PHR Project: 10/3000/07 – Determining the Impact of Smoking Point of Sale Legislation Among Youth Study: a longitudinal study with a before and after design

Supplementary Materials

S1. School level data 2013-2017

School level data were collected each wave using a structured questionnaire from the schools just after completing the pupil survey (April-May). The questionnaires were completed by different members of staff of the schools including head teacher, deputy head teacher, head of guidance and other staff. Data for questions related to smoking-related health promotion are presented by schools and waves.

Anti-smoking educational resources were available in all schools, number of resources slightly increased in C1 school (urban/high deprivation) over the waves (Table 1). Every school had clear written aims for health and wellbeing and these were met from 2014 (Table 2 and Table 3). Most schools, and all from 2015 reported that school staff had undertaken CPD training in substance use (Table 4). Health professionals visited pupils at all schools to discuss smoking related issues, with the exception of school C1 (Table 5). The particular year groups receiving lessons, videos or discussions on smoking changed slightly between years, but primarily focused on S1-S3 in most schools (Table 6). Three of the schools took part in some form of risk-taking intervention in most survey years, with school C2 (urban/medium to low deprivation) only reporting this for one year (Table 7). A smoking cessation service was provided in all schools, however only school C2 consistently reported this service over all 5 years (Table 8).

One school (C1) reported evidence of selling cigarette on black market almost every wave (except 2015) (Table 9). There was variability across years in reporting of seeing pupils smoking on school premises, with the exception of school C1 which consistently reported this (Table 10). In contrast schools were more consistent in reporting seeing pupils smoking outside of school premises, with consistently high rates reported from school C1 (Table 11). Policies on removing/confiscating tobacco products from pupils were not reported consistently across the period, in contrast schools were more consistent in reported to parents when pupils were found in possession of tobacco on school grounds (Table 12, Table 13). All schools had non-smoking policies for staff (Table 14). Pupils selling tobacco products to other pupils either on school grounds or outside school grounds was generally not reported as problem by two schools (C1 and C4) (Table 15). Number of cigarette butts seen within school grounds was similar in all schools throughout the waves (Table 16).

When questions on e-cigarette policies for pupils were first asked in 2014, three schools (not school C2) had unwritten policies restricting use of e-cigarettes on school grounds by pupils, but no school had a formal written policy (Table 17). The first formal policy was reported in 2016 and by 2017 three schools reported a formal written policy (Table 17). Similarly, in 2014 there were no formal,

and only one informal policy on use of e-cigarettes by staff on or off school premises, but by 2016/2017 most schools were reporting formal or informal policies on e-cigarette use for staff (Table 18).

Table 1: (Q 4) School deliver any anti-smoking educational resources

	Number of anti-smoking educational resources						
School	2013	2014	2015	2016	2017		
C1	5	3	2	3	3		
C2	2	3	1	1	3		
C3	4	3	2	2	3		
C4		2	2	3	4		

Table 2: (Q 5) School have clear written aims for health and wellbeing

	Clear written aims for health and wellbeing						
School	2013	2014	2015	2016	2017		
C1	Yes	Yes	Yes	Yes	Yes		
C2	Yes	Yes	Yes	Yes	Yes		
C3	Yes	Yes	Yes	No	Yes		
C4	Yes	No	Yes	Yes	Yes		

Table 3: (Q 6) The extent to which aims for health and wellbeing are being met

	Aims for health and wellbeing are being met?						
School	2013	2014	2015	2016	2017		
C1	Yes, some of the time	Yes, some of the time	Yes, some of the time	Yes, some of the time	Yes, all of the time		
C2	No	Yes, some of the time	Yes, all of the time	Yes, some of the time	Yes, some of the time		
C3	Yes, some of the time	Yes, some of the time	Yes, some of the time	Yes, some of the time	Yes, some of the time		
C4	No	Yes, some of the time					

Table 4: (Q 11) Staff of school undertake CPD training (part)

School	Staff under	Staff undertake CPD training in substance use						
	2013	2014	2015	2016	2017			
C1	Yes	Yes	Yes	Yes	Yes			
C2	No	-	Yes	Yes	Yes			
C3	Yes	Yes	Yes	Yes	Yes			
C4	Yes	Yes	Yes	Yes	Yes			

Table 5: (Q15) Health professionals visit pupils at school to discuss smoking

	Health pro	Health professionals visit pupils at school to discuss smoking						
School	2013	2014	2015	2016	2017			
C4	No	No	No	No	No			
C2	Yes	Yes	Yes	Yes	Yes			
С3	Yes	Yes	Yes	Yes	Yes			
C1	Yes	Yes	No	Yes	Yes			

Table 6: (Q17) In the last six months, which year groups have received lessons, videos or discussions on smoking

	Year groups receiving lessons, videos or discussions on smoking in last 6 months							
School	2013	2014	2015	2016	2017			
C1	S1, S2, S3, S4, S5, S6	S2	S1, S2	S1, S2, S3, S4, S5, S6	S2, S3			
C2	S1, S2, S3	S1, S2, S3	S2	S2	S1, S2, S3			
C3	S1, S2	S1, S2, S3, S4	S2, S3	S1, S2	S1, S2, S3, S4			
C4	-	S1 , S2	S1, S2	S1, S2	-			

Table 7: (Q40) School taking part in risk-taking behaviour interventions

	School taking part in risk-taking behaviour interventions						
School	2013	2014	2015	2016	2017		
C1	Yes	Yes	No	Yes	Yes		
C2	-	No	Yes	-	No		
C3	Yes	Yes	Yes	Yes	Yes		
C4	Yes	No	Yes	Yes	Yes		

Table 8: (Q18a) School have a smoking cessation service for pupils

	School hav	School have a smoking cessation service for pupils						
School	2013	2014	2015	2016	2017			
C1	Yes	No	No	Yes	Yes			
C2	Yes	Yes	Yes	Yes	Yes			
C3	Yes	Yes	Yes	No	No			
C4	Yes	No	Yes	No	No			

Table 9: (Q27) People selling cigarettes on the black market cigarettes (e.g. illegal/fake/counterfeit) in the school area

	Black mark	Black market cigarette sales in the school area							
School	2013	2014	2015	2016	2017				
C1	Yes	Yes	No	Yes	Yes				
C2	No	No	No	-	Yes				
C3	-	No	Yes	No	-				
C4	No	No	No	No	No				

Table 10: (Q28) Pupils ever observed smoking within the school grounds

	Pupils ever obs	Pupils ever observed smoking within the school grounds							
School	2013	2014	2015	2016	2017				
C1	Yes, once or twice a week	Yes, once or twice a week	Yes, every day	Yes, less than once a week	Yes, every day				
C2	Yes, once or twice a week	No, never	No, never	No, never	Yes, once or twice a week				
С3	Yes, less than once a week	Yes, less than once a week	Yes, less than once a week	No, never	No, never				
C4	Yes, every day	Yes, every day	No, never	No, never	Yes, less than once a week				

Table 11: (Q30) Pupils ever observed smoking outside school grounds

	Pupils ever observed smoking outside school grounds							
School	2013	2014	2015	2016	2017			
C1	Yes, once or twice a week	Yes, every day	Yes, every day	Yes, less than once a week	Yes, every day			
C2	No, never	Yes, every day	Yes, every day	Yes, less than once a week	Yes, once or twice a week			
C3	Yes, every day	Yes, once or twice a week	Yes, less than once a week	Yes, every day	Yes, once or twice a week			
C4	Yes, every day	Yes, every day	Yes, every day	Yes, every day	Yes, every day			

Table 12: (Q32) School have a policy of remove/confiscating tobacco products from pupils

	School policy to removing/confiscate tobacco products from pupils						
School	2013	2014	2015	2016	2017		
C4	No, not at all	-	No, not at all	No, not at all	Yes, only within school grounds		
C2	No, not at all	No, not at all	Yes, only within school grounds	No, not at all	No, not at all		
С3	Yes, only within school grounds	No, not at all	-	-	Yes, only within school grounds		
C1	Yes, only within school grounds	No, not at all	Yes, only within school grounds	Yes, both within and outside school grounds	No, not at all		

Table 13: (Q33) Pupils' parents/guardians are informed if caught in possession of cigarettes or tobacco products

	Parents informed if caught possessing cigarettes on school grounds					
School	2013	2014	2015	2016	2017	
C1	Yes, sometimes	Yes, always	Yes, always	Yes, always	Yes, always	
C2	Yes, always	Yes, always	Yes, always	Yes, always	Yes, always	
C3	Yes, always	Yes, always	Yes, always	Yes, always	Yes, always	
C4	Yes, sometimes	Yes, sometimes	Yes, always	Yes, always	Yes, sometimes	
	Parents informed if caught possessing cigarettes outside school grounds					
School	2013	2014	2015	2016	2017	
C1	Yes, sometimes	Yes, sometimes	Yes, sometimes		Yes, sometimes	
C2		Yes, always	Yes, sometimes	Yes, sometimes	Yes, sometimes	
C3	No	No	Yes, always	No	Yes,sometimes	
C4	Yes, sometimes	Yes, sometimes	Yes, sometimes	Yes, always	Yes, sometimes	

Table 14: (Q34) School has no-smoking policy for staff

	School has no-smoking policy for staff				
School	2013	2014	2015	2016	2017
C1	Yes, both within and outside school grounds	Yes, only within school grounds	Yes, only within school grounds	Yes, only within school grounds	No, not at all
C2	Yes, only within school grounds	Yes, both within and outside school grounds	Yes, only within school grounds	Yes, only within school grounds	Yes, only within school grounds
С3	Yes, only within school grounds	Yes, only within school grounds	Yes, only within school grounds	Yes, only within school grounds	Yes, both within and outside school grounds
C4	Yes, only within school grounds		Yes, only within school grounds	Yes, only within school grounds	Yes, both within and outside school grounds

Table 15 continued: (Q35) Problems which affect schools

	Pupils sell tobacco/cigarettes to other pupils on school grounds						
School	2013	2014	2015	2016	2017		
C1	Minor problem	Minor problem	Minor problem	Not a problem	Moderate problem		
C2	Not a problem	Not a problem	Not a problem	Not a problem	Not a problem		
СЗ	Not a problem	Not a problem	Minor problem	Not a problem	Not a problem		
C4	Minor problem	Not a problem	Minor problem	Minor problem	Moderate problem		
	Pupils sell tobaco	Pupils sell tobacco/cigarettes to other pupils outside school grounds					
C1	Minor problem	Don't know	Don't know	Minor problem	Moderate problem		
C2	Not a problem	Not a problem	Not a problem	Not a problem	Not a problem		
СЗ	Moderate problem	Not a problem	Minor problem	Don't know	Not a problem		
C4	Minor problem	Not a problem	Don't know	Don't know	Moderate problem		

Table 16: Cigarette butts lying on the grounds in areas in or around the school periphery

	Number of cigarette butts lying on the ground							
School	2014	2015	2016	2017				
	Within school gr	Within school grounds						
C1	0-50	0-50	0-50	0-50				
C2	0-50	0-50	0-50	0-50				
C3	0-50	101-500	0-50	0-50				
C4	0-50	0-50	0-50	0-50				
	Outside school g	Outside school ground						
C1	0-50	0-50	0-50	0-50				
C2	Don't know	0-50	0-50	0-50				
C3	0-50		51-100	0-50				
C4	51-100	Don't know	51-100	0-50				

Table 17: Schools have a formal or informal no-smoking policy with regards to the use of e-cigarettes for pupils

	No-smoking policy with regards to the use of e-cigarettes for pupils						
School	2014	2015	2016	2017			
	Formal written policy						
C1	No, not at all		Yes, both within and outside the school grounds	No, not at all			
C2	No, not at all	No, not at all	No, not at all	Yes, only within school grounds			
C3	No, not at all	-	-	Yes, only within school grounds			
C4	No, not at all	No, not at all	No, not at all	Yes, only within school grounds			
	informal (non-wri	informal (non-written) policy					
C1	Yes, only within school grounds	Yes, only within school grounds		No, not at all			
C2	No, not at all	No, not at all	No, not at all	Yes, only within school grounds			
C3	Yes, only within school grounds		Yes, only within school grounds	Yes, only within school grounds			
C4	Yes, only within school grounds	Yes, only within school grounds	Yes, both within and outside school grounds	Yes, only within school grounds			

Table 18: Schools have a formal or informal no-smoking policy with regards to the use of e-cigarettes for staff

	No-smoking policy with regards to the use of e-cigarettes for staff						
School	2014	2015	2016	2017			
	Formal written policy						
C1	No, not at all		Yes, only within school grounds	No, not at all			
C2	No, not at all	No, not at all		Yes, only within school grounds			
C3	No, not at all	No, not at all	Yes, only within school grounds	Yes, both within and outside the school grounds			
C4	No, not at all	No, not at all	No, not at all	Yes, both within and outside the school grounds			
	Informal (non-written) policy						
C1	Yes, only within school grounds	Yes, only within school grounds		Yes, only within school grounds			
C2		No, not at all	Yes, only within school grounds	No, not at all			
C3	No, not at all		Yes, both within and outside the school grounds	Yes, both within and outside the school grounds			
C4	No, not at all	No, not at all	Yes, only within school grounds				

S2. Administration of School Survey

1.1 Process

At the initial year, researchers delivered a short briefing session to class teachers on the importance of maintaining pupil confidentiality and anonymity and outlined the procedures for administering the survey. In the following years, the study researcher visited each school prior to the delivery of the survey. During this visit, the researcher briefed the lead contact (head teacher/depute head teacher) and the pastoral/guidance team about the coming survey. These briefings provided an opportunity for the researcher to talk through the study materials (i.e., parental/pupil information leaflets, questionnaire, teacher class return forms, etc.), procedures for delivery of the survey, and also to identify strategies to ensure the safe storage and return of completed questionnaires throughout the fieldwork period. In addition, the researcher discussed the limitations of previous waves, if any, to resolve these in following waves, e.g., low response rate in any year group, incomplete/incorrect Scottish Candidate Number, etc.

Parental consent letters (S1-S4 pupils only), pupil information leaflets, questionnaires and survey materials were delivered to each school on average three weeks before pupils were due to complete the survey. The research team prepared the questionnaires by grouping them into 'class batches' or 'year group' according to the preference of the schools. Batches were separated into plastic bags which included pupil questionnaires, envelopes, pupil information sheets, teacher class return forms, and an envelope for the torn-off survey link forms. Bags were clearly labelled with the class ID, year group, teacher name and number of questionnaires in bag. This was to allow the class teacher to quickly ensure that there were indeed enough questionnaires within the bag before they took the bag along to their PSE class.

Pupils received the questionnaire within Personal and Social Education (PSE) class-time, and completed them under exam conditions while supervised by the class teacher. The researcher visited schools during survey to support the staff if requested. A period of two weeks was allocated to capture students who were absent on the initial day of the survey.

1.2 Data Linkage and the embedded Cohort

Data from each survey wave were linked using each pupil's Scottish Candidate Number (SCN) as opposed to collecting personal information such as name, DOB, and full address. The University of St Andrews ethics board also approved the use of the SCN. To link match the data, each questionnaire was printed with a unique serial number and a top sheet (that would be later separated from the

main questionnaire). This top sheet was labelled 'survey link form' and provided information about data linkage and instructions for pupils to stick a label with their SCN on the form. Administrative support teams in each of the four schools prepared and printed labels with pupils' names and SCN. Class teachers distributed the labels, instructed pupils to sick the labels to the survey link form and to separate the survey link form the questionnaire after completion. The survey link forms were then collected and stored separately from the completed questionnaires. SCNs were double-entered to avoid key-punching errors. Scottish candidate numbers and questionnaire serial numbers were stored on a secure server, separate from the questionnaire data.

1.3 Timing of data collection

The first baseline surveys of S2 and S4 pupils were conducted in each of the four study schools between February and March 2013 before the implementation of the ban in supermarkets. This survey was repeated one year later in 2014. The second baseline survey was conducted with all pupils (S1-6) in February to March 2015 before the comprehensive ban was taken place, with repeat surveys conducted annually for two years post-implementation (2016 and 2017) (Table 24).

Table 24: Fieldwork timetable

School	Start date of data collection					
	2013	2014	2015	2016	2017	
C1	w/c 15 Feb 2013	w/c 17 Feb 2014	w/c 26 Jan 2015	w/c 4 Jan 2016	w/c 26 Jan 2017	
C2	w/c 25 Feb 2013	w/c 24 Feb 2014	w/c 23 Feb 2015	w/c 22 Feb 2016	w/c 20 Feb 2017	
C3	20 Feb 2013	w/c 4 Feb 2014	w/c 2 Feb 2015	w/c 11 Jan 2016	w/c 6 Feb 2017	
C4	w/c 25 Feb 2013	w/c 24 Feb 2014	w/c 26 Jan 2015	w/c 18 Jan 2016	w/c 30 Jan 2017	

S2. Images of standardized packaging used in School Survey Questionnaire



S4. DISPLAY Study Steering Group

Ann McNeill (Chair)

Professor of Tobacco Addiction

Institute of Psychiatry, Psychology and Neuroscience

Kings College London

Strand

London WC2R 2LS

Sheila Duffy

Chief Executive

ASH Scotland

8 Frederick Street

Edinburgh EH2 2HB

Marion Henderson

Senior Investigator Scientist

MRC Social and Public Health Sciences Unit

4 Lilybank Gardens

Glasgow G12 8RZ

John Glen

The Scottish Government

Tobacco Control Team

Public Health Division

Area 3E

St Andrew's House

Edinburgh EH1 3DG

Garth Reid

Public Health Adviser

NHS Health Scotland

Thistle House 2nd Floor

91 Haymarket Terrace

Edinburgh EH12 5HE

S5. DISPLAY Data Monitoring and Ethics Committee (DMEC)

Shaun Treweek (Chair)
Professor of Health Service Research
Health Services Research Unit
Aberdeen University

Helen Sweeting
Senior Investigator Scientist
MRC/CSO Social and Public Health Sciences Unit

Chris Milne
Associate CIO (Information Assurance & Governance)
University of St Andrews,

Margaret Shotter (Lay member)
Formerly Associate Director (Research Ethics)
Office of Research Services
University of British Columbia