ECONOMIC AND SOCIAL RESEARCH COUNCIL
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UKCRC PUBLIC HEALTH CENTRE END OF AWARD REPORT

ESRC-led GRANT REFERENCE NUMBER	
RES-590-28-0004	
NAME OF CENTRE	
UK Centre for Tobacco Control Studies	
CENTRE DIRECTOR	
Professor John Britton	
HOST RESEARCH ORGANISATION	
University of Nottingham	
COLLABORATIVE / PARTNER RESEARCH ORGANISATION(S)	
University of Bath, University of Bristol, Birmingham University, University of Edinburgh, Queen Mary University of London, University of York, University College London, University of Stirling, King's College London, University of Oxford	
GRANT START AND END DATES	**GRANT CASH LIMIT(S) ***
1st June 2008 – 30 November 2013	

The form should be completed and returned to your **ESRC Case Officer (Rachel Tyrrell rachel.tyrrell@esrc.ac.uk 01793 444518)** on or before **31st October 2013**. Please note that the report can only be accepted if all sections have been completed in full.

REPORTING REQUIREMENTS

The ESRC Centre Director End of Award Report is a single document comprising the following sections:	
Declarations	**Declaration A:** Grant holder - Centre Director(s) **Declaration B:** Head of Department **Declaration C:** Finance Officer
Centre Director's Report	Template attached below
To be listed on the Research Outcomes System	Details of all communication activities carried out by the Centre including publications, conferences, workshops and advisory roles.
Please submit the completed report to Rachel Tyrrell at ESRC.	

Centre Directors should note that:

1. The final instalment of the award will not be paid until an acceptable Centre End of Award Report is received.

2. Centre Directors whose reports are overdue or incomplete will not be eligible for further ESRC funding until the reports are accepted.

3. Once the Centre End of Award Report has been formally accepted, no additions or revisions will normally be acceptable, other than in cases of genuine error. Centre Directors noticing an error in their report at a later stage should contact their Case Officer without delay. Such cases will usually be addressed by means of an erratum slip.

4. If the report needs to refer to material which may be sensitive, this should be put in an annex clearly marked as confidential. A covering letter should be added to the report emphasising this.

5. Summary details of publications and/or other outputs of research conducted under ESRC funded awards must be submitted to the ESRC Research Catalogue on the ESRC website. For queries on managing your grant on the ESRC website (including how to upload outputs) please contact: researchoutcomes@rcuk.ac.uk or 0800 2922478.

6. The ESRC's funding rules require grant holders to offer for deposit with the Economic and Social Data Service (ESDS) any data arising from their project within three months of the end date of the grant. Should any problem relating to the deposit of the data be foreseen, grant holders should contact ESDS at the earliest opportunity. Please note that the ESRC will withhold the final payment of a grant if data has not been deposited to the required standard within three months of the end of the grant, except where a modification or waiver of deposit requirements has been agreed in advance.

All queries regarding data deposit should be directed to the ESDS Research Data Management Support Services team at acquisitions@esds.ac.uk or telephone: 01206 872974. Specific information for ESRC Research Centres can be found at: http://www.esds.ac.uk/aandp/create/centres.asp

7. ESRC, on behalf of the funders, reserves the right to recover a sum of the expenditure incurred on the grant if the End of Award Report is overdue. (Please see Section 5 of the ESRC Research Funding Guide for details.)

DECLARATIONS

Please ensure that sections A, B and C below are completed and signed by the appropriate individuals. The End of Award Report will not be accepted unless all sections are signed.

Please note electronic signatures are accepted and should be used.

A. To be completed by Grant Holder (Centre Director)

Please read the following statements. Tick the statements under i) and ii), and ONE statement under iii), then sign with an electronic signature at the end of the section (this should be an image of your actual signature).

i) The Project

This Report is an accurate overview of the project, its findings and impacts. All co-investigators named in the proposal to ESRC (on behalf of the Funders) or appointed subsequently have seen and approved the Report.	√

ii) Submissions to the ESRC website (Research Catalogue)

Output and impact information has been submitted to the ESRC website. Details of any future outputs and impacts will be submitted as soon as they become available.	√

iii) Submission of Datasets

Datasets arising from this grant have been offered for deposit with the Economic and Social Data Service.	☐
OR	
Datasets that were anticipated in the grant proposal have not been produced and the Economic and Social Data Service has been notified.	☐
OR	
No datasets were proposed or produced from this grant.	☐

SIGNATURE:

NAME: **DATE:**

B. To be completed by Head of Department, School or Faculty

Please read the statement below then sign with an electronic signature to confirm your agreement.

This Report is an accurate overview of the project, its findings and impacts.

SIGNATURE:

NAME:

POSITION: **DATE:**

C. To be completed by Finance Officer of Grant-Holding Research Organisation

Please read the statement below then sign with an electronic signature to confirm your agreement.

ESRC funds have been used in accordance with the ESRC Research Funding Guide. All co-investigators named in the proposal to ESRC or appointed subsequently have seen and approved the Report.

SIGNATURE: 

NAME: MIN GU

POSITION: Research Projects Coordinator **DATE: 29/10/2013**

UKCRC PUBLIC HEALTH CENTRE DIRECTOR'S FINAL REPORT TEMPLATE

Part 1. Executive Summary **(2 Pages)**	• A summary drawing out the key points and messages
Part 2. Introduction **(1-2 pages)**	• General background to the Centre (i.e. how the research group came together and the origin of the research programme) • Overall size and distribution of the Centre • When the Centre began and subsequent changes • Special features of the Centre (e.g. topic spread) • Overview of Centre aims, and link to the UKCRC PH Centres Initiative as a whole
Part 3: Centre Objectives **(5-6 pages)**	• Refer to the aims and objectives in the Centre contract and give brief accounts of the Centre's achievements under each heading. • Where achievements have either exceeded or fallen short of expectations, please suggest reasons for this. • Discuss how the Centre has contributed to the funders strategic priorities
Part 4: Centre Activities, Outputs and Impacts **(7-8 pages)**	• Describe the Centre's activities, including communication and research synergy between work streams, capacity building and scholarly exchange (e.g. conferences, networks etc). • Describe the major impacts achieved by the Centre. This should cover both academic contributions and impact on policy and practice and should include: - 3 or 4 examples of outstanding research that emerged as a consequence of the Centre funding - 3 or 4 examples of outstanding capacity building and skills development in areas of particular need and importance - 3 or 4 examples of high-impact activities that have been successful in bringing the Grant's work to non-academic groups who have engaged with the Centres' work (i.e. societal, policy and economic impacts) • Briefly describe the main publications and

	other outputs (e.g. events, seminars etc.) from the Centre • Describe the outcomes that have occurred as a consequence of the Centre, the next steps that will be taken to ensure uptake and application of the research findings and the expected destinations of all staff linked to the Centre.
Part 5: The Director's Role and Reflections on the Centre (4-6 pages)	• Discuss how the Director's role has added value to the Centre. How has the management of the Centre led to research that has been of higher quality and impact than individual stand alone projects would have been likely to achieve? • Briefly describe and comment on any particular challenges, problems and unexpected events that were encountered and their impact on the Centre. • Use this section to provide feedback to the ESRC, on behalf of the Funders, on the Centre, the policies underpinning it, the processes by which it was commissioned and managed, the Director's role and how this was supported by the Committee, the ESRC Office and the other funders.

To be listed on the Research Outcomes System (ROS)	List all communication activities carried out by the Centre including publications, conferences, workshops and advisory roles.

Part 1. Executive Summary (2 Pages)

The UK Centre for Tobacco Control Studies (UKCTCS) was established as one of five UKCRC-funded Public Health Research Centres of Excellence in June 2008. Our ***vision*** was to bring complementary but (then) disparate groups of tobacco researchers in the UK together to a create a multidisciplinary network with shared strategic oversight, coordination, management, and infrastructure support; and hence to deliver original research, policy development, advocacy and capacity building beyond that achievable by our individual groups working separately. Our ***mission*** was to reduce the harm to individuals and society caused by tobacco use. Our ***objectives*** were to: **(1)** Establish the UKCTCS as a leading international centre of tobacco research and policy excellence within the first five-year funding period; **(2)** Deliver a comprehensive portfolio of multidisciplinary national and global tobacco control research and policy work, maximising all opportunities to reduce the burden of premature death and disability caused by tobacco use; **(3)** Create a sustainable structure to engage, recruit, train and develop researchers, health professionals, policymakers, advocates and others in tobacco control science and practice, establishing UKCTCS as an international focus for training and development; **(4)** Harness the skills, knowledge and outputs of the UKCTCS to provide strategic direction for the tobacco control policy agenda. We also undertook to explore, where possible, opportunities to apply successes in research, policy and practice from tobacco control to other behavioural determinants of health, and particularly, harmful use of alcohol.

Achievements over past 5 years

Since 2008 the UKCTCS has transformed tobacco control research, policy support and capacity building in the UK. By providing the infrastructure and strategic overview for a broad research network, UKCTCS has initiated, developed and delivered multidisciplinary multicentre research projects far more efficiently than previously possible, attracting around more than £30 million in new research funding, publishing about 350 papers, and creating a wider UK Tobacco Control Research Network of over 300 members from more than 100 organisations (see www.UKCTCS.org). We have recruited a new cohort of early career researchers by creating over 42 PhD studentships and 12 fellowships; and leveraged funding for 5 new Lecturer and 1 Senior Fellowship posts from our host institutions. We have developed and delivered Masters tobacco control modules, specialist training courses for tobacco treatment and policy professionals, and held national and early career researcher conferences on tobacco. We have worked closely with politicians and senior civil servants to promote effective tobacco control policy at government level, and achieved significant input into all major UK government tobacco policy document and policies since 2008. Our positioning of the UKCTCS as a national focus for tobacco research has enabled us to present a united, authoritative and comprehensive academic voice in tobacco control policy and practice, achieving major national and international impact. We have invested in public engagement through conferences, user groups and media management; monitoring since October 2009 has logged nearly 900 UKCTCS media mentions with an estimated circulation of 8255 million. We have thus achieved all of our major five-year objectives.

Development/changes in approach to meeting our objectives

To address gaps in our skills profile we incorporated investigators with expertise in industry/corporate strategies (Gilmore), genetics/psychology (Munafò), and moved our

health economics investment to York (Godfrey, Parrott). We used Centre resources strategically to pump-prime and enable new researchers to establish themselves through personal fellowships and project grant funding, and to support senior investigators (Aveyard, Bauld) moving to new University posts. We worked with Doctoral Training Centres and other funding initiatives to enhance our studentship numbers, and have invested in structures to build community and research culture among our students and fellows. Advice from our International Advisory Board has helped ensure delivery of a comprehensive research portfolio. In line with our original proposal we have also succeeded in expanding our research into alcohol and other behavioural determinants of health.

Plans for the future

We have now bid successfully for further funding to maintain the Centre for a second five year period, and to build on the success of the UKCTCS as a world leader in tobacco control policy by also focussing on work that addresses the harmful use of alcohol. Our strategy will be to further develop our tobacco work and cohort of tobacco researchers; recruit leading UK and international alcohol research leaders to reposition the UKCTCS as the UK Centre for Tobacco and Alcohol Studies (UKCTAS); and invest in further capacity building in both tobacco and alcohol work. Our objectives will be to:

(1) Establish the UKCTAS as a leading international centre for both tobacco and alcohol research and policy excellence, complementing our success with UKCTCS

(2) Deliver a world-class portfolio of original research and policy development

(3) Sustain capacity by developing our engagement and training programmes for researchers, health professionals, policymakers, advocates and others in alcohol and tobacco science and practice

(4) Harness the skills, knowledge and outputs of the UKCTAS to engage with and provide strategic direction for the tobacco and alcohol control policy agenda

Part 2. Introduction (1-2 pages)

General background to the Centre (i.e. how the research group came together and the origin of the research programme)

The UKCTCS came together in response to the 2007 UKCRC call for bids for UK Public Health Research Centres of Excellence. The original applicants were all working in different areas of tobacco control, alone and in collaboration, but the UKCRC call provided an opportunity to build an infrastructure to realise the synergies and full collaborative potential of the group, establishing a critical mass on which to build capacity in tobacco research. Once the core group had met, the components of the research programme came together easily as a natural expression of the skills and interests of the applicants, which we then brought together to generate a comprehensive programme of tobacco control research and capacity building.

Overall size and distribution of the Centre

The Centre initially comprised 10 applicants from seven UK universities, all of whom led or were embedded in active research groups which were then integrated into the UKCTCS. The main administrative hub of the Centre is based in Nottingham, but the Centre has always been a virtual rather than physical entity. By the end of the funding period the network had extended to include 13 lead investigators from 10 Universities (see below), and a wider UK Tobacco Control Research Network of over 300 members from more than 100 organisations, with an extensive range of international collaborations (see www.UKCTCS.org for detail).

When the Centre began and subsequent changes

The Centre began on 1st June 2008. Soon after that date, our main collaborator in health economics moved to a job in another country and left the Centre, and was replaced by Chris Godfrey (and since her retirement, Steve Parrott) from York. Also in our first year we invited Marcus Munafò (Bristol) and Anna Gilmore (Bath) to join the Centre with co-applicant status. For most of the remainder of the grant period therefore, the UKCTCS comprised 13 investigators (Britton, McNeill, Lewis, Coleman, Amos, Aveyard, Hastings, Bauld, Godfrey/Parrott, Hajek, West, Gilmore, Munafò) from 9 university groups (Nottingham, Edinburgh, Birmingham, Stirling, Bath, York, Queen Mary University of London, University College London, and Bristol). The award of a separate grant from Cancer Research UK allowed us to appoint a post to manage our public engagement and establish our research network, based in Bath. We used Centre resources strategically to pump-prime and enable new researchers to establish themselves through personal fellowships and project grant funding, and to support senior investigators (Aveyard, Bauld, McNeill) moving to new University posts (Oxford (replacing Birmingham), Stirling, King's College London respectively).

Special features of the Centre (e.g. topic spread)

The special feature of the UKCTCS was the bringing together of complementary but (then) disparate groups of tobacco researchers in the UK into a multidisciplinary network with shared strategic oversight, coordination, management, and infrastructure support to enable us to deliver original research, policy development, advocacy and capacity building beyond that achievable by our individual groups working separately.

Overview of Centre aims, and link to the UKCRC PH Centres Initiative as a whole

The original aims of the Centre were:

1. To establish the UKCTCS as a leading international centre of tobacco research and policy excellence within the first five-year funding period

2. To deliver a comprehensive portfolio of multidisciplinary original research and policy work in national and global tobacco control activity, aiming to identify and develop all opportunities to reduce the burden of disease and disability caused by tobacco use.

3. To create a sustainable structure to engage, recruit, train and develop researchers, health professionals, policymakers, advocates and others in tobacco control science and practice, establishing the UKCTCS as a major international focus for training and development.

4. To harness the skills, knowledge and outputs of the UKCTCS to provide strategic direction for the tobacco control policy agenda.

Our Centre differed from the other four successful UKCRC public health centre applications in that we were the only virtual centre (the others all had a single or regional geographical base); and in being focussed almost entirely on a single (though extremely important) determinant of ill-health. However we had worked in collaboration with members of other UKCRC centres in the past and have continued to do so throughout the five year funding period. For example, we have successfully secured funding for research from a range of funders on projects with other centres (for example, our work on illicit tobacco with Fuse and forthcoming work on smoking prevention with DECIPHer). We also worked with the other Centres during the first five years to develop a cross-centre knowledge exchange strategy that will help inform the second quinquennium of work.

Part 3: Centre Objectives (5-6 pages)

Refer to the aims and objectives in the Centre contract and give brief accounts of the Centre's achievements under each heading.

The UKCTCS was established as one of five UKCRC-funded Public Health Research Centres of Excellence in June 2008. Our vision was to bring complementary but (then) disparate groups of tobacco researchers in the UK together to a create a multidisciplinary network with shared strategic oversight, coordination, management, and infrastructure support; and hence to deliver original research, policy development, advocacy and capacity building beyond that achievable by our individual groups working separately. Our mission was to reduce the harm to individuals and society caused by tobacco use. Our broad achievements in relation to the Centre objectives (see Part 2 above) have been:

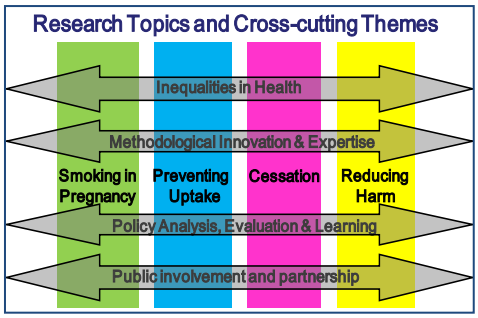
(1) Establish the UKCTCS as a leading international centre of tobacco research and policy excellence within the first five-year funding period

Since 2008 the UKCTCS has transformed tobacco control research, policy support and capacity building in the UK. By providing the infrastructure and strategic overview for a broad research network, UKCTCS has initiated, developed and delivered multidisciplinary multicentre research projects far more efficiently than previously possible, attracting over £30 million in new research funding, publishing about 350 papers, and creating a wider UK Tobacco Control Research Network of over 300 members from more than 100 organisations (see www.UKCTCS.org). Advice from our International Advisory Board has been pivotal in enabling this comprehensive spectrum of work, and in establishing UKCTCS as an international reputation for research and policy work through projects and activities including:

- the International Tobacco Control (ITC) project – an international research collaboration for systematic evaluation of key policies of the WHO Framework Convention on Tobacco Control (FCTC) at the population level, and now involving collaborators in over 20 countries (see http://www.itcproject.org/countries). Ann McNeill was one of the foundation investigators of the ITC and remains actively involved in the project.
- Developing background documents for the WHO Framework Convention Alliance for Articles 9 and 10 of the Framework Convention on Tobacco Control. Martin Raw, a special lecturer at the University of Nottingham and the UK Centre for Tobacco Control studies, led the drafting of Article 14 guidelines on behalf of the UK Government, which led a working group of 36 countries charged with this task. The guidelines were presented to the fourth Conference of the Parties of the FCTC in November 2010 and accepted. This work was supported by McNeill and Robert West. Anna Gilmore's group also contributed to the Article 5.3 Guidelines.
- An international survey of 121 countries on implementation of Article 14 and smoking cessation treatment guidelines, involving McNeill.
- Contributions, by Anna Gilmore, Gerard Hastings and Amanda Amos, to the Expert Reference Group for WHO Europe 2010 report *"Empower Women: Combating Tobacco Industry Marketing in the WHO European Region"* http://www.euro.who.int/__data/assets/pdf_file/0014/128120/e93852.pdf.

- Anna Gilmore is also part of an international team of experts convened by IARC to co-author its Handbook "Effectiveness of Tax and Price Policies for Tobacco Control".
- Leading profile at international conferences, including joint hosting and organisation of the Society for Research on Nicotine and Tobacco (SRNT) European conference in Bath (September 2010). We also made a significant contribution to invited plenary and symposia sessions at the European Conference on Tobacco or Health in Amsterdam in March 2011, SRNT Europe in Turkey 2011 and the World Conferences on Tobacco and Health in Mumbai, 2009 and in Singapore in 2012. At the Singapore conference, three UKCTCS researchers were included in an international shortlist of eight for three best young investigators awards, with one being successful. We have also been closely involved with the planning and delivery of major UK-based conferences with international attendees such as the UK National Smoking Cessation Conference and the annual conference of the Society for Social Medicine.
- Work with the World Health Organisation (WHO). For example, Linda Bauld served as a member of the WHO committee that developed guidelines on smoking cessation and second hand smoke exposure in pregnancy in 2012/2013. In addition, Anna Gilmore awarded a WHO medal for her contribution to international tobacco control efforts in 2009 followed by another UKCTCS investigator, Amanda Amos, in 2013.
- A very wide range of research projects with overseas partners. Some examples include work on the evolution of the tobacco smoking epidemic and plain packaging/health warnings in Ghana, passive smoke exposure in Cuba and smoking cessation programmes for women in Ireland. We have also played a significant role in a number of pan European projects on, for example, tobacco taxation, smoking cessation and inequalities and smoking.
- Work with the Royal College of Physicians producing reports on passive smoking in children [1], and smoking among people with mental health problems [2]; the former of these in particular gaining substantial national and international media coverage and leading to widespread calls to protect children from passive exposure to smoke.

(2) Deliver a comprehensive portfolio of multidisciplinary national and global tobacco control research and policy work, maximising all opportunities to reduce the burden of premature death and disability caused by tobacco use



UKCTCS research was organised into four research topics and cross-cutting themes (see figure), and we have made significant advances in research and translation in all of these areas. Examples include:

1. Smoking in Pregnancy:

We conducted the largest ever randomised trials of two smoking cessation interventions in pregnancy. The first, a now published trial of Nicotine Replacement Therapy (NRT) in pregnancy [3] and the second, a soon to be completed trial of financial incentives for cessation in pregnancy [4]. We also obtained NIHR programme funding to develop more

effective interventions for pregnancy, and provided expert evidence reviews for 2010 NICE guidance on smoking cessation in pregnancy and after childbirth [5]).

2. Preventing Uptake: We have carried out research on the impact of plain packaging and point-of-sale displays on young people's perceptions of smoking [6-8], and have prospective studies monitoring the effects of English point of sale legislation on smoking susceptibility and uptake in progress. We led the systematic review of the plain packaging literature to inform the 2011 UK government consultation on plain tobacco packaging [9]; studies of tobacco and alcohol imagery in the media, which will be presented to a NICE topic selection panel in October 2013; and have been awarded an NIHR public health project grant for work on interventions to prevent the uptake of smoking in secondary school students. We participated (Chair and Advisory Group members) in the NICE Evidence Update on school-based interventions to prevent smoking.

3. Cessation: We have carried out a range of trials, funded through NIHR schemes and other sources including the major charities, investigating

- Means of integrating smoking cessation interventions into routine secondary care [10]; this approach has been adopted into NICE guidance (published in draft April 2013 [11], full guidance due November 2013)
- The development of alternative cessation service provision systems to engage with disadvantaged smokers [12]
- Different forms of cessation support in a national quitline (PORTSSS) [13]
- Novel interventions to reduce exposure of young children to tobacco smoke in the home (in progress)
- Trials of a novel, low cost smoking cessation pharmacotherapy (cytisine) [14]
- Use of NRT prior to quit attempts (NIHR HTA funded Preloading trial, in progress)
- Relapse prevention studies including an HTA funded evidence synthesis and cost-effectiveness evaluation of relapse prevention interventions used to prevent a return to smoking after cessation [15] and pilot targeting routine and manual smokers who have attended local stop smoking services [16]
- A systematic review, meta-analysis, network analysis, and cost-effectiveness of computerised interventions for smoking cessation [17;18].
- Chair and members of the NICE programme development group on smoking cessation in secondary care [11], and provision of systematic evidence reviews to the process

4. Reducing harm: We have achieved substantial progress in tobacco harm reduction:

- Cut-down-to-quit approaches, including the RedPharm study [19] and the BHF funded Rapid Reduction Trial [20]
- UKCTCS staff were members of the Medicines and Healthcare Products Regulatory Agency (MHRA) Expert Committee on Nicotine Containing Products which advised on the introduction of permissive licensing for nicotine-containing products in June 2013 [21]. The key change, a switch from using placebo as the safety comparator for nicotine products to the pragmatic likelihood of continued smoking, has opened the door to the development and use of alternative nicotine products (e.g. electronic cigarettes) as long-term substitutes for smoking.
- UKCTCS successfully advocated the establishment of a NICE Citizens Council on harm reduction in 2009, leading to a NICE PDG on tobacco harm reduction (Chair and members from UKCTCS) which produced guidance integrating harm reduction

into NHS practice [22]. The UKCTCS also produced some of the evidence reviews for this guidance [23].

- We have produced world-leading work on the performance and potential toxicity of electronic cigarettes [24-26] and on patterns of use of electronic cigarettes as harm reduction options, using the Smoking Toolkit Study [27].
- We worked closely with EU partners to inform the development of the proposed 2013 revision of the EU Tobacco Products Directive.

5. Inequalities: UKCTCS worked with the Department of Health on the Tobacco Control Health Inequalities Pilot Programme [28] to improve cessation support for disadvantaged smokers. We also worked with Nottingham City PCT to develop better cessation services in deprived areas [29;30]; and work on the Give it Up for Baby (GIUFB) and Quit4U financial incentives for disadvantaged communities initiatives in Tayside in Scotland. With the Royal College of Physicians we produced an authoritative report on smoking among people with mental health problems, highlighting the high prevalence of smoking, and lack of progress in reducing smoking prevalence over the past two decades in this group. We are involved in the EU SILNE project on inequalities and smoking in Europe, and have produced three systematic reviews on the equity impact of population and individual level tobacco control interventions on young people and adults [31-33].

6. Methodological innovation: Our statistics and economics group has developed the use of routinely collected primary care data, in particular from the Health Improvement Network (THIN) to establish near real-time monitoring of smoking prevalence, to assess the impact of tobacco control policies on smoking prevalence and medical prescribing behaviour, and used data mining techniques to explore prescribing patterns in relation to comorbidities among smokers. Examples of work are available through the Nottingham Tobacco Control Database (NTCD) [34].

7. Policy evaluation: We have played a leading role in the evaluation of the main UK tobacco control policies since the Centre was established, including policies pursued by the devolved administrations, particularly in Scotland. In particular, we have used the NTCD, the Smoking Toolkit and other resources for impact assessments of effects of smoke-free policy, media campaigns, changes in NRT licensing and other policies on prevalence trends. Examples of this and other work include:

- Review of the English smoke-free legislation, leading to retention of legislation by UK government [35]
- Assessment of the impact of mass media campaigns on quitting behaviour [36]
- Analysis of sales data to assess the impact of point of sale display legislation in Ireland on tobacco sales [8] and the on-going longitudinal DISPLAY study which is evaluating the impact of the point of sale display legislation on young people in Scotland.
- Assessment of the effectiveness of the North of England initiative on illicit tobacco [37]
- Analysis of cigarette affordability in the EU [38] and pricing strategy of UK tobacco products [39]
- Monitoring of tobacco promotion through imagery in UK film and television, and identification of alibi tobacco marketing [40-42]
- Monitoring of smoking prevalence, quitting behaviour, harm reduction activity [43;44]

- A series of studies evaluating the impact of the UK's unique free at the point of use national network of smoking cessation services [45;46]
- Evaluating the impact of the rise in age of sale of tobacco and of the Stoptober campaign [47;48].
- Evaluating the impact of new medications and the broadening of indications of nicotine replacement therapies [49-52]

8. Public involvement and partnership: We established and have held regular meetings of a Smokers' Panel to test research and policy ideas, gain user insights and priorities for innovation, and to obtain user input into funding proposals. The Panel has met approximately at least twice a year since our establishment and each meeting has been attended by between 20-30 participants. When first established it included current smokers but we recognised that some smokers would stop and they were welcome to continue to attend. Therefore the most recent panel meeting, in Bath on October 2nd 2013, included panel members who were still smokers, some who had stopped, and another group who had reduced their consumption. Some panel members have attended since the first meeting while others have been recruited more recently. The panel's contribution to UKCTCS has been invaluable. Members have served as co-applicants on research proposals, members of project advisory groups, have spoken at academic conferences and a press conference with UKCTCS investigators and have commented extensively on proposals, data collection instruments and dissemination plans.

In addition to engagement in the annual UKCRC Centres of Excellence conferences our final year conference in York (*Tackling Smoking in 21st Century Britain;* http://www.ukctcs.org/ukctcs/events/tackling-smoking-conference.aspx) attracted more than 250 delegates from the UK, together with international delegates from eight other countries. Our media monitoring since October 2009 has logged nearly 900 UKCTCS media mentions with an estimated circulation of 8255 million.

9. Application of tobacco research and policy approaches to other health problems: We also undertook at the outset of the UKCTCS to explore, where possible, opportunities to apply successes in research, policy and practice from tobacco control to other behavioural determinants of health, and particularly to preventing the harmful use of alcohol. In line with our original proposal we have succeeded in expanding a number of our research projects into alcohol and other behavioural determinants of health, in particular in the areas of media portrayal of alcohol, the effect of glass shapes on drinking behaviour, and other work. We have also played a major role in the establishment of the Alcohol Health Alliance (http://www.rcplondon.ac.uk/projects/alcohol-health-alliance) and worked with them to develop an independent alcohol policy strategy for the UK, published in March 2013 and now serving as a key international example of a civil society response to the harms from alcohol [53].

(3) Create a sustainable structure to engage, recruit, train and develop researchers, health professionals, policymakers, advocates and others in tobacco control science and practice, establishing UKCTCS as an international focus for training and development

We have succeeded in establishing a new and gifted cohort of early career researchers by

creating over 40 PhD studentships, and using UKCTCS fellowship funding to support 12 post-doctoral researchers into more substantive funding, including 5 new Lecturer and 1 Senior Fellowship posts in our host institutions. The Centre fellowship funding was used to support promising candidates while developing proposals for competitive project or fellowship grant applications, redeploying the Centre funding when applications were successful. We have developed and delivered two Masters tobacco control modules in Nottingham each year, and annual specialist training courses for tobacco treatment and policy professionals in Bath, Nottingham, Stirling and Edinburgh, achieving strongly positive and supportive feedback in all cases. We have and continue to work with a number of ESRC Doctoral Training Centres and other PhD funding initiatives (CR-UK, MRC and others) to enhance our studentship numbers, and have invested in structures to build community and research culture among our students and fellows. There have been two awards to junior staff – Silvy Peters won one of the 2012 WCTOH awards in Singapore (as mentioned above) and Emily Savell, PhD student, won an award at the Population Health, Methods and Challenges centre conference in Birmingham in April 2012.

(4) Harness the skills, knowledge and outputs of the UKCTCS to provide strategic direction for the tobacco control policy agenda

We have worked closely with politicians and senior civil servants to promote effective tobacco control policy at government level. Our positioning of the UKCTCS as a national focus for tobacco research has enabled us to present a united, authoritative and comprehensive academic voice in tobacco control policy and practice, achieving major national and international impact. Our work has achieved significant policy impact, including tobacco clauses in the Health Bill in England, and we have contributed significantly to a number of major UK and EU policy changes. This includes, for example, retaining smoke-free legislation by providing definitive evidence of effectiveness at three year review, informing legislation to remove tobacco products from point-of-sale displays in England, relaxation of MHRA regulatory requirements for nicotine-containing products, and the production of NICE guidance on tobacco harm reduction and smoking cessation in secondary care. We have also provided evidence to drive continued discussions in government on the case for standardised tobacco packaging, resulting in Scotland making a policy commitment to introduce the policy even if it does not currently proceed at UK level. We've also played a very significant role in providing evidence to inform potential legislation to prohibit smoking in private vehicles, and are driving debate on the portrayal of tobacco products in films and other media, tobacco pricing, preventing illicit supply, and a range of other measures. We have acted as advisors on two European Commission SCENIHR committees, contributed to the European Commission's 2010 Health Forum and been involved in a range of other policy meetings with EC officials; and have contributed to international WHO Framework Convention on Tobacco Control negotiations and assessment. Full details of these and many other outputs and impacts are available in our annual reports at http://www.ukctcs.org/ukctcs/about/reports.aspx .

Where achievements have either exceeded or fallen short of expectations, please suggest reasons for this.

We are not aware of having fallen seriously short of expectations, and although we would like to have seen more progress, in particular, in national policy on plain tobacco

packaging we believe that we have contributed significant advances to tobacco control research and policy implementation during our five years of activity.

Discuss how the Centre has contributed to the funders' strategic priorities

We agree with the conclusion of the UKCRC Scientific Assessment Panel review of the public health research centres initiative [54] that the initiative has been successful, and in particular in providing a successful model of combining knowledge exchange and capacity building, innovative ways of gaining buy-in and engagement with policy makers with clear evidence of impact at local and national levels, effective collaboration in building a UK-wide infrastructure for public health research, and excellent capacity building attracting academics from different disciplines. We believe that the UKCTCS has contributed in all of these areas, and has transformed the profile of tobacco control research in the UK.

Part 4: Centre Activities, Outputs and Impacts (7-8 pages)

Describe the Centre's activities, including communication and research synergy between work streams, capacity building and scholarly exchange (e.g. conferences, networks etc).

Centre activities fall into four broad areas: Research, translation, public engagement and communication, and capacity building.

1. **Research**

Our research activities are summarised in relation to the workstreams and cross-cutting themes of the Centre under Objective 2 in Part (3) above, and in the outputs listed below.

There has been substantial synergy between these areas of research. The UKCTCS was set up to enable and realise efficiencies of scale and intellectual capacity by providing infrastructure to coordinate and promote collaboration between tobacco researchers working in different sites across the UK. At that point there was no leading tobacco control research centre in the UK, and although the traditional academic model might have been to invest in bringing leading researchers into a single geographical location, this is a model typically driven by the need to share expensive equipment or laboratory resources. In our case there was no need for a physical centre, other than to promote interaction and teamwork between the groups. We elected achieve this instead by providing, through the UKCTCS, the administrative infrastructure to encourage research collaboration and integration, and create opportunities for investigators to interact and translate creative thinking into research practice. This facilitation allows us to work much more collaboratively, and to bring together the best people, either in the Centre or through our research network, to build research teams, write project and programme grants, and produce policy documents much more efficiently.

Examples of collaborative ventures during the life of the Centre include:

- Major programme grant awards for research investigating:
    - alternative models of smoking cessation service delivery
    - service delivery in pregnancy
    - smoking prevention in schools
    - smoke-free homes interventions
    - promoting smoking cessation in disadvantaged groups
    - point of sale display effects in children
    - nicotine preloading
    - Proactive Or Reactive Telephone Smoking CeSsation Support (PORTSS) trial
    - a programme focused on tobacco and alcohol use within the new MRC Integrative Epidemiology Unit at the University of Bristol (see http://www.bristol.ac.uk/integrative-epidemiology/)
- A systematic review of the impact of the plain packaging of tobacco products that underpinned the UK government's public consultation on the issue. This review was led by UKCTCS researchers at the University of Stirling, in collaboration with the Public Health Research Consortium and another UKCTCS investigator (McNeill) at King's College London.
- Production of RCP reports *Passive smoking and children*, which included original research and reviews involving contributions from 19 staff and students from

UKCTCS research groups, and *Smoking and mental health* (11 UKCTCS contributors).

- The production of an independent, evidence-based alcohol strategy for the UK – Health First – published in March 2013. This was work led by UKCTCS in partnership with the Alcohol Health Alliance and the report was endorsed by more than 70 organisations.
- An extensive collaboration of researchers working in partnership with health and law enforcement agencies to evaluate the North of England *Tackling Illicit Tobacco for Better Health* Programme
- Six pilot projects within a collaborative DH funded grant investigating novel approaches to tackling smoking inequalities
- A review of inequalities in smoking in England. This review was led by UKCTCS researchers at the Universities of Edinburgh and Stirling, in collaboration with the Public Health Research Consortium and other UKCTCS investigators (Bauld and Hiscock) at the University of Bath and (Fidler) UCL. http://phrc.lshtm.ac.uk/papers/PHRC_A9-10R_Final_Report.pdf
- Significant input to collaborative international work on tobacco taxation including a European Union FP7 Project, Pricing Policies and Control of Tobacco in Europe and contribution to the IARC Handbook Of Cancer Prevention volume 14 "Effectiveness of tax and price policies for tobacco control."

2. **Translation**

Translation of research findings into clinical practice, policy and other practical applications has been a priority in all our work. Centre status has enhanced that process, because representing a broad network of researchers gives the Centre substantial credibility and profile; it has also allowed us to support external partners involved in policy development and advocacy much more effectively. For example:

- The UKCTCS has worked in close partnership with the Royal Colleges of Physicians, Paediatricians and Psychiatrists, and the Faculty of Public Health, in the development of reports on tobacco policy
- UKCTCS works closely with Action on Smoking and Health (ASH) and ASH Scotland in producing original research and evidence for policy advocacy, particularly on point-of-sale legislation, plain packaging, tobacco industry tactics and tobacco imagery in the media
- Work with the MHRA, Department of Health, and Behavioural Insight Team to create a suitable regulatory environment for harm reduction products
- Work with the three regional offices of tobacco control in England on: smoking in pregnancy interventions, smoking in the media, illicit tobacco and other themes
- Work with organisations involved in preventing harmful use of alcohol, to support the creation of the Alcohol Health Alliance and production of *Health First*, the independent alcohol strategy for the UK
- Working with the all-party parliamentary group on smoking, and various NGOs, in promoting arguments to prohibit smoking in cars carrying children
- Work with NICE on the production of guidance on tobacco harm reduction, and smoking cessation in secondary care
- Work with the HMRC and local authorities on reducing illicit tobacco

- Responding to consultations by governments, NICE and other organisations on behalf of the Centre, presenting (where evident) a united and authoritative academic view
- A range of work with the European Smokefree Partnership on, for example, providing evidence to inform the European Tobacco Products Directive and an EU funded programme on building capacity in the public health workforce to advocate for tobacco taxation across Europe
- Work with various partners including WHO, Smokefree Partnership, CRUK and all-party parliamentary group on smoking and health to address tobacco industry interference in policy. This work helped secure effective FCTC Article 5.3 guidelines.

3. Public Engagement and Communication

Engagement with the public, and communication of our work to the general population, have been key objectives of our work. We have achieved this by:

- Establishing a public engagement panel - a *Smokers' Panel* - consisting of a group of adult smokers recruited in Bath**.** As outlined above, the panel has met regularly since 2009 and have engaged in a wide range of activities set out later in this report and have been invaluable in assisting UKCTCS investigators to communicate more effectively with the public.
- The Centre has produced annual newsletters for a wide range of stakeholders. Four stakeholder newsletters have been produced since the Centre's inception. Each gives a retrospective 'round-up' of our activities and outputs over the preceding year (the initial one covered a period of 18 months). These newsletters are distributed to all of the University teams making up the centre, our funding organisations and our collaborators. Additionally, they have gone to members of our Smokers' Panel, delegates on the three teaching modules we have each year (2 MPH modules and the CPD) and at the conferences and events that we have helped to organise. The newsletters are also available on our Centre website.
- TobaccoTactics wiki (www.tobaccotactics.org) developed as a novel form of knowledge exchange to ensure rapid and timely dissemination of policy relevant research on the tobacco industry.
- **50th anniversary of *Smoking Kills* (Conference with Royal College of Physicians)**
  Smoking Kills was a landmark report in the history of smoking prevention. Published in March 1962 the report drew public and professional attention for the first time to the major health impacts of smoking, and articulated key policy responses which underpin modern tobacco control activity and the WHO FCTC. On the 50th anniversary of publication, in March 2012, the UKCTCS and the RCP co-hosted a conference at the RCP to review progress since 1962, and to identify priorities for further progress in reducing the burden of mortality and morbidity caused by smoking in the UK and elsewhere. The conference involved presentations by 15 internationally recognised experts from the UK, Europe, USA and Australasia, and a keynote address by the UK Secretary of State for Health, Andrew Lansley. The audience of 190 included people from academia, the Department of Health, journalists, health professionals, local government, NGOs and industry. The conference attracted major UK and international television, radio newspaper and online media interest. Mr Lansley's speech outlining clear commitments to further effective tobacco policy, is available at

http://mediacentre.dh.gov.uk/2012/03/07/speech-6-march-2012-andrew-lansley-smoking-and-health

- Nearly 9000 UKCTCS media mentions since October 2009. This has an estimated circulation of 8255 million.

4. Capacity building

Capacity building has been a major priority and area of success for the Centre. We have:

- Developed and delivered, with excellent feedback, annual four day CPD courses on tobacco control (held in Bath, Nottingham, Stirling and Edinburgh) that have attracted delegates from the healthcare professions, government policymakers, NGOs and a range of other organisations
- Developed and delivered two Masters degree modules in tobacco control (*Epidemiology of tobacco use and the tobacco industry* and *Tobacco Control Interventions*) delivered each year as part of the University of Nottingham Masters in Public Health, attracting internal and external Masters students
- Registration of 42 PhD students, funded from a range of sources, to study across a spectrum of topics relevant to tobacco control; 13 have been awarded their PhDs within four years, one had a one-year extension for extenuating circumstances and one has encountered health problems but will return in 2013. All others are on course for completion within their allocated time periods
- Provision of Fellowship support to promising postdoctoral fellows to enable external Fellowship or research project funding [12 fellows supported for varying durations of time]
- Attracting significant host institution investment in the creation of posts to retain excellent researchers trained and developed through the Centre. There were 5 new Lecturer and 1 Senior Fellowship posts created from our host institutions.
- Attraction of further significant host institution investment, to a value of £6million, in additional posts and senior investigator time to support the next phase of the Centre, as the UK Centre for Tobacco and Alcohol Studies (UKCTAS) from 2013-18.
- Created an international profile as a centre of training and research excellence for future students and researchers. We have had participants in both the CPD and Masters degree modules form overseas

Describe the major impacts achieved by the Centre. This should cover both academic contributions and impact on policy and practice and should include:

3-4 Examples of outstanding research that emerged as a consequence of the Centre funding

1. Nicotine replacement therapy in pregnancy

Smoking in pregnancy is a significant cause of harm to the fetus. Nicotine replacement therapy (NRT) is of proven effectiveness for smoking cessation outside pregnancy and it is recommended for use by pregnant smokers in published smoking cessation guidelines in the UK and many other countries. However there is no clinical trial evidence that NRT is effective, or indeed safe, in pregnancy. Three UKCTCS applicants (Coleman, Lewis, Britton) led a definitive HTA-funded double-blind, randomised placebo controlled multicentre trial which has demonstrated that although standard dose NRT did not appear to cause any harm to the mother or fetus, there was no sustained effect of

treatment on sustained smoking cessation. The international importance of the study is evident in its publication in the highest impact factor medical journal, the New England Journal of Medicine, on 1.3.12; the findings will inform policy and practice for smoking cessation in pregnancy across the globe. Further work is in development to determine whether higher doses or NRT (in response to evidence of more rapid nicotine metabolism in pregnancy), or other approaches to improve compliance with therapy, might be effective.

2. Work on alternative nicotine devices to support harm reduction strategy

Unlicensed nicotine devices, and in particular electronic cigarettes (e-cigs) have emerged onto the UK market since the Centre was established and have enormous potential benefits for, but also risks to, public health. Centre members have provided internationally cited evidence on the content and nicotine delivery characteristics of e-cigs [25;26;55;56], and on the use of e-cigs in the English population through the Smoking Toolkit Study [27], the ITC Study [57] and other surveys [58]. This research has informed recent policy debates on the regulation of e-cigs.

3. A new treatment for smoking cessation

UKCTCS members in collaboration with colleagues in Warsaw carried out a large-scale randomised clinical trial examining the safety and efficacy of a very low-cost medication (cytisine, marketed as Tabex, and widely available in Central and Eastern Europe) to aid smoking cessation [14]. This was mainly funded by NPRI, with a CRUK programme grant funding the contribution of some authors. The results found a highly significant increase in 12-month sustained abstinence rates and a rate ratio of 3.4. This finding paved the way for a submission for regulatory approval by the European medicines regulators and subsequent approval in China and other low and middle income countries. It could bring a safe, cheap and effective treatment to hundreds of millions of smokers worldwide who cannot afford existing medications

4. Monitoring tobacco industry activity

The University of Bath has undertaken extensive research on the conduct of the tobacco industry (TI) and its influence over public policies. This research has (a) significantly extended understanding of TI influence, by showing that the TI not only attempts to influence public health policies, but also enjoys significant influence over upstream policies; (b) provided some of the best documented examples of corporate influence over EU policy-making, raising concerns about transparency in policy-making; and (c) increased awareness that regulatory reforms known as Better Regulation may pose a threat to public health. The key impact of this research, from 2008, is that it has reduced the ability of the TI to influence public health policy. This has been achieved by contributing to the development and implementation of Article 5.3 of the WHO's *Framework Convention on Tobacco Control* (FCTC), the WHO's first global health treaty. Most notably the work and its effective dissemination to policy makers and NGOs helped secure effective Article 5.3 Guidelines despite intense tobacco industry lobbying. These impacts involved work with beneficiaries including WHO and a variety of NGOs and by increasing awareness among policy makers of TI influence.

3 or 4 examples of outstanding capacity building and skills development in areas of particular need and importance

1. PhD recruitment

Investment in infrastructure and particularly early career posts was a priority objective of the UKCRC, and the UKCTCS aimed to create a sustainable structure to engage, recruit, train and develop researchers. The 15 students funded by the UKCTCS and 27 from other sources have given tobacco control research in the UK an unprecedented boost in terms of capacity and outputs. Their research spanned the range of our themes, covering pregnancy, prevention, cessation, harm reduction, policy, methodological innovation and health inequalities. Several students addressed complex health issues (such as highly dependent smokers, smokers who cannot quit, pregnant smokers, smokers with lung cancer) and translating research into practice (such as assessing different ways of quitting smoking and their effectiveness), policy (point of sale, price marketing, packaging) and policy evaluation (European tobacco control policies, smoke-free laws, plain packaging). Our students have also developed new methods for monitoring prevalence using novel applications of existing data sources, and econometric techniques for analysing the impact of policy changes. They have also studied tobacco industry practices. The students encompass a range of disciplines, as has the mix of supervisors, with co-supervisors also often based at different UKCTCS universities. UKCTCS–funded PhD student outputs include two published Cochrane reviews: one first-author (abrupt cessation versus reduction) and the second mid-author (weight gain after cessation; also published in the BMJ); and their research has contributed to four further systematic reviews (plain packaging, nicotine pre-loading, and two NICE reviews on relapse prevention and mental health and secondary care) and government consultations. Students funded from sources other than the UKCTCS have also published widely; a BMJ paper by one of our students [59] has been cited over 80 times since 2010. Most of our students have won travel scholarships and prizes enabling them to present their research at national and international conferences; several have been invited plenary speakers at our UK National Smoking Cessation Conference, attended by between 600 and 800 delegates. One of our students won a NIHR School for Primary Care Research Fellowship, another a NIHR Doctoral Fellowship. Our students have been awarded several prizes.

We have encouraged our students to expand their research skills through supervisory guidance, training and courses. They have thus learnt a range of skills important to public health research including systematic review and meta-analysis; reviewing and analysing complex longitudinal data; management of trials of complex behavioural interventions; qualitative research skills (including longitudinal qualitative research analysis); genetic epidemiology; laboratory-based techniques such as eye-tracking and fMRI; and health economic models and econometrics. We have trained clinicians, public health trainees, psychologists and one public health dietician. Some of our students have taken accredited training to be NHS stop smoking advisors and have completed stage 2 health psychology training. Four were funded through the ESRC e-studentship initiative and recruited for scarce skills in programming and database creation. One had many years industrial experience with high-level programming skills almost non-existent among public health researchers, a shortcoming which has limited the extent to which complex public health data can be exploited in research. We have also recruited students from marketing backgrounds and one student developed methods for monitoring and measuring media imagery content.

Two PhD students who began their doctorates in advance of UKCTCS funding and were awarded their PhDs during the UKCTCS grant, and two who began during the UKCTCS award, have secured lecturer positions at the University of Nottingham. Ten of our PhD students have progressed to postdoctoral positions (two Birmingham, one to

transfer to Oxford; two Bristol; two Nottingham; two Bath; one UCL, one Manchester). Three of these posts have been externally funded: one NIHR School for Primary Care Research, and two CR-UK. One of our students went on to work for the World Health Organisation, another the University of Pittsburgh, US and another as an intern with the Behavioural Insights Team in Government. One has returned to clinical practice.

2. Tobacco Modules

We established two 15 credit Masters' modules on tobacco control at Nottingham University to support career development in tobacco research: 'Epidemiology of Tobacco Use and the Role of the Tobacco Industry'[1] and 'Tobacco Control Interventions'[2]. These have now been run for five years, attracting between 25-40 students to each module. All UKCTCS associated PhD students and fellows attend this training as well as students on the MPH course in Nottingham but we have also attracted overseas students. After each UKCTCS tobacco control module we collect anonymous feedback from participants. Over the years, there has been universal approval for the modules. Comments received include the following which are not atypical: *'I thoroughly enjoyed the module' 'A real highlight was hearing from experienced and well known researchers/practitioners in the field' 'Fantastic' 'Superb overall' 'Am completely inspired' 'A brilliant module' 'Very informative and interesting'*

The modules are now a permanent part of the MPH course in Nottingham.

3. CPD courses

When UKCTCS was established a clear need was identified by our external partners for a training course on tobacco control for professionals. We began work on a CPD module in 2008 and offered this first in 2009 with pump-priming money from one of the regional tobacco control offices, SmokeFree SouthWest. The course was first run and accredited in Bath and then when one of the investigators coordinating it moved back to Scotland, it was accredited by the University of Stirling. We have alternated English (Bath, Nottingham) and Scottish (Stirling, Edinburgh) each year. The sessions have received excellent feedback (100% of those attending in 2013 said that they would recommend the course to other colleagues) and also resulted in further research and knowledge exchange activities between UKCTCS investigators and students on the course.

4. Practitioner training

UKCTCS investigators played a key role in the development of the National Centre for Smoking Cessation and Training (NCSCT). Since 2008 NCSCT has developed a range of online and face to face courses for smoking cessation practitioner and other professionals and is the main provider of smoking cessation training in England. The courses are based on research to identify behaviour change techniques (BCTs) for effective smoking cessation interventions. The NCSCT's comprehensive training, assessment and certification programme is built around these evidence-based behaviour change techniques. UKCTCS investigators also chaired multidisciplinary committees to develop two speciality modules now offered by NCSCT, on smoking cessation for pregnant women and for people with mental health problems. Further information is available from: www.ncsct.co.uk

[1] http://modulecatalogue.nottingham.ac.uk/Nottingham/asp/moduledetails.asp?crs_id=019561
[2] http://modulecatalogue.nottingham.ac.uk/Nottingham/asp/moduledetails.asp?crs_id=019562

3 or 4 examples of high-impact activities that have been successful in bringing the Grant's work to non-academic groups who have engaged with the Centres' work (i.e. societal, policy and economic impacts)

1. **Harm reduction**

UKCTCS has advocated the use of harm reduction strategies to reduce the impact of nicotine addiction on health by making acceptable and viable alternative sources of nicotine available to smokers at the point of sale and for sustained use, and as a complement to the conventional use of nicotine as a medical therapy to support smoking cessation. We made the case for harm reduction before UKCTCS was established, in a report with the RCP (*Harm reduction in nicotine addiction);* we advocated the establishment of a Public Health Programme Development Group on tobacco harm reduction, which produced guidance in 2013, under a UKCTCS chair (Bauld); we also advocated a review of nicotine regulation by the MHRA, leading to establishment of an advisory group to explore rational regulatory approaches to capture the potential health benefits of alternative nicotine devices (of which e-cigarettes are one example); and met with the Cabinet Office Behavioural Insight Team, and the Prime Minister's Policy Unit, to present the case for harm reduction and the regulatory frameworks necessary to enable this to happen. We have made similar representations to the EU in relation to the proposed revision of the Tobacco Products Directive. Our work on the performance of electronic cigarettes, and monitoring harm reduction activity through the Smoking Toolkit Study, has further informed this process.

2. **Systematic review for UK government on effect of plain tobacco packaging**

Since 2002, tobacco marketing in the UK has been radically restricted by the terms of the Tobacco Advertising and Promotion Act. The tobacco industry has, in response, concentrated their marketing budgets on remaining opportunities, which include tobacco packaging, which has been shown to promote the appeal of smoking, particularly to young people. In 2011 the UK government announced a consultation on introducing plain tobacco packaging, and in collaboration with the Public Health Research Consortium, UKCTCS was commissioned by the Department of Health to conduct a systematic review of the evidence on plain packaging to serve as the basis for the public consultation. The systematic review found consistent evidence that plain packaging could reduce the appeal of smoking, improve the effectiveness of health warnings, and counteract smoker's misconceptions about tobacco harm communicated through the pack. The review was completed in 2011-12, informed the consultation call, and was published with it on 16.4.12. Although the UK government did not include plain packaging legislation in the programme for the current parliamentary session, we worked closely with the Scottish government on the issue and this resulted in a commitment from them to introduce the policy irrespective of UK-level decision-making. We continue to monitor the emerging evidence on packaging effects, to support any review of the UK government decision.

3. **Production and impact of the 2010 Royal College of Physicians report on Passive Smoking and Children**

The UKCTCS worked closely with the RCP and Cancer Research-UK in the production of a report on passive smoking and children, highlighting the impact of this exposure on child health and subsequent smoking behaviour. The report included extensive new evidence reviews, most of which have since been published separately in peer-reviewed journals, the literature searches and meta-analyses for which were funded by Cancer Research-UK. Almost all of this work was carried out by the UKCTCS, but with inputs

from a much wider range of contributors. The report gained international media interest, particularly on the issue of preventing passive exposure of children in private vehicles, and has since led to initiatives to implement legislation to prevent smoking in cars carrying children in England, Northern Ireland and Scotland, involving private members bills and advocacy by a range of NGOs (including the British Medical Association, British Lung Foundation, Action Cancer (Northern Ireland)) for wider restrictions on smoking in the presence of children, particularly in cars; a 2011 All Party Parliamentary Group hearing on smoking in private vehicles chaired by Steven Williams MP); a private member's bill calling for legislation to prohibit smoking in cars in Northern Ireland (http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Reports-11-12/14-November-2011/#4) and the Smoke-free Private Vehicles Bill [HL] 2012-13 in the House of Lords.

Briefly describe the main publications and other outputs (e.g. events, seminars etc.) from the Centre

Publications

Our publications have been listed in successive annual reports (available at http://www.ukctcs.org/ukctcs/about/reports.aspx) and online publication lists (http://www.ukctcs.org/ukctcs/publications/index.aspx), and provide comprehensive coverage of the spectrum of tobacco control research.

Events and seminars

UKCTCS hosted and helped organise a number of events and seminars, some of which have already been mentioned above. We highlight three here: the joint UKCTCS/SRNT Europe conference in Sept 2010; a one day event with the Royal College of Physicians in March 2012; the Population Health: methods and challenges conference in April 2012; and the UKCTCS inaugural conference in November 2012.

SRNT Europe 6-9 September 2010, Bath

UKCTCS and SRNT Europe hosted a joint conference at the University of Bath from 6—9 September. The theme of the conference was 'Translating Science to Policy' and more than 450 international delegates attended, a larger turn out than any previous SRNT conference over the last twelve years. The 450 delegates who came were from 30 different countries and the variety of nationalities and varied research interests. In addition to overall organisation of the conference, Centre members contributed at all stages - be it as reviewers prior to the event or as contributors to plenary sessions, symposia, oral presentations and poster presentations.

Fifty years since 'Smoking and health' progress, lessons and priorities for a smokefree UK, March 2012, London

As outlined above, this was a jointly hosted conference with the Royal College of Physicians to commemorate 50 years since the publication of the RCP report Smoking and Health. The programme was developed and led by a range of experts, including speakers from ASH, Fresh North East and the RCP Tobacco Advisory Group, as well as the then Secretary of State for Health, Andrew Lansley.

Presentations from Centre members included Amanda Amos who presented on smoking in children and vulnerable adults, Robert West on smoking cessation interventions, Ann McNeill on reducing harm from nicotine use, Linda Bauld on passive smoking and

smokefree policy, Jeff Collin on the role of the tobacco industry and, finally, John Britton offered closing remarks on smoking and health in the next 50 years. Conference proceedings were published as a booklet.

Population Health—Methods and Challenges conference, April 2012, Birmingham

Another collaborative effort between the MRC Population Health Sciences Research Network, the 5 UKCRC Public Health Research Centres of Excellence and the Scottish Collaboration for Public Health Research and Policy, this was the first UK conference on population health research methods, with a focus on the significant challenges facing translational research in population health

Cathy French, communications manager for UKCTCS, was steer of the organising committee and contributions from Centre members included Linda Bauld who presented on 'systematic reviews in public health: the example of plain packaging of tobacco products', Tessa Langley on 'using multiple time series analysis in public health research; an example using an evaluation of the impact of anti-tobacco mass media campaigns in England and Wales', Rosemary Hiscock on 'making the best use of complex surveys; pitfalls for the uninformed user' and Sarah Lewis on 'who receives prescriptions for smoking cessation medications? An association rule mining analysis using a large primary care database'

UKCTCS inaugural conference. Tackling Smoking in 21st Century Britain, November 2012, York

The Centre held a national conference to showcase the first four years of its work at the end of 2012. More than 250 UK delegates came to the three-day event - together with international delegates from Bangladesh, the United States, Nepal, Saudi Arabia, Nigeria, Finland, Netherlands and the Republic of Ireland. Parallel sessions comprised some 52 individual presentations, with many of these delivered by the new researchers, either working for, or affiliated with, the Centre, who we have fostered over the past five years. Many of our external supporting organisations also attended and we had 16 exhibitors.

Finally, UKCTCS has helped to organise and support a wide range of other events and seminars during the initial five years of the Centre, with the most recent example being the June 2013 40th Anniversary event of ASH Scotland, a two day conference jointly organised with UKCTCS and involving more than 300 delegates.

Describe the outcomes that have occurred as a consequence of the Centre, the next steps that will be taken to ensure uptake and application of the research findings and the expected destinations of all staff linked to the Centre.

Outcomes: The Centre has substantially advanced understanding of the drivers to smoke, methods of stopping smoking, policies to discourage smoking, approaches to harm reduction and a range of other tobacco control topics; and has engaged in policy implementation through our work with NICE, and with advocacy groups promoting change. Precise outcomes are listed on our website. It is difficult to identify outcomes that are directly attributable to the creation of the Centre, but our general estimate has always been that Centre infrastructure and the collaboration the Centre generates has increased the collective productivity of the research groups involved by around 30%. In policy terms however, the existence of the Centre has dramatically increased academic

impact by representing, and having access to the expertise of, a wide range of tobacco control investigators, and establishing a profile which transcends that of the individual academic groups involved.

Ensuring uptake and application: We will continue to publish and publicise our research and develop the main themes (outlined above), and realise potential applications of tobacco control to the prevention of harmful use of alcohol, through the new UK Centre for Tobacco and Alcohol Studies (UKCTAS), funded by the UKCRC via the Medical Research Council for five years from 2013. Our vision for the UKCTAS is to build on the success of the UKCTCS as a world leader in tobacco control policy, and enhance our research by also expanding research into the harmful use of alcohol. Our strategy will be to further develop our tobacco work and cohort of tobacco researchers; recruit leading UK and international alcohol research leaders to reposition the UKCTCS as the UK Centre for Tobacco and Alcohol Studies (UKCTAS); and invest in further capacity building in both tobacco and alcohol work.

Expected destinations of staff: Our senior staff are all in established academic posts, and we have been able to establish middle-grade academic posts, as postdoctoral researchers or Lecturers, for many of our best early career researchers. We will continue to use Centre funding now available through UKCTAS to invest strategically in posts to enable the best of the continued flow of excellent Doctoral Graduates to build career paths through personal fellowships and project grant proposals, and ultimately to become the independent researchers, policymakers and practitioners of the future.

Part 5: The Director's Role and Reflections on the Centre (4-6 pages)

Use this section to provide feedback to the ESRC, on behalf of the Funders, on the Centre, the policies underpinning it, the processes by which it was commissioned and managed, the Director's role and how this was supported by the Committee, the ESRC Office and the other funders

Discuss how the Director's role has added value to the Centre. How has the management of the Centre led to research that has been of higher quality and impact than individual stand alone projects would have been likely to achieve?

In the early years the Centre was managed by the director (John Britton) and deputy director (Ann McNeill), who oversaw the process of bringing the various components of the network together and ensured that the core infrastructure in general administration, grant application and regulatory approval support, public engagement and communications, development of teaching programmes and other functions were in place. In practice however, and from a very early stage, the work of managing the Centre has been widely shared through the system of workstream and cross-cutting theme leads. Linda Bauld has taken a particular lead on the development of research and policy on alcohol. Ann McNeill and Linda Bauld are deputy directors for tobacco and alcohol respectively in the new UKCTAS.

The director, and deputies, have regularly represented or spoken for UKCTCS in public, in meetings with policymakers and grant agencies, and other organisations, but the nature of the Centre and the breadth of the work carried out means that these roles are often also taken on by other applicants, simply because they are the most skilled and appropriate person to do so.

The contribution of Centre management to research output is discussed above; the model we have adopted has been to promote collaboration between Centre researchers and the wider network in developing grant proposals, and drawing the appropriate expertise into Centre initiatives such as the two RCP reports and the UK Alcohol Strategy. It is difficult to identify research that would not have happened without the Centre, but we are certain that the total output of the Centre substantially exceeds that achievable by its component parts in isolation.

Briefly describe and comment on any particular challenges, problems and unexpected events that were encountered and their impact on the Centre.

The main challenge has been and remains that of helping our best new researchers into postdoctoral positions. Particularly at the early stages of the Centre, the main grant bodies restricted fellowship applications to researchers with some years of postdoctoral experience, and we needed fellowships for people emerging from their PhD studies. We also found that researchers involved in policy were particularly difficult to fund.

We encountered a substantial problem in the early stages of planning for a second period of funding for the Centre. In the fourth year of the Centre the UKCRC had made no commitment to further funding, and the ESRC (our main funder) indicated that it planned to withdraw from the UKCRC initiative. We therefore responded to the 2011-12 ESRC call for Centre funding applications, and our proposal reached the final shortlist of

10 interviewed by the ESRC. The reviewers' feedback on the Centre proposal was extremely positive. At interview, however, one component of the application was criticised very heavily by an economist on the panel whose opinion (it seemed to us) transcended that of the other independent reviews (he noted at interview that the reviewers were very supportive, and asked rhetorically whether this meant that they were the wrong reviewers). We were not successful.

Nobody likes failing, but this was a particularly bruising experience. The application process was extremely lengthy, and the development of the application was the main output of the Centre in that year. For so much work to be dismissed so easily, and apparently whimsically, after such positive peer review feedback, seemed to us then and now unprofessional and wrong.

Throughout the life of the Centre we have enjoyed excellent support from Margaret Whitehead and the ESRC case officers supervising the grant (including Jo Stephens, Leah Bevan and Rachel Tyrell), whom we thank.

We are also extremely grateful for the help and support provided by our International Advisory Board members, who have freely given their time to provide advice and feedback on our activities; and particularly to Professor Martyn Partridge, who kindly agreed to chair the group. We also acknowledge with thanks the many individuals and organisations who have contributed in so many ways to the work we have been able to carry out; and especially the UKCRC, without which the Centre would not have existed.

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