of the ban (n=600 patients; n=684 staff).

Jones 2010 [Australia, BHS, SCSS+] carried out questionnaire surveys to assess staff attitudes towards smoking on hospital grounds at a general hospital with an indoor ban in place, and compared this with staff attitudes at three other Australian hospitals that also had indoor bans. Specifically, a questionnaire survey was used to assess staff views on the acceptability of visible smoking areas on hospital grounds, support for a complete ban, and support for providing smoking areas.

Kannegaard 2005 [Denmark, BHS, RCSS++] investigated staff attitudes towards smoking restrictions at a hospital. Surveys were conducted at two time points, both before implementation of a total smoking ban. A total of 729 staff took part in the first survey, and 729 staff also took part in the second survey. The surveys assessed satisfaction with hospital smoking restrictions, and attitudes towards the implementation of sanctions towards staff who do not comply with these restrictions.

Lewis 2011 [Wales, BHS, SCSS+] assessed staff support for smokefree policy, and policy preferences in a health board with a total smoking ban in place. Five hundred staff were recruited to take part in the survey using opportunistic sampling.

Matthews 2005 [USA, MHS, B&A-] evaluated the implementation of a smoking ban on an acute psychiatric unit for men. Staff were surveyed before (n=14) and after implementation of the ban (n=13). The surveys covered beliefs about benefits of the ban, beliefs about the ethics of the ban, and views about the problems anticipated/experienced as a result of the ban.

Parks 2009 [England, BHS, SCSS+] assessed staff attitudes at a hospital with a total smoking ban in place. A total of 704 staff took part in the survey. Specifically, the survey assessed support for the hospital's policy, awareness of the policy,

beliefs about enforcement, and beliefs about the beneficial effects of smokefree policy in terms of protecting people from second hand smoke.

Patten 1995 [USA, MHS, BAS+] evaluated the effects of the implementation of a total smoking ban at an adult locked in-patient psychiatric unit. Staff were surveyed 6 months before implementation (n=137) and 6 months after implementation (n=126). The surveys assessed staff support for the smokefree policy, and views about expected/observed success of implementation.

Praveen 2009 [England, MHS, SCSS+] explored staff (n=308) attitudes towards an impending indoor smoking ban at three in-patient mental health units. Relevant attitudinal results were staff views about where staff and patients should be allowed to smoke, beliefs about whether staff should be allowed to smoke with patients, and beliefs about the effects of smokefree on patient mental and physical health.

Rosen 1995 [USA, BHS, SCSS+] carried out a survey to explore patient (n=329) attitudes to smokefree policy at a teaching hospital with an indoor smoking ban in place. A survey assessed patient satisfaction with the policy, preferred smokefree policy, and knowledge and understanding of the policy.

Smith 2008 [England, MHS, SCSS+] assessed patient (n=135) smoking policy preferences in thirteen mental health wards in an NHS Trust with an impending indoor smoking ban.

Steiner 1991 [USA, MHS, BAS+] assessed staff and patient attitudes towards smokefree policy at a mental health day hospital. Surveys were carried out 1 week prior to a move to new smokefree premises (n=17 patients; n=15 staff), and two weeks after the move (n=15 patients; n=17 staff). The surveys assessed staff and patient support for the policy, and beliefs about the effect of the move to a smokefree facility on patient mental health.

Steiner 2009 [USA, MHS, SCSS+] assessed staff (n=175) support for an impending complete smoking ban at a mental health facility.

Stillman 1995 [USA, BHS, SCSS+] examined smoking inpatient's knowledge of, attitude towards, and compliance with an indoor smoking ban at a 1,000 bed urban teaching hospital in Maryland. Patients (n=504) were interviewed within 3 days of being admitted to the hospital.

Ullen 2002 [Sweden, BHS, RCSS+] assessed staff satisfaction with smoking restrictions at a large university hospital with an indoor smoking ban in place. Forty-one heads of department and 517 hospital employees took part in the study.

Vardavas 2009 [Greece, BHS, SCSS-] assessed staff (n=100) support for smokefree hospitals and staff smokefree policy preferences at a large university hospital with an indoor smoking ban.

Voci 2010 [Canada, MHS, RCSS++] explored staff attitudes towards and experiences of implementation of an indoor and partial-outdoor smoking ban at a centre for mental health and addiction at two time points after policy implementation: 2-7 months after implementation (n=430); and 31-33 months after implementation (n=400). The surveys assessed: support for the policy; beliefs about the beneficial effects of smokefree policy on the hospital environment; views about the right to smoke/right to be protected from second hand smoke; beliefs about the effect of smokefree policy on patient mental and physical health; beliefs about the effect of smokefree policy on patient aggression and patient management; beliefs about the effects of the policy on patient medication needs; beliefs about the effect of the policy on safety; and beliefs about the effect of the policy on patient retention.

Wye 2010 [Australia, MHS, SCSS++] explored staff attitudes towards an impending total smoking ban at a psychiatric inpatient hospital. A total of 183 staff were surveyed 2 weeks before the ban was due to be implemented. As well as assessing staff support for the ban, the survey assessed beliefs about the potential effects of the ban on: patient physical health; patient mental health; patient management and patient aggression; patient medication needs; staff working conditions; patient quality of life; quality of care; staff workload; rapport between patients; and hospital safety. The study also explored clinician views about perceived barriers to implementation of the policy.

1.1 Level of staff support for smokefree policy

Qualitative findings

No qualitative evidence was identified relating to this theme

Quantitative findings

Twenty-five quantitative studies assessed levels of staff support for smokefree policy (**Arack 2009 [England, BHS, SCSS-]; Bloor 2006 [England, MHS, SCSS+]; Cormac 2010 [England, MHS, BAS+]; Daughton 1992 [USA, BHS, RCSS-]; Donchin 2004 [Israel, BHS, BAS+]; Erwin 1991 [USA, MHS, BAS-]; Etter 2008 [Switzerland, MHS, BAS+]; Fitzpatrick 2009 [Ireland, BHS, MMS+]; Garg 2009 [England, MHS, SCSS+]; Haller 1996 [USA, MHS, BAS+]; Hudzinski 1990 [USA, BHS, BAS+]; Jones 2010 [Australia, BHS, SCSS+]; Kannegaard 2005 [Denmark, BHS, RCSS++]; Lewis 2011 [Wales, BHS, SCSS+]; Matthews 2005 [USA, MHS, BAS-]; Parks 2009 [England, BHS, SCSS+]; Patten 1995 [USA, MHS, BAS+]; Ratschen 2008 [England, BHS, MHS, MMS+]; Steiner 1991 [USA, MHS, BAS+]; Steiner 2009 [USA, MHS, SCSS+]; Ullen 2002 [Sweden, BHS, RCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]; Wheeler 2007 [USA, BHS, MMS-]; Wye 2010 [Australia, MHS, SCSS++]).** These studies are summarised in the **Table 2**.

Table 2: Data summaries for studies measuring staff support for smokefree

Study details **Country** **Where** **Study design** **(when measured)**	**Sample** **Total sample** **Sample characteristics**	**Staff support for smokefree**
Arack (2009) England Isle of Wight NHS Acute Trust. **Cross-sectional study** (2007. After smokefree implementation)	Total sample: n=160 staff 48.4% never smokers, 27% ex-smokers, 19.5% smokers, 5% occasional smokers. Occupational groups: 38% nursing, 30.9% admin/clerical, 17.8% allied health professions, 2.0% science and professional, 5.3% technical, 3.9% medical, 1.3% auxiliary.	78.3% of respondents supported the smoking ban on hospital grounds.
Bloor (2006) England A modern, purpose-built psychiatric unit in Stoke on Trent. **Cross-sectional study** (After smokefree implementation)	Total sample: n=92 Nursing grade A–D 44.6% (n=41), Nursing grade E 25.0% (n=23), Nursing grade F 7.6% (n=7), Nursing grade G 7.6% (n=7), Nursing grade H 1.1% (n=1), Nursing grade I n=0, Senior Manager n=0, Did not specify 14.1% (n=13); Smokers 34.78%, Former Smokers 34.78%, Never smokers 30.43%; <21 years n=0, 21-30 years 22.8% (n=21), 31-40 years 29.3% (n=27), 41-50 years 31.5% (n=29), >50 years 16.3% (n=15); Male 33.7% (n=31), Female 65.2% (n=60), Did not specify 1.1% (n=1); White 97.8% (n=90), Mixed race n=0, Asian/British n=0, Black/Black British 2.2% (n=2), Chinese/other n=0.	Overall, 57.7% nursing staff respondents (40.61% smokers, 62.6% former smokers and 71.4% never smokers) agreed with the statement "A restrictive smoking policy in hospitals is a good idea". Overall, 44.6% nursing staff respondents (15.61% smokers, 53.1% former smokers and 53.6% never smokers) agreed with the statement "I support the smoking policy of the Health Trust". Overall, 41.3% nursing staff respondents (59.1% smokers, 43.7% former smokers and 46.5% never smokers) agreed with the statement "Health Trusts have to fulfil an exemplary role in the field of worksite non-smoking policies". No further statistical information is available.
Cormac (2010) England A high secure, long-stay psychiatric hospital for patients with complex mental health disorders who are a grave and immediate danger to the public or themselves (the majority have committed serious offences). **Before-and-after study**	Total sample: Staff n=1038 (pre-ban) n=670 (post-ban) Pre-ban: 46% male, 23% smokers pre-ban, 61% nursing staff. Post-ban: 38% male, 22% smokers pre-ban, 54% nursing staff.	In favour of the ban: Pre-ban 528/1038 (50.9%). Post-ban 404/670 (60.3%). Changed in favour of smokefree. No further statistical information is available.

(Feb 2007: before smokefree implementation. July 2007: after smokefree implementation)		
Daughton (1992) USA, Nebraska A hospital (no further details given). **Cross-sectional study** (2 timepoints after smokefree implementation: 5 months post-implementation; 17 months post-implementation)	Total sample: Survey 1: n=1070; Survey 2: n=88 Survey 1: n=589 non-smokers, n=284 ex-smokers (self-report abstinent for >5 months prior to ban announcement), n=16 ban-year quitters (self-report abstinent for ≥3 months), n=181 smokers (n=55 light smokers <10 cigs/day, n=110 moderate smokers 10-29 cigs/day, n=22 heavy smokers ≥30 cigs/day). Occupations (of those who identified themselves) included: physicians, nurses, cafeteria workers, painters, mail room clerks, laboratory technicians, administrators, secretaries, researchers and environmental service workers.	Support for the smoking ban: Five months after implementation of a total indoor ban on smoking, and one year after it was announced, 89% non-smokers staff (n=523), 86% ex-smokers (those who quit before the ban was announced) (n=245), 81% of ban-year quitters (n=13) and 45% smokers (n=82) supported the ban. Significant sub-group differences: Five months after implementation of a total indoor ban on smoking, only 27% of heavy smokers staff (≥30 cigs/day) (n=6) compared with 64% of light smokers (<10 cigs/day) (n=34) favoured the policy ($p<0.05$). Five months after implementation of a total indoor ban on smoking, 74% staff smokers who wanted to stop smoking "a lot" (n=26) compared with only 15% smokers who did not wish to quit (n=8), supported the ban ($p<0.001$). Long-term support for the smoking ban: Seventeen months after implementation of a total indoor ban on smoking at the hospital, and 2 years after the policy was announced, 82% staff smokers who completed the both surveys (n=72) maintained their original support for the ban. 16% changed their (n=14) changed from position of non-support 5 months post-implementation to support for the policy one year later.
Donchin (2004) Israel A 959-bed university hospital in Jerusalem, employing over 3,700 salaried workers and accommodating 42,580 inpatients and 201,185 outpatient visits (2001). **Before-and-after study** (3 months before smokefree implementation. 6-9 months post-implementation).	Total sample: n=368 staff (pre-policy), n=364 (post-policy) Doctors and dentists 17.1% (pre-) 13.5% (post-), nurses 27.4% 31.9%, administrators and clerks 14.9% 17.0%,technicians 28.0% 26.6%, unskilled workers 12.5% 11.0%; <35 years 23.1% (pre-) 22.5% (post-), 35– 44 years 26.9% 28.3%, 45–54 years 29.3% 27.7%, 55+ years 20.7% 21.4%; Males 36.1% (pre-) 30.2% (post-); 0-12 years of education 23.2% (pre-) 25.4% (post-), 13-15 years of education 23.5% 18.5%, 16+ years of education 53.3% 56.1%. Smoking status: current smokers 19% (pre-) 19.5% (post-), past smokers 12.5% 19.5%.	Attitudes towards smoking in the workplace (% agreement with the statement "The hospital should be completely smokefree"): There were differing response rates from smokers and non-smokers in both the pre- (45.7% and 84.5%, respectively) and post-policy surveys (60.0% and 87.0%, respectively) ($p<0.0001$) with smokers being less likely to agree with the statement, "The hospital should be completely 'smokefree'". The increase in smokers who agreed with this statement from pre- to post-policy was not statistically significant. In the pre-policy survey, controlling for personal smoking status, unskilled workers and clerks were most likely to agree with the statement, "The hospital should be completely 'smokefree'", while doctors, nurses, and technicians were least likely to (no data reported).
Erwin (1991) USA, Illinois A US Dept. of Veterans Affairs hospital in an urban centre in Illinois. Two 21-bed acute care psychiatric wards for veterans. **Before-and-after study** (3 timepoints: pre-implementation [no date given]; 1 week post implementation; 4 weeks post-implementation)	Total sample: n=29 66% (n=19) registered nurses, 17% (n=5) licensed practical nurses, 17% (n=5) nurses aides	Nursing staff support for a smokefree ward: Pre-implementation, 44% Ward A nursing staff and 61% Ward B nursing staff reported to prefer a smokefree ward. One week after smokefree implementation support for a smokefree ward was 60% Ward A and 60% Ward B, and 63% Ward A and 60% Ward B 4 weeks after smokefree implementation. (No p values calculated)
Etter (2008) Switzerland Two in-patient, adult units of	Total sample: 2003 (no ban: n=57 staff, 2006 (total ban): n=57 staff	Opinion of rules about smoking: Between 2003 (no ban) and 2006 (total ban), there was a significant increase in the percentage of staff reporting that

the Psychiatry Department of the Geneva University Hospitals: an admission and short-stay unit (16 beds) and a medium-stay unit (16 beds). **Before-and-after study** (Before implementation of smokefree – multiple timepoints: Oct 03 [pre ban], Apr 04 [2 months post-partial ban], Dec 05 [20 months post-partial ban/pre-total ban] After implementation – single timepoint: Mar-May 06 [3-5 months post-total ban])	2003 (no ban): mean age 38.8 years; 64.9% Ever smoked 100+ cigarettes, Daily smokers 26.3%, Occasional (non-daily) smokers 7.0%, Former smokers 22.8%, Never smokers 43.9%. 2006 (total ban): mean age 40.7 years; 57.9% Ever smoked 100+ cigarettes, Daily smokers 26.3%, Occasional (non-daily) smokers 7.0%, Former smokers 22.8%, Never smokers 43.9%.	"Rules about smoking at the hospital are too strict" (7.0% to 59.6%, p<0.001), there was a decrease in the percentage of staff reporting that "Rules about smoking at the hospital are adequate" (71.9% to 36.8%, p value not reported).
Fitzpatrick (2009) Ireland Acute general hospital with between 350 and 520 in-patient beds. **Cross-sectional study** (2006. Before implementation of smokefree)	Total sample: Staff: n=225	Would you agree with the introduction of a total campus-wide smoking ban indoor and outdoor? Yes: 52.4%, No: 38.2% , Don't know: 9.3% If it was introduced, would you support its implementation? Yes: 74.7%, No: 14.2%, Don't know: 11.1%
Garg (2009) England A 90 bed regional medium secure psychiatric unit in West Yorkshire. **Cross-sectional study** (After implementation of smokefree)	Total sample: n=116 60% qualified nurses (n=70), 29% unqualified nursing staff (n=34), 10% doctors/psychiatrists (n=12) 39% men (n=45), mean age 37 (SD 9.62) years, 30% (self-reported) current smokers (n=35). Current smokers: psychiatrists 16.7%, qualified nurses 34.3%, unqualified nurses 26.5%. There were no statistical differences in smoking rates between the doctors and the nurses (p=0.34) or between qualified and unqualified nursing staff (p=0.5).	Support for the smoking ban: 75% psychiatrists (9/12) and 62.5% nursing staff (qualified and unqualified) (65/104) answered yes, they support the smoking ban. There was no significant difference between the views of psychiatrists and nursing staff (p=0.53). Smokers were significantly less likely to support the ban than nonsmokers (p = 0.0001).
Haller (1996) USA, California A 16-bed locked inpatient unit in San Francisco, CA, with a 2 week mean length of stay. **Before-and-after study** (1 month pre-implementation. 1 month post-implementation)	Total sample: n=67 (pre-ban) n= 53(post-ban) Occupation: nurses 36 (pre-ban) 32 (post-ban), physicians 13 (pre-) 6 (post-), other staff 18 (pre-) 15 (post). Current smokers 5 (pre-) 4 (post-).	Pre-ban implementation, 57% staff (38/67) agreed that smoking should be entirely banned in a hospital setting, rising to 70% (37/53) agreement post-ban. Sub-group comparisons: After the ban implementation, patients were significantly more likely than staff to disagree that smoking should be entirely banned in a hospital setting (t=-3.45, df=144, p<0.001).
Hudzinski (1990) USA, Louisiana A health care institution (clinic and medical foundation) with inpatient units employing staff physicians and psychologists. **Before-and-after study** (3 timepoints: 6 months pre-implementation; 6 months post-implementation; 12 months post-implementation)	Total sample: n=1946 (pre-ban), n=1608 (6m post-ban), n=684 (12m post-ban) At 12 months follow-up: 18% physicians 82% other employee; 4% <35years, 29% 35-44 years, 27% ≥45 years; 29% male.	Support for the ban: Pre-policy, 77% of all hospital staff favoured the no-smoking policy, 75% favoured the policy 6 months after implementation, increasing to 84% of all hospital staff who favoured the policy 12 months after implementation (p<0.001).
Jones (2010) Australia Four South Australian/Northern Territory hospitals. Royal Adelaide Hospital (RAH): approximately 550 beds. Flinders Medical Centre (FMC):	Total sample: Not reported.	Area should be provided (%): ASH 92.9%; FMC 92.4%; RAH 87.7%; TQEH 92.1%. Support complete ban (%): ASH 5.5%; FMC 14.3%; RAH 19.9%; TQEH 15.0%. Not acceptable to smoke visibly (%): ASH 45.3%; FMC 67.6%; RAH 57.6%; TQEH 62.0%.

approximately 480 beds. The Queen Elizabeth Hospital (TQEH): approximately 320 beds. Alice Springs Hospital (ASH) **Cross-sectional study** (After implementation: FMC and ASH – 2004; RAH – 2005; TQEH – 2007)		
Kannegaard (2005) Denmark A Danish hospital. **Cross-sectional study** (2 timepoints before implementation of non-smoking policy: June 1999; June 2001).	Total sample: 1999: n=729, 2001: n=729 Approximately 85% of the staff are women and almost 15% were men in both studies. In 1999, 33% of the staff answered that they were smokers, while in 2001 only slightly more than 26% were smoking daily or nondaily.	Satisfaction with prohibition on smoking in the hospital compared with smoking status of responder [( ) indicates the actual number; P < 0.0005 in 1999 and 2001.] 1999 Smoker, daily: satisfied 48.5% (N = 94); not satisfied 51.5% (N = 100); total 100.0% (N = 194); Smoker, non-daily: satisfied 87.8% (N = 36); not satisfied 12.2% (N = 5); total 100.0% (N = 41); Ex-smoker: satisfied 88.2% (N = 157); not satisfied 11.8% (N = 21); total 100.0% (N = 178); Never smoked: satisfied 95.2% (N = 277); not satisfied 4.8% (N = 14); total 100.0% (N = 291); Total: satisfied 80.1% (N = 564); not satisfied 19.9% (N = 140); total 100.0% (N = 704) 2001 Smoker, daily: satisfied 21.1% (N = 43); not satisfied 70.9% (N = 105); total 100.0% (N = 148); Smoker, non-daily; satisfied 90.3% (N = 28); not satisfied 9.7% (N = 3); total 100.0% (N = 31); Ex-smoker: satisfied 87.2% (N = 164); not satisfied 12.8% (N = 24); total 100.0% (N = 188); Never smoked; satisfied 96.6% (N = 311); not satisfied 3.4% (N = 11); total 100.0% (N = 322); Total: satisfied 79.2% (N = 546); not satisfied 20.8% (N = 143); total 100.0% (N = 689).
Lewis (2011) Wales All seven hospitals of Hywel Dda Health Board, providing health care to a population of around 372 000 people in Wales. **Cross-sectional study** (After smokefree implementation)	Total sample: n=500 The mean (SD) age of the responders was 36.4 (11.9) years (range 18–70); 72% were female. Overall, 7% of responders said they were current smokers, 21% were ex-smokers and 71% reported never smoking (defined as fewer than 100 cigarettes in their lifetime).	Overall, 57% of HCPs wanted a complete ban on smoking in hospital grounds and 40% preferred a partial ban, with designated smoking areas on hospital grounds; 1% thought there should be no ban and 3% declined to answer. There was only one statistically significant difference between HCP groups with regard to the attitude to bans on hospital premises. The very small numbers supporting no ban, five in total, were combined with those supporting a partial ban. This combined group was compared with those supporting a complete ban. Doctors had the highest support for a total ban (68.5%), followed by students (59.0%), AHPs (57.8%) and nurses (52.0%). The difference between doctors and nurses was statistically signifi cant (OR 2.01, 95%CI 1.14–3.56, P = 0.01).
Matthews (2005) USA, North Carolina An 18-bed acute crisis stabilization unit where all male patients are first admitted, for up to 3 days, by which time patients are either discharged or referred to the male acute treatment unit. The unit is within Dorothea Dix State Psychiatric Hospital, which provides care to people in the south central region of	Total sample: Nursing staff n=14 (pre-ban) n=13 (post-ban)	Pre-implementation, 6 of the 14 nursing staff respondents believed banning smoking would be helpful, increasing to 13 of 13 respondents post-implementation who respondents believed the intervention had been helpful (p=0.002). [Direction of effect supports smokefree]

North Carolina. Approx. 3,000 patients (1,800 men, 1,200 women) are admitted to adult psychiatry service per year (approx. 95% involuntarily). **Before-and-after study** (1 timepoint before and 1 after smokefree implementation: dates not given)		
Parks (2009) England Addenbrooke's Hospital: a large NHS quaternary referral centre with 1,170 beds and 6,981 staff (2007/8), located in Cambridge. **Cross-sectional study** (March 20008. After smokefree implementation)	Total sample: n=704 The demographic composition of the sample was largely representative of the hospital's working population for gender, age, job profile and ethnicity. There were however differences: those aged 25 years or under were over-represented compared to those aged 26 to 45 years, men were over-represented and healthcare staff (professional and auxiliary) were under-represented. Smoking profile: 14.3% (95% CI, 12.0 – 17.1%) were smokers, 21.7% (95% CI 18.8 – 24.9%) were ex-smokers and 63.9% (95% CI 60.3 – 67.3%) had never smoked.	The hospital is right to have such a policy: non-smokers 85.3%; compliant smokers 36.8%; non-compliant smokers 34.4%
Patten (1995) USA, Minnesota A 28-bed locked adult inpatient psychiatric unit in Saint Marys Hospital, Rochester, Minnesota. **Before-and-after study** (6 months pre-implementation; 6 months post-implementation)	Total sample: (survey sample) n=137 (pre-ban) n=126 (post-ban) Smoking status: Current smokers 9.5% (pre-) 7% (post-), former smokers 36.5% (pre-) 26% (post-), never smokers 52.0% (pre-) 63% (post-), no response 2.0% (pre-) 4% (post-). Occupation: 90% (post-) work involved direct contact with patients in the psychiatric units.	Support for the policy: Pre-implementation, 49% of all staff were in favour of the smokefree policy, 44% did not support the policy and 7% were undecided or did not give a response. Post-implementation, different outcomes were measured to indicate the level of staff support for the policy. 76% of all staff agreed that they 'Would recommend that other adult psychiatric units be smokefree', 13% of all staff responded they would not. 71% of all staff responded that they would not 'Recommend that the adult psychiatric units not remain smokefree', 21% of all staff responded they would. Sub-group differences by smoking status: 78% of current staff smokers (76% former staff smokers, 81% staff never smokers) agreed that they 'Would recommend that other adult psychiatric units be smokefree', no current staff smokers (21% former staff smokers, 13% staff never smokers) responded they would not. 44% of current staff smokers (82% former staff smokers, 75% staff never smokers) responded that they would not 'Recommend that the adult psychiatric units not remain smokefree', 44% of current staff smokers (18% former staff smokers, 20% staff never smokers) responded they would.
Ratschen (2008) England English NHS Trusts providing acute and/or mental health services in inpatient facilities. **Cross-sectional study** (After implementation)	Total sample surveyed: n=186 Trusts n=132 acute Trusts (69% Trusts comprising >1 site) ; n=54 mental health settings (n=48 mental health trusts, n=6 primary healthcare trusts with providing mental health in-patient facilities) (100% Trusts comprising >1 site)	Survey data: Post-implementation of smokefree, representatives from mental health settings in NHS Trusts in England (n=54) were surveyed: 52% respondents believed that the level of policy support by staff differed among staff groups, with nurses being most frequently identified as the least supportive group (32%)
Sheffer (2009) USA Arkansas medical facilities. The number of beds at the medical facilities ranged from 0 to 791, with a mean of 132, a	Total sample: n=113 hospital CEOs/administrators	Results reported as mean (standard deviation) Support for smoking ban. Measured on an 11 point-scale (0 = do not agree at all; 11 = total agreement): As an employer: Pre-ban 8.78 (2.38); Post-ban 9.22 (1.67); As a healthcare provider: Pre-ban 9.41 (1.77); Post-ban 9.80 (0.74); As a community member: Pre-

median of 77, and a mode of 25. The majority of facilities had no psychiatric or alcohol and drug beds (n=68; 64.76%), with 27.62% (n=29) maintaining some psychiatric and alcohol and drug beds, and 7.62% (n=8) maintaining only psychiatric and/or alcohol and drug beds. The majority of medical facilities were private non-profit (56.36%), with 26.36% under corporate control, and 17.27% under city, county, state, or federal government control. **Before-and-after study** (Pre-implementation April/May 2005; post-implementation October 2006)		ban 9.10 (1.95); Post-ban 9.47 (1.26) Support anticipated/experienced from the following people. Measured on an 11 point scale (0=none at al; 11 = the most possible): Employees: pre-ban 6.86 (1.84); post-ban 7.68 (1.50); Patients: pre-ban 5.96 (2.41); post-ban 6.81 (1.88); Visitors: pre-ban 5.66 (2.26); post-ban 6.13 (2.32); Board: pre-ban 9.42 (1.14); post-ban 9.84 (0.62); Physicians: pre-ban 8.94 (1.50); post-ban 9.54 (0.71); Community: pre-ban 7.35 (1.94); post-ban 7.83 (2.10) Resistance anticipated/experienced from the following people. Measured on an 11 point scale (0=none at all; 11=the most possible): Employees: pre-ban 4.62 (2.42); post-ban 3.64 (2.35); Patients: pre-ban 4.61 (2.46); post-ban 4.13 (2.93); Visitors: pre-ban 5.41 (2.40); post-ban 4.41 (2.45); Board: pre-ban 0.40 (0.83); post-ban 0.02 (0.14); Physicians: pre-ban 1.10 (1.37); post-ban 0.73 (1.40); Community: pre-ban 2.74 (1.91); post-ban 2.00 (2.10)
Steiner (1991) USA The Connecticut Mental Health Centre Day Hospital: a short-term programme (30 days) for individuals who are making the transition from an inpatient facility to the community, or whom an 'alternative to hospitalisation' is indicated. **Before-and-after study** (1 week before and 2 weeks after a move to new smokefree premises)	Total sample: Pre-ban: 17 patients (71% smokers; average habit 1.5 packs/day [range 0.5-3]); 15 staff (20% smokers) Post-ban: 15 patients; 17 staff	Pre-move (=pre-ban): All responding staff thought the smokefree policy was a 'good' or 'great' idea, that it would assist smokers to decrease smoking and it would improve the physical environment. Post-move (=post-ban): 94% indicated that they felt the policy change had been 'good' or 'great', and 100% thought that the physical environment had improved due to the lack of smoke.
Steiner (2009) USA The Connecticut Mental Health Center: a state owned and state-operated facility with both inpatient and outpatient services, run jointly by the Connecticut Department of Mental Health and Addiction Services and Yale University. It serves individuals from the greater New Haven area who have severe and persistent mental illness, a substance use disorder, or both. **Cross-sectional study** (Pre-implementation: Jan 2007)	Total sample: n=175 Most survey respondents were women (N=124, 71%) and Caucasian (N=117, 67%), and the mean±SD age of respondents was 42.5±11.8 years. Most respondents had never smoked (N=107, 61%); 14% (N=25) defined themselves as current smokers, and 25% (N=43) defined themselves as former smokers.	Respondents differed by smoking status in their agreement about whether the entire mental health center campus should become smoke free ($p<.05$). In addition, the overall regression model was significant ($\chi2=14.9$, df=6, $p<.05$). When the analysis controlled for age, gender, ethnicity, and job category, smoking status continued to predict attitudes about a smokefree center. In general, compared with former smokers and current smokers, a larger proportion of those who had never smoked agreed that the mental health center should be smoke free.
Ullén (2002) Sweden Karolinska Hopsital, Sweden. A large University Hospital dedicated to specialist medical care and clinical research. 1,000 beds, 6,000 staff. **Cross-sectional study** (3 separate cross-sectional studies after implementation	Total sample: Heads of departments n=41; Employees n=517 [84% female]; Labour managers n=17	Heads of Department reported a third of their staff were satisfied with the smoking restrictions, and the remaining two thirds were of a mixed positive/negative opinion. Employee survey: 62% of employees had a positive attitude towards the smoking restrictions. 28% had mixed attitudes. 7% were negative towards the restrictions. Approximately 30% said they had changed their opinion to the ban in a positive

of smokefree: Dec 1992; March 1993; March 1995)		direction.
Vardavas (2009) Greece A large regional university hospital which provides primary and secondary care to the population of Heraklion and tertiary care to the population of Crete and the nearby islands. **Cross-sectional study** (After implementation of smokefree)	Total sample: n=100 staff (n=55 medical research staff/doctors; n=45 nursing staff) 33.0% males; mean age 39.2 SD 7.4 years; 45.0% smokers, 55.0% ex- and non-smokers; mean 8.0 SD 9.0 years of smoking; 8.9% 1-9 cigarettes/day, 68.9% 10-20 cigarettes/day, 22.2% >20 cigarettes/day; mean 8 SD 11 cigarettes/day.	Approval or disapproval of smokefree hospitals: 66% (n=66) of total staff approved of smokefree hospitals, 70.9% (n=39) of all medical/research staff approved of smokefree hospitals, 60.0% (n=27) of all nursing staff approved of smokefree hospitals. 46.7% (n=21) of total staff smokers approved of smokefree hospitals, 52.6% (n=10) of all medical/research staff smokers approved of smokefree hospitals, 42.3% (n=11) of all nursing staff smokers approved of smokefree hospitals. 81.8% (n=45) of total staff non-smokers (non- and ex-smokers) approved of smokefree hospitals, 80.6% (n=29) of all medical/research staff non-smokers approved of smokefree hospitals, 84.2% (n=16) of all nursing staff non-smokers approved of smokefree hospitals.
Voci (2010) Canada Centre for Addiction and Mental Health: 557 beds; provides care to over 20,000 patients annually through approximately 28 inpatient units and over 100 outpatient clinics. CAMH is governed by Ontario's provincial health care system and is a fully affiliated teaching hospital of the University of Toronto. **Cross-sectional study** (2 cross sectional studies after smokefree implementation: 2-7 months post implementation [Nov-April 2006]; 31-33 months post-implementation [April-June 2008])	Total sample: 2005-2006: n=430; 2008: n=400 2005-2006: mean age 45.7 (SD 11.1); 79.2% female 2008: mean age 44.9 (SD 11.2); 77.3% female. (Further demographic information provided.)	2005-2006 survey How strongly did you support the smokefree policy before it was implemented? n=430: 64.0% definitely support; 18.6% support; 9.3% neutral; 5.6% do not support; 2.6% definitely do not support How strongly do you support the smokefree policy currently? n=430: 72.6% definitely support; 16.5% support; 4.4% neutral; 2.3% do not support; 4.2% definitely do not support. 2008 survey How strongly do you support the smokefree policy currently? n=386: 78.2% definitely support; 11.9% support; 5.4% neutral; 2.1% do not support; 2.3% definitely do not support Staff who were current smokers were more likely to recall having not supported the policy before implementation and were more likely to be unsupportive at both time points post-implementation.
Wheeler (2007) USA, Arkansas Two sites: 1) Arkansas's university hospital and academic medical center and 2) a smaller, private children's hospital that uses the university's faculty and residents for its medical staff. Before-and-after study (Site 1: before implementation [April 2004]; after implementation [May 2005]). **Cross-sectional study** (Site 2: 2 months after employee only ban [4 months before implementation of total smoking ban])	Total sample: Questionnaire site 1 (staff): n=842 (pre-implementation), n=912 (post-implementation) Occupation distribution changed significantly due to a change in nurse respondents from 19% (pre-) to 11% (post-) ($p<0.0001$) and education distribution changed significantly due to decreases in 'high school or less' and 'college graduate' and an increases in 'professional or post-college education' ($p=0.015$). Gender ($p=0.8964$), age and race distributions did not change significantly between measures.	Support for the policy: Between April 2004 (pre-implementation) and May 2005 (post-implementation), there was a significant increase in staff support for the ban (83.3% to 89.8%, $p<0.001$). Results in favour of smokefree. (The researchers were "concerned that underrepresentation of smokers, who may have chosen not to return the survey, might have influenced our results" (p.751) and reweighted the data (more weight to smokers to bring the prevalence in Apr 04 and May 05 up to 15% and reduced weights to non-smokers). On reanalysis of the 'support for the policy' variable, percentages changed proportionally in both years, but only by 2-3% without any effect on significance testing. The results were still in favour of smokefree.)
Wye (2010) Australia A large psychiatric inpatient hospital in the state of New South Wales. The facility had approximately 2000 patient discharges per annum, consisting of 80 beds in six units: a psychiatric emergency	Total sample: n=183: clinical staff 73; non-clinical staff 110 66% female; 44% under 35 years; 21% 36-45 years; 35% 45+ years; 21% current smokers; 26% former smokers; 52% never smokers	Do you support the statement that smoking should be totally banned throughout the Area's mental health services?: 7% strongly unsupportive; 14% unsupportive; 12% no view either way; 33% supportive; 34% strongly supportive. Do you agree with the statement that smoking should be totally banned on the unit? (clinical staff only): 7% strongly disagree; 19% disagree; 19%

centre, an intensive care unit, two general acute units, a dual diagnoses (concurrent mental health and substance use) unit, and an aged care unit. **Cross-sectional study** (Before smokefree implementation)		unsure; 22% agree; 32% strongly agree.

Of the nine studies that assessed staff support for smokefree policy by staff smoking status, all found that non-smokers were more supportive of smokefree policy than smokers (**Bloor 2006 [England, MHS, SCSS+]**; **Daughton 1992 [USA, BHS, RCSS-]; Donchin 2004 [Israel, BHS, BAS+]; Garg 2009 [England, MHS, SCSS+]; Kannegaard 2005 [Denmark, BHS, RCSS++]; Parks 2009 [England, BHS, SCSS+]; Steiner 2009 [USA, MHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**). Five of these studies reported that the between-group differences were significant to p<0.05 (**Donchin 2004 [Israel, BHS, BAS+]; Garg 2009 [England, MHS, SCSS+]; Parks 2009 [England, BHS, SCSS+]; Steiner 2009 [USA, MHS, SCSS+]; Voci 2010 [Canada, MHS, RCSS++]**), one reported that the finding was not significant (**Vardavas 2009 [Greece, BHS, SCSS-]**), and the others did not report levels of significance. These studies covered both mental health secondary care settings (**Bloor 2006 [England, MHS, SCSS+]**; **Garg 2009 [England, MHS, SCSS+]**; **Steiner 2009 [USA, MHS, SCSS+]; Voci 2010 [Canada, MHS, RCSS++]**) and broader secondary care settings (**Daughton 1992 [USA, BHS, RCSS-]; Donchin 2004 [Israel, BHS, BAS+]; Parks 2009 [England, BHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]**). One study reported a sub-group difference by level of smoking. **Daughton (1992 [USA, BHS, RCSS-])** reported that heavy smoking staff (≥30 cigs/day) were significantly less supportive of smokefree policy than light smoking staff (<10 cigs/day): only 27% of heavy smokers were supportive, compared to 64% of light smokers (p<0.05).

Of the seven studies that assessed staff support for smokefree policy before and after policy implementation, the majority reported that support increased after implementation compared to support before implementation (**Cormac 2010 [England, MHS, BAS+]; Erwin 1991 [USA, MHS, BAS-]; Haller 1996 [USA, MHS, BAS+]; Matthews 2005 [USA, MHS, BAS-]; Sheffer 2009 [USA, BHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]**). Four of these studies reported that the findings were significant to p<0.05 (**Matthews 2005 [USA, MHS, BAS-]; Sheffer 2009 [USA, BHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]**), while the others did not report significance levels. These studies covered both mental health and broader secondary care settings.

One study also reported that staff support for smokefree policy increased significantly with time after policy implementation. **Hudzinski et al (1990 [USA, BHS, BAS+])** reported that 75% of all staff at a US healthcare institution supported the policy 6 months after implementation, increasing to 84% of staff supporting the policy 12 months after implementation (p<0.05).

In contrast, one study showed a decline in support. **Steiner et al (1991 [USA, MHS, BAS+])** reported that before implementation of a smokefree buildings policy in US mental health facility, all staff (n=17) thought the policy was a 'good' or 'great' idea. This figure dropped marginally to 94% 3 weeks after implementation with one member of staff disagreeing.

Six studies assessed support for smokefree policy by staff occupation (**Donchin 2004 [Israel, BHS, BAS+]; Garg 2009 [England, MHS, SCSS+]; Lewis 2011 [Wales, BHS, SCSS+]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**). These studies covered both mental health settings and other secondary care settings. Two studies reported that nurses were significantly less supportive of smokefree policy than other staff (**Lewis 2011**

[Wales, BHS, SCSS+]; Voci 2010 [Canada, MHS, RCSS++]). **Lewis et al (2011 [Wales, BHS, SCSS+]**) reported that 69% of doctors supported a total smoking ban at a Welsh NHS health board, while only 52% of nurses supported the ban (p=0.01). **Voci et al (2010 [Canada, MHS, RCSS++**]) reported that nurses in a Canadian psychiatric hospital were significantly less supportive of smokefree policy before implementation (recalled 2-7 months after policy implementation) (nurses versus other staff OR 2.99, p=0.27), and at 2-7 months post implemenation (OR 3.33, p=0.27). The difference was not significant at 31-33 months post-implementation. Two additional studies reported that nurses were less supportive of smokefree policy than other staff, but the findings were not significant (**Garg 2009 [England, MHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]**). **Garg et al (2009 [England, MHS, SCSS+])** reported that 75% of psychiatrists and 63% nursing staff at an English psychiatric hospital supported an indoor smoking ban (p=0.53). Vardavas et al (**2009 [Greece, BHS, SCSS -]**) reported that 71% of medical and research staff, and 60% of nursing staff at a Greek university hospital supported smokefree policy (p>0.05). **Ratschen (2008 [England, BHS, MHS, MMS+])** reported that nurses were most frequently cited as the least supportive staff group by the representatives of the mental health settings responding to their survey of NHS acute and mental health Trusts. **Donchin (2004 [Israel, BHS, BAS+])** reported that, controlling for smoking status, unskilled workers were more likely to support smokefree policy than doctors, nurses and technicians (exact figures not reported). Overall, these studies suggest that nurses are less supportive of smokefree policy than other staff.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Level of staff support for smokefree policy

Evidence statements:

1.1 Facilitator: exposure to the policy brings about a positive shift in levels of staff support. Eight studies (one UK, seven non-UK), five relating to mental health and three to broader secondary care settings found that staff support for smokefree policy increased post-implementation (**Cormac 2010 [England, MHS, BAS+]; Erwin 1991 [USA, MHS, BAS-]; Haller 1996 [USA, MHS, BAS+]; Matthews 2005 [USA, MHS, BAS-]; Sheffer 2009 [USA, BHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]; Hudzinski 1990 [USA, BHS, BAS+]**). One study conducted in a US mental health setting found that staff support declined post-implementation (**Steiner 1991 [USA, MHS, BAS+]**).

1.2 Barrier: differences in level of support by smoking status and occupational group. Nine studies (three UK, six non-UK), four conducted in mental health settings and five in broader secondary care settings, found that staff who smoked were less likely than staff who were non-smokers to support smokefree policy (**Bloor 2006 [England, MHS, SCSS+]**; **Daughton 1992 [USA, BHS, RCSS-]; Donchin 2004 [Israel, BHS, BAS+]; Garg 2009 [England, MHS, SCSS+]; Kannegaard 2005 [Denmark, BHS, RCSS++]; Parks 2009 [England, BHS, SCSS+]; Steiner 2009 [USA, MHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**). Five studies (three UK, two non-UK), two conducted in mental health settings and three in broader secondary care settings found that nurses were less likely to support smokefree policy than other healthcare workers (**Garg 2009 [England, MHS, SCSS+]; Lewis 2011 [Wales, BHS, SCSS+]; Vardavas 2009 [Greece, BHS, SCSS-]; Voci 2010 [Canada, MHS, RCSS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+])**.

Six of the 19 studies reported were conducted in the UK **(Cormac 2010 [England, MHS, BAS+];**

Bloor 2006 [England, MHS, SCSS+]; **Garg 2009 [England, MHS, SCSS+]; Parks 2009 [England, BHS, SCSS+]; Lewis 2011 [Wales, BHS, SCSS+]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

1.2 Level of patient support for smokefree policy

Qualitative findings

No qualitative evidence was identified relating to this theme

Quantitative findings

Six quantitative studies assessed patient support for smokefree (**Cormac 2010 [England, MHS, BAS+]**; **Etter 2008 [Switzerland, MHS, BAS+]; Hudzinski 1990 [USA, BHS, BAS+]**; **Rosen 1995 [USA, BHS, SCSS+]; Stillman 1995 [USA, BHS, SCSS+]; Steiner 1991 [USA, MHS, BAS+]**). These studies are summarised in **Table 3**.

Table 3: Data summaries for studies measuring patient support for smokefree

Study details **Country** **Where** **Study design** **(when measured)**	**Sample** **Total sample** **Sample characteristics**	**Patient support for smokefree**
Cormac (2010) England A high secure, long-stay psychiatric hospital for patients with complex mental health disorders who are a grave and immediate danger to the public or themselves (the majority have committed serious offences). **Before-and-after study** (Feb 2007: before smokefree implementation. July 2007: after smokefree implementation)	Total sample: Patients n=175 (pre-ban) n=115 (post-ban) Pre-ban (89% male, 70% smokers pre-ban); post-ban (85% male, 87% smokers pre-ban).	In favour of the ban: patients pre-ban 40/175 (22.9%) patients post-ban 29/115 (25.2%). Changed in favour of smokefree. No further statistical information is available.
Etter (2008) Switzerland Two in-patient, adult units of the Psychiatry Department of the Geneva University Hospitals: an admission and short-stay unit (16 beds) and a medium-stay unit (16 beds). **Before-and-after study** (Before implementation of smokefree – multiple timepoints: Oct 03 [pre ban], Apr 04 [2 months post-partial ban], Dec 05 [20 months post-partial ban/pre-total ban] After implementation – single timepoint: Mar-May 06 [3-5 months post-total ban])	Total sample: 2003 (no ban): n=49 patients. 2006 (total ban): n=77 patients Patients 2003 (no ban) 91.8% Ever smoked 100+ cigarettes, Daily smokers 73.5%, Occasional (non-daily) smokers 6.1%, Former smokers 12.2%, Never smokers 8.2%, 2006 (total ban) 81.6% Ever smoked 100+ cigarettes, Daily smokers 65.8%, Occasional (non-daily) smokers 2.6%, Former smokers 15.8%, Never smokers 15.8%; Patients 2003 (no ban) mean age 39.9 years. 2006 (total ban) mean age 41.0 years; Patients 2003 (no ban) 59.2% men. 2006 (total ban) 60.0% men.	Opinion of rules about smoking: Between 2003 (no ban) and 2006 (total ban), there was a significant increase in the percentage of patients reporting that "Rules about smoking at the hospital are too strict" (12.2% to 49.4%, p<0.001), there was a decrease in the percentage of patients reporting that "Rules about smoking at the hospital are adequate" (73.5% to 46.8%, p value not given).
Hudzinski (1990) USA, Louisiana A health care institution (clinic and medical foundation) with inpatient units employing staff physicians and psychologists. Before-and-after study (3 timepoints: 6 months pre-implementation; 6 months post-implementation; 12 months post-implementation)	Total sample: n=607 (pre-ban), n=397 (6m post-ban), n=600 (12m post-ban)	Support for the ban: Pre-policy, 82% of hospital patients surveyed favoured the no-smoking policy, 93% favoured the policy 6 months after implementation, an 80% favoured the policy 12 months after implementation (p<0.001).
Rosen (1995) USA, Massachusetts A 379-bed tertiary teaching hospital	Total sample: n=329 Mean hospitalisations in past year 2.2	Satisfaction with the non-smoking policy: When surveyed 1 week after being discharged from hospital, 75% of

Cross-sectional study (May-July 1992: 7-9 months post-implementation)	(SD=1.6); mean cigarettes per day 24 (SD=15), mean years smoked 27 (SD=14), mean smokers in house 0.8 (SD=0.9); mean age 58 (SD=16) years; female 48%; white 86%; college/higher education 37%; professional/manager 37%; employed 25%.	all patients were satisfied with the non-smoking policy at the hospital, 11% were dissatisfied and 14% were not sure. Sub-group differences: current smokers had the least satisfaction with the policy (55%) and the most dissatisfaction (34%), compared with former smokers (85% satisfied, 3% dissatisfied) and never smokers (72% satisfied, 8% dissatisfied) (Chi-square=56.4, df=12, p<0.0001).
Stillman (1995) USA, Maryland A 1000 bed urban teaching hospital **Cross-sectional study** (1990-1992: 0-2 years post-implementation)	Total sample: n=504 inpatients (who were recruited for smoking cessation counselling) Mean age=50.2 years; 51% male; 28% African American, "most of the rest were white"; 63% high school graduates; 51% had a cardiac diagnosis; mean length of stay=8.3 days. All study participants were smokers.	Agreement with the policy: 76.8% patients surveyed at admission expressed agreement with the smokefree policy. There were no differences in agreement with the policy based on gender, age or race of the patient. Sub-group differences: Patients who remained abstinent during hospitalisation (self report to not smoking even one cigarette) were significantly more likely to have stated agreement with the policy than patients who smoked during hospitalisation (self-report to either leaving the hospital to smoke or being non-compliant with the policy and smoking inside the hospital building) (82% versus 62.5%, p<0.001).
Steiner (1991) USA The Connecticut Mental Health Centre Day Hospital: a short-term programme (30 days) for individuals who are making the transition from an inpatient facility to the community, or whom an 'alternative to hospitalisation' is indicated. **Before-and-after study** (1 week before and 2 weeks after a move to new smokefree premises)	Total sample: Pre-ban: 17 patients; 15 staff ; Post-ban: 15 patients; 17 staff Patients: 71% smokers; average habit 1.5 packs/day [range 0.5-3]); staff: 20% smokers	Pre-move: Patient opinion was evenly divided on whether the plan was a good or bad idea, and 53% thought it would assist smokers to decrease smoking. 71% of patients thought the physical environment would improve. Three patients expressed angry sentiments. Post-move: 67% of responders (which included all the non-smokers) thought that the policy change had been 'good' or 'great'. 86% of respondents felt that there had been an improvement in the physical environment.

Cormac et al (2010 [England, MHS, BAS+]) assessed patient support for smokefree policy in a psychiatric hospital 1-2 months before and 4 months after policy implementation, and reported that patient support increased after implementation compared to support before implementation. **Hudzinski et al (1990 [USA, BHS, BAS+])** reported that patient support for smokefree policy was higher 6 months after implementation than it was 6 months before implementation, but lower 12 months after implementation than it had been pre-implementation.

Rosen et al (1995 [USA, BHS, SCSS +]) reported that smokers were significantly less satisfied with the indoor smokefree policy at a US teaching hospital than non-smokers. Current smokers had the least satisfaction with the policy (55%) and the most dissatisfaction (34%) compared with ormer smokers (85% satisfied, 3% dissatisfied) and never smokers (72% satisfied, 8% dissatisfied) (p<0.05). Smokers were also significantly more likely to prefer fewer or no restrictions on smoking than non-smokers. When surveyed 1 week after being discharged from hospital, 14% of all patients said that they would prefer tigher restrictions on smoking at the hospital. Current smokers were most likely to prefer

fewer or no restrictions compared with former smokers and never smokers (15%, 3% and 4% respectively, p<0.05).

Level of patient support for smokefree policy

Evidence statements:

1.3 **Inconclusive: exposure to the policy brings about a positive shift in levels of patient support.** One UK study conducted in a mental health setting found that patient support for smokefree policy increased post-implementation (**Cormac 2010 [England, MHS, BAS+]**), while another conducted in a broad secondary setting in the USA found that patient support had increased in the short-term (i.e. at 6 months post implementation) but then decreased in the longer-term (i.e. by 12 months support had fallen below pre-implementation levels) (**Hudzinski 1990 [USA, BHS, BAS+]**).

1.4 **Barrier: differences in level of support by patient smoking status.** One US study conducted in a broad secondary care setting found that patients who smoked were significantly less likely than patients who were non-smokers to support a smokefree policy (**Rosen 1995 [USA, BHS, SCSS+])**.

Only one of the three studies reported was conducted in the UK (**Cormac 2010 [England, MHS, BAS+]**).

1.3 Preferences for type of smokefree policy

Qualitative findings

No qualitative evidence was identified relating to this theme.

Quantitative findings

Four quantitative studies considered staff preferences for a range of smokefree polices i.e. indoor only ban, indoor ban plus designated indoor areas (partial indoor ban), indoor ban plus designated outdoor smoking areas (partial outdoor ban), or indoor ban plus smokefree grounds (total ban) (**Jones 2010 [Australia, BHS, SCSS+]**; **Lewis 2011 [Wales, BHS, SCSS+]; Praveen 2009 [England, MHS, SCSS+]**; **Vardavas 2009 [Greece, BHS, SCSS-]**).

In a survey to assess staff attitudes towards smoking on hospital grounds at a general hospital with an indoor ban already in place, **Jones et al (2010 [Australia, BHS, SCSS+])** reported that the minority of staff (<20%) responding to their surveys supported a total ban, and the majority (>87%) believed that smoking areas should be provided. **Lewis et al (2011 [Wales, BHS, SCSS+])** reported that 57% staff who responded to their survey at a hospital with a total ban in place preferred the total smoking ban, while 40% were in favour of a partial outdoor ban with designated smoking areas on hospital grounds. **Vardavas et al (2009 [Greece, BHS, SCSS -])** reported that the majority (>93%) of staff respondents to their survey (both smokers and non-smokers), at a hospital with an indoor smoking ban preferred a partial ban with designated smoking and non-smoking areas inside the hospital, to a total indoor ban.

Praveen et al (2009 [England, MHS, SCSS+]) reported that non-smoking staff at three in-patient mental health units with impending indoor smoking bans, were more supportive of a total ban, including banning smoking in outdoor areas, than staff who smoked. The study also found that

managers were more supportive of a total ban (29% supportive) than doctors (20% supportive) or nurses (20% supportive). No statistical analysis was reported.

One quantitative study (**Smith 2008 [England, MHS, SCSS+]**) considered patient preferences for smokefree indoor polices in mental health facilities with a partial indoor ban and impending full indoor ban. The authors reported that 71% of patients supported a smokefree policy with designated indoor smoking areas, while only 14% supported an indoor ban.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Preferences for type of smokefree policy

Evidence statements:

1.5 **Facilitator: greater support for smoking bans where designated smoking areas are provided.** One Australian study found a strong preference amongst staff for a partial outdoor ban incorporating designated smoking areas on hospital grounds (**Jones 2010 [Australia, BHS, SCSS+]**) while two studies (one UK, one non-UK), one conducted with staff and the other with patients found a strong preference for a smokefree indoor policy incorporating designated indoor smoking areas to a total ban on smoking indoors (**Vardavas 2009 [Greece, BHS, SCSS-]; Smith 2008 [England, MHS, SCSS+]**). One UK study conducted in a broad secondary care setting found a marginal preference amongst staff for a total ban on hospital grounds to a partial outdoor ban (**Lewis 2011 [Wales, BHS, SCSS+])**. Of the studies (two UK, one non-UK) supporting the provision of designated smoking areas, one was conducted in a mental health setting (**Smith 2008 [England, MHS, SCSS+]**) and two were conducted in broader secondary care settings (**Jones 2010 [Australia, BHS, SCSS+]**; **Lewis 2011 [Wales, BHS, SCSS+]**).

1.6 **Barrier: differences in level of support for a total ban on smoking by smoking status and occupational group.** One UK study conducted in a mental health setting found staff who were smokers to be less likely to support a total ban on smoking than staff who were non-smokers, and healthcare and clinical staff to be less likely to support a total ban than managers **(Praveen 2009 [England, MHS, SCSS+]**).

Of the five studies reported the majority, three, were conducted in the UK (**Smith 2008 [England, MHS, SCSS+]; Lewis 2011 [Wales, BHS, SCSS+]; Praveen 2009 [England, MHS, SCSS+]**) and one other was judged to have similar applicability to the UK (**Jones 2010 [Australia, BHS, SCSS+]**).

Q2: Factors affecting acceptance of smokefree policy

Views on factors affecting acceptance of smokefree policy were grouped under five themes: attitude to smoking as a 'rights' issue; organisational factors associated with the adoption of smokefree policy; policing and enforcement of smokefree policy; cessation support in relation to smokefree policy; and patient groups requiring special consideration when devising smokefree policy. Brief summaries of the studies used to answer this research question are given in **Figure 3**.

Figure 3: Question 2 study summaries

Qualitative evidence only

Campion 2008 [Australia, MHS, QS+] reported on the introduction, trial and termination of a smokefree policy in an acute mental health inpatient unit. Individual and group interviews were carried out with 6 key informants, and analysis of documentation related to implementation of the smokefree policy was carried out.

Drach 2012 [USA, MHS, QS-] assessed tobacco-related policies and procedures at all state-funded, community-based residential mental health and substance abuse treatment facilities in Oregon before implementation of a state-wide smokefree policy. Telephone interviews were carried out with administrators from 163 facilities, 111 of which provided additional open-ended comments about tobacco-related policies.
HUG 2007 [Scotland, MHS, QS-] reported on the findings of 13 branch discussion meetings of a network of people who use or have used mental health services in the Scottish Highlands: Highland Users Group (HUG). The meetings involved 85 people, and explored participants' views on the possibility of psychiatric hospitals becoming smokefree.

Jessup 2007 [USA, MHS, QS++] explored the implementation of a smokefree policy requiring total abstinence from tobacco at a residential drug abuse treatment facility for pregnant and post-partum women. All staff were invited to take part in an interview. Those who took part in interviews (n=8) also took part in a focus group discussion.

Johnson 2010 [Canada, MHS, QS++] carried out a discourse analysis of healthcare providers' engagement in tobacco control in community mental health settings. Ninety-one healthcare providers (42 professionals and 49 paraprofessionals) across 6 study locations including 2 mental health housing units participated in open-ended interviews in which they described their role in tobacco control.

Karan 1993 [USA, MHS, CS-] report on the introduction and subsequent termination of a smokefree policy, requiring patient tobacco abstinence, at an inpatient substance abuse inpatient unit for patients with late stage addictions requiring intensive support.

Kotz 1993 [USA, MHS, CS-] reported on the implementation of an indoor smoking ban at an independent/private 20 bed chemical dependency unit in a 1000 bed tertiary care hospital.

McNeil 2007 (case studies, interviews, observation, Scotland +) explored the move towards mental health settings becoming smokefree in Scotland. The study consisted of interviews with professionals involved in managing, delivering or supporting mental health services in Scotland (n=11). In addition, observational visits were carried out to 4 UK NHS sites/hospitals, and the information gathered from these was presented as case studies.

Mental Health Foundation 2009 [England, MHS, SCSS+] explored the impact of smokefree legislation in English psychiatric units. A questionnaire survey was circulated around UK psychiatric units 5 months after the legislation came into force, and responses were received from 100 English NHS units and 9 independent sector units. Open-ended responses to the questionnaire were reported.

Parle 2004 [Canada, MHS, CS-] report on the implementation of a total smoking ban, including grounds, at a 291 bed psychiatric hospital spread over 225 acres incorporating a large maximum secure unit.

Pritchard 2008 [England, MHS, QS++] evaluated the impact of a smokefree policy covering buildings and grounds within a mental health Trust. Purposive sampling was used to recruit 19 participants from a range of settings involved in implementation to take part in short interviews, including patient advocates, nursing staff and consultants.

Ratschen 2009a [England, MHS, QS++] explored the implementation of a smokefree policy in 2 adult inpatient mental health wards in an acute mental health Trust. Interviews were carried out with a stratified purposive sample of 16 medical and non-medical staff.

Ratschen 2010 [England, MHS, QS++] explored inpatients' experience of smokefree policy in 2 acute adult mental health wards, and one 10-bed intensive care unit. Interviews were carried out with 15 inpatient smokers.

Seymour 2000 [England, BHS, CS-] present a series of case studies from 6 NHS Trusts, selected because each offered a different perspective and approach to tobacco control. Case study data were gathered through questionnaires, and supplementary interviews were conducted with Trust representatives.

Schultz 2011 [Canada, BHS, QS++] carried out a mixed methods ethnographic study to explore the consequences of smokefree policy in two acute care teaching hospitals that had implemented smokefree property policies 3 years previously. A total of 82 inpatients, 9 key policy makers and 14 support staff were interviewed. Sixteen focus groups were held with healthcare providers and ward staff (n=81). In addition, researchers carried out 6 hour observations at each site.

Tillgren 1998 [Sweden, BHS, QS-] evaluated the implementation of an indoor smoking ban in a large university hospital. Four years after implementation of the ban, interviews were carried out with non-healthcare staff at the hospital: gardeners (n=5), cleaners (n=5), and hosts/hostesses (n=5).

Wareing 2012 [England, MHS, QS+] explored the implementation of smokefree legislation in English mental health services. Observational visits to 28 units were carried out. These were drawn from a cross section of responses to a questionnaire on compliance that had been distributed to a broad range of mental health facilities across England. The selected units represented those who reported good practice, those who reported problems, and some who had not responded to the compliance questionnaire.

Qualitative and quantitative evidence

Arack 2009 [England, BHS, SCSS-] conducted a survey to explore the effect of a complete smoking ban at an NHS Trust, focusing on staff attitudes, staff compliance, and staff smoking behaviour. The survey took place 17 months after implementation of the ban. A total of 160 staff were recruited to take part in the survey through opportunity sampling. Outcome measures were support for smoking ban, and opinions about enforcement of the ban. Thematic analysis was used to identify the main themes emerging from responses to the survey's open-ended questions.

Fitzpatrick 2009 [Ireland, BHS, MMS+] carried out a survey of staff and patient attitudes at an acute general hospital with an indoor ban in place, and plans to transition to a complete campus-wide ban. A total of 295 patients and 225 staff took part in the study. The relevant attitudinal result was support for the planned introduction of a campus-wide ban. In addition, short 5-15 minute attitudinal interviews were conducted with smoking patients (n=28) and staff (n=30).

Sheffer 2009 [USA, BHS, BAS+] explored the attitudes and beliefs of hospital CEOs (Chief Executive Officers)/administrators in one US State towards smokefree legislation 6 months before (n=84) and 1 year after (n=68) legislation became effective. The surveys assessed support for the legislation, support for and resistance to smokefree anticipated/experienced from stakeholders (staff, patients, visitors etc.), and views about the challenges of implementing the legislation. The surveys included a number of open-ended questions.

Ratschen 2008 [England, BHS, MHS, MMS+] explored the impact and challenges of implementation of smokefree policy in NHS acute and mental health Trusts. Questionnaire based surveys were sent to all NHS acute and mental health Trusts, of which representatives from 186 Trusts completed questionnaires (72 mental health trusts and 114 Acute Trusts). At the time of the survey, the majority of Trusts had implemented smokefree policies. Relevant attitudinal results included: views about experience of staff support; views about the effect of smokefree on patient mental health (mental health settings only); beliefs about the effect of smokefree on patient medication needs (mental health settings only); views about the effect of smokefree policies on the staff-patient relationship; views about enforcement and compliance. Questionnaires were supplemented with semi-structured telephone interviews with 22 respondents and direct observation at a sample of 15 Trusts (22 different sites).

Wheeler 2007 [USA, BHS, MMS-] evaluated the impact of a total smoking ban at a university hospital (site 1), and an employee smoking ban at a private children's hospital on the hospital campus (site 2). Staff were surveyed at site 1 three months before implementation of the ban (n=842) and 10 months after implementation (n=912). Staff were surveyed at site 2 two months after implementation of the staff smoking ban (n=183). The surveys assessed: support for policy; belief that the policy would make/made the site healthier and safer; belief that the policy would set/set a good example for patients. In addition, focus group discussions were conducted with supervisors (n=7) and security personnel (n=4), and key informant interviews were carried out with hospital administrators (n=8) at site 1 after implementation of the ban.

Quantitative evidence only

Baile 1991 [USA, BHS, SCSS+] investigated the impact of a complete smoking ban on the employees of a cancer treatment facility four months after implementation of the ban. A total of 266 non-smoking employees were recruited through staff meetings to complete a questionnaire. The key outcome measure was attitudes towards employer's right to ban smoking.

Bloor 2006 [England, MHS, SCSS+] conducted a questionnaire survey to investigate the impact of a smokefree policy in a newly opened English mental health hospital on the smoking behaviour and attitudes of nursing staff. A total of 92 nurses

completed the questionnaire. Relevant outcome measures were support for ban, beliefs about right to smoke, and attitudes towards enforcement of the policy.

Haller 1996 [USA, MHS, BAS+] studied the effects of a complete smoking ban in a locked psychiatric unit. Staff and patients were surveyed 1 month before implementation (staff n=67; patients n=21). Staff were also surveyed 1 month after implementation (n=53), and patients were surveyed 2-4 months after implementation (n=93). The survey measured attitudes towards the ban, and its perceived impact on patients and the ward.

Hill 2007 [England, MHS, SCSS++] investigated the attitudes of patients (n=38) and staff (n=39) on an in-patient drug and alcohol dependence treatment unit towards a proposed indoor smoking ban. The relevant attitudinal results were beliefs about the willingness of patients to accept treatment in a smokefree facility, beliefs about the difficulty of treatment in a smokefree environment, and beliefs about the success of treatment in a smokefree environment.

Matthews 2005 [USA, MHS, B&A-] evaluated the implementation of a smoking ban on an acute psychiatric unit for men. Staff were surveyed before (n=14) and after implementation of the ban (n=13). The surveys covered beliefs about benefits of the ban, beliefs about the ethics of the ban, and views about the problems anticipated/experienced as a result of the ban.

Ratschen 2009b [UK, MHS, SCSS++] explored staff attitudes to smokefree policy in 25 inpatient mental health units of an NHS Mental Health Trust with a smokefree policy in place. A total of 459 staff completed a questionnaire survey designed to assess beliefs about the importance of addressing smoking in mental health settings, views about compliance and enforcement, and beliefs about smoking and mental health.

Shipley 2008 [England, BHS, SCSS+] explored staff views about enforcement of smokefree policy at a general hospital with a smokefree policy in place. A total of 85 staff were recruited through convenience sampling. Staff were asked whether they would challenge patients, other staff members or visitors for smoking on the hospital sites, and the study explored the reasons given by staff who said they would not do so.

Voci 2010 [Canada, MHS, RCSS++] explored staff attitudes towards and experiences of implementation of an indoor and partial-outdoor smoking ban at a centre for mental health and addiction at two time points after policy implementation: 2-7 months after implementation (n=430); and 31-33 months after implementation (n=400). The surveys assessed: support for the policy; beliefs about the beneficial effects of smokefree policy on the hospital environment; views about the right to smoke/right to be protected from second hand smoke; beliefs about the effect of smokefree policy on patient mental and physical health; beliefs about the effect of smokefree policy on patient aggresion and patient management; beliefs about the effects of the policy on patient medication needs; beliefs about the effect of the policy on safety; and beliefs about the effect of the policy on patient retention.

2.1 Attitude to Smoking as a 'Rights' Issue and Readiness to Support Smokefree policy

Qualitative findings

Some studies reported an association between people's perceived right to smoke and patient and staff willingness to engage with and support smokefree policy. There is a belief that tobacco policy needs to acknowledge the patient's moral right to smoke (**Johnson 2010 [Canada, MHS, QS++]),** for example through the provision of designated smoking areas (**Arack 2009 [England, BHS, SCSS-]**) and the provision of smoking breaks on request (**Kotz 1993 [USA, MHS, CS-]**). These beliefs are evident in both mental health and wider secondary care settings and amongst both patients and staff, but appear to be magnified in mental health settings, particularly in relation to long stay psychiatric patients undergoing rehabilitation and continuing care where wards can be regarded as 'home' (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**), and acutely ill and psychologically distressed patients who can be sectioned or detained against their will (**McNeill 2007 [Scotland, MHS, QS+]; HUG 2007 [Scotland, MHS, QS-]**). Legal challenges and threats to the implementation of smokefree polices on human rights grounds have led some implementers to advise incorporating legal counsel as part of policy development and to ensure smokers are actively consulted as part of the development process (**Parle 2004 [Canada, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]**).

Identification with smoking as a patient rights issue was also associated with poor staff engagement in delivering cessation support. For example, administrators in one substance addictions unit gave cessation support a low treatment priority citing residents' right to smoke as a reason (**Drach 2012 [USA, MHS, QS-]**); while in another study paraprofessionals and professionals viewed their role in smoking cessation to be limited, stating that it was not their role to dictate what people should do with their lives (**Johnson 2010 [Canada, MHS, QS++]**). It is suggested in studies from the UK, that low utilisation of smoking cessation services is reflective of a failure to acknowledge the effects of smoking on patients' physical health (**Wareing 2012 [England, MHS, QS+]**) and to recognise smoking as an addiction or as serious an addiction as other dependency behaviours (**McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**) or, as another study noted, was not something that needed to be included as part of the patients care plan (**Ratschen 2009a [England, MHS, QS++]**). It has been suggested that healthcare staff are more likely to engage in providing cessation support when smoking is framed as an addiction requiring treatment rather than as a habit or moral issue where staff feel they do not have the right to intervene (**Schultz 2011 [Canada, BHS, QS++]**).

Quantitative findings

Several quantitative studies looked at staff and patient attitudes to rights issues surrounding smokefree policy (**Bloor 2006 [England, MHS, SCSS+]**; **Haller 1996 [USA, MHS, BAS+]**; **Matthews 2005 [USA, MHS, BAS-]; Ratschen 2009b [UK, MHS, SCSS++]**; **Voci 2010 [Canada, MHS, RCSS++]**). All of these studies were conducted in mental health settings.

Studies show that smokers were more likely to believe in the 'right to smoke' than non-smokers, and that non-smokers may be more likely to support the right to be protected from second-hand smoke than smokers. **Bloor et al's (2006 [England, MHS, SCSS+])** study reported a higher proportion of smoking staff than non-smoking staff in the mental health setting agreed that: staff should have the right to smoke if they wish (97% smokers, 69% former smokers, 82% never smokers); a non-smoking policy violates the personal freedom of smokers (94% smokers, 63% former smokers, 47% never smokers); and that smokers are victimised by the non-smoking policy (94% smokers, 59% former smokers, 43% never smokers). **Ratschen et al (2009b [UK, MHS, SCSS++])** reported that smoking staff in mental health settings were significantly less likely than non-smoking staff to agree that protecting patients and staff from second-hand smoke through smokefree policy was an important aim (59.3% of smokers agreed, compared with 75.1% of non-smokers, $p<0.05$).

In **Voci et al's (2010 [Canada, MHS, RCSS++]) ** study conducted in a mental health and addictions facility, the average levels of agreement among staff with the statements 'non-smoking clients have the right to be cared for in a 100% smokefree facility' and 'staff have the right to work in a 100% smokefree facility' were higher than the average level of agreement with the statement 'inpatient clients have a right to smoke'.

Two studies compared attitudes to rights issues before and after implementation of smokefree policy (**Haller 1996 [USA, MHS, BAS+]**; **Matthews 2005 [USA, MHS, BAS-]**). **Haller et al (1996 [USA, MHS, BAS+])** reported that mental health patients felt significantly less strongly that the ban was 'unfair and cruel' after implementation, compared with views before implementation ($p<0.05$). **Matthews et al (2005 [USA, MHS, BAS-])** reported that a higher proportion of nursing staff in the mental health setting believed that banning smoking was ethical after implementation than the proportion that held this belief before implementation. However, this finding was not significant.

A further study (**Baile 1991 [USA, BHS, SCSS+]**) assessed non-smokers' attitude towards the rights of a cancer treatment centre in the USA to implement a smokefree policy (prompted by a perceived

need for organisational protection from possible litigation). The study reported that 93% of non-smoker employees agreed that employers have a right to ban smoking on the worksite.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Attitude to smoking as a 'rights' issue and readiness to support smokefree policy

Evidence statements:

2.1 **Barrier: negative association between perceptions of smoking as a right and readiness to support smokefree policy by staff and patients.** Eight studies (six UK, two non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, and six of which were conducted with staff and two with patients, found a negative association between readiness to support smokefree policy and perceptions of smoking as a right (**Johnson 2010 [Canada, MHS, QS++]; Arack 2009 [England, BHS, SCSS-]**; **Kotz 1993 [USA, MHS, CS-]**; **McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**).

2.2 **Barrier: differences in belief by smoking status that smokers' have a right to smoke.** Two UK studies, both conducted in mental health settings, found that staff who smoke are more likely to believe in the 'right to smoke' and are less likely to support the right of non-smokers to be protected from second-hand smoke compared to non-smokers [**Bloor 2006 [England, MHS, SCSS+]**; **Ratschen 2009b [UK, MHS, SCSS++]**).

2.3 **Barrier: negative association between staff perceptions of smoking as a right and providing cessation support.** Two non-UK studies, both conducted in mental health settings, found a negative association between perceptions of smoking as a right and staff readiness to provide cessation support to patients (**Drach 2012 [USA, MHS, QS-]; Johnson 2010 [Canada, MHS, QS++]**).

2.4 **Facilitator: positive association between staff recognition of smoking as an addiction and readiness to provide cessation support.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary care setting, reported a belief that staff are more likely to support the provision of cessation treatments when smoking is framed as an addiction or is acknowledged as having an impact on patient physical health worthy of treatment (**McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**; **Schultz 2011 [Canada, BHS, QS++]**].

Of the 14 studies reported, the majority, 10, were conducted in the UK (**Arack 2009 [England, BHS, SCSS-]**; **McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]; Bloor 2006 [England, MHS, SCSS+]**; **Ratschen 2009b [UK, MHS, SCSS++]; Wareing 2012 [England, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**).

2.2 Impact of organisational factors on acceptance of smokefree policy

Three organisational factors were associated with adoption of smokefree policy: timing and phasing of the introduction of smokefree policy; giving due consideration to the wider policy context; and leadership, planning and feedback issues.

2.2.1 Impact of timing and phasing the introduction of smokefree on policy acceptance

Qualitative findings

Timing and phasing the introduction of smokefree policy were both seen to have a potential impact on successful implementation. Timing concerns related to seasonal factors and how prevailing weather conditions can affect people's preparedness to move to outdoor areas to smoke. Views expressed by mental health staff responsible for implementing smokefree policy in one Scottish study indicate that scheduling implementation to coincide with warmer months and longer daylight hours can assist in encouraging the transition to smokefree (**McNeill 2007 [Scotland, MHS, QS+]**). This is supported by patients' who consider smoking outdoors harder to accept in colder winter months in a second Scottish study (**HUG 2007 [Scotland, MHS, QS-]**).

Two UK studies also considered the pros and cons of phasing the introduction of smokefree policy against implementing policy in one step. There is no consensus on the best approach. However, an incremental approach appears to appeal to frontline staff as it facilitates a longer, more adaptive process, although it requires more time and resources (**McNeill 2007 [Scotland, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**). It has been suggested that the pace adopted might best be tailored to reflect the prevailing context and setting (**McNeill 2007 [Scotland, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact of timing and phasing the introduction of smokefree on policy acceptance

Evidence statements:

2.5 **Facilitator: timing implementation to take advantage of prevailing weather conditions.** Two UK studies, both conducted in mental health settings, reported that giving consideration to seasonal weather conditions at the time of implementation may have an impact on smokers willingness to smoke outdoors (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]**).

2.6 **Inconclusive: introducing smokefree policy in one or more steps.** Two UK studies, both conducted in mental health settings, considered the effectiveness of phasing the introduction of smokefree policy against implementing policy in one single step. There was no consensus on the more effective approach. (**McNeill 2007 [Scotland, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**).

All three of the studies reported were conducted within the UK (**McNeill 2007 [Scotland, MHS,**

QS+; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**).

2.2.2 Impact of the prevailing policy context on acceptance of smokefree policy

Qualitative findings

A number of studies have considered the wider policy context and how this might affect expectations and acceptance of smokefree policy in secondary care and mental health settings. Early UK studies conducted in the 1990s into smoking restrictions in secondary care settings indicated strong institutional barriers to adopting smokefree policies which were responsible for lead times having to be extended and the adoption of an incremental approach to policy development and the creation of smokefree spaces (**Seymour 2000 [England, BHS, CS-]**). However, more recent findings from the UK and Ireland suggest that the creation of smokefree public spaces in the wider community brought about by legislative change was seen to contribute to successful implementation of smokefree policy in secondary care by establishing new smoking norms and expectations (**Fitzpatrick 2009 [Ireland, BHS, MMS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**). Similar findings have also been found in UK psychiatric services where effective implementation of smokefree polices in broader secondary care settings and in the wider community can help to change smoking norms and increase staff confidence that it can be achieved (**Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**).

These same patterns have also been observed in US studies. Here, implementers' views indicate that it can be difficult to implement smokefree policy where acceptability of smoking in the care setting has not previously been contested (**Karan 1993 [USA, MHS, CS-]**); and where policy is seen to be new and innovative (**Jessup 2007 [USA, MHS, QS++]**). However, where policy forms part of wider changes to the introduction of smokefree environments this has been found to take the pressure off hospitals (**Sheffer 2009 [USA, BHS, BAS+]**). Experience in the US also indicates implementation to be more successful where policies are initiated at a state-wide level rather than a facility level, as individual services are able to benefit from centralised leadership and to support and learn from other services (**Drach 2012 [USA, MHS, QS-]**).

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact of the prevailing policy context on acceptance of smokefree policy

Evidence statements:

2.7 **Barrier: settings where smoking has not previously been contested.** Three studies (one UK, two non-UK), all conducted in mental health settings, attribute difficulties in implementing and acceptance of smokefree policy to policies of this kind being new and smoking not having previously been contested (**Seymour 2000 [England, BHS, CS-]; Karan 1993 [USA, MHS, CS-]**; **Jessup 2007 [USA, MHS, QS++]).**

2.8 **Facilitator: context where smokefree norms are already widely established.** Five studies (two UK, three non-UK), two conducted in mental health settings and three in broader health care settings, suggest that acceptance of smokefree policy is greater where smokefree

norms are already established in adjacent communities and where implementation forms part of a broader initiative (**Fitzpatrick 2009 [Ireland, BHS, MMS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Sheffer 2009 [USA, BHS, BAS+]**; **Drach 2012 [USA, MHS, QS-]**).

Three of the eight studies reported were conducted in the UK (**Seymour 2000 [England, BHS, CS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**) and one was judge to have similar applicability to the UK (**Fitzpatrick 2009 [Ireland, BHS, MMS+]**).

2.2.3 Impact of leadership, planning and feedback on acceptance of smokefree policy

Qualitative findings

Findings from studies in mental health settings indicate that strong and supportive leadership is important to facilitating policy implementation, by helping to secure resources, preparing the service for change and persuading sceptics and detractors (**McNeill 2007 [Scotland, MHS, QS+]; Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]**). A recent survey of mental health services in England found that variation in compliance achieved by different psychiatric units could be attributed to the influence of individual unit managers (**Wareing 2012 [England, MHS, QS+]**). Similar findings are also reported in secondary care settings where senior management support is considered important to implementation, as is identifying advocates or 'champions' who are in a position to engage senior executives and to shape local tobacco policy (**Seymour 2000 [England, BHS, CS-]**).

Findings from studies in both secondary care and mental health settings indicate that planning and feedback processes can influence implementation. Studies in mental health settings highlight the importance of having a clear planning process which provides sufficient time for policy development, stakeholder consultation, consensus building and preparing the service for change through appropriate training, integration of treatment support and communication of new rules (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**). Having comprehensive mechanisms in place for consulting with staff and patients, and informing them of rule changes are also considered important (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**), an issue also highlighted in broader secondary care settings (**Ratschen 2008 [England, BHS, MHS, MMS+]**). Other cases in mental health settings provide illustrations of how lack of time spent on planning and inadequate consultation with stakeholders contributed to policy failure (**Karan 1993 [USA, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2009a [England, MHS, QS++]**).

Similar findings have also been found in secondary care settings. Early efforts in the UK to implement smoking restrictions in hospitals were in some cases hampered by a lack of staff consultation and a failure to listen to staff (**Seymour 2000 [England, BHS, CS-]**). Following these experiences, measures were introduced to involve staff and to address staff concerns regarding security and how to deal with difficult situations (**Seymour 2000 [England, BHS, CS-]**).

In addition to planning process, having systems in place for monitoring implementation and responding to difficulties as these emerge, have also been found to support implementation. One study highlighted the value of developing a culture of critical evaluation, where staff can review and modify practice in accordance with lessons acquired from implementing policy (**Campion 2008 [Australia, MHS, QS+]**). Other cases highlight the role played by management in policy failures,

where lack of management commitment to actively addressing problems with implementation was identified as a significant barrier (**McNeill 2007 [Scotland, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact of leadership, planning and feedback on acceptance of smokefree policy

Evidence statements:

2.9 **Facilitator: strong leadership.** Five studies (three UK, two non-UK), four conducted in mental health settings and one in a broader secondary care setting, made specific reference to the importance of strong leadership in supporting implementation of smokefree policy, and this was found to be particularly important to securing resources, preparing the service for change and persuading sceptics and detractors**.** (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]; Wareing 2012 [England, MHS, QS+]; Seymour 2000 [England, BHS, CS-]**].

2.10 **Facilitator: clear planning process.** Four studies (three UK, one non-UK) all conducted in mental health settings, highlight the importance of having a clear planning process and sufficient time for policy development, stakeholder consultation, consensus building and preparing the service for change. (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**]. Three studies (two UK, one non-UK), two conducted in a mental health settings and one in a broader secondary care setting, suggest that having in place comprehensive mechanisms for consulting with staff and patients, and informing them of rule changes are also important (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Ratschen 2008 [England, BHS, MHS, MMS+])**.

2.11 **Barrier: lack of staff consultation.** One UK study conducted in a broad secondary care setting illustrates how lack of staff consultation and a failure to listen to staff can hamper implementation [**Seymour 2000 [England, BHS, CS-]**].

2.12 **Facilitator: culture of critical evaluation.** One Australian study conducted in a mental health setting highlights the value of developing a culture of critical evaluation, where staff can review and modify practice in accordance with lessons acquired from implementing policy (**Campion 2008 [Australia, MHS, QS+]**).

2.13 **Barrier: poor management commitment.** Two UK studies conducted in mental health settings illustrate how a lack of management commitment to actively addressing problems with implementation can act as an organisational barrier (**McNeill 2007 [Scotland, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**].

Of the 10 studies reported the majority, six, were conducted in the UK (**McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]; Seymour 2000 [England, BHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen**

2008 [England, BHS, MHS, MMS+]) and one was judge to have similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

2.3 Factors relating to policing and enforcement and acceptance of smokefree policy

Enforcement of smokefree policy emerged as a significant theme in both mental health and secondary care settings. The following sub-themes were identified which illuminate the challenges of enforcing smokefree polices in these settings: type of mental health facility; staff commitment to policy enforcement; staff support and resource needs to enforce policy; clarity and consistency in application of smokefree rules; provisions for smokers to support compliance; and dealing with underground markets for tobacco products.

2.3.1 Type of mental health facility and ease of enforcement

Qualitative findings

In mental health settings the type of facility was reported to have an impact on ease of enforcement. Two studies found enforcement of no smoking rules to be easier in secure facilities than on open facilities and admission wards (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**), although the escorting of forensic patients and patients who have been sectioned and under close observation to outdoor areas could require more resources (**Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]**). The rapid inpatient turnover and larger numbers of inpatients involved in open settings was described as making enforcement more difficult (**Mental Health Foundation 2009 [England, MHS, SCSS+]**), while the higher level of control over movement of patients, relatives and staff in secure facilities were reported to make enforcement easier (**Pritchard 2008 [England, MHS, QS++]**). A recent survey of mental services in England found difficulties implementing smokefree policy in medium secure and day care units and to a lesser degree in acute inpatient units (**Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Type of mental health facility and ease of enforcement

Evidence statement:

2.14 Facilitator: easier to enforce in secure mental health facilities compared to open facilities. Two UK studies reported enforcement of smokefree rules to be easier in secure mental health facilities compared with open facilities, which was attributed to smaller numbers of patients and greater control over patient movement in secure settings [**Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**]. However, despite being more straightforward to enforce in secure settings, three UK studies reported that policing in these settings required additional resources (**McNeill 2007 [Scotland, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

All five of the studies reported were conducted within the UK (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **McNeill 2007 [Scotland, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.3.2 Staff commitment to enforcing smokefree policy

Qualitative findings

Staff commitment to enforce smokefree policy is considered central to its success (**Karan 1993 [USA, MHS, CS-]**) However, healthcare and nursing staff can be reluctant to police smokefree policy, often not seeing it as part of their role (**McNeill 2007 [Scotland, MHS, QS+]**; **Kotz 1993 [USA, MHS, CS-]**). Similar patterns have also been reported in relation to escorting patients (**McNeill 2007 [Scotland, MHS, QS+]**) with some regarding it as inappropriate or wasteful of their time (**Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Quantitative findings

A study of staff views in an English general hospital with a smokefree policy that extended to hospital grounds (**Shipley 2008 [England, BHS, SCSS+]**) found that 25% of staff had challenged patients for violating the policy, 13% had challenged visitors, and only 8% had challenged another member of staff. Of staff who had not challenged anyone, the minority (21%) said they would do so in the future, and of those who said that they would not do so, the second most commonly cited reason behind fear of aggression was that they did not consider it their job to enforce smokefree policy.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Staff commitment to enforcing smokefree policy

Evidence statement:

2.15 **Barrier: willingness to accept responsibility for enforcement.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary care setting, found a reluctance amongst healthcare staff to assume responsibility for escorting patients and enforcing smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]**; **Kotz 1993 [USA, MHS, CS-]; Shipley 2008 [England, BHS, SCSS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Three of the four studies reported were conducted in the UK (**McNeill 2007 [Scotland, MHS, QS+]**; **Shipley 2008 [England, BHS, SCSS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**).

2.3.3 Staff support needs and enforcement of smokefree policy

Qualitative findings

Concerns were expressed by staff about their ability to enforce smokefree policy with some staff feeling powerlessness to act resolutely when confronted by patients who fail to comply (**Schultz 2011 [Canada, BHS, QS++]**; **Arack 2009 [England, BHS, SCSS-]**). This was a particular issue for staff working in mental health settings who sometimes felt they lacked the necessary management support and skills to defuse difficult and potentially threatening situations (**Ratschen 2008 [England,**

BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]). There was an expressed need from those working in these settings for greater care and preparation at the planning stage (**McNeill 2007 [Scotland, MHS, QS+]**), better guidance on how to deal with violations (**Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**), and additional training on how to recognise withdrawal symptoms and de-escalate smoking- related situations (**McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]**). Distressed or psychotic patients who are unwell and not prepared or able to comply have been found to present significant challenges to enforcement and to require particular consideration (**Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Staff support needs and enforcement of smokefree policy

Evidence statements:

2.16 **Barrier: perceived ability to enforce smokefree policy.** Four studies (three UK, one non-UK), one conducted in a mental health setting and the three in broader secondary care settings, reported that staff felt they lacked confidence in their ability to enforce the policy and in particular to deal with patients who challenged their authority (**Schultz 2011 [Canada, BHS, QS++]**; **Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+])**.

2.17 **Barrier: inadequate guidance and training on dealing with violations.** Six studies (four UK, two non-UK), five conducted in mental health settings and one in a broader secondary care setting, reported instances where staff expressed a need for better guidance and training on how to deal with violations and to de-escalate smoking-related situations (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Campion 2008 [Australia, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

Of the eight studies reported the majority, five, were conducted in the UK (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Ratschen 2009a [England, MHS, QS++]**) and one was conducted in a country judge to have similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

2.3.4 Importance of consistency and clarity of smokefree rules to policy enforcement

Qualitative findings

Active involvement and consistent application of rules by staff are considered central to effective enforcement of smokefree policy (**Ratschen 2008 [England, BHS, MHS, MMS+]; Wareing 2012 [England, MHS, QS+]**). Lack of clarity on policy or inconsistency in how rules are applied have been linked with poor compliance (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wareing**

2012 [England, MHS, QS+]). Specific failings identified include lack of clarity on: exemptions (**Pritchard 2008 [England, MHS, QS++]**); who is responsible for policing the policy (**McNeill 2007 [Scotland, MHS, QS+]**); and how to respond to instances of non-compliance (**Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**). On the question of exemptions, there can be uncertainty as to whether to implement blanket bans on smoking or to allow exemptions (**Ratschen 2008 [England, BHS, MHS, MMS+]**). Giving staff the freedom to grant concessions on a case-by-case basis is considered an appropriate way of managing difficult situations. However, there can be a concern that discretionary powers may be used by staff as an excuse to allow smoking (**Ratschen 2008 [England, BHS, MHS, MMS+]**) and that this in turn can encourage non-compliance and cessation relapse (**McNeill 2007 [Scotland, MHS, QS+]**). A recent UK study identified no exceptions to practice as a key criterion for successful implementation of smokefree policy (**Wareing 2012 [England, MHS, QS+]**).

Inconsistent application of smoking policy can be seen to have a negative impact on the therapeutic environment, creating feelings of anger and frustration amongst patients, and ultimately leading to conflict and unrest (**Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**) and in some cases undermining the efforts of patients engaged in stopping smoking (**Karan 1993 [USA, MHS, CS-]**). Inconsistencies in application between staff and patient have also been associated with unrest and patient's willingness to comply (**Karan 1993 [USA, MHS, CS-]**).

Inconsistencies have also been linked with structural factors. Where premises are shared or in close proximity to other health providers or psychiatric services, differing approaches to enforcement and application of exemptions can lead to frustration (**McNeill 2007 [Scotland, MHS, QS+]; Pritchard 2008 [England, MHS, QS++]**). In these situations it is suggested a standardised approach to policy decisions is required (**Karan 1993 [USA, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]**).
The failure in some cases to clearly define and communicate policy, for example posting signs indicating that 'this hospital is smokefree' without indicating if the requirement applies to buildings alone or together with grounds, can also cause confusion and contribute to poor compliance (**Wareing 2012 [England, MHS, QS+]**).

Quantitative findings
No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Importance of consistency and clarity of smokefree rules to policy enforcement

Evidence statement:

2.18 **Barrier: lack of clarity and inconsistency in application of rules.** Eight studies (five UK, three non-UK), seven conducted in mental health settings and one in a broader secondary care setting, found that lack of clarity on policy and inconsistencies in the way in which smokefree rules are applied can adversely affect compliance and the wider therapeutic environment (**Mental Health Foundation 2009 [[England, MHS, SCSS+]**; **Wareing 2012 [England, MHS, QS+]**; **Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Parle 2004 [Canada, MHS, CS-]; Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-])**.

Of the eight studies reported the majority, five, were conducted in the UK (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wareing 2012 [England, MHS, QS+]**; **Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]**) and one was conducted in a country judge to have similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

2.3.5 Importance of special provisons for smokers and compliance with smokefree policy

Qualitative findings

There is a belief amongst staff in both mental health and wider secondary care settings that the provision of outdoor smoking areas (**Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]**), and where necessary secure smoking areas (**McNeill 2007 [Scotland, MHS, QS+]**), are required to combat patient aggression and facilitate successful enforcement indoors (**Ratschen 2008 [England, BHS, MHS, MMS+]**). These qualitative findings are also consistent with quantitative findings relating to the staff preferences for type of smokefree policy (see Section 1.3) and with other qualitative findings with reports of staff and patients calling for the right to smoke outdoors (**Wareing 2012 [England, MHS, QS+]**) and the provision of designated areas to facilitate smoking on hospital grounds (**Ratschen 2008 [England, BHS, MHS, MMS+]; HUG 2007 [Scotland, MHS, QS-]; Ratschen 2010 [England, MHS, QS++]**). Where outdoor areas are not provided, there can be a lack of understanding amongst patients as to the reason for not providing designated smoking areas (**HUG 2007 [Scotland, MHS, QS-]**), with some assuming designated outdoor areas are appropriate and would not interfere with the aim of protecting non-smokers against environmental tobacco smoke (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

Failure to take account of smokers' needs has been associated with poor compliance. For example, resulting in unofficial smoking areas becoming established on hospital grounds (**Ratschen 2009a [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**) and calls for improved enforcement and detection measures in locations where secret smoking is known to take place (**Seymour 2000 [England, BHS, CS-]**). Similarly, the provision of outside smoking facilities that are not considered acceptable and safe, (i.e. offer inadequate protection from bad weather, are poorly lit and located in isolated positions, and do not provide panic buttons or incorporate surveillance cameras), has been associated with poor compliance and use (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**), while well-equipped and well-positioned outdoor facilities have been associated with good compliance (**Arack 2009 [England, BHS, SCSS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Poor compliance is also associated with not having sufficient staff resources to: escort patients to outside areas (**McNeill 2007 [Scotland, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**), particularly secure patients (**Ratschen 2009a [England, MHS, QS++]**); provide surveillance in designated areas (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**); patrol hospital grounds (**Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]**); and deal with smoking-related incidents (**Mental Health Foundation 2009 [England, MHS, SCSS+]**). Conversely, adequate staffing levels to monitor compliance and escort patients to outdoor areas has been associated with successful implementation of smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Structural factors have also been reported to influence compliance, where poor access to external smoking areas brought about by service location, for example wards located on upper floors, can discourage the use of such facilities (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**). Similarly, policing grounds can also prove difficult, especially where these are large and there are common areas and thoroughfares shared by members of the public (**McNeill 2007 [Scotland, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Importance of special provisions for smokers and compliance with smokefree policy

Evidence statements:

2.19 Facilitator: a belief that designated smoking areas are necessary to support compliance. Four studies (two UK, two non-UK), one conducted in a mental health setting and three in broader secondary care settings, suggest staff support for smokefree policy is predicated on a belief that designated areas are necessary to support compliance (**Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+])**. Two UK studies, both conducted in mental health settings, reported unofficial smoking areas becoming established on hospital grounds in the absence of designated smoking areas [**Ratschen 2009a [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**).

2.20 Barrier: association between poorly designed smoking areas and poor compliance. Two UK studies, both conducted in mental health settings, suggest that poor compliance is associated with poorly equipped and positioned smoking areas (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]**].

2.21 Facilitator: association between well-designed smoking areas and good compliance. Two UK studies, one conducted in a mental health setting and another in a broader secondary care setting, reported a positive association between compliance and well equipped and positioned outdoor smoking areas **Arack 2009 [England, BHS, SCSS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**].

2.22 Barrier: insufficient staff resources to police smokefree policy on hospital grounds. Seven studies (six UK, one non-UK), six conducted in mental health settings and one in a broader secondary care setting, reported a lack of staff resources to escort patients and patrol hospital grounds as a reason for poor compliance (**McNeill 2007 [Scotland, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2009a [England, MHS, QS++]**; **Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]**].

2.23 Barrier: structural limitations adversely affect compliance and enforcement. Three UK studies, all conducted in mental health settings, identified poor access to outside areas and large, shared grounds as factors responsible for poor compliance and difficulties in policing (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS,**

SCSS+]; **Wareing 2012 [England, MHS, QS+]**].

Of the 11 studies reported the majority, eight, were conducted within the UK (**Ratschen 2008 [England, BHS, MHS, MMS+]; McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Arack 2009 [England, BHS, SCSS-]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2009a [England, MHS, QS++]**; **Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**).

2.3.6 Emergence of underground markets for tobacco and enforcement of smokefree policy

Qualitative findings

In some mental health settings implementation of smokefree policies has been implicated in the development of underground markets for smuggled tobacco products which has created additional challenges for enforcement (**Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**). Visitors and relatives can pose a particular problem in this setting by secretly supplying tobacco to inpatients (**Mental Health Foundation 2009 [England, MHS, SCSS+]**). Within secure forensic facilities, reclassifying tobacco as a contraband item has facilitated routine searches of visitors, patients and staff members entering the premises, contributing to the creation of a smokefree environment (**Pritchard 2008 [England, MHS, QS++]**). In other cases, markets for contraband tobacco have been reported in the grounds surrounding psychiatric services where patients have unsupervised access (**Parle 2004 [Canada, MHS, CS-]**) which creates challenges for patrolling grounds.

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Emergence of underground markets for tobacco and enforcement of smokefree policy

Evidence statements:

2.24 Barrier: emergence of underground markets creates additional challenges for enforcement. Three studies (one UK, two non-UK), all conducted in mental health settings, report the emergence of an underground market for tobacco products following implementation, with visitors and relatives posing a particular problem in supplying contraband tobacco (**Karan 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]**).

2.25 Facilitator: implementing search policies more straightforward in secure settings. One UK study conducted in a secure forensic mental health facility reported that reclassifying tobacco as a contraband item had facilitated routine searches of visitors, patients and staff members entering the premises (**Pritchard 2008 [England, MHS, QS++]**).

Two of the four studies reported were conducted within the UK (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**).

2.4 Factors relating to the provision of cessation support and acceptance of smokefree policy

Two themes emerged in relation to smokefree provisions for cessation support in secondary care and acceptance of smokefree policy; patient motivation and the conditions under which patients were prepared to engage with cessation support; and staff support and resource needs necessary to deliver cessation support to patients.

2.4.1 Patient motivation and willingness to engage in cessation support as part of a smokefree policy

Qualitative findings

Patients identify smokefree hospitals as a possible trigger to stop smoking (**HUG 2007 [Scotland, MHS, QS-]**) and cessation support to be potentially useful provided if is offered in a compassionate, non-coercive manner, and as a means of improving patient health rather than as an isolated measure that can be seen merely as punitive (**HUG 2007 [Scotland, MHS, QS-]**). Similarly, successful smokefree implementation is associated with policy that is presented as part of a wider public health drive to improve the health of patients and staff (**Mental Health Foundation 2009 [England, MHS, SCSS+]**), including, where relevant, perinatal benefits (**Jessup 2007 [USA, MHS, QS++]**). These findings appear to show strong consistency with views expressed by healthcare staff, which indicates staff to be more likely to engage in providing cessation support when smoking is framed as an addiction (see Section 2.1).

Patients also caution that dealing with mental illness can be traumatic (**Ratschen 2010 [England, MHS, QS++]**) and that being admitted to hospital can be a point in their lives where they are dealing with a host of problems making stopping smoking and dealing with the symptoms of withdrawal difficult (**HUG 2007 [Scotland, MHS, QS-]**), views also supported by hospital staff who describe discussions about smoking cessation as "hassling clients" about "one more thing" (**Drach 2012 [USA, MHS, QS-]; Johnson 2010 [Canada, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]**). Consequently patients state that they need help to give up when they are ready and prepared to do so (**HUG 2007 [Scotland, MHS, QS-]**). Some inpatients express a greater interest in cutting down their consumption than quitting (**Ratschen 2010 [England, MHS, QS++]**) underlining a need for support not merely to help quit attempts but also to minimise harm and encourage a reduction in use and temporary abstinence (**Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Patient motivation and willingness to engage in cessation support as part of a smokefree policy#

Evidence statements:

2.26 **Facilitator: belief that take-up of cessation support can be influenced by the way in which advice is framed.** Three studies (two UK, one non-UK), all conducted in metal health settings, suggest that patients are more likely to engage with cessation services when advice is delivered in a non-coercive manner and is motived by a desire to improve patient

health, and not merely to support the smokefree policy (**HUG 2007 [Scotland, MHS, QS-]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Jessup 2007 [USA, MHS, QS++])**.

2.27 **Barrier: belief that take-up of cessation support is dependent upon patient readiness to quit.** One UK study conducted in relation to mental health settings reported that smokefree facilities can act as a trigger to consider quitting but also found patient willingness to engage with cessation support is dependent upon their readiness to stop (**HUG 2007 [Scotland, MHS, QS-]**). Two UK studies, both conducted in mental health settings, found some patients were motivated to take up support for temporary abstinence and to reduce consumption rather than to quit [**Ratschen 2010 [England, MHS, QS++]; Wareing 2012 [England, MHS, QS+]**].

Of the five studies reported the majority, four, were conducted within the UK (**HUG 2007 [Scotland, MHS, QS-]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Ratschen 2010 [England, MHS, QS++]; Wareing 2012 [England, MHS, QS+]**).

2.4.2 Staff support and resource needs necessary to encourage patient engagement in cessation support as part of a smokefree policy

Four sub-themes relating to staff support and resources were identified: staff training needs, continuity of support with community cessation services; cessation support for staff who smoke; and perceived gaps in provision of cessation resources.

Qualitative findings

a. Staff training needs

Some healthcare staff saw smoking cessation as requiring a specialised set of skills which was beyond their domain and identified a lack of training and knowledge regarding tobacco use as a barrier to engaging patients (**Johnson 2010 [Canada, MHS, QS++]**). Some healthcare staff indicated a willingness to assess patients' readiness to quit but were not prepared to support implementation of smoking cessation goals (**Johnson 2010 [Canada, MHS, QS++]**) which appears to support reported gaps in the provision of brief intervention training (see Section 2.4.2d).

b. Continuity with patient cessation support provided in the community

Delivering effective smoking cessation to inpatients was considered harder to plan and implement where patients were not being offered cessation support in the community or informed that they would not be allowed to smoke once admitted (**Mental Health Foundation 2009 [England, MHS, SCSS+]**). The absence of clear protocols and referral pathways to community-based cessation support for patients discharged from hospital were reported in both mental health and wider secondary care settings (**Schultz 2011 [Canada, BHS, QS++]; McNeill 2007 [Scotland, MHS, QS+]**). A recent survey of mental health services in England indicates limited contact between mental health units and NHS stop smoking services, with most only contacting units on request (**Wareing 2012 [England, MHS, QS+]**).

c. Cessation support for staff who smoke

Availability of cessation support for staff who smoke was seen as an important element of the preparation for and potential success of a smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]**) with a belief that staff should be afforded the same kind of support as patients (**Jessup 2007 [USA, MHS, QS++]**). Findings suggest that uptake of cessation support by staff was sometimes lower than

had been planned for, in some cases resulting in reductions in provision (**Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

d. Gaps in provision of cessation resources

Some studies and participant reports identify significant gaps or inequities in the supply of cessation resources for mental health patients; information materials, NRT and staff training (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**). Similar gaps or shortages were also noted in wider secondary care settings (**Schultz 2011 [Canada, BHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**). Details are limited but a number of specific gaps were identified from recent UK studies in mental health settings which included; measures to ensure availability of a range of pharmacotherapies including NRT and gum (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**); and staff trained to deliver brief interventions (**McNeill 2007 [Scotland, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**), to manage nicotine addiction and interactions with antipsychotic medications (**McNeill 2007 [Scotland, MHS, QS+]; Ratschen 2009a [England, MHS, QS++]; Wareing 2012 [England, MHS, QS+]**) and to provide specialist support (**Wareing 2012 [England, MHS, QS+]**). One study found staff had a poor understanding of the detrimental effects of smoking (**Ratschen 2009a [England, MHS, QS++]),** while another reported an inability amongst staff to assess nicotine dependency and to prescribe appropriate pharmacotherapy to adequately alleviate cravings and withdrawal (**Wareing 2012 [England, MHS, QS+]**).

In some cases gaps in provision of resources were attributed to low awareness rather than low availability (**McNeill 2007 [Scotland, MHS, QS+]**), again something also observed in broader secondary care settings (**Arack 2009 [England, BHS, SCSS-]**). In other cases, gaps relate to the way in which resources are delivered. For example, supplying nicotine patches on admission without guidance on their use, or any offer of behavioural support (**Ratschen 2010 [England, MHS, QS++]**).

Provision of a varied range of therapeutic, diversionary activities to compensate for smoking was also considered important to supporting cessation and temporary abstinence (**Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Wareing 2012 [England, MHS, QS+]**) and was also identified as a significant gap (**McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**). This is supported by patient accounts of their reasons for smoking as a means of relaxing and overcoming boredom (**HUG 2007 [Scotland, MHS, QS-]**) and as a way of socialising with other patients (**HUG 2007 [Scotland, MHS, QS-]**).

Quantitative findings

No quantitative evidence was identified relating to any of these sub-themes.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Staff support and resource needs necessary to encourage patient engagement in cessation support as part of a smokefree policy

Evidence statements:

2.28 **Barrier: poor continuity with cessation support in the community.** Four studies (three UK, one non-UK), three conducted in mental health settings and one in a broader secondary

care setting, found that poor communication and continuity of support with cessation services in the community made providing cessation support for inpatients as part of a smokefree policy harder to plan and implement [**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Schultz 2011 [Canada, BHS, QS++]; McNeill 2007 [Scotland, MHS, QS+]**; **Wareing 2012 [England, MHS, QS+]**].

2.29 **Facilitator: provision of cessation support for staff.** Two studies (one UK, one non-UK), both conducted in mental health settings, suggest that providing cessation support to staff as well as patients is important to successful implementation of smokefree policy (**McNeill 2007 [Scotland, MHS, QS+]**; **Jessup 2007 [USA, MHS, QS++])**. Two other studies (one UK, one non-UK), both conducted in broader secondary care settings, found that take-up of such services by staff to be low (**Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.30 **Barrier: gaps in provision of cessation resources.** Seven studies (six UK, one non-UK), five conducted in mental health settings and two in broader secondary care settings, reported gaps and inequities in the provision of important cessation resources and support as part of a smokefree policy relating to four mains areas; information materials, pharmacotherapies, trained staff and diversionary activities (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**; **Schultz 2011 [Canada, BHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+])**.

Of the eight studies reported the majority, six, were conducted within the UK (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2010 [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]**).

2.5 Mental health patient groups identified as requiring special consideration when devising smokefree policy

Three mental health patient groups are identified as requiring special consideration and potential exemption status from smokefree policy: long-stay psychiatric patients receiving continuing care; cognitively impaired and acutely ill psychiatric patients; and patients being treated for other addictive disorders. Other groups requiring similar consideration include bereaved relatives and patients receiving palliative care (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

2.5.1 Long-stay psychiatric patients

Qualitative findings

The grounds for affording long-stay psychiatric patients special attention relates exclusively to smoking being seen as a human rights issue and the patient care setting assuming the status of 'home'. The identified evidence is described under Section2.1, 'Attitudes to smoking as a rights issue and willingness to engage in smokefree policy'.

Quantitative findings

No quantitative evidence was identified relating to this theme.

2.5.2 Acutely ill and cognitively impaired psychiatric patients

Qualitative findings

Staff working in mental health settings express concern that patients with acute mental illness who are often admitted in crisis under emergency conditions can be particularly disruptive and difficult to treat, and present an increased risk to staff if denied access to cigarettes in a smokefree setting (**McNeill 2007 [Scotland, MHS, QS+]**; **Campion 2008 [Australia, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**). Similar concerns are also raised in connection with cognitively impaired patients with limited capacity to understand and to retain the information surrounding a smokefree policy, such as patients with dementia (**Pritchard 2008 [England, MHS, QS++]**). Advocates argue that special consideration and provisions are required for patients who are non-comprehending (**Ratschen 2008 [England, BHS, MHS, MMS+]**), for example additional staff resources to escort and provide surveillance in outdoor areas (**Karan 1993 [USA, MHS, CS-]**), and that in some extreme situations exemptions are necessary as a measure to alleviate patient distress (**Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Concerns are also expressed about the legality of removing the right to smoke from patients who have been sectioned or detained against their will. The related evidence is described under Section 2.1, 'Attitudes to smoking as a rights issue'.

Quantitative findings

No quantitative evidence was identified relating to this theme.

2.5.3 Patients with other addictive disorders

Qualitative findings

Staff treating patients for addictive disorders expressed concern that trying to abstain from or stop smoking whilst simultaneously giving up other substances or forms of chemical dependence to comply with smokefree can have a negative impact on their recovery (**Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]**), with, for example, staff efforts diverted from treatment to enforcement (**Kotz 1993 [USA, MHS, CS-]**). Findings suggest that such concerns can be promulgated by patient mentors or 'sponsors' who are themselves smokers (**Jessup 2007 [USA, MHS, QS++]**) and that patients in this group can have low motivation to quit (**Karan 1993 [USA, MHS, CS-]**) and may acquiesce to tobacco cessation support in order to gain access to a drug treatment programme (**Karan 1993 [USA, MHS, CS-]**).

Findings suggest that consideration also needs to be extended to the friends and relatives of patients with addictive disorders. **Kotz et al (1993, [USA, MHS, CS-])** found that family members can persist in supplying patients with tobacco and resist efforts to stop patients smoking because they are reluctant for their relative to be distracted from recovery from an addiction to another drug which has more immediate and severe adverse consequences.

Quantitative findings

Hill et al (2007 [England, MHS, SCSS++]) in their investigation of patients and staff attitudes towards a proposed indoor smoking ban in an English inpatient drug and alcohol dependence treatment unit found that the majority of staff (97%) believed that patients would find treatment more difficult, and 87% of staff believed that treatment would be less successful. The study also found that the majority of patients (92%) believed that treatment for drug and/or alcohol dependence with a no-smoking policy would be more difficult, and 71% of patients felt that treatment would be less successful.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Mental health patient groups identified as requiring special consideration when devising smokefree policy

Evidence statement:

2.31 **Barrier: belief that some mental health patients require special consideration and support.** Eleven studies (seven UK, four non-UK) identified specific types of mental health patient as requiring special consideration and potential exemption status from smokefree policy: long-stay psychiatric patients receiving continuing care who may regard the mental health facility as their home (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**]; cognitively impaired and acutely ill psychiatric patients who have limited capacity to understand and to retain the information surrounding the policy and who can be disruptive and present an increase risk to staff (**McNeill 2007 [Scotland, MHS, QS+]**; **Campion 2008 [Australia, MHS, QS+]**; **Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Pritchard 2008 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **Karan 1993 [USA, MHS, CS-]);** and patients being treated for other addictive disorders who may find stopping smoking whilst simultaneously giving up other substances interferes with their treatment and recovery (**Jessup 2007 [USA, MHS, QS++]**; **Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]; Hill 2007 [England, MHS, SCSS++]**).

Of the 11 studies reported the majority, seven, were conducted within the UK (**McNeill 2007 [Scotland, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2010 [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **Hill 2007 [England, MHS, SCSS++]**) and one was conducted in a country judge to have similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

Q3: What are the adverse events and other consequences associated with smokefree policies?

Views on adverse events and consequences were wide ranging and were grouped under ten themes: impact on patient mental health; impact on patient physical health; stimulating patient abuse and aggression; impact on the therapeutic environment and the patient-carer relationship; issues emerging from changing staff work break patterns; impact on medication requirements; impact on patient recruitment and retention; increased fire hazard risk; security and safety concerns; and impact on the physical environment. Brief summaries of the studies used to answer this research question are given in **Figure 4**.

Figure 4: Question 3 study summaries

Qualitative evidence only

Campion 2008 [Australia, MHS, QS+] reported on the introduction, trial and termination of a smokefree policy in an acute mental health inpatient unit. Individual and group interviews were carried out with 6 key informants, and analysis of documentation related to implementation of the smokefree policy was carried out.

Cooke 1991 [Canada, MHS, CS-] reports a personal account of the implementation of an indoor smoking ban at a 20 bed psychiatric unit in a regional general hospital by the clinical nurse specialist manager of the unit.
HUG 2007 [Scotland, MHS, QS-] reported on the findings of 13 branch discussion meetings of a network of people who use or have used mental health services in the Scottish Highlands: Highland Users Group (HUG). The meetings involved 85 people, and explored participants' views on the possibility of psychiatric hospitals becoming smokefree.

Jessup 2007 [USA, MHS, QS++] explored the implementation of a smokefree policy requiring total abstinence from tobacco at a residential drug abuse treatment facility for pregnant and post-partum women. All staff were invited to take part in an interview. Those who took part in interviews (n=8) also took part in a focus group discussion.

Johnson 2010 [Canada, MHS, QS++] carried out a discourse analysis of healthcare providers' engagement in tobacco control in community mental health settings. Ninety-one healthcare providers (42 professionals and 49 paraprofessionals) across 6 study locations including 2 mental health housing units participated in open-ended interviews in which they described their role in tobacco control.

Karan 1993 [USA, MHS, CS-] report on the introduction and subsequent termination of a smokefree policy, requiring patient tobacco abstinence, at an inpatient substance abuse inpatient unit for patients with late stage addictions requiring intensive support.

Kotz 1993 [USA, MHS, CS-] reported on the implementation of an indoor smoking ban at an independent/private 20 bed chemical dependency unit in a 1000 bed tertiary care hospital.

McNeil 2007 (case studies, interviews, observation, Scotland +) explored the move towards mental health settings becoming smokefree in Scotland. The study consisted of interviews with professionals involved in managing, delivering or supporting mental health services in Scotland (n=11). In addition, observational visits were carried out to 4 UK NHS sites/hospitals, and the information gathered from these was presented as case studies.

Mental Health Foundation 2009 [England, MHS, SCSS+] explored the impact of smokefree legislation in English psychiatric units. A questionnaire survey was circulated around UK psychiatric units 5 months after the legislation came into force, and responses were received from 100 English NHS units and 9 independent sector units. Open-ended responses to the questionnaire were reported.

Parle 2004 [Canada, MHS, CS-] report on the implementation of a total smoking ban, including grounds, at a 291 bed psychiatric hospital spread over 225 acres incorporating a large maximum secure unit.

Patterson 2008 [Canada, BHS, QS++] carried out an ethnographic study of security staff (n=19) involved in enforcing an indoor smoking ban at a large hospital. The study consisted of participant observations, and 30 min-1 hour participant interviews.

Pritchard 2008 [England, MHS, QS++] evaluated the impact of a smokefree policy covering buildings and grounds within a mental health Trust. Purposive sampling was used to recruit 19 participants from a range of settings involved in implementation to take part in short interviews, including patient advocates, nursing staff and consultants.

Ratschen 2009a [England, MHS, QS++] explored the implementation of a smokefree policy in 2 adult inpatient mental health wards in an acute mental health Trust. Interviews were carried out with a stratified purposive sample of 16 medical and non-medical staff.

Schultz 2011 [Canada, BHS, QS++] carried out a mixed methods ethnographic study to explore the consequences of smokefree policy in two acute care teaching hospitals that had implemented smokefree property policies 3 years previously. A total of 82 inpatients, 9 key policy makers and 14 support staff were interviewed. Sixteen focus groups were held with healthcare providers and ward staff (n=81). In addition, researchers carried out 6 hour observations at each site.

Tillgren 1998 [Sweden, BHS, QS-] evaluated the implementation of an indoor smoking ban in a large university hospital. Four years after implementation of the ban, interviews were carried out with non-healthcare staff at the hospital: gardeners (n=5), cleaners (n=5), and hosts/hostesses (n=5).

Wareing 2012 [England, MHS, QS+] explored the implementation of smokefree legislation in English mental health services. Observational visits to 28 units were carried out. These were drawn from a cross section of responses to a questionnaire on compliance that had been distributed to a broad range of mental health facilities across England. The selected units represented those who reported good practice, those who reported problems, and some who had not responded to the compliance questionnaire.

Qualitative and quantitative evidence

Arack 2009 [England, BHS, SCSS-] conducted a survey to explore the effect of a complete smoking ban at an NHS Trust, focusing on staff attitudes, staff compliance, and staff smoking behaviour. The survey took place 17 months after implementation of the ban. A total of 160 staff were recruited to take part in the survey through opportunity sampling. Outcome measures were support for smoking ban, and opinions about enforcement of the ban. Thematic analysis was used to identify the main themes emerging from responses to the survey's open-ended questions.

Fitzpatrick 2009 [Ireland, BHS, MMS+] carried out a survey of staff and patient attitudes at an acute general hospital with an indoor ban in place, and plans to transition to a complete campus-wide ban. A total of 295 patients and 225 staff took part in the study. The relevant attitudinal result was support for the planned introduction of a campus-wide ban. In addition, short 5-15 minute attitudinal interviews were conducted with smoking patients (n=28) and staff (n=30).

Sheffer 2009 [USA, BHS, BAS+] explored the attitudes and beliefs of hospital CEOs (Chief Executive Officers)/administrators in one US State towards smokefree legislation 6 months before (n=84) and 1 year after (n=68) legislation became effective. The surveys assessed support for the legislation, support for and resistance to smokefree anticipated/experienced from stakeholders (staff, patients, visitors etc.), and views about the challenges of implementing the legislation. The surveys included a number of open-ended questions.

Ratschen 2008 [England, BHS, MHS, MMS+] explored the impact and challenges of implementation of smokefree policy in NHS acute and mental health Trusts. Questionnaire based surveys were sent to all NHS acute and mental health Trusts, of which representatives from 186 Trusts completed questionnaires (72 mental health trusts and 114 Acute Trusts). At the time of the survey, the majority of Trusts had implemented smokefree policies. Relevant attitudinal results included: views about experience of staff support; views about the effect of smokefree on patient mental health (mental health settings only); beliefs about the effect of smokefree on patient medication needs (mental health settings only); views about the effect of smokefree policies on the staff-patient relationship; views about enforcement and compliance. Questionnaires were supplemented with semi-structured telephone interviews with 22 respondents and direct observation at a sample of 15 Trusts (22 different sites).

Wheeler 2007 [USA, BHS, MMS-] evaluated the impact of a total smoking ban at a university hospital (site 1), and an employee smoking ban at a private children's hospital on the hospital campus (site 2). Staff were surveyed at site 1 three months before implementation of the ban (n=842) and 10 months after implementation (n=912). Staff were surveyed at site 2 two months after implementation of the staff smoking ban (n=183). The surveys assessed: support for policy; belief that the policy would make/made the site healthier and safer; belief that the policy would set/set a good example for patients. In addition, focus group discussions were conducted with supervisors (n=7) and security personnel (n=4), and key informant interviews were carried out with hospital administrators (n=8) at site 1 after implementation of the ban.

Quantitative evidence only

Cormac 2010 [England, MHS, BAS+] evaluated the impact of a total smoking ban in a high security long-stay psychiatric hospital. Postal surveys of staff were conducted at two time points: 1 pre-implementation (n=1038), and 1 post-implementation (n=670). Relevant outcome measures were support for the ban, beliefs about the effect of the ban on patient aggression and patient management, beliefs about the effect of the ban on patient medication needs. Postal surveys of patients were conducted at two time points: 1 pre-implementation (n=175), and 1 post-implementation (n=115). Relevant outcome measures were support for ban, and beliefs about the effect of the ban on patient and physical and mental health.

Haller 1996 [USA, MHS, BAS+] studied the effects of a complete smoking ban in a locked psychiatric unit. Staff and patients were surveyed 1 month before implementation (staff n=67; patients n=21). Staff were also surveyed 1 month after

implementation (n=53), and patients were surveyed 2-4 months after implementation (n=93). The survey measured attitudes towards the ban, and its perceived impact on patients and the ward.

Hill 2007 [England, MHS, SCSS++] investigated the attitudes of patients (n=38) and staff (n=39) on an in-patient drug and alcohol dependence treatment unit towards a proposed indoor smoking ban. The relevant attitudinal results were beliefs about the willingness of patients to accept treatment in a smokefree facility, beliefs about the difficulty of treatment in a smokefree environment, and beliefs about the success of treatment in a smokefree environment.

Praveen 2009 [England, MHS, SCSS+] explored staff (n=308) attitudes towards an impending indoor smoking ban at three in-patient mental health units. Relevant attitudinal results were staff views about where staff and patients should be allowed to smoke, beliefs about whether staff should be allowed to smoke with patients, and beliefs about the effects of smokefree on patient mental and physical health.

Ratschen 2009b [UK, MHS, SCSS++] explored staff attitudes to smokefree policy in 25 inpatient mental health units of an NHS Mental Health Trust with a smokefree policy in place. A total of 459 staff completed a questionnaire survey designed to assess beliefs about the importance of addressing smoking in mental health settings, views about compliance and enforcement, and beliefs about smoking and mental health.

Shipley 2008 [England, BHS, SCSS+] explored staff views about enforcement of smokefree policy at a general hospital with a smokefree policy in place. A total of 85 staff were recruited through convenience sampling. Staff were asked whether they would challenge patients, other staff members or visitors for smoking on the hospital sites, and the study explored the reasons given by staff who said they would not do so.

Steiner 1991 [USA, MHS, BAS+] assessed staff and patient attitudes towards smokefree policy at a mental health day hospital. Surveys were carried out 1 week prior to a move to new smokefree premises (n=17 patients; n=15 staff), and two weeks after the move (n=15 patients; n=17 staff). The surveys assessed staff and patient support for the policy, and beliefs about the effect of the move to a smokefree facility on patient mental health.

Voci 2010 [Canada, MHS, RCSS++] explored staff attitudes towards and experiences of implementation of an indoor and partial-outdoor smoking ban at a centre for mental health and addiction at two time points after policy implementation: 2-7 months after implementation (n=430); and 31-33 months after implementation (n=400). The surveys assessed: support for the policy; beliefs about the beneficial effects of smokefree policy on the hospital environment; views about the right to smoke/right to be protected from second hand smoke; beliefs about the effect of smokefree policy on patient mental and physical health; beliefs about the effect of smokefree policy on patient aggression and patient management; beliefs about the effects of the policy on patient medication needs; beliefs about the effect of the policy on safety; and beliefs about the effect of the policy on patient retention.

Wye 2010 [Australia, MHS, SCSS++] explored staff attitudes towards an impending total smoking ban at a psychiatric inpatient hospital. A total of 183 staff were surveyed 2 weeks before the ban was due to be implemented. As well as assessing staff support for the ban, the survey assessed beliefs about the potential effects of the ban on: patient physical health; patient mental health; patient management and patient aggression; patient medication needs; staff working conditions; patient quality of life; quality of care; staff workload; rapport between patients; and hospital safety. The study also explored clinician views about perceived barriers to implementation of the policy.

3.1 Impact on patient mental health

Qualitative findings

Studies conducted in mental health settings suggest that smoking is sometimes seen by staff as having a calming effect, providing relief from and helping patients cope with the symptoms associated with mental illness (**Johnson 2010[Canada, MHS, QS++]**), while the withdrawal of tobacco is seen to risk exacerbating these symptoms (**Johnson 2010 [Canada, MHS, QS++]; Parle 2004 [Canada, MHS, CS-]**). A recent survey of mental health units in England found mental health staff to lack knowledge about the effect of smoking and appreciation of its interaction with mental health conditions (**Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

Several studies, all of which covered mental health settings, reported on patient and staff views about the effects of smokefree on patient mental health (**Cormac 2010 [England, MHS, BAS+]**; **Haller 1996 [USA, MHS, BAS+]**; **Praveen 2009 [England, MHS, SCSS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **Ratschen 2009b [UK, MHS, SCSS++]; Steiner 1991 [USA, MHS, BAS+]**; **Voci 2010 [Canada, MHS, RCSS++]**; **Wye 2010 [Australia, MHS, SCSS++]**).

These studies suggest that smoking is widely viewed as a coping mechanism for mental health patients, and there is a widespread belief that the removal of smoking has an adverse effect on patient mental health. In their survey of staff before implementation of smokefree policy, **Praveen et al (2009 [England, MHS, SCSS+];)** found that 79% of respondents believed patients would become more agitated or deteriorate in their mental health if they are not allowed to smoke, and only 15% of staff believed that patient mental health would improve as a result of the ban.

Ratschen et al (2009b [UK, MHS, SCSS++])reported that 65% of staff (including medical and non-medical) who participated in their survey believed that smoking was an important coping mechanism for patients. In addition, **Wye et al (2010 [Australia, MHS, SCSS++])** reported that 59% of psychiatric hospital staff disagreed with the statement that 'a total smoking ban will make patients happier', and only 29% agreed that a ban would improve patient mental health.

However, attitudinal findings indicate that the adverse effects of smokefree on patient mental health may not be as great as anticipated. **Cormac et al (2010 [England, MHS, BAS+])** reported that before smokefree policy was implemented in a psychiatric hospital in England, 53% of patients believed that it would have an adverse effect on patient mental health, however post-implementation only 39% believed that this had been the case. **Ratschen et al's (2008 [England, BHS, MHS, MMS+])** postal survey of English NHS acute trusts and mental health units revealed that only 17% of Trust representatives from the mental health settings believed that aggravation of mental health problems had posed problems in the implementation of smokefree policy. **Haller et al (1996 [USA, MHS, BAS+])** reported that staff in a locked inpatient unit were significantly less concerned about patients being 'too fragile' to cope with smoking withdrawal after the ban than they were before implementation of the ban ($p<0.05$).
Voci et al's (2010 [Canada, MHS, RCSS++]**)** surveys of staff in a Canadian mental health and addictions facility revealed that the average level of agreement with the statement that 'patients are more anxious' as a result of the implementation of smokefree was between 'neutral' and 'somewhat agree' in the first two surveys post-implementation, and between 'somewhat disagree' and 'neutral' in the third survey after policy implementation (scale: strongly disagree/somewhat disagree/neutral/somewhat agree/strongly agree). However, this change was not significant ($p>0.05$).

Steiner et al (1991 [USA, MHS, BAS+]) reported that only a third of staff (33%) at a psychiatric day hospital believed that the move to a smokefree facility had a negative emotional impact on patients, with the majority of staff (59%) surprised by the positive response of patients. Similarly, 75% of patients were surprised at how smooth the transition had been, although 69% of patients also believed the move had resulted in a negative emotional impact on some of their fellow patients (e.g. nervousness).

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on patient mental health

Evidence statement:

3.1 Barrier: belief that smokefree policy would adversely affect psychiatric patients' mental health. Two studies (one UK, one non-UK) found that staff expected smokefree policy to have a negative impact on patient mental health (**Praveen 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**) while two other Canadian studies found that withdrawal of tobacco was believed to risk exacerbating the symptoms of mental illness (**Johnson 2010 [Canada, MHS, QS++]; Parle 2004 [Canada, MHS, CS-]**). Four studies (one UK, three non-UK) found that beliefs about these adverse effects had diminished following implementation of the policy or that the effects were not believed to be as significant as had been anticipated (**Cormac 2010 [England, MHS, BAS+]; Haller 1996 [USA, MHS, BAS+]; Voci 2010 [Canada, MHS, RCSS++]; Steiner 1991 [USA, MHS, BAS+]**).

Of the eight studies reported only two were conducted in the UK (**Praveen 2009 [England, MHS, SCSS+]; Cormac 2010 [England, MHS, BAS+]**) and one was judged to have similar applicability to the UK (**Wye 2010 [Australia, MHS, SCSS++]**).

3.2 Impact on patient physical health

Qualitative findings

No qualitative evidence was identified relating to this theme

Quantitative findings

Three studies, all from mental health settings, reported on beliefs about the effects of smokefree on patient physical health (**Cormac 2010 [England, MHS, BAS+]**; **Praveen 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**).

Praveen et al (2009 [England, MHS, SCSS+];) reported that 64% of staff believed that patient physical health would benefit as a result of implementation of a ban on smoking, and **Wye et al (2010 [Australia, MHS, SCSS++])** reported that 65% of staff agreed that a total smoking ban would improve patient physical health. These studies suggest that staff acknowledge the physical health benefits of smokefree environments. However, **Cormac et al (2010 [England, MHS, BAS+])** reported that a quarter of patients (27%) surveyed in an English psychiatric hospital believed that smokefree policy would adversely affect patient physical health. This remained unchanged after implementation of the policy (25%).

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on patient physical health

Evidence statement:

3.2 Inconclusive: belief that smokefree policy would be beneficial to psychiatric patients' physical health. Two studies (one UK, one non-UK) found that mental health staff believed smokefree policy would benefit patients physical health (**Praveen 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**), while one UK study reported that psychiatric patients believed it would adversely affect patient physical health, a belief that remained unchanged after implementation (**Cormac 2010 [England, MHS, BAS+]**).

Of the three studies reported two were conducted in the UK (**Praveen 2009 [England, MHS, SCSS+]**; **Cormac 2010 [England, MHS, BAS+]**) and one was conducted in a country judged to be applicable to the UK (**Wye 2010 [Australia, MHS, SCSS++]**).

3.3 Stimulating patient abuse and aggression

Qualitative findings

There was a fear amongst staff, particularly in the mental health settings, that enforcing smokefree policy could be a potential source of conflict, where informing clients that they cannot smoke could cause aggression and an increased risk of assault and injury (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]**), and create tension and stress in the workplace (**Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-]**). These views were echoed by mental health patient groups (**HUG 2007 [Scotland, MHS, QS-]**).

Staff report opting not to enforce smokefree policy for fear of escalating potentially difficult situations (**Ratschen 2009a [England, MHS, QS++]**). Staff who had experience of similar bans in other settings helped to allay some of the fears by suggesting that such fears were not necessarily justified (**McNeill 2007 [Scotland, MHS, QS+]**). In some cases these fears had not be borne out following the introduction of a smokefree policy (**Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Cooke 1991 [Canada, MHS, CS-]; Parle 2004 [Canada, MHS, CS-]**). However, in others an increase in incidents related to the introduction of the smokefree policy were reported (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Ratschen 2009a [England, MHS, QS++]**), although these could be restricted to lower level effects such as verbal abuse (**Pritchard 2008 [England, MHS, QS++]**). In some cases the effect was less clear or unproven (**Campion 2008 [Australia, MHS, QS+]**). The apparent absence of robust systems for monitoring such incidents could limit ability to assess for these effects (**Campion 2008 [Australia, MHS, QS+]; Parle 2004 [Canada, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]**).

Quantitative findings

Four studies reported on staff beliefs about the effects of smokefree policy on patient aggression and patient management issues, three in a mental health setting (**Cormac 2010 [England, MHS, BAS+]**; **Voci 2010 [Canada, MHS, RCSS++]**; **Wye 2010 [Australia, MHS, SCSS++]**) and one in a general

hospital (**Shipley 2008 [England, BHS, SCSS+]**). No studies were identified that reported on patient beliefs about the same issue.

The quantitative studies included in the review suggest that there is a belief that implementation of smokefree policies in mental health settings will result in patient aggression and difficulties in patient management. **Wye et al (2010 [Australia, MHS, SCSS++])** reported that 60% of psychiatric hospital staff surveyed before implementation of a total smoking ban disagreed that the ban would decrease patient aggression, and 31% were uncertain. In addition, 89% of clinicians believed that fear of patient aggression was a barrier to successful implementation of a smoking ban.

One quantitative study in England compared beliefs about the effects of smokefree on patient aggression in the mental health setting before and after implementation (**Cormac 2010 [England, MHS, BAS+]**). Before implementation of the smokefree policy, 55% of staff believed that patients would be more aggressive, compared to only 15% of staff who believed that patients had been more aggressive after implementation of the ban.

Voci et al (2010 [Canada, MHS, RCSS++]) conducted a series of three staff surveys after the implementation of an indoor smoking ban in a Canadian mental health and addictions facility. The surveys revealed that the average level of agreement across all surveys with all of the following statements was between 'somewhat disagree' and 'neutral' (scale: strongly disagree/somewhat disagree/neutral/somewhat agree/strongly agree): there is an increased number of physical assaults/aggression; there is an increased number of seclusions; there is an increased number of physical restraints. The average level of agreement with the statement 'there is an increased number of verbal assaults/aggression' increased across the surveys, with agreement between 'somewhat disagree' and 'neutral', in the initial surveys rising to between 'neutral' and 'somewhat agree' in the later survey.

Shipley et al (2008 [England, BHS, SCSS+]) found that, of staff who had not challenged patients, staff or visitors for smoking on the district general hospital site and who were not prepared to do so, the most commonly cited reason was fear of aggression.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

<u>Stimulating patient abuse and aggression</u>

Evidence statements:

3.3 Barrier: belief that enforcement of smokefree policy would result in abuse and aggression. Seven studies (five UK, two non-UK), four conducted in mental health settings and three in broader secondary care settings, reported concerns that enforcing smokefree policy is a potential source of conflict, and could result in abuse and increased risk of assault (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; HUG 2007 [Scotland, MHS, QS-]; Wye 2010 [Australia, MHS, SCSS++]; Shipley 2008 [England, BHS, SCSS+]**). Two UK studies, one conducted in a mental health setting and the other in a broader secondary care setting, reported cases where staff specifically reported not enforcing the policy for fear of conflict (**Ratschen 2009a [England, MHS, QS++]**; **Shipley 2008 [England, BHS, SCSS+]**).

3.4 Barrier: cases of abuse and aggression can be a feature of implementation but often not at

the frequency or severity anticipated. Five qualitative studies (two UK, three non-UK), four conducted in a mental health setting and one in a broader secondary care setting, reported that fear of abuse and aggression were not realised following the introduction of a smokefree policy (**Wheeler 2007 [USA, BHS, MMS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Cooke 1991 [Canada, MHS, CS-]; Parle 2004 [Canada, MHS, CS-]**). Three UK studies conducted in mental health settings reported an increase in incidents related to the introduction of the smokefree policy (**Mental Health Foundation 2009 [England, MHS, SCSS+]; Ratschen 2009a [England, MHS, QS++]; Pritchard 2008 [England, MHS, QS++]**]. However, one of these studies indicated that these changes were restricted to lower level effects such as verbal abuse (**Pritchard 2008 [England, MHS, QS++]**). Similarly, of the two quantitative studies that assessed changes over time for this issue, both of which were conducted in mental health settings, one UK study reported significantly lower numbers of staff expressing concerns after implementation compared to before implementation of the policy (**Cormac 2010 [England, MHS, BAS+]**). The other quantitative study (non-UK) found that while there was agreement that verbal assaults and aggression had increased after implementation there was general disagreement that other more serious incidents such as physical assaults had increased (**Voci 2010 [Canada, MHS, RCSS++]**).

Of the 15 studies reported the majority, nine, were conducted within the UK (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]; HUG 2007 [Scotland, MHS, QS-]; Shipley 2008 [England, BHS, SCSS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Ratschen 2009a [England, MHS, QS++]; Pritchard 2008 [England, MHS, QS++]; Cormac 2010 [England, MHS, BAS+]**) and two studies were conducted in a country judged to be of similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]; Wye 2010 [Australia, MHS, SCSS++]**).

3.4 Impact on the patient-carer relationship and therapeutic environment

Qualitative findings

In mental health settings smoking is traditionally seen as a shared activity, where smoking with clients can function as a therapeutic tool, acting as a conduit for relationship building and an opportunity for information sharing (**McNeill 2007 [Scotland, MHS, QS+]; Johnson 2010 [Canada, MHS, QS++]**). In some cases cigarettes have been used by staff to help patients relax and as a bargaining mechanism to help alleviate agitation and distress and to diffuse difficult situations (**Patterson 2008 [Canada, BHS, QS++]; McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Johnson 2010 [Canada, MHS, QS++]**), and in one case the threat of withdrawal of cigarettes is reported as being used as an incentive to good behaviour (**Wareing 2012 [England, MHS, QS+]**).

Viewed within this context the introduction of smokefree policies in mental health settings and requirement by healthcare staff to enforce the policy is seen to have a detrimental effect on the therapeutic environment, for example, creating agitation and an unhealthy fixation on outside smoking areas and break times (**Ratschen 2009a [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]; Kotz 1993 [USA, MHS, CS-]**) and causing patients to become less socially interactive as they retreat to private spaces such as bathrooms to smoke (**Kotz 1993 [USA, MHS, CS-]**). Similarly, introduction of smokefree polices and the onus placed on healthcare staff to police these polices have also been seen to conflict with attempts to build trusting therapeutic relationships (**McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-];**

Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]). In some cases these concerns have discouraged healthcare staff from enforcing the rules in order to maintain a good therapeutic relationship (**Mental Health Foundation 2009 [England, MHS, SCSS+]**) and in one case were instrumental in the decision to discontinue a policy which proved unenforceable (**Kotz 1993 [USA, MHS, CS-]**).

There are fewer reported positive effects on the patient-carer relationships and therapeutic environment. However, one study reported that escorting patients to outside areas as part of the enforcement regime can provide new opportunities to interact with patients (**Pritchard 2008 [England, MHS, QS++]**) while another reported that new recreational spaces created from former smoking rooms can have a positive impact on patient behaviour and sense of well-being (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

Quantitative findings

Two quantitative studies considered staff beliefs around smoking with patients and the staff-patient relationship. The findings from these appear to support those to emerge from the qualitative studies.

Ratschen et al (2008 [England, BHS, MHS, MMS+]) in their study of NHS acute and mental health Trusts found that 36% of staff from acute and mental health Trusts from across England believed that adverse effects of smokefree policy on clinician-patient relationships had posed difficulties in implementation.

In addition, **Praveen et al (2009 [England, MHS, SCSS+])** reported that staff who smoke were more likely to believe that that there are benefits to staff smoking with service users when compared with staff who were non-smokers (65% versus 30% respectively) and that staff should be allowed to smoke with service users when compared with staff who were non-smokers (42% versus 24%,, respectively). However, the authors did not report whether this finding was significant. These findings appear to suggest that staff who smoke are more likely to recognise benefits to the therapeutic relationship of smoking with patients.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on the patient-carer relationship and the therapeutic environment

Evidence statements:

3.5 **Barrier: belief that smokefree policies were damaging to the patient-carer relationship and the therapeutic environment.** Eight studies (five UK, three non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, reported a belief amongst healthcare staff that policing and enforcing smokefree policy was detrimental to establishing therapeutic relationships with patients (**McNeill 2007 [Scotland, MHS, QS+]; Campion 2008 [Australia, MHS, QS+]; Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+])**. One UK study conducted in a mental health setting found that staff who smoked were more likely to believe that there were therapeutic benefits to staff smoking with patients than staff who were non-smokers (**Praveen 2009 [England, MHS, SCSS+]**). Three studies (two UK, one non-UK), all conducted in mental health settings, found that smokefree

policies could be detrimental to establishing a positive therapeutic environment (**Ratschen 2009a [England, MHS, QS++]**; **Wareing 2012 [England, MHS, QS+]; Kotz 1993 [USA, MHS, CS-])**.

3.6 Facilitator: belief that smokefree policies can make positive contributions to the patient-carer relationships and therapeutic environment. One UK mental health study reported that escorting patients to outside areas to smoke can provide new opportunities to interact with patients [**Pritchard 2008 [England, MHS, QS++]**], while another UK study conducted in broader secondary care settings reported that new recreational spaces created from former smoking rooms can have a positive impact on patient behaviour and sense of well-being (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

Of the 10 studies reported the majority, seven, were conducted within the UK (**McNeill 2007 [Scotland, MHS, QS+]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]; Praveen 2009 [England, MHS, SCSS+]; Wareing 2012 [England, MHS, QS+]**) and one study was conducted in a country judged to be of similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

3.5 Issues emerging from changing break patterns to accommodate smoking

Qualitative findings

Implementation of smokefree policy is reported to result in staff taking longer breaks in order to leave the grounds to smoke (**Arack 2009 [England, BHS, SCSS-]**) or taking extra breaks outside of official break times (**Ratschen 2008 [England, BHS, MHS, MMS+]; Wareing 2012 [England, MHS, QS+]**). Longer and more frequent smoking breaks can be a source of tension between smoking and non-smoking staff (**Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]**). Other studies suggest non-smoking staff welcome plans for going completely smokefree because staff who smoke no longer require extra smoking breaks, resulting in greater equity in break patterns (**Schultz 2011 [Canada, BHS, QS++]; Sheffer 2009 [USA, BHS, BAS+]**).

Implementation of smokefree policies is reported to place extra demands on staff time and resources, to organise patient smoking breaks (**Wareing 2012 [England, MHS, QS+]**), to assist patients who require to leave the ward to smoke, particularly patients with mobility limitations and to find patients for treatment who leave wards unassisted (**Schultz 2011 [Canada, BHS, QS++]**). Polices are also reported to adversely affect healthcare delivery, with patients who leave wards to smoke unassisted sometimes not being available for treatment when required (**Schultz 2011 [Canada, BHS, QS++]**) and the introduction of regular smoking breaks disrupting therapeutic activities (**Wareing 2012 [England, MHS, QS+]**).

Quantitative findings

No quantitative evidence was identified relating to this theme

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Issues emerging from changing break patterns to accommodate smoking

Evidence statements:

3.7 Inconclusive: belief that smokefree policy leads to longer staff breaks and tension between smoking and non-smoking staff. Three UK studies, one conducted in a mental health setting and two in broader secondary care settings, suggest that smokefree policy leads to staff who are smokers taking more break time (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Wareing 2012 [England, MHS, QS+]**). Two of these studies also report that these changes can lead to tension between smoking and non-smoking staff (**Arack 2009 [England, BHS, SCSS-]; Wareing 2012 [England, MHS, QS+]).** Two non-UK studies studies, both conducted in broad secondary care settings, report that smokefree policy may lead to greater equity in break patterns (**Schultz 2011 [Canada, BHS, QS++]; Sheffer 2009 [USA, BHS, BAS+]**).

3.8 Barrier: belief that changing break patterns places extra demands on staff resources and disrupts healthcare delivery. Two studies (one UK, one non-UK), one conducted in a mental health setting and the other in a broader secondary care setting, report that the need to supervise patients smoking, places extra demands on staff time and resources and disrupts patient attendance for treatment and participation in therapeutic activity (**Schultz 2011 [Canada, BHS, QS++]; Wareing 2012 [England, MHS, QS+]**).

Three of the five studies reported were conducted within the UK (**Arack 2009 [England, BHS, SCSS-]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Wareing 2012 [England, MHS, QS+]**).

3.6 Impact on medication requirements

Qualitative findings

Two UK studies conducted in mental health settings identified a lack of understanding by nonmedical, healthcare staff about the interaction between stopping smoking and medication requirements, particularly dosage of antipsychotic medications which led to calls for better information for staff and improved monitoring and training (**McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**). Reported inabilities of staff to distinguish between the symptoms of nicotine withdrawal and mental illness (**Ratschen 2009a [England, MHS, QS++]**) appears to add extra weight to such calls. One study conducted in a Canadian psychiatric unit reported that in practice the smokefree policy had not resulted in any increase in use of medication (**Cooke 1991 [Canada, MHS, CS-]**).

Quantitative findings

A number of studies examined beliefs about the impact of smokefree policy and use of medication. Two studies identified a concern among staff that implementation of smokefree policy would result in an increase in the amount of medication required by patients in mental health settings (**Cormac 2010 [England, MHS, BAS+]**; **Haller 1996 [USA, MHS, BAS+])** while one study conducted in an Australian psychiatric hospital before implementation of smokefree policy, reported that 56% of clinical staff disagreed that a smoking ban would reduce medication use **Wye et al (2010 [Australia, MHS, SCSS++])**.

Two of the studies suggest that these concerns may be exaggerated. **Cormac et al (2010 [England, MHS, BAS+])** reported that before implementation of smokefree, 46% of psychiatric hospital staff believed patients would need more medication as a result of the policy, compared with only 13% of staff surveyed after policy implementation who believed this had been the case (the authors did not report whether this finding was significant). **Haller et al (1996 [USA, MHS, BAS +])** reported that

compared with pre-implementation attitudes, psychiatric staff were significantly less concerned about patients requiring more medication after implementation of smokefree policy ($p<0.05$). The same study also found that patients felt significantly less strongly than they did before the ban that extra doses of psychiatric medications would be required, and that total medication doses would need to be increased ($p<0.05$).

In addition, **Voci et al's (2010 [Canada, MHS, RCSS++])** surveys of staff in a Canadian mental health and addictions facility conducted after implementation of a smokefree policy revealed that the average level of agreement with the statement that 'there is an increased use of PRN medications (excluding NRT)' was between 'neutral' and 'somewhat agree' (scale: strongly disagree/somewhat disagree/neutral/somewhat agree/strongly agree).

Finally, a recent survey of acute and mental health NHS trusts in England examined the impact of smokefree policy on use of antipsychotic medication **Ratschen et al (2008 [England, BHS, MHS, MMS +])**. It found that 34% of Trust representatives believed that problems related to assessing dosage of antipsychotic medication in the context of changed smoking behaviour posed difficulties for the implementation of smokefree polices.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on medication requirements

Evidence statements:

3.9 **Barrier: lack of understanding about the interaction between stopping smoking and antipsychotic medication**. Three UK studies, two conducted in mental health settings and one in broader secondary care settings, reported a lack of understanding by staff about the interaction between stopping smoking and dose requirements for antipsychotic medications (**McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+])**.

3.10 **Barrier: belief that smokefree policy has an adverse impact on the amount of medication required by patients.** Two studies (one UK, one non-UK), both conducted in mental health settings, reported that implementation of smokefree policy would result in an increase in the amount of medication required by mental health patients (**Cormac 2010 [England, MHS, BAS+]**; **Haller 1996 [USA, MHS, BAS+]**), while another study (non-UK), also conducted in a mental health setting, reported general disagreement that smokefree policy would reduce medication use (**Wye 2010 [Australia, MHS, SCSS++]**). However, of the two studies (one UK, one non-UK) that conducted post-implementation follow-up surveys, both found that increases in medication use were believed to be significantly less than had been anticipated (**Cormac 2010 [England, MHS, BAS+]**; **Haller 1996 [USA, MHS, BAS+]**). One further study (non-UK) conducted in a mental health setting found a marginal level of agreement that use of medication had increased following implementation of smokefree policy (**Voci 2010 [Canada, MHS, RCSS++]**), while another qualitative study (non-UK) conducted in a mental health setting reported that use of medication had not increased post-implementation (**Cooke 1991 [Canada, MHS, CS-]**).

Four of the eight studies reported were conducted in the UK (**McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2009a [England, MHS, QS++]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Cormac 2010**

[England, MHS, BAS+]) and one study was conducted in a country judged to be of similar applicability to the UK (**Wye 2010 [Australia, MHS, SCSS++]**).

3.7 Impact on patient recruitment and retention

Qualitative findings

A number of studies have examined the impact of smokefree policy on patient recruitment and retention. Mental health staff expressed concern that implementation of smokefree policy can discourage clients who smoke from attending for outpatient appointments (**Campion 2008 [Australia, MHS, QS+]**), a view also echoed by some patients (**HUG 2007 [Scotland, MHS, QS-]**). However, experience indicates that any fall-off in attendance is relatively minor and short lived (**HUG 2007 [Scotland, MHS, QS-]**).

Staff and patients voice similar concerns for inpatient and residential mental health services, with smokefree policies resulting in patients refusing admission and discharging against medical advice (**HUG 2007 [Scotland, MHS, QS-]**; **Parle 2004 [Canada, MHS, CS-]**). Anecdotal observations by staff would in some cases appear to confirm such assertions (**McNeill 2007 [Scotland, MHS, QS+]**; **Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]**) However, examination of patient records fails to support these effects (**Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]**; **Parle 2004 [Canada, MHS, CS-]**), which in one case showed an increase in admissions post-implementation (**Kotz 1993 [USA, MHS, CS-]**). It is suggested that these contradictory data may be explained by strong observer bias and that harm associated with patient admission and retention effects are largely illusory (**Kotz 1993 [USA, MHS, CS-]**).

There are fewer reported instances of patient recruitment and retention concerns in broader secondary care settings. The evidence that does exist appears to follow a similar pattern to that in mental health services. In one US study conducted on two hospital campuses, prior to implementation of a smokefree policy administrative staff expressed concerns that it might deter patients from attending for treatment (**Wheeler 2007 [USA, BHS, MMS-]**). However, post implementation no negative consequences were reported, with unanimous agreement that the policy was 'a good thing'. The same study also recorded concerns that the smokefree policy could damage employee relations and increase staff turnover. However, again no negative consequences were reported (**Wheeler 2007 [USA, BHS, MMS-]**). A second US study, this time relating to the retention of staff employed on a residential drugs rehabilitation programme, reported that the programme lost no staff and no clients as a result of the smokefree policy change (**Jessup 2007 [USA, MHS, QS++]**).

Quantitative findings

Three studies, all of which were conducted in mental health settings, reported on beliefs about the effects of smokefree on patient recruitment and retention (**Haller 1996 [USA, MHS, BAS+]**; **Hill 2007 [England, MHS, SCSS++]**; **Voci 2010 [Canada, MHS, RCSS++]**).

The studies suggest that mental health staff believe that implementation of smokefree policy can result in problems with patient recruitment and retention of patients in treatment. In the only UK study of the three, **Hill et al (2007 [England, MHS, SCSS ++])**, reported that in their survey conducted in specialist substance abuse treatment wards before implementation of indoor smokefree policy, 63% of staff believed that patients would be unlikely to accept treatment if there was a no smoking policy. In the same study, 73% of smoking patients said they would be unlikely to accept treatment if there was a no-smoking policy. However, another study suggests that the effect of smokefree policy

on patient recruitment may not be as serious as some staff and patients fear (**Haller 1996 [USA, MHS, BAS+]**). **Haller et al (1996 [USA, MHS, BAS +])** reported that after implementation of smokefree policy, staff of an inpatient psychiatric unit were significantly less concerned about patients leaving the unit against medical advice and patient elopement than they were before implementation of the ban ($p<0.05$).

Voci et al's (2010 [Canada, MHS, RCSS++]**) [Canada, MHS, RCSS++]**series of staff surveys conducted in a Canadian mental health and addictions facility after the implementation of an indoor smoking ban revealed that the average level of agreement with the statements that 'there is an increased number of elopements' and 'there is an increase in discharges against medical advice' as a result of the implementation of smokefree were both between 'somewhat disagree' and 'neutral' (scale: strongly disagree/somewhat disagree/neutral/somewhat agree/strongly agree).

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on patient recruitment and retention

Evidence statements:

3.11 Barrier: belief that smokefree policy discourages patients from attending for outpatient appointments. Two studies (one UK, one non-UK) conducted in mental health settings reported concerns by mental health staff and patients that implementing smokefree policy would discourage patients who smoke from attending for outpatient appointments (**Campion 2008 [Australia, MHS, QS+]**; **HUG 2007 [Scotland, MHS, QS-]**). However, patient experiences reported by one of these studies (UK) indicates that any fall-off in attendance to be short-term (**HUG 2007 [Scotland, MHS, QS-]**).

3.12 Barrier: belief that smokefree policy results in patients refusing admission and discharging against medical advice. Eight studies (three UK, five non-UK), seven of which were conducted in mental health settings and one in a broader secondary care setting, reported staff and patient concerns that the implementation of smokefree policy would result in patients refusing admission and treatment, and discharging against medical advice (**HUG 2007 [Scotland, MHS, QS-]**; **Parle 2004 [Canada, MHS, CS-]; McNeill 2007 [Scotland, MHS, QS+]**; **Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Wheeler 2007 [USA, BHS, MMS-]**; **Haller 1996 [USA, MHS, BAS+]**; **Hill 2007 [England, MHS, SCSS++]**). However, in three cases (all non-UK), all relating to mental health settings, examination of patient records failed to indicate any negative impact (**Karan 1993 [USA, MHS, CS-]**; **Kotz 1993 [USA, MHS, CS-]**; **Parle 2004 [Canada, MHS, CS-]**). In three of these cases (one UK, two non-UK), again all relating to mental health settings, staff observations post-implementation were consistent with prior concerns that smokefree policy would have a negative impact on patient retention (**McNeill 2007 [Scotland, MHS, QS+]**; **Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-])**, while in two other cases (both non-UK), one conducted in a mental health setting and the other a broader secondary care setting, concerns about negative impact on patient retention were significantly reduced or no longer existed (**Haller 1996 [USA, MHS, BAS+]**; **Wheeler 2007 [USA, BHS, MMS-]**). One other mental health study (non-UK) found a marginal level of disagreement with statements that elopements' and discharges against medical advice had increased as a result of the smokefree policy (**Voci 2010 [Canada, MHS, RCSS++]**).

Of the 10 studies reported only three were conducted in the UK (**HUG 2007 [Scotland, MHS, QS-]**;

McNeill 2007 [Scotland, MHS, QS+]; **Hill 2007 [England, MHS, SCSS++]**) and one was conducted in a country judged to be of similar applicability to the UK (**Campion 2008 [Australia, MHS, QS+]**).

3.8 Increased fire hazard risk

Qualitative findings

In mental health settings there was a widespread belief that clandestine smoking in unsupervised areas such a patient bedrooms and bathrooms constitutes an enhanced fire hazard risk (**Ratschen 2008 [England, BHS, MHS, MMS+]**; **HUG 2007 [Scotland, MHS, QS-]; Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]**) with some patients reported to be adopting high risk practices such as smoking under bed sheets (**Pritchard 2008 [England, MHS, QS++]**). These concerns were substantiated by reports of: patient injuries, including one case involving serious burns; burns found on carpets and furniture; and patients extinguishing cigarettes in a dangerous manner in an attempt to evade detection (**Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]**). No serious fires resulting from clandestine smoking were identified in the studies. Concerns about fire risk have been addressed by banning the bringing of flame-producing products onto premises (**Mental Health Foundation 2009 [England, MHS, SCSS+]**) and through on-going staff training to support enforcement (**Pritchard 2008 [England, MHS, QS++]**). None of the studies conducted in broader secondary care settings identified fire-related hazards as an issue of concern following implementation of smokefree policy.

Quantitative findings

No quantitative evidence was identified relating to this theme.

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Increased fire hazard risk

Evidence statement:

3.13 Barrier: belief that clandestine smoking constitutes an enhanced fire hazard risk. Eight studies (five UK, three non-UK), seven conducted in mental health settings and one conducted in broader secondary care settings, found that clandestine smoking in unsupervised, private spaces constituted an enhanced fire hazard risk (**HUG 2007 [Scotland, MHS, QS-]; Karan 1993 [USA, MHS, CS-]; Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Parle 2004 [Canada, MHS, CS-]; Pritchard 2008 [England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]**). Three of these studies (two UK, one non-UK), all related to mental health settings, substantiated these risks with reports of patient injuries, burns found on carpets and furniture, and patients extinguishing cigarettes in a dangerous manner in an attempt to evade detection (**Kotz 1993 [USA, MHS, CS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008 [England, MHS, QS++]**). None of the studies reported fires resulting from clandestine smoking.

Of the eight studies reported the majority, five, were conducted within the UK (**HUG 2007 [Scotland, MHS, QS-]; Mental Health Foundation 2009 [England, MHS, SCSS+]; Pritchard 2008**

[England, MHS, QS++]; Ratschen 2009a [England, MHS, QS++]; Ratschen 2008 [England, BHS, MHS, MMS+]).

3.9 Security and safety concerns

Qualitative findings

Staff in both mental health and wider secondary care settings expressed concerns for patients leaving premises to smoke unsupervised, particularly at night and with patients who are frail and have limited mobility, leaving them vulnerable to attack, exposed to low temperatures and at risk of falls and injury (**Fitzpatrick 2009 [Ireland, BHS, MMS+]; Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Campion 2008 [Australia, MHS, QS+]; Pritchard 2008 [England, MHS, QS++]**). Similar safety concerns were also raised by night shift staff who were required to smoke outside unprotected (**Arack 2009 [England, BHS, SCSS-]**).

Poor supervision of patient smoking could create additional safety and security concerns with emergency escape doors being found open (**McNeill 2007 [Scotland, MHS, QS+]**) and patients being at risk by being unavailable for treatment (**Ratschen 2008 [England, BHS, MHS, MMS+]**). In some cases such concerns were echoed by patients who felt unsafe and worried about getting suddenly sick while smoking off-site (**Schultz 2011 [Canada, BHS, QS++]; Ratschen 2010 [England, MHS, QS++]**), leading some patients to choose to smoke in entrance areas and with other patients or visitors (**Schultz 2011 [Canada, BHS, QS++]**) and to calls for the provision of designated smoking areas on hospital grounds (**Ratschen 2008 [England, BHS, MHS, MMS+]; HUG 2007 [Scotland, MHS, QS-]; Ratschen 2010 [England, MHS, QS++]**). One study also reported health and safety concerns brought about by changes in break patterns and staff availability (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

One Canadian study (**Schultz 2011 [Canada, BHS, QS++]**) raised additional safety concerns about possible equipment failures with patients smoking outdoors, including malfunction of electronic pumps and freezing of intravenous lines due to low temperatures. The same study also raised safety concerns about the reuse of discarded cigarette butts acting as a vector for the spread of disease. Such effects were seen to project contradictory health messages, raised liability issues and led to calls for more effective tobacco dependence treatment.

Quantitative findings

Findings from one study indicate safety concerns among staff surrounding the implementation of smokefree policy. **Wye et al's (2010 [Australia, MHS, SCSS++])** survey of staff in an Australian psychiatric unit before implementation of a total smoking ban revealed that only 26% agreed that the ban would make the unit safer, while 37% disagreed, and 36% of participants were unsure.

A postal survey of English NHS acute and mental health Trusts revealed that of respondents who agreed that psychiatric settings encountered specific problems with regard to smokefree policy implementation, 70% agreed that safety issues were a concern (**Ratschen 2008 [England, BHS, MHS, MMS+]**).

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Security and safety concerns

Evidence statement:

3.14 Barrier: belief that smokefree policy creates additional challenges for patient safety and security. Eight studies (three UK, five non-UK), four conducted in mental health settings and four in broader secondary care settings, reported staff concerns for patient security and safety relating to patients leaving premises to smoke unsupervised (**Fitzpatrick 2009 [Ireland, BHS, MMS+]; Schultz 2011 [Canada, BHS, QS++]; Wheeler 2007 [USA, BHS, MMS-]; Campion 2008 [Australia, MHS, QS+]; Pritchard 2008 [England, MHS, QS++]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Wye 2010 [Australia, MHS, SCSS++]; Ratschen 2008 [England, BHS, MHS, MMS+])**. Two of these studies (one UK, one non-UK), both conducted in broader secondary care settings, reported cases of patients expressing security and safety concerns [**Schultz 2011 [Canada, BHS, QS++]; Ratschen 2010 [England, MHS, QS++]**]. None of the studies provided evidence of any of these concerns being realised.

Four of the nine studies reported were conducted within the UK (**Pritchard 2008 [England, MHS, QS++]**; **McNeill 2007 [Scotland, MHS, QS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]; Ratschen 2010 [England, MHS, QS++]**) and three were conducted in countries judged to be of similar applicability to the UK (**Fitzpatrick 2009 [Ireland, BHS, MMS+]; Campion 2008 [Australia, MHS, QS+]; Wye 2010 [Australia, MHS, SCSS++]**).

3.10 Impact on the physical environment

Qualitative findings

Findings from a number of studies in both mental health and wider secondary care settings suggest that displacement of smoking to perimeter areas following implementation of smokefree policies can have an adverse impact on the physical environment and wider community relations. This is reflected in criticism of increased congestion and littering found around entrance and perimeter areas (**Schultz 2011 [Canada, BHS, QS++]; Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**) which can be intimidating for people entering and leaving buildings (**McNeill 2007 [Scotland, MHS, QS+]**), can create discord with local neighbours and affect service image with the wider community (**Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]; Johnson 2010 [Canada, MHS, QS++]**) and can create supervision issues (**Campion 2008 [Australia, MHS, QS+]**) and increase ground keeping workloads (**Schultz 2011 [Canada, BHS, QS++]**). It is also suggested that failure to maintain an environment free of tobacco detritus can serve to legitimise smoking and non-compliance (**Wareing 2012 [England, MHS, QS+]**), and may contribute to patients smoking discarded cigarettes butts (**Schultz 2011 [Canada, BHS, QS++]**). However, hospital administrators and supervisors in one US study reported an improvement in the physical environment following the introduction of a full smokefree policy (covering buildings, vehicles and grounds) with a reduction in discarded cigarette butts and fewer patients and staff

smoking on hospital grounds (**Wheeler 2007 [USA, BHS, MMS-]**). These changes were described as having a positive impact on the hospital's image within the wider community (**Wheeler 2007 [USA, BHS, MMS-]**). While another qualitative study reported non-smoking staff expressing relief at no longer being required to enter smoke filled rooms (**Mental Health Foundation 2009 [England, MHS, SCSS+]**).

Quantitative findings

Three quantitative studies reported on beliefs about the effects of smokefree policy on the physical environment (**Wye 2010 [Australia, MHS, SCSS++]**; **Steiner 1991 [USA, MHS, BAS+]**; **Voci 2010 [Canada, MHS, RCSS++]**). These studies suggest that stakeholders acknowledge the beneficial effects of smokefree policies on the physical environment.

Steiner et al (1991 [USA, MHS, BAS+]) reported that before implementation of smokefree policy at a psychiatric day hospital, all staff and 71% of patients who participated in their survey believed the physical environment would improve as a result of the policy. Indeed, after implementation, all staff and 86% of patients believed that this had been the case (the authors did not report whether the finding for patients was significant). **Wye et al (2010 [Australia, MHS, SCSS++])** reported that 64% of staff agreed that a total smoking ban in their psychiatric unit would improve working conditions. **Voci et al's (2010 [Canada, MHS, RCSS++])** post-implementation surveys of staff in a Canadian mental health and addictions facility found that the average level of agreement with the statement that 'smokefree facilities are cleaner' after the implementation of smokefree policy was between 'somewhat agree' and 'strongly agree' (scale: strongly disagree/somewhat disagree/neutral/somewhat agree/strongly agree).

Key: MHS = mental health setting; BHS = broader healthcare setting; QS = qualitative study; CS = case study; SCSS = single cross-sectional study; RCSS = repeat cross-sectional study; BAS = before and after study; MMS = mixed methods study.

Impact on the physical environment

Evidence statement:

3.15 Inconclusive: belief that smokefree policy has a positive impact on the physical environment. Five studies (one UK, three non-UK), four conducted in mental health settings and one in broader secondary care settings, found that smokefree policy was believed to have a positive impact on the physical environment, for example, through the removal of smoke from rooms, cleaner facilities, fewer smokers on hospital grounds and improved work conditions (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Wye 2010 [Australia, MHS, SCSS++]**; **Steiner 1991 [USA, MHS, BAS+]**; **Voci 2010 [Canada, MHS, RCSS++]**; **Wheeler 2007 [USA, BHS, MMS-]**). Four other studies (two UK, two non-UK), one conducted in mental health settings and three in broader secondary care settings, found that displacement of smoking to perimeter areas following implementation of smokefree policies had an adverse impact on the physical environment through increased congestion and littering around entrances, and people feeling intimidated entering and leaving buildings (**Schultz 2011 [Canada, BHS, QS++]; Tillgren 1998 [Sweden, BHS, QS-]; Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**).

Three of the eight studies reported were conducted within the UK (**Mental Health Foundation 2009 [England, MHS, SCSS+]**; **Ratschen 2008 [England, BHS, MHS, MMS+]**; **McNeill 2007 [Scotland, MHS, QS+]**) and one was conducted in a country judge to be of similar applicability to the UK (**Wye 2010 [Australia, MHS, SCSS++]**).

4. Discussion

Findings

The review presents 52 separate views-based evidence statements: 32 barriers, 15 facilitators and 5 inconclusive statements. From those statements judged to be conclusive a number of findings appear to have significant implications for practice regarding the implementation of smokefree policies in secondary care settings. These findings are summarised as follows:

- Exposure to smokefree policy leads to enhanced staff support for the policy in both mental health and broader healthcare settings. The evidence for enhanced support post-implementation amongst patients remains inconclusive.
- Some groups may be more resistant to accepting smokefree policies and appear to require additional support. These include nurses, and staff and patients who smoke, particularly staff who are heavy smokers. These findings relate to both mental health and broader healthcare settings.
- Support for smokefree policies in both settings is higher where policies incorporated provisions for smoking areas. These provisions are seen by staff in both settings to be necessary to supporting policy enforcement. Evidence in mental health settings suggests that the provision of smoking areas is particularly valued by smokers and frontline staff.
- The positioning of smoking areas and adequacy of equipment in terms of lighting, security and weather protection etc, were seen to be important to supporting and encouraging compliance, although in some cases poor access to outdoor areas from wards and service areas can impose significant structural barriers to what can be achieved.
- The widely held attitude found in both settings that smokers have a right to smoke acts as a significant obstacle to acceptance of smokefree policy, and emerged as a factor restricting the willingness of mental health staff to provide cessation support to patients. However, the evidence suggests policy initiatives that underline the addictive properties of smoking may help to overcome this barrier.
- A number of important organisational factors emerged, mainly in mental health settings, which were seen to act as facilitators for smokefree policy. These include: strong leadership; a responsive and committed management; having sufficient time in place to implement a robust consultation process; timing implementation to take advantage of favourable weather conditions; and having in place robust systems for monitoring implementation and responding to problems as they emerge.
- A willingness amongst frontline staff in both settings to assume responsibility for enforcing smokefree policy emerged as a significant barrier. This appears to be in part explained by a lack of clarity on the rules and the way in which they should be applied, and a lack of staff confidence about how to deal with patients who challenge their authority, leading to calls for better management support and greater guidance and training on how to deal with violations.
- Insufficient staff resources, particularly in mental health settings, were regarded as a barrier to enforcement. These resource limitations were seen to constrain staff ability to escort patients to outside areas and to patrol hospital grounds, the latter being particularly challenging where the service had large, shared grounds to which the wider public had access.
- A number of mental health services described the emergence of contraband markets for tobacco as a significant challenge to enforcement of smokefree policy, although secure facilities was reported as offering more favourable conditions for policing.

- The introduction of smokefree policy can act as a trigger for patients to considering quitting. However, uptake by those expressing a readiness to quit is considered more likely when cessation support is framed as an initiative designed to improve patient health and not simply to accommodate the smokefree ordinance. Findings suggest that provisions also need to be made for those inpatients seeking temporary abstinence whilst attending for treatment.
- A number of factors were identified from both settings which were believed could enhance both the uptake and value of cessation support as part of a smokefree policy: improved provision of information materials, pharmacotherapies, trained staff and diversionary activities; better continuity with stop smoking services provided in the community, including advanced warning of smokefree rules; and provision of comparable services for staff who wish to stop smoking.
- Three mental health patient groups emerge who it is believed require special consideration and potential discretionary exemption status from smokefree policies: long-stay psychiatric patients receiving continuing care who may regard the mental health facility as their home; cognitively impaired and acutely ill psychiatric patients who have limited capacity to understand and to retain the information surrounding the policy and who can present a significant risk to staff; and patients being treated for other addictive disorders who it is believed may find stopping smoking whilst simultaneously giving up other substances interferes with their recovery.

As well as identifying barriers and facilitators to implementing smokefree policy which have direct implications for practice in secondary care settings, the review also identified beliefs held by staff regarding negative consequences associated with implementation of smokefree policies. Beliefs where conclusive evidence was found are as follows:

- Belief that smokefree policy would adversely affect psychiatric patients' mental health**.** There is some evidence that these beliefs can diminish after exposure to the policy.
- Enforcement of smokefree policy in both settings would result in an increase in abuse and aggression. Evidence suggests that the frequency and levels of abuse actually experienced are lower than expected.
- Belief that smokefree policies were damaging to the patient-carer relationship and the therapeutic environment, a view expressed particularly by staff in mental health settings. Fewer studies (one in each setting) identified positive contributions to the patient-carer relationship and the therapeutic environment made by smokefree policies.
- Belief that changing break patterns brought about by smokefree policy places extra demands on staff time and resources and disrupts patient attendance for treatment and participation in therapeutic activity in both settings. These concerns appear to have been borne out by staff experience.
- Belief that implementing smokefree policy in mental health settings results in an increased requirement for patient medication. There was a belief that these increases were not as significant as had been anticipated. There was also evidence of a lack of understanding by staff about the interaction between stopping smoking and dose requirements for antipsychotic medications.
- Belief that smokefree policy discourages patients from attending for outpatient appointments, and results in inpatients refusing admission and discharging against medical advice. These concerns were mainly voiced by staff in mental health settings and the evidence suggests that negative outcomes were not always realised or did so at a diminished level.

- Belief that clandestine smoking brought about by smokefree policy constitutes an enhanced fire hazard risk, a belief largely expressed by staff in mental health settings. Although no fires were reported as a consequence of smokefree policies in any of the study sites, there does appear to be compelling evidence of enhanced risk.

Strengths

The review provided a broad body of qualitative and quantitative views-based evidence about factors affecting the adoption of, support for and compliance with smokefree policies and interventions in secondary care settings. Fifty-three studies published in English since 1990, were identified, with data subsequently extracted from 54 papers. Nearly two-fifths of these studies (n=20) were conducted in the UK and all but one was published since 2006. This large body of data allowed the team to conduct a narrative synthesis of related evidence incorporating both staff and patient perspectives providing insight into factors that influence acceptance and adoption of smokefree policies, many of which are likely to have implications for the development of practice in this area. From a UK perspective recent developments in smokefree policy in wider communities would appear to act as key driver to acceptance of smokefree initiatives in mental health and wider secondary care settings.

The narrative synthesis was wide-reaching in its approach. It extended beyond studies which specifically described barriers and facilitators to implementing smokefree policies and interventions to include more general reports of practitioners', administrators' and service users' experiences of, belifs about and attitudes towards smokefree policy. This enabled the review to develop a broad thematic framework for identifying barriers and facilitators, critical to which was the synthesis of qualitative data which was used to expand upon and explain findings to emerge from the review of quantitative studies. Both types of data were then subsequently combined in the evidence statements where relevant. One advantage of the thematic analysis is that it helps to maintain transparency of the synthesis process, although the tendency to weight findings as a function of frequency risks underplaying any qualitative differences that exist.

Fifty-two separate evidence statements were constructed. These are presented in the report by related theme under the three subsidiary questions used to guide the review. The evidence statements are generally judged to have high applicability with the majority (36 out of 52) derived from data drawn predominantly from UK studies (i.e. where more than half of the studies reported have been conducted within the UK), and nearly a third (14 out of 52) are derived from data drawn entirely from UK studies. Only three of the evidence statements are based on data drawn exclusively from non-UK studies. Findings from other countries did not differ substantially from those reported in the UK, though in practice there may be differences in the organisation of health care delivery. Four of the non-UK studies were conducted in countries judge to have similar applicability to the UK, one in Ireland and three in Australia.

Limitations

The review provided wide-ranging insights into implementation of smokefree policies in mental health settings, with 32 of the 52 studies conducted exclusively in this setting. However, the ability of the review to examine implementation in acute and maternity settings was more limited. Only one of the 52 studies made specific reference to maternity services, while a number of the mental health study findings relate to acute mental health services. The twenty 'non-mental health' studies

were conducted in other secondary care settings such as general hospitals, teaching hospitals and NHS trusts. Consequently, some of these broader studies may also include mental health services or wards. For the purposes of the review, these settings are referred to as broader secondary care settings, and are likely to include acute and maternity services. In addition, irrespective of setting, it is important to underline that while findings relate to staff and patients' experiences of smokefree policy, much of the evidence is derived from unsupported beliefs about effect.

In many cases the study did not explicitly state if the setting was relevant only to inpatients, to outpatients or to both. Consequently, information on patient populations of interest to the review is incomplete. Where this information was provided this has been summarised in **Tables 1a** and **1b**. For classification purposes it is assumed the studies conducted in general facilities, such as teaching hospitals, general hospitals and acute NHS trusts, are of relevance to both inpatient and outpatient populations.

There was also a lack of clarity about the type of smokefree policy under investigation and limited reporting of support strategies and interventions. For the purposes of the review, and as far as was possible, the studies have been categorised according to the types of spaces covered by the policy (i.e. outdoor smokefree and/or indoor smokefree, see **Tables 1a** and **1b**) There was insufficient data to confirm if these policies also included designated indoor or outdoor spaces for smoking in all cases. In addition information regarding the legislative context for the countries where studies were conducted is provided in **Appendix 1**.

Finally, there was also considerable variability in the level of information provided on methodological approach and research design, for example, some quantitative studies did not report statistical analysis and some qualitative case studies failed to provide information on sample and data collection methods, and in some cases findings were not demonstrated using illustrative data. The lack of reporting of methodological approach and original data made quality assessment difficult in some instances, particularly with case studies where reporting may have been selective. However, following recognised practice in synthesis, studies papers were not excluded on the basis of their appraised quality.

The overall quality of the included studies was judged to be moderate. Quality scores for the included qualitative studies were evenly distributed across the three score ranges, and both validity scores for the included quantitative studies were equally balanced with the majority of papers being judged in the mid-range, '+'.

Gaps

Two areas were identified where there was an absence of useful data:

- The value and role played by sanctions in enforcement and encouraging compliance with of smokefree policies.
- The perspectives of specific population groups; visitors, friends and relatives of inpatients, and non-clinical/non-healthcare staff responsible for policing and maintaining grounds and health care facilities.

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