UNIVERSITY of STIRLING

Implementation of smokefree prisons in Scotland: findings from the Tobacco in Prisons (TIPs) study

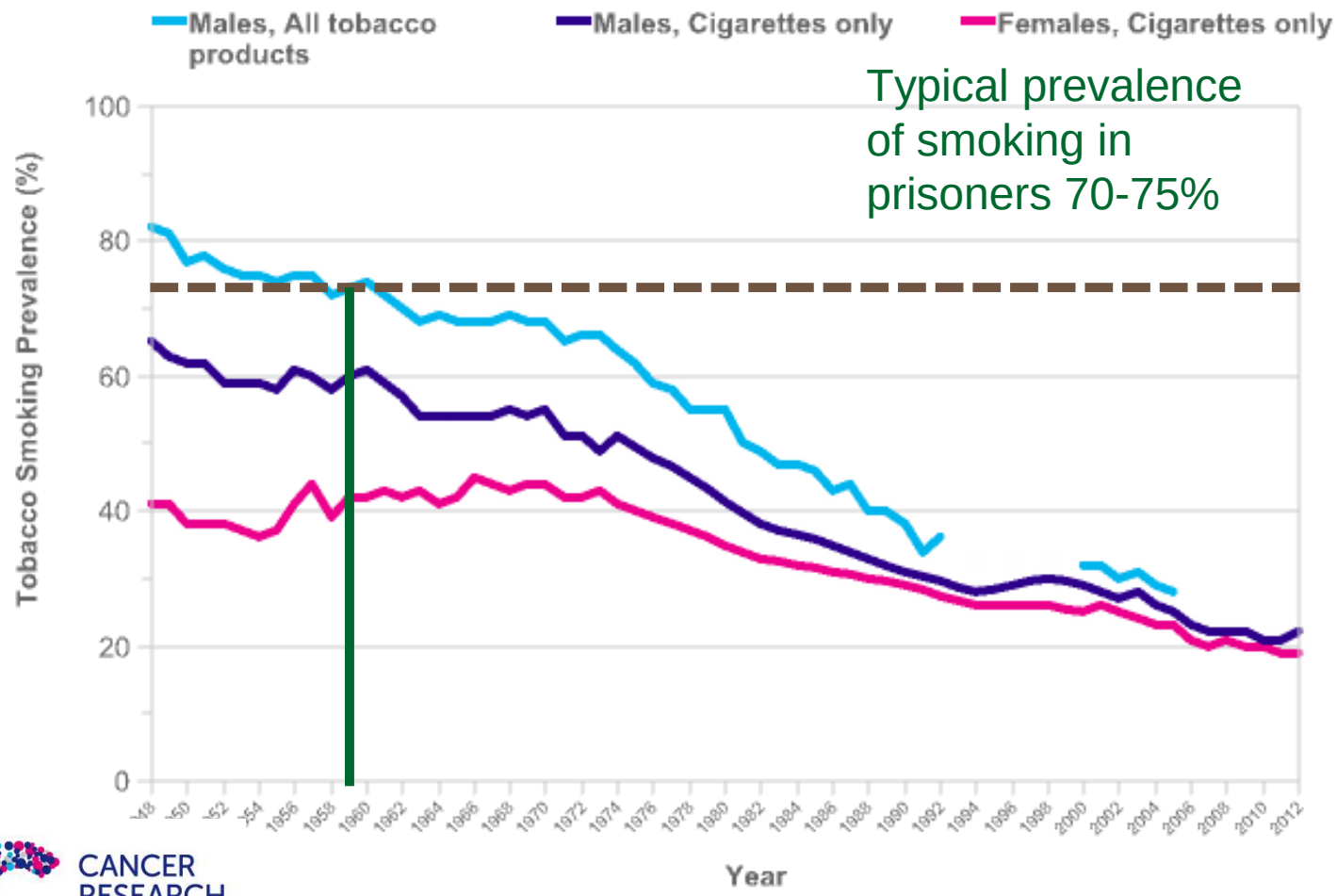
Professor Kate Hunt

Society for the Study of Addition, Annual Conference
Newcastle, 8 November 2019

BE THE DIFFERENCE

Background

Smoking Prevalence: 1948-2012
Prevalence Percentage, Great Britain



Typical prevalence of smoking in prisoners 70-75%

CREATING A TOBACCO-FREE GENERATION
A Tobacco Control Strategy for Scotland

High smoking in prisoners a major challenge to SG aspirations:

- A tobacco-free Scotland by 2034.
- Reduced inequalities in health

CANCER RESEARCH UK

healthier scotland

Implementation of smokefree prisons to 2016

- **Canada**: All provinces have comprehensive smoke-free policies (indoor and outdoor) (2008)
- **New Zealand**: comprehensive smoke-free policies since 2011
- **Australia**: most states have comprehensive smoke-free policies (first implementation in Northern Territory in July 2013) – not WA
- **USA**: 105 federal prisons are smoke-free, and in April 2014 correctional facilities in 20/50 states have comprehensive smoke-free policies
- **Wales and England**: 4 + 4 pilot prisons 2016 (then projected roll out – *completed as of 2018*)

Implementing smokefree prisons

- Significant **challenges** because of smoking culture in prisons

- Exemptions from smokefree policies in community - **staff and prisoners exposed to SHS**

- **Under-researched** area – extent of problem; barriers and facilitators; process of developing and implementing new smoking policies; outcomes and impacts

3 Phase mixed-methods research: the Tobacco in Prisons study

~2015 Scotland discussing potential change in policy

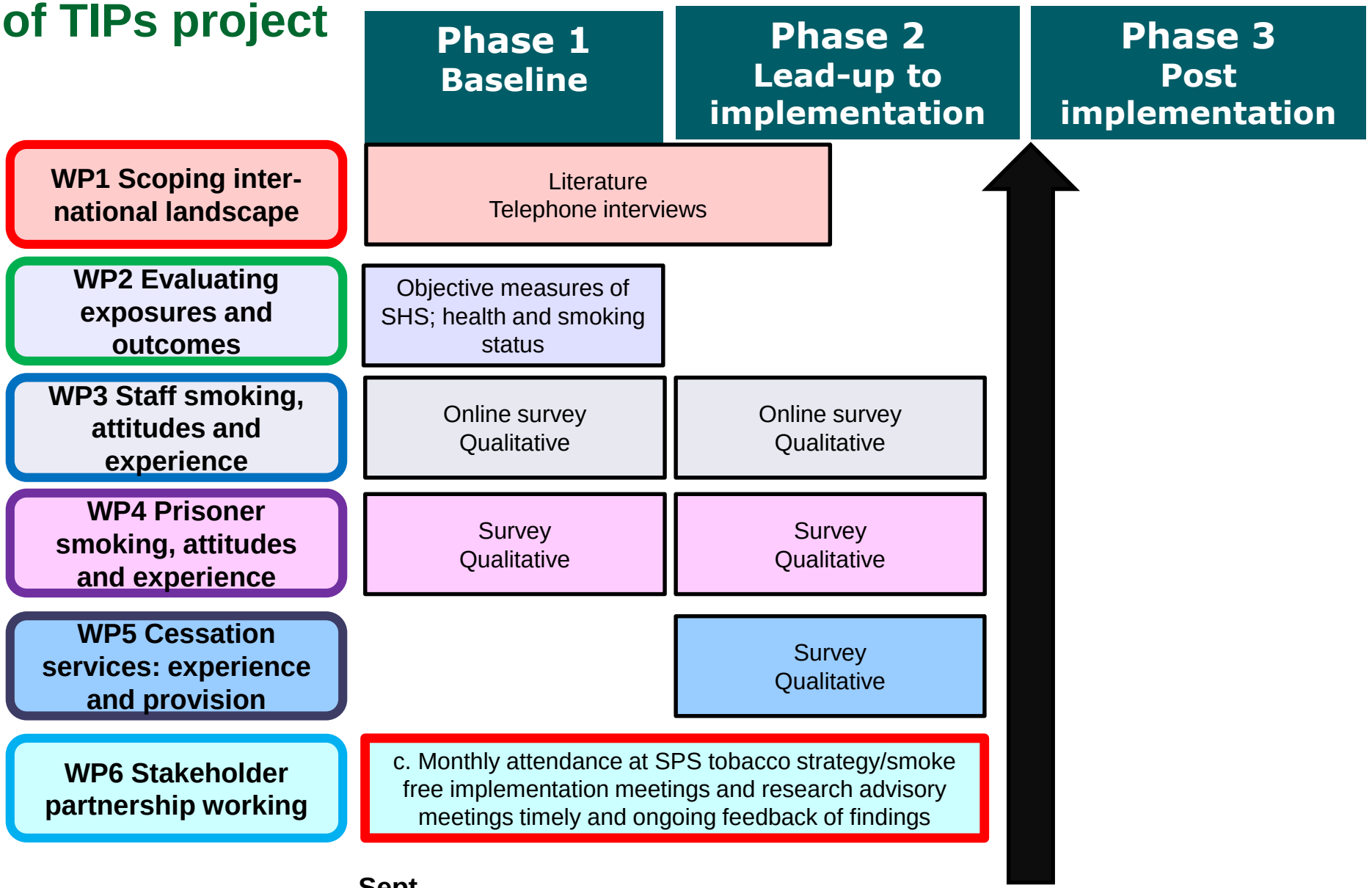
Phase 1 – understanding the situation on the ground before any change in smoking policy - all Scottish prisons; prisoners' and staff views; levels of smoking *Sept 2016 - July 2017*

Phase 2 – understanding whether/how things change after the announcement of date for implementation of smokefree prisons in Scotland on 30.11.18 *Aug 2017-Nov 2018*

Phase 3 – evaluating the impact of introducing smokefree prisons for prisoners, staff, the prison service and health services *From November 2018*

FUNDED BY
NIHR | National Institute for Health Research

Overview of TIPs project



FUNDED BY
NIHR | National Institute for Health Research

Phase 1: Prisoner & staff views

Nicotine & Tobacco Research, 2018, 1–9
doi:10.1093/ntr/nty092
Original investigation
Received January 19, 2018; Editorial Decision April 28, 2018; Accepted May 8, 2018
Advance Access publication XXXX XX, XXXX

Original investigation

Prison Staff and Prisoner Views on a Prison Smoking Ban: Evidence From the Tobacco in Prisons Study

Ashley Brown MA[1,2], Helen Sweeting PhD[2], Greig Logan PhD[3], Evangelia Demou PhD[2], Kate Hunt PhD[1,2]

[1]Institute for Social Marketing, Faculty of Health Sciences and Sport, University of Stirling, Stirling, Scotland; [2]MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, Scotland; [3]Faculty of Health Sciences and Sport, University of Stirling, Stirling, Scotland

Corresponding Author: Ashley Brown, MA, Institute for Social Marketing, Faculty of Health Sci… of Stirling, Stirling, FK9 4LA, Scotland; E-mail: a.l.brown@stir.ac.uk

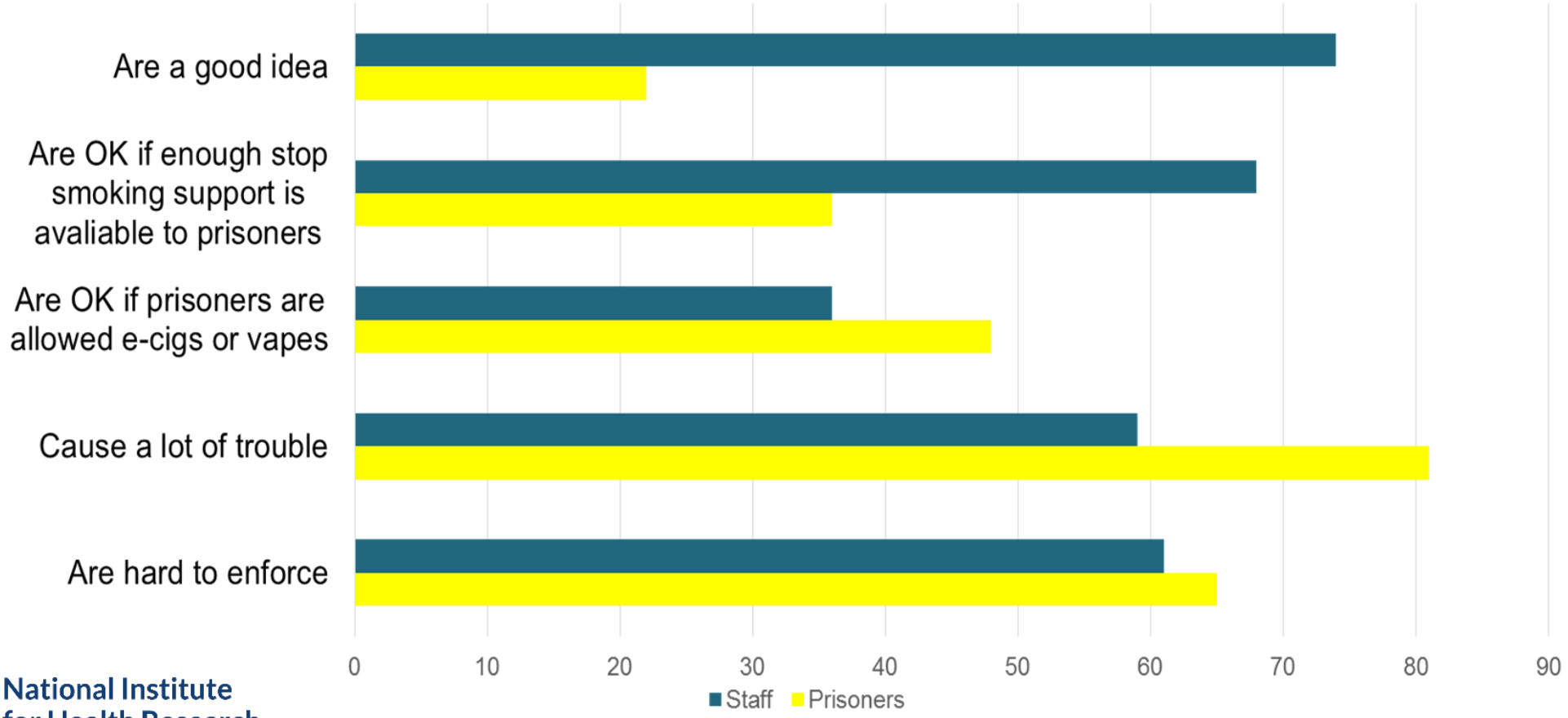
Abstract

Introduction: In jurisdictions permitting priso… embedded in prison culture, leading to secon… ers and challenges for smoking cessation. Mon… research on staff and prisoner views is lacking.

FUNDED BY
NIHR | National Institute for Health Research

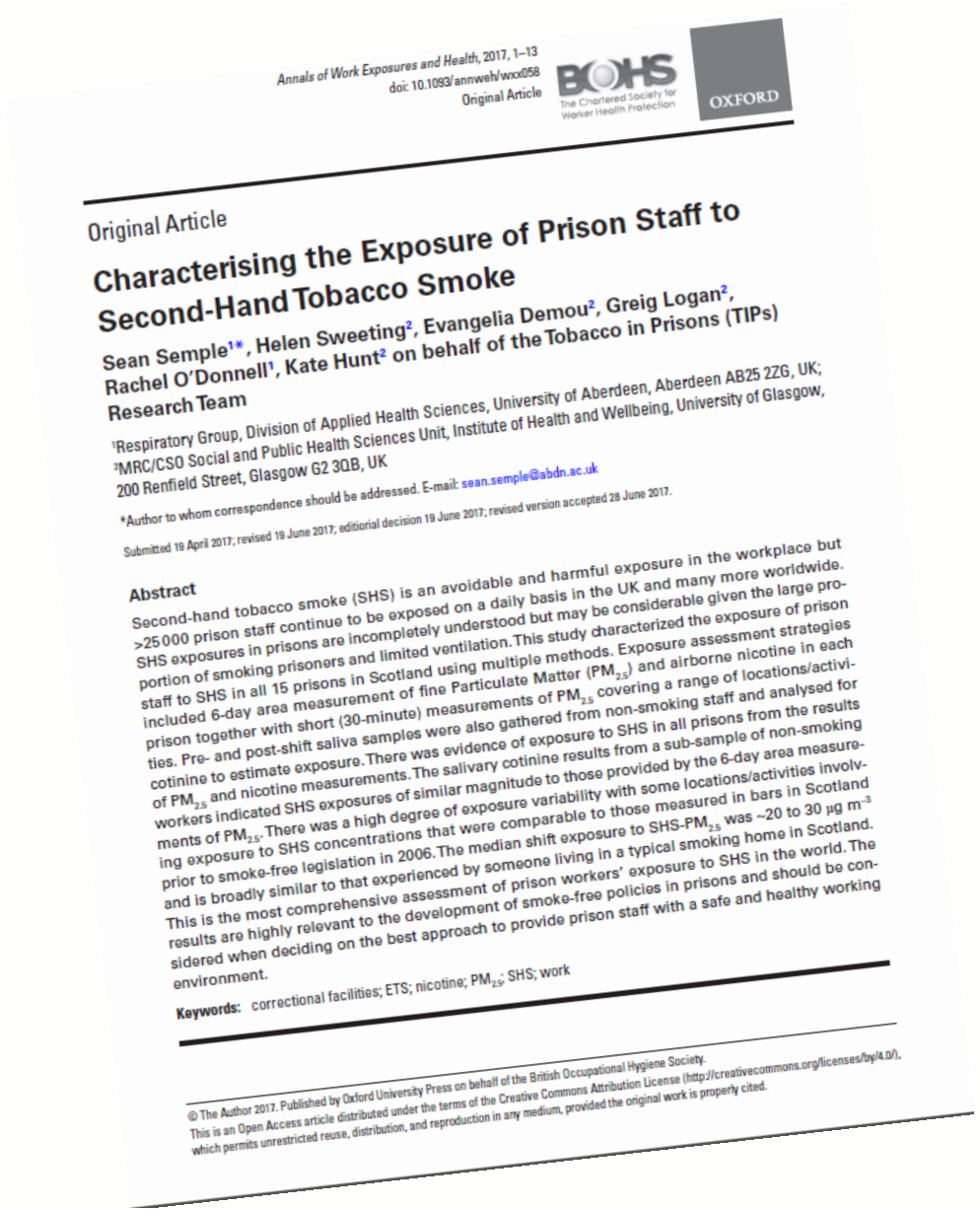
Phase 1: Staff and prisoner attitudes (survey)

- Surveys (n=2512 prisoners; n=1271 staff).
- Substantial % of smokers would like to stop
- ~3/4 staff, but only ~1/5 prisoners supported prison smoking bans.



FUNDED BY
NIHR | National Institute for Health Research

Evidence on SHS exposure: Phase 1 (2016)



Annals of Work Exposures and Health, 2017, 1–13
doi: 10.1093/annweh/wox058
Original Article

Original Article

Characterising the Exposure of Prison Staff to Second-Hand Tobacco Smoke

Sean Semple[1*], Helen Sweeting[2], Evangelia Demou[2], Greig Logan[2], Rachel O'Donnell[1], Kate Hunt[2] on behalf of the Tobacco in Prisons (TIPs) Research Team

[1]Respiratory Group, Division of Applied Health Sciences, University of Aberdeen, Aberdeen AB25 2ZG, UK; [2]MRC/CSO Social and Public Health Sciences Unit, Institute of Health and Wellbeing, University of Glasgow, 200 Renfield Street, Glasgow G2 3QB, UK

*Author to whom correspondence should be addressed. E-mail: sean.semple@abdn.ac.uk

Submitted 19 April 2017; revised 19 June 2017; editorial decision 19 June 2017; revised version accepted 28 June 2017.

Abstract

Second-hand tobacco smoke (SHS) is an avoidable and harmful exposure in the workplace but >25 000 prison staff continue to be exposed on a daily basis in the UK and many more worldwide. SHS exposures in prisons are incompletely understood but may be considerable given the large proportion of smoking prisoners and limited ventilation. This study characterized the exposure of prison staff to SHS in all 15 prisons in Scotland using multiple methods. Exposure assessment strategies included 6-day area measurement of fine Particulate Matter ($PM_{2.5}$) and airborne nicotine in each prison together with short (30-minute) measurements of $PM_{2.5}$ covering a range of locations/activities. Pre- and post-shift saliva samples were also gathered from non-smoking staff and analysed for cotinine to estimate exposure. There was evidence of exposure to SHS in all prisons from the results of $PM_{2.5}$ and nicotine measurements. The salivary cotinine results from a sub-sample of non-smoking workers indicated SHS exposures of similar magnitude to those provided by the 6-day area measurements of $PM_{2.5}$. There was a high degree of exposure variability with some locations/activities involving exposure to SHS concentrations that were comparable to those measured in bars in Scotland prior to smoke-free legislation in 2006. The median shift exposure to SHS-$PM_{2.5}$ was ~20 to 30 μg m^{-3} and is broadly similar to that experienced by someone living in a typical smoking home in Scotland. This is the most comprehensive assessment of prison workers' exposure to SHS in the world. The results are highly relevant to the development of smoke-free policies in prisons and should be considered when deciding on the best approach to provide prison staff with a safe and healthy working environment.

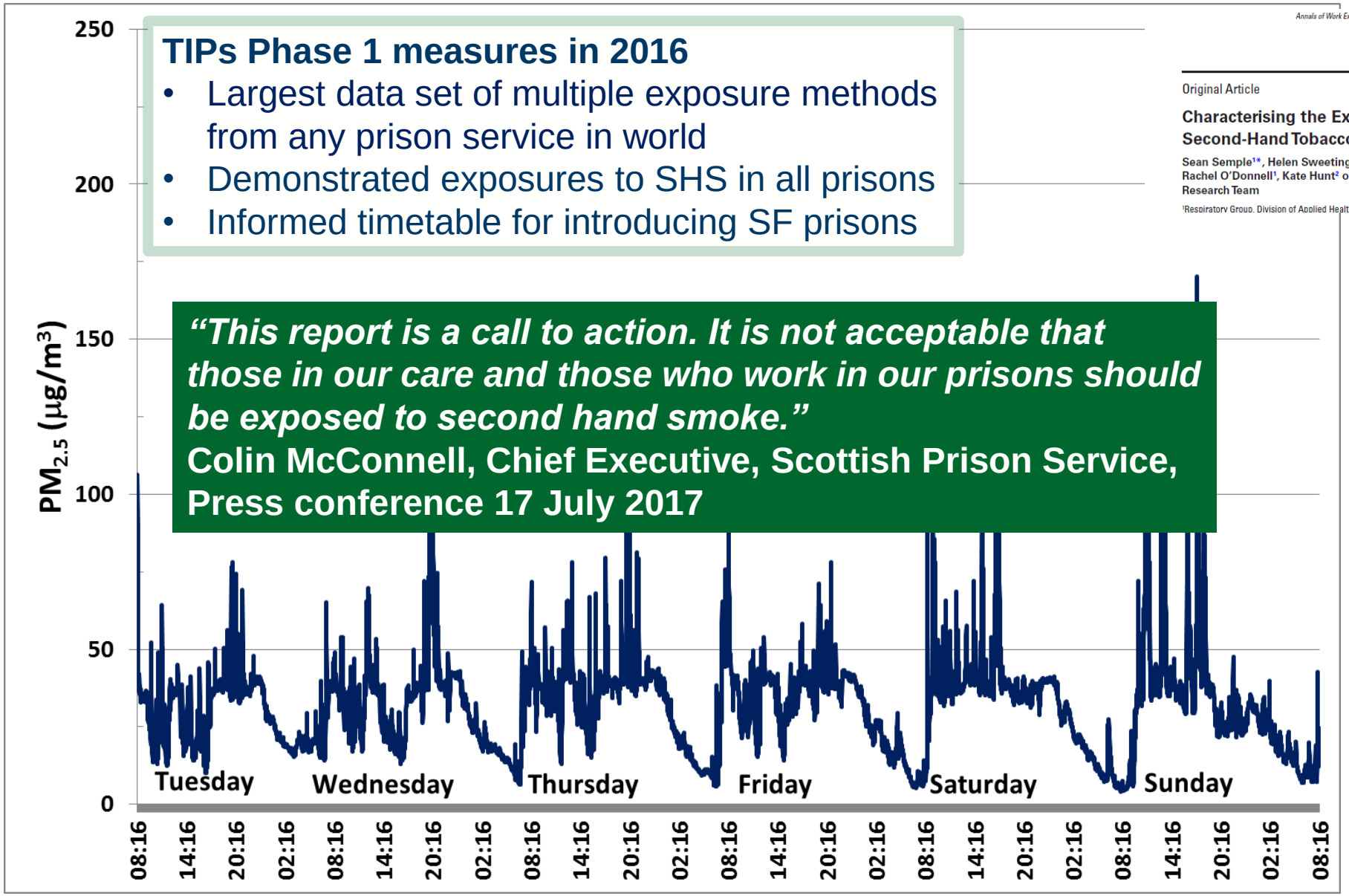
Keywords: correctional facilities; ETS; nicotine; $PM_{2.5}$; SHS; work

- SHS measured with help of prison staff trained to operate air quality monitor
- 128 431 mins SHS data ~ 89 days' measurement.
- Additional measures: nicotine levels in air (12 prisons); salivary cotinine in non-smoking staff (n=422)
- Overall, exposure to SHS for most prison staff ~20-30 μg/m^3
- **Levels similar to data from prisons in England & Wales (2015) and similar to those experienced by non-smoker living with a smoker**
- No Workplace Exposure Limit for SHS. WHO: **"there is no safe level of exposure to SHS"**

Evidence on SHS

TIPs Phase 1 measures in 2016

- Largest data set of multiple exposure methods from any prison service in world
- Demonstrated exposures to SHS in all prisons
- Informed timetable for introducing SF prisons



"This report is a call to action. It is not acceptable that those in our care and those who work in our prisons should be exposed to second hand smoke."
Colin McConnell, Chief Executive, Scottish Prison Service, Press conference 17 July 2017

Annals of Work Exposures and Health, 2017, 1–13
doi: 10.1093/annweh/wxx058
Original Article

Original Article

Characterising the Exposure of Prison Staff to Second-Hand Tobacco Smoke

Sean Semple[1]*, Helen Sweeting[2], Evangelia Demou[2], Greig Logan[2], Rachel O'Donnell[1], Kate Hunt[2] on behalf of the Tobacco in Prisons (TIPs) Research Team

[1]Respiratory Group, Division of Applied Health Sciences, University of Aberdeen, Aberdeen AB25 2ZG, UK;

Introduction of e-cigs to prisons announced during Phase 2

- First single use, then rechargeable vapes (initially free to those eligible)
- Additional Cancer Research UK grant to examine process and impacts of introducing rechargeable vapes in prison context
- **Unique data at particular points in process of going smokefree?**
  - Interviews with prisoners and staff (6 CS prisons) –*immediately prior* to Nov 2018 ban
  - Second set of interviews ~6 months post-implementation (May-Jul 2018) – role that e-cigs play in a smokefree prison service
  - Analysis of 'canteen' purchasing, pre-post ban (and pre-post introduction of e-cigs)

CANCER RESEARCH UK

Reasons for trying e-cigarettes in prison (1)

- Uptake of e-cigarettes among people in custody **strongly** influenced by **unique situation in Scottish prisons**.

- Smokers **had to find ways of quitting smoking or managing without tobacco** because of **imminent ban.**
- Even so some reported vaping due to potential health or financial benefits.

Reasons for trying e-cigarettes in prison (2)

- E-cigarette 'starter packs' were distributed (on an interim basis) to eligible smokers in prisons, meant **individuals could try vaping free of charge.**

- Sense of **novelty and curiosity** about the introduction of rechargeable e-cigarettes in prison.

Experience of early e-cigarette use among people in custody

1) Enjoyment

- Flavoured e-liquids made vaping an **enjoyable/novel** (not simply functional) activity for some participants.
- Participants expressed strong views on particular flavours of e-liquid.

2) Effectiveness

- Current e-cig users had generally **made progress in cutting down or stopping use of tobacco**.

- But some spoke of **difficulties in managing nicotine cravings** by vaping – e.g. not yet meeting their needs re speed of nicotine delivery ("puffing and puffing") or desired strength of 'hit'.

Perceived benefits of e-cigarettes in assisting the transition to smoke-free prisons

Main benefits of e-cigs in assisting people in custody in transition to smoke-free prisons identified:

- **Symbolic**: seen as a welcome gesture/ 'quid pro quo' for the removal of tobacco.
- **Practical**: another tool for abstaining/quitting smoking and handling stress/passing the time in prison.

Potential issues/challenges surrounding e-cigarettes in prisons

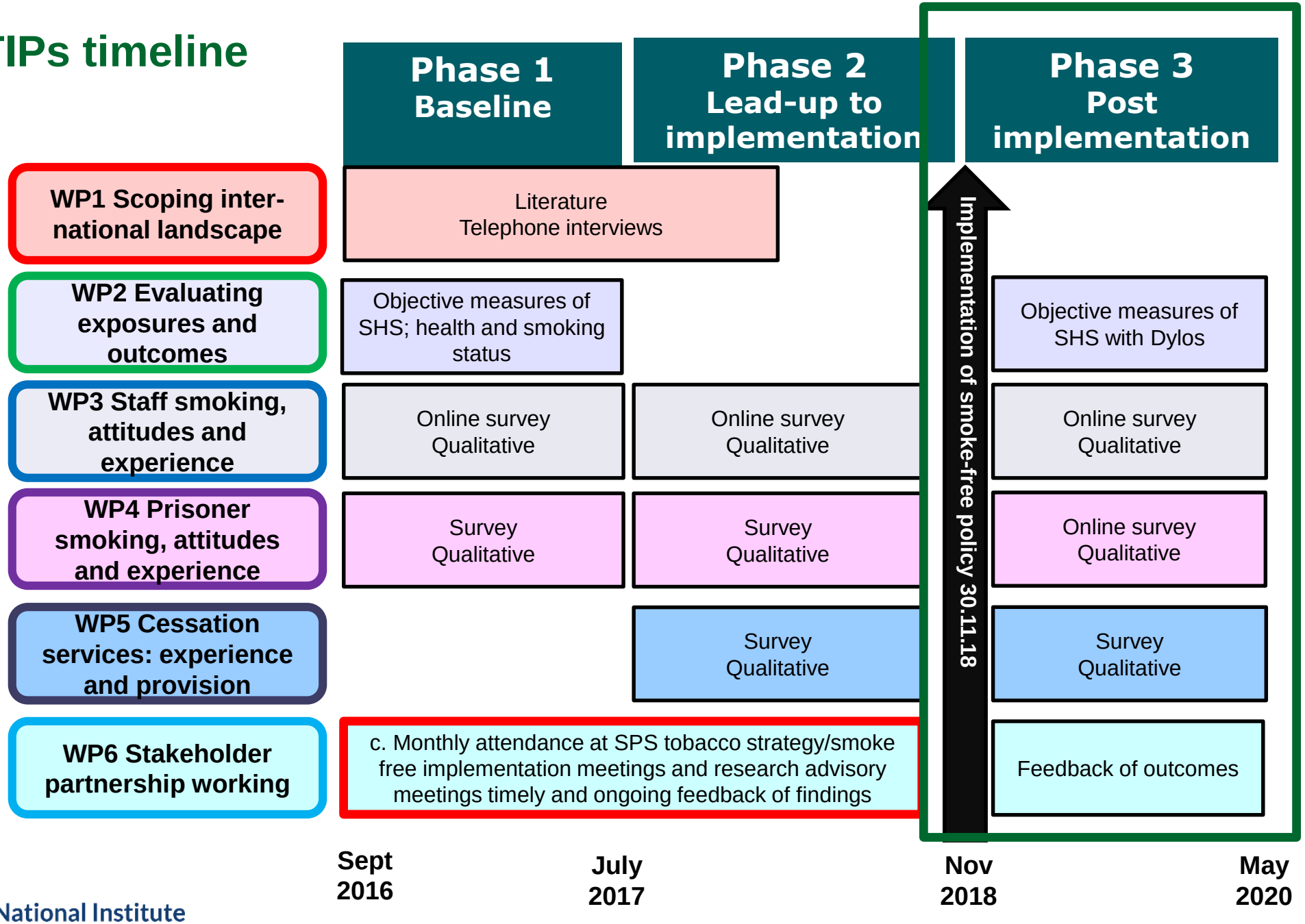
- Some **dissatisfaction** with rechargeable e-cigs on sale; requests for more product choices (e.g. devices, strengths/flavours of e-liquids).

- Some questions about **affordability** of vaping in prison, esp. for those who might develop high use patterns or had limited funds.

- Great deal of **uncertainty/ambivalence** about whether participants might use e-cig on a temporary or long-term basis in prison.

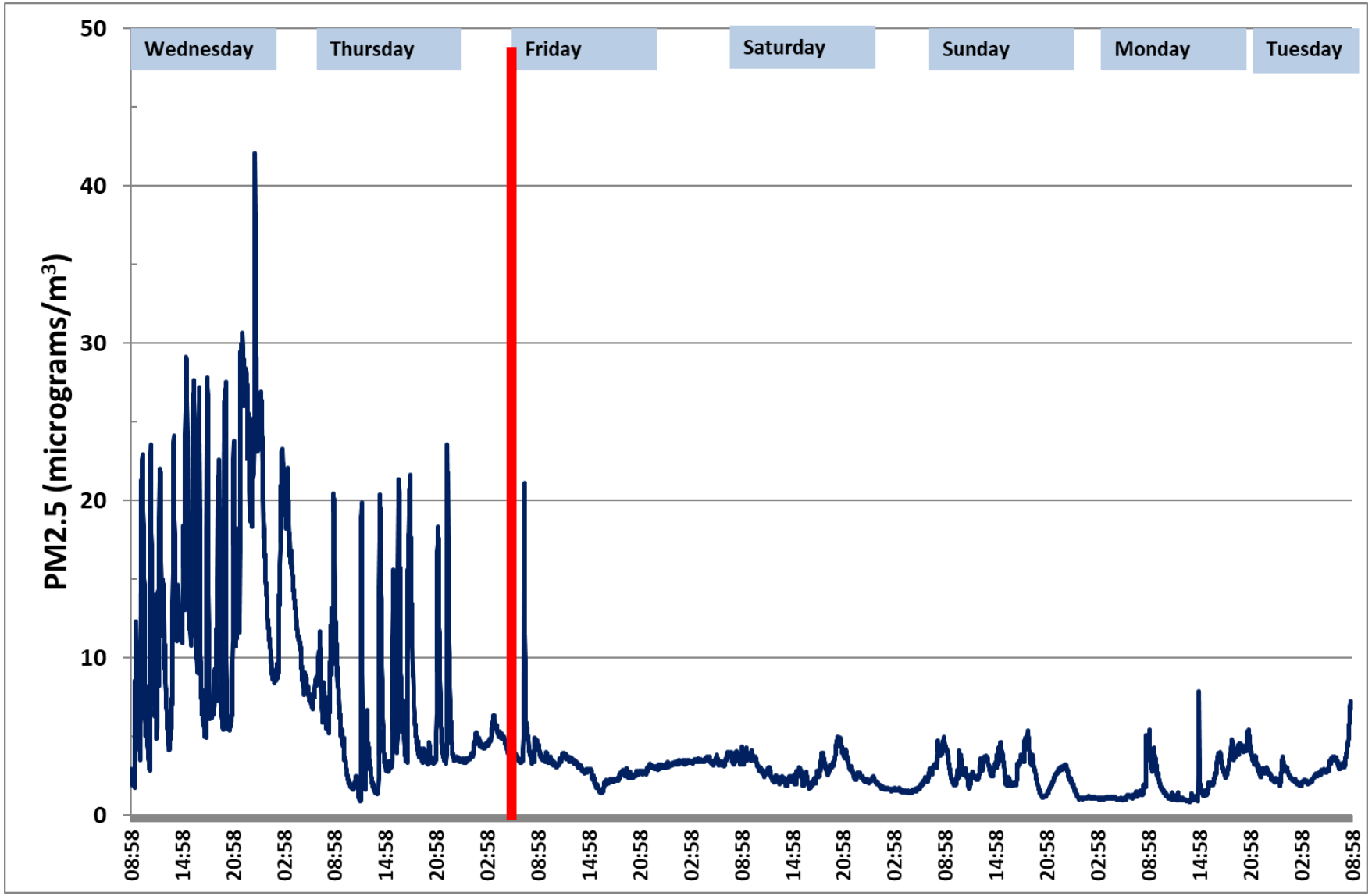
- Confusion/uncertainty about the **potential health risks of use of e-cigarettes** a recurring theme.

Revised TIPs timeline

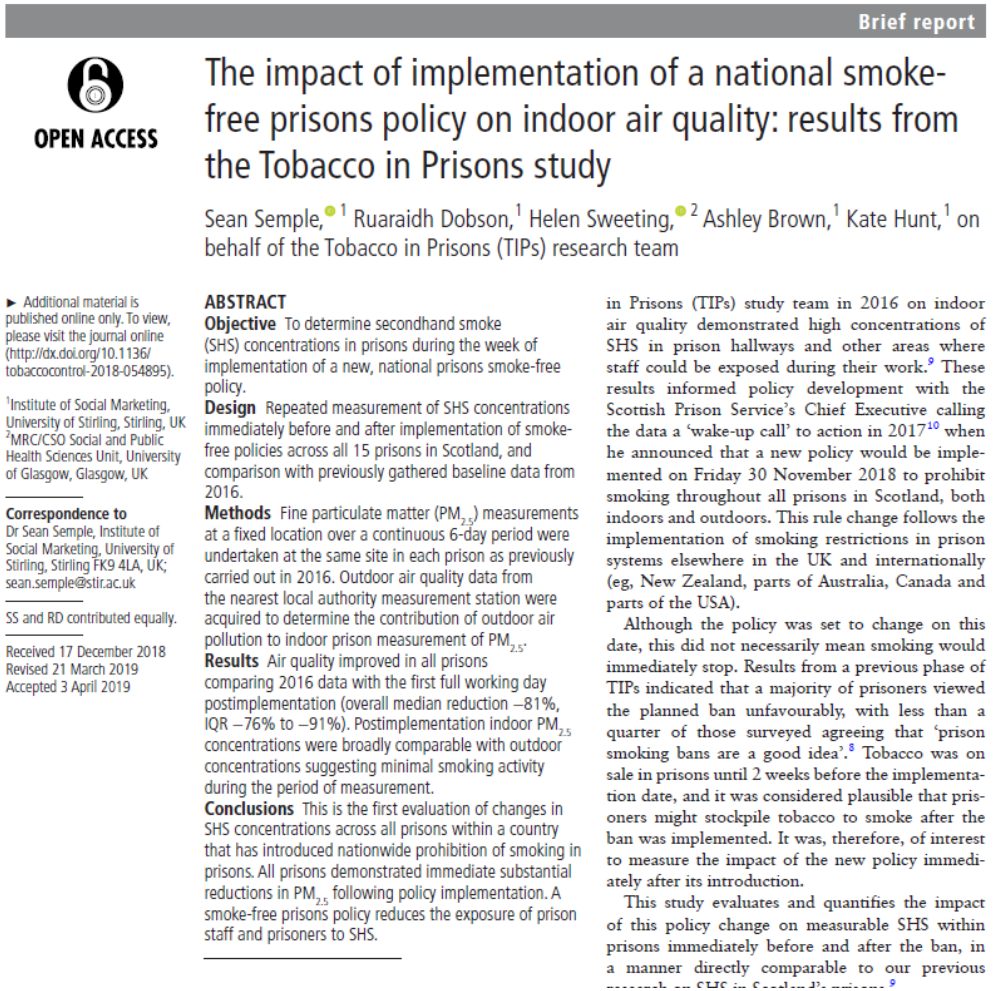


FUNDED BY
NIHR | National Institute for Health Research

$PM_{2.5}$ concentrations: example prison in week of implementation (28.11.18 - 4.12.18)



Phase 3: evidence on impact on air quality



Brief report

OPEN ACCESS

The impact of implementation of a national smoke-free prisons policy on indoor air quality: results from the Tobacco in Prisons study

Sean Semple,[1] Ruaraidh Dobson,[1] Helen Sweeting,[2] Ashley Brown,[1] Kate Hunt,[1] on behalf of the Tobacco in Prisons (TIPs) research team

► Additional material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/tobaccocontrol-2018-054895).

[1]Institute of Social Marketing, University of Stirling, Stirling, UK
[2]MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK

Correspondence to
Dr Sean Semple, Institute of Social Marketing, University of Stirling, Stirling FK9 4LA, UK; sean.semple@stir.ac.uk

SS and RD contributed equally.

Received 17 December 2018
Revised 21 March 2019
Accepted 3 April 2019

ABSTRACT

Objective To determine secondhand smoke (SHS) concentrations in prisons during the week of implementation of a new, national prisons smoke-free policy.

Design Repeated measurement of SHS concentrations immediately before and after implementation of smoke-free policies across all 15 prisons in Scotland, and comparison with previously gathered baseline data from 2016.

Methods Fine particulate matter ($PM_{2.5}$) measurements at a fixed location over a continuous 6-day period were undertaken at the same site in each prison as previously carried out in 2016. Outdoor air quality data from the nearest local authority measurement station were acquired to determine the contribution of outdoor air pollution to indoor prison measurement of $PM_{2.5}$.

Results Air quality improved in all prisons comparing 2016 data with the first full working day postimplementation (overall median reduction −81%, IQR −76% to −91%). Postimplementation indoor $PM_{2.5}$ concentrations were broadly comparable with outdoor concentrations suggesting minimal smoking activity during the period of measurement.

Conclusions This is the first evaluation of changes in SHS concentrations across all prisons within a country that has introduced nationwide prohibition of smoking in prisons. All prisons demonstrated immediate substantial reductions in $PM_{2.5}$ following policy implementation. A smoke-free prisons policy reduces the exposure of prison staff and prisoners to SHS.

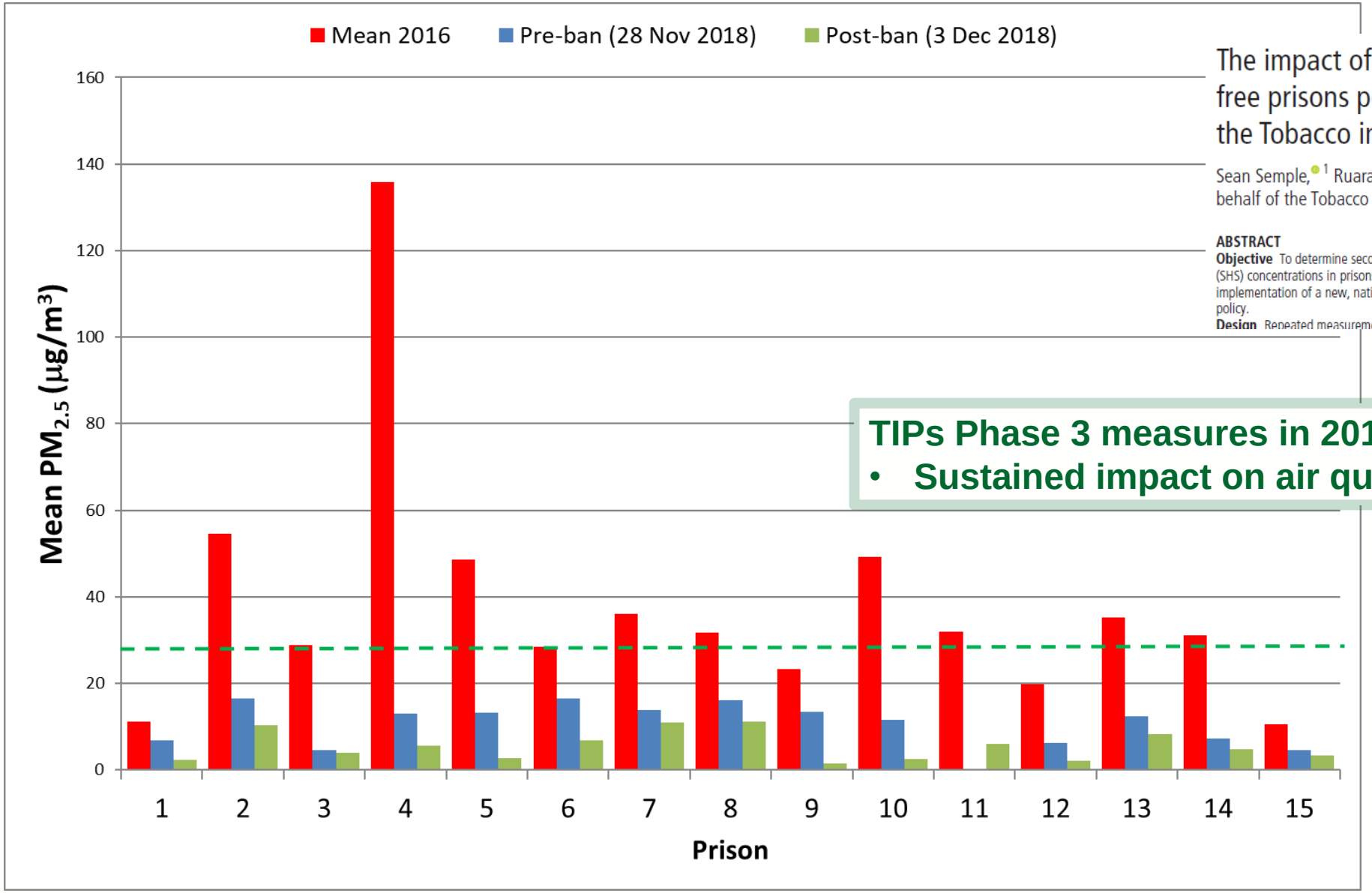
in Prisons (TIPs) study team in 2016 on indoor air quality demonstrated high concentrations of SHS in prison hallways and other areas where staff could be exposed during their work.[9] These results informed policy development with the Scottish Prison Service's Chief Executive calling the data a 'wake-up call' to action in 2017[10] when he announced that a new policy would be implemented on Friday 30 November 2018 to prohibit smoking throughout all prisons in Scotland, both indoors and outdoors. This rule change follows the implementation of smoking restrictions in prison systems elsewhere in the UK and internationally (eg, New Zealand, parts of Australia, Canada and parts of the USA).

Although the policy was set to change on this date, this did not necessarily mean smoking would immediately stop. Results from a previous phase of TIPs indicated that a majority of prisoners viewed the planned ban unfavourably, with less than a quarter of those surveyed agreeing that 'prison smoking bans are a good idea'.[8] Tobacco was on sale in prisons until 2 weeks before the implementation date, and it was considered plausible that prisoners might stockpile tobacco to smoke after the ban was implemented. It was, therefore, of interest to measure the impact of the new policy immediately after its introduction.

This study evaluates and quantifies the impact of this policy change on measurable SHS within prisons immediately before and after the ban, in a manner directly comparable to our previous

- SHS measured using same methods and locations as in 2016, across all prisons
- 114,000 minutes of data in week of implementation in Nov 2018
- **81% average reduction in $PM_{2.5}$ 2016 to immediately post-ban (from median of 31.7 to 5.8 micrograms/m³)**
- **~ at levels in outside air**
- **Without any known major incident**
- Measures repeated 6 months post-ban (week of May 27th 2018)

Evidence on SHS post ban



The impact of implementation of a national smoke-free prisons policy on indoor air quality: results from the Tobacco in Prisons study

Sean Semple,[1] Ruaraidh Dobson,[1] Helen Sweeting,[2] Ashley Brown,[1] Kate Hunt,[1] on behalf of the Tobacco in Prisons (TIPs) research team

ABSTRACT

Objective To determine secondhand smoke (SHS) concentrations in prisons during the week of implementation of a new, national prisons smoke-free policy.

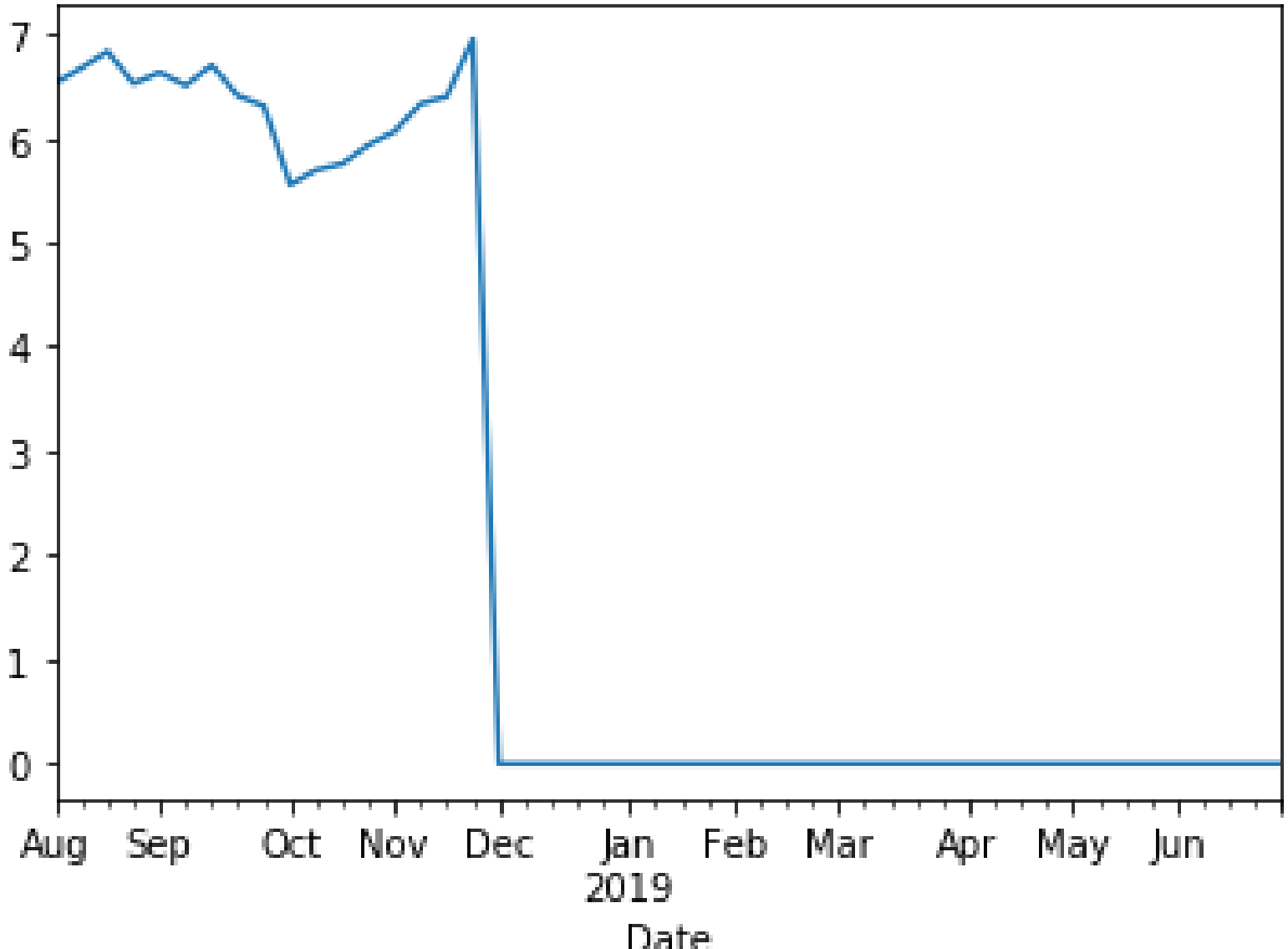
Design Repeated measurement of SHS concentrations

in Prisons (TIPs) study team in 2016 on indoor air quality demonstrated high concentrations of SHS in prison hallways and other areas where staff could be exposed during their work.[9] These results informed policy development with the Scottish Prison Service's Chief Executive calling

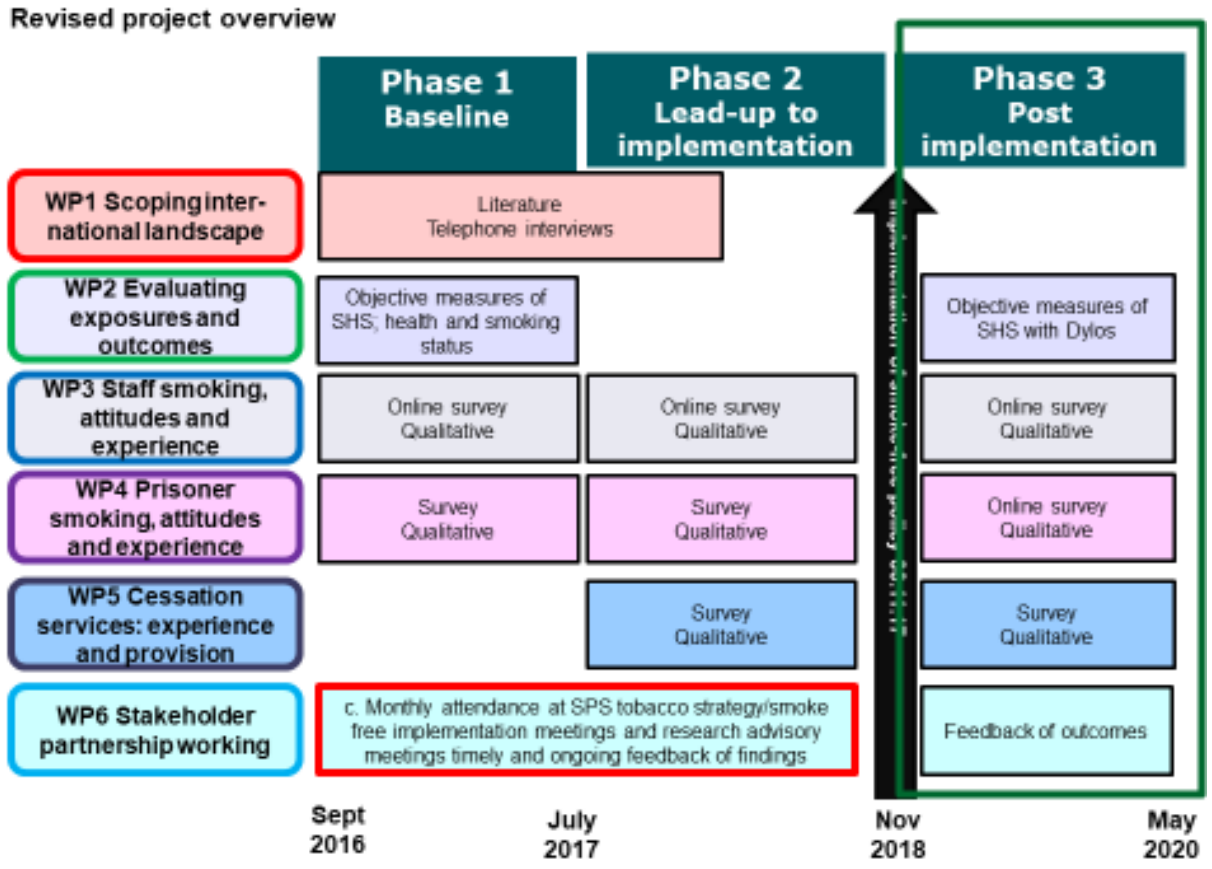
TIPs Phase 3 measures in 2018/9

- **Sustained impact on air quality & SHS in all prisons**

Mean tobacco spend per person per wk: all



Phase 3: Outcomes & impacts



- <u>In all prisons</u>: staff FGs, prisoner & staff survey *(May-Aug 2019)*
- <u>In CS prisons</u>: qualitative interviews with staff and prisoners; QYR-P service providers/users *(May-Aug 2019)*
- e-cig post ban interviews – those entering custody/high risk (*CRUK TAG grant*)
- <u>Modelling outcomes</u> – e.g. staff sickness absence, staff and prisoner health (survey data), medications, canteen purchasing data, organisational data

- **Comprehensive overview of impact and process to improve the evidence base** and evidence-based policy making

Phase 3: Early findings

- No major incidents – less troublesome than anticipated by staff and people in custody
- Widespread acceptance that no-smoking is the new norm – policy more popular with some than others
- Recognised benefits of living/working in smokefree prisons
- Qualitative and AQM confirm high levels of compliance with smokefree policy
- Questions about vaping and how important/ necessary introduction of e-cigs was to the process

- Crucial questions remain on what happens when people are released from smoke-free prisons

Acknowledgments and thanks

- **People in custody/staff** who have taken part in research
- **Staff at the Scottish Prison Service HQ & HMPs** and in HMP Kilmarnock and HMP Addiewell, SPS TIPs Research Advisory Group, SPS Smokefree implementation Stakeholder Advisory Group
- **Co-investigators**: **Ashley Brown, Dr Sean Semple, Dr Helen Sweeting, Douglas Eadie**, Richard Purves, Prof Linda Bauld, **Dr Kathleen Boyd**, Dr Peter Craig, Prof Alastair Leyland, Prof Jill Pell, Dr Philip Conaglen
- **Other colleagues**: **Dr Cath Best**, Dr Ruaraidh Dobson, Dr Allison Ford, Dr Rachel O'Donnell, **Nicola McMeekin**, Dr Emily Tweed
- **Funder TIPs: NIHR Public Health Research Programme**

  Disclaimer: This project is funded by the National Institute for Health Research (NIHR) Public Health Research programme (project reference NIHR-PHR-15/55/44). The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.
- **Funder E-cigarettes in prison**: **Cancer Research UK**