

Institution: University College London		
Unit of Assessment: 2 - Public Health, Health Services and Primary Care		
Title of case study: Development and evaluation of the 'Stoptober' campaign to deliver smoking cessation and influence commissioning decisions worldwide.		
Period when the underpinning research was undertaken: Between 2005 and 2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Jamie Brown	Professor of Behavioural Science & Health	Between 2010 and present
Robert West	Emeritus Professor of Health Psychology	Between 2003 and present
Emma Beard	Principal Research Fellow	Between 2011 and present
Period when the claimed impact occurred: Between 1 October 2013 and 31 December 2020		
Is this case study continued from a case study submitted in 2014? No		
<p>1. Summary of the impact</p> <p>According to the ONS, 14.1% of UK adults were smokers in 2019 and more than half want to quit. UCL's Tobacco and Alcohol Research Group (UTARG) has provided underpinning evidence and theory for the annual 'Stoptober' public health campaign: a mass national quitting event run annually by Department of Health or Public Health England. UTARG's evaluation of 'Stoptober's' first year of operation, published in November 2013, was instrumental in determining continuation of campaign funding in England (approximately GBP2m per year). It is estimated that the decision to recommission 'Stoptober' has generated an additional 350,000 quit attempts each year since 2013 and saved a total 83,200 discounted life years (DLY) up to 2020, at a cost of GBP414.26 per DLY in the modal age group. The UTARG evaluation and engagement were also crucial in decisions to implement similar campaigns in the Netherlands (since 2014), France (since 2016) and New Zealand (between 2014 and 2016).</p>		
<p>2. Underpinning research</p> <p>Between 2012 and 2020, England's Department of Health and Public Health England (PHE) - with substantial direction on four key themes from the UCL Tobacco and Alcohol Research Group (UTARG) described below - designed and ran a campaign called 'Stoptober'. Rather than focusing on the harms of smoking, 'Stoptober' aimed to create a positive mass quitting 'trigger' and actively support a social movement around a specific activity: stopping smoking for 28 days. UTARG research influenced the need, timing and content of the campaign:</p> <p>i) Evidence-base for impact of national campaigns: The UK government and voluntary sector charities campaign 'No Smoking Day' (NSD) has taken place in March throughout England since 1984. It is a national event that aims to help smokers to stop by providing a nationally supportive environment and drawing attention to available treatments. UTARG leads the Smoking Toolkit Study (STS), which is a detailed population survey on smoking and smoking cessation that recruits a new representative sample of approximately 1,700 adults each month in England. An evaluation of NSD by UTARG, using STS data, compared reported quit attempts by 3,981 past-year smokers in the month following NSD for three consecutive years (from 2007 to 2009) with adjacent months. It estimated that NSD had generated 238,000 attempts to stop in a population of 8.5 million smokers, at a cost of around GBP750,000 to the No Smoking Day charity [R1]. This UTARG evaluation contributed to the evidence base for the impact of mass quitting campaigns and helped secure national investment in the 'Stoptober' campaigns.</p> <p>ii) Evidence to inform the timing of the campaign: UTARG researchers pointed out that Autumn was a fallow period for quitting activity in England: an analysis of UTARG's STS data on quit attempts obtained from 31,566 past-year smokers during monthly household surveys representative of the English population showed that from 2007 to 2011 the rate in October was less than in other months of the same period [R2]. This UTARG insight established the need for a national cessation campaign to generate a burst of activity around that time and influenced the decision to run 'Stoptober' campaigns in October.</p> <p>iii) Insight to set a 28-day challenge: 'Stoptober' campaigns, run by Department of Health and PHE, set people the challenge of being smoke-free for 28 days starting on 1 October. This call to</p>		

action was reinforced by the positive message that smokers achieving this goal would be at least five times more likely to become permanent ex-smokers than they were at the start, having recovered from the worst of the cravings and withdrawal symptoms. This message was based on standard relapse curves produced by research groups, including UTARG [R3]. The 28-day target also aimed to help people achieve a difficult behavioural goal (stopping completely) by beginning with a realistic intermediary goal, which was objective, well-specified and bound to a particular target date. The approach was first used in a smartphone app called SmokeFree28 that UTARG developed, using their PRIME theory [R4]. The app asked users to record whether they had smoked each day, visualised progress towards their 28-day goal and provided digital quitting tools. A promising preliminary evaluation showed that of 1,170 app users who met the inclusion criteria, 18.9% abstained from smoking for ≥ 28 days, compared with an estimated 15% quitting success rate for people who were unaided in their attempts to give up smoking [R4].

iv) Underpinning theory: Another important psychological insight arose from PRIME theory, proposed by two members of UTARG in the book *Theory of Addiction* [R5]. Their comprehensive theory of motivation argues that behaviour is determined on a moment-to-moment basis by a wide variety of motivational inputs, from impulses and inhibitory forces, through desires, drives, and emotional states, to evaluations and plans. It also proposes that the motivational system is inherently unstable and requires constant balancing input to maintain a constant pattern of behaviour. Thus, smokers are most likely to quit successfully if a range of support is provided that targets the whole motivational system, rather than just some elements of it, and aims to both weaken the powerful motivational forces to engage in smoking and create new sources of desire to refrain. Therefore, providing a variety of support to help smokers achieve a smoke-free month was fundamental to the campaign. This included a postal support pack and digital tools such as a website, peer support via Facebook, a motivational text-messaging programme and an app providing ongoing encouragement and self-monitoring tools.

Evaluation: The UTARG evaluation of the first 'Stoptober' campaign used data on quit attempts from 31,566 past-year smokers, collected during nationally representative monthly household surveys between 2007 and 2012 as part of the UCL STS [R2]. The effectiveness of the campaign was assessed by the increase in national quit attempt rate in October relative to other months in 2012 vs. 2007 to 2011. Relative to other months in the year, more people tried to quit in October in 2012 compared with 2007 to 2011. In 2012, there was an approximately 50% increase in quitting during October compared with other months of the same year, whereas in 2007 to 2011 the rate in October was less than in other months of the same period. In just one month, 'Stoptober' 2012 was estimated to have generated an additional 350,000 quit attempts and, using a standard model for calculating the cost-effectiveness of smoking cessation interventions with the conservative assumption that only 2.5% of these attempts would result in permanent success, the UCL team estimated the first campaign saved 10,400 discounted life years (DLY) at GBP414.26 per DLY in the modal age group (35 to 44) and GBP557.70 per DLY for the overall population. This compared favourably with other estimates concerning UK anti-tobacco campaigns, which have ranged between GBP40 and GBP2,000 per DLY gained (e.g. [R1]; Raikou and McGuire, 2008; Atusingwize et al, 2015). An evaluation of subsequent campaigns indicated a prolonged effect over the first six years of 'Stoptober' in England. This UTARG research also indicated that effects appeared to be greater when campaigns budgets were higher compared with times of lower campaign spending [R6].

3. References to the research

- [R1] Kotz D., Stapleton J.A., Owen L., West R. (2011). 'How cost-effective is 'No Smoking Day'? *Tob Control*. **20**, 302–304. DOI: [10.1136/tc.2009.034397](https://doi.org/10.1136/tc.2009.034397)
- [R2] Brown J., Kotz D., Michie S., et al. (2014). 'How effective and cost-effective was the national mass media smoking cessation campaign 'Stoptober'?' *Drug Alcohol Depend*. **135**, 52–58. DOI: [10.1016/j.drugalcdep.2013.11.003](https://doi.org/10.1016/j.drugalcdep.2013.11.003)
- [R3] West R., Stapleton J.A. (2008). 'Clinical and public health significance of treatments to aid smoking cessation'. *Eur Respir Rev*. **17**, 199–204. DOI: [10.1183/09059180.00011005](https://doi.org/10.1183/09059180.00011005); and Jackson S., McGowan J., Ubhi H. K., et al. (2019). 'Modelling continuous abstinence rates over

time from clinical trials of pharmacological interventions for smoking cessation.' *Addiction*. **114** (5), 787-97. DOI: [10.1111/add.14549](https://doi.org/10.1111/add.14549)

[R4] Ubhi, H.K., Michie, S., Kotz, D., Wong, W.C., West, R. (2015). 'A Mobile App to Aid Smoking Cessation: Preliminary Evaluation of SmokeFree28.' *J. Med. Internet Res.* **17**(1). DOI:[10.2196/jmir.3479](https://doi.org/10.2196/jmir.3479)

[R5] West R., Brown J. (2013). 'Theory of Addiction' (2nd ed). Wiley Blackwell; Oxford

[R6] Kuipers, M, West R, Beard E, Brown J. (2019). 'Impact of the 'Stoptober' Smoking Cessation Campaign in England From 2012 to 2017: A Quasiexperimental Repeat Cross-Sectional Study'. *Nicotine Tob Res.* **22**, 49, 1453-9. DOI: [10.1093/ntr/ntz108](https://doi.org/10.1093/ntr/ntz108)

Funding: West R, Wardle J. Smoking cessation: population & clinical approaches. CRUK. GBP2,850,000, 2007 to 2012 (Award number C1418/A7972); West R, Michie S, McNeill A, Aveyard P. Smoking cessation: population & clinical approaches. CRUK. GBP1,655,000, 2012 to 2017 (C1417/A14135); West R, Brown, J, Michie S, Shahab L. Advancing & integrating population & individual approaches to smoking cessation. CRUK GBP3,586,491.00, 2017 to 2022 (C1417/A22962).

4. Details of the impact

Lives saved from smoking cessation: Tobacco smoking is estimated to lead to the premature death of approximately 8 million people worldwide and 80,000 people in the UK each year. These premature deaths each typically represent 10 years of life years lost. Smoking cessation is a function of two processes: making an attempt to stop; and succeeding in that attempt. Novel mass media campaigns can stimulate quit attempts and UTARG's research and theory was pivotal in influencing the design of 'Stoptober', a novel mass media smoking cessation campaign run by the Department of Health since 2012 and PHE (from 2013).

The influence of four key themes of UTARG research on the design of 'Stoptober' is summarised in [R2], which was co-authored by Matthew Walmsley at Department of Health and states: "*The English Department of Health with input from an academic partner (RW) designed a campaign called 'Stoptober'.*" These themes have been central to each subsequent iteration of 'Stoptober' between October 2013 to 2020 and their ongoing influence on campaign designs is clear in PHE's Social Marketing Strategy 2014 – 2017 [S1], which states, in relation to utilising evidence-based approaches in public health marketing: "*We use Prime Theory in tobacco control... we have collaborated with... Professor Robert West and his team at University College London (UCL) on a wide range of projects*". These collaborations include frequent contact between UTARG and PHE on tobacco control monitoring, assessment, and strategies, and participation in implementation boards and expert roundtables on tobacco control policy at the Department of Health. The NHS SmokeFree website, which delivered the digital components of the 'Stoptober' campaign, publicly acknowledged UCL's input until April 2020: "*Our thanks in particular go to Professor Robert West for providing data and analysis from the Smoking Toolkit Study and supporting our campaign and product development with insight and advice*" [S2].

A UTARG evaluation [R2] estimated that 'Stoptober' led more than a third of a million smokers to try to quit in October 2012 than would otherwise have done (quit attempts are a commonly used metric in tobacco cessation research, being on the causal pathway to quitting). Assuming these effects extended from 2013 to 2020, then 'Stoptober' saved an estimated 83,200 DLY at a cost to government of GBP414.26 per DLY in the modal age group. This UCL evaluation was also later identified as just one of eleven appropriate studies in a 2015 independent review of economic evaluations of tobacco mass media campaigns, published in *Tobacco Control*. The authors concluded that the UCL study was among the higher quality evaluations (scoring 7/10 on their quality checklist) and was an important part of the evidence that led to the conclusion: "*the cost effectiveness of tobacco control mass media campaigns is limited, but of acceptable quality and consistently suggests that they offer good value for money.*" [S3]

Shaping national commissioning decisions: The original UTARG evaluation of the first year of operation was critical in the commissioning of 'Stoptober' in subsequent years [R2]. In an article published in the leading French epidemiology and public health journal *Bulletin épidémiologique hebdomadaire*, Professor Kevin Fenton, then the National Director of Health and Wellbeing at PHE, described the UTARG study results and consequences: "*A study published in 2014 to*

evaluate how effective and cost-effective ‘Stoptober’ was in 2012 – the first year of the campaign – found that ‘designing a national public health campaign with a clear behavioural target using key psychological principles can yield substantial behaviour change and public health impact’... [S4]. There is continuing reference to ongoing evaluation in the STS, led by West and Brown, in PHE press releases on ‘Stoptober’, e.g., *“And according to UCL’s Smoking Toolkit Study, smoking rates are continuing to fall in 2014”* [S6]. The UTARG evaluation is the second reference in the Welcome in PHE’s 2017 to 2020 social marketing strategy and is listed as evidence that *“Marketing...can encourage behaviours that lead to longer lives, and it can give people the confidence to make healthier choices (Brown et al, 2014)”* [S1]. Three UTARG publications are also listed the strategy’s section on recognition of PHE’s work.

Informing political debate on smoking cessation campaigns: UTARG evidence on the impact of smoking cessation public campaigns, and the argument for continued spending on them, has been raised in parliament through political debate. UTARG research on the value of tobacco control spending was referenced by Labour MP Sir Kevin Barron’s opening speech of a House of Commons debate on a new Tobacco Control Strategy in December 2015: *“The cut in spending [on mass media campaigns] is already having an impact. An early indicator of the effects of reductions in spending on tobacco control is given by the smoking toolkit study run by Professor Robert West, from UCL. Results for 2015 show that smoking prevalence has stopped declining and is beginning to go back up again for the first time in many years.”* [S5].

This political and policy debate continued into 2020 as a cross-party issue. In a parliamentary debate on ‘Smokefree England 2030’ in November 2020, Conservative MP and ex-Public Health Minister Steve Brine noted: *“The UCL smoking toolkit [R1], [R2], [R6] indicates that the pandemic has been a driver of quitting among smokers across all social groups, with the highest rate of people stopping smoking seen in the past 30 years. However...there are worrying signs among the 18 to 24-year-old group that smoking rates may be increasing”* [S5]. In December 2020, Public Health Minister Jo Churchill responded: *“The Department, working with PHE, will develop and publish a new Tobacco Control Plan to deliver its ‘Smokefree 2030’ ambition”* [S5].

UTARG research was also published to coincide with the start of ‘Stoptober’ 2020: a government press release reported that *“New data from the UCL Smoking Toolkit Study show that in England in 2020 there has been an increase of nearly a quarter (22%) in quit attempts compared to 2019 and an increase of almost two-thirds in the quitting success rate from 14% to 23%, the highest since at least 2007”* and included quotes from Jo Churchill, and UTARG’s Professor Jamie Brown, who acted as a media spokesperson for the 2020 campaign [S6].

Engagement with the media has been important in communicating this message to the public, politicians and policymakers and reinforcing the message that investment in public health campaigns for smoking cessation is cost-effective. An ITV report from 2018 included results from UTARG research, mentioning the additional 350,000 quit attempts [S6] while various online media outlets quoted the study team, including the *Daily Mail* and *GP online*: *“Lead author Dr Jamie Brown said: ‘The data clearly show ‘Stoptober’ resulted in a large increase in the number of people stopping smoking in England. The GBP5.8m spent on the campaign by the DH appears to have been an excellent investment.”* [S6].

International commissioning decisions:

France: The success of ‘Stoptober’ has led to it being adopted in France. A case study by Public Health France (Santé publique France) directly cited [R2] and reported *“France decided to import the UK campaign ‘Stoptober’ because it was effective in increasing quit attempt rates.”* [S7]. Furthermore, an editorial by Executive Director of France’s National Institute for Prevention and Health Education (INPES) cites the UTARG evaluation (google translate): *“The positive evaluation of the ‘Stoptober’ 2012 campaign led to the renewal of the campaign in 2013 and 2014... Inpes, in conjunction with the Alliance against Tobacco, is considering adapting this system to French territory”* [S8]. UTARG hosted a delegation from INPES to plan the French initiative and to ensure robust evaluation plans were in place, with one French delegate stating: *“we often present it ([R2]) to our partners as a positive argument in favour of the French adaptation of ‘Stoptober’.”* The first iteration was launched in 2016, continuing to 2020, and has generated an estimated 380,000 quit attempts, according to an evaluation [S7].

Netherlands: The evaluation of the original campaign in England was an influence in the launch of the Dutch 'Stoptober', in 2014, as indicated on the 'Stoptober Netherlands' launch website: "*After the great success in England, the Netherlands also embraces 'Stoptober' this year*". The influence of the underpinning research by UTARG can be seen in the public description of the campaign, which uses the same concept: "*'Stoptober' encourages every step you take towards a non-smoking life through the free app that supports you personally. ...Through social media you encourage each other to keep it going for 28 days.*" Subsequent evaluations of 'Stoptober' show the influence of UTARG research in the campaign design and estimate that 50,000 people have participated each year, with evidence that "*an abstinence campaign with a wide reach in a national population may be effective in decreasing smoking prevalence and cigarette consumption among a broad range of participants*" [S9].

New Zealand: A 'Stoptober' campaign was also launched and run in New Zealand between 2014 and 2016 by Smoke Free New Zealand, with clear links to the evidence behind the English version of the campaign; an online presentation by the organisation references both the study design by England's Department of Health and Brown and West's PRIME theory [S10]. Results from the end of the first year of the campaign estimated that "*5,200 smokers signed up to 'Stoptober' NZ 2014*" and that 55% of those successfully completed the programme with 82% being motivated by 'Stoptober' to stop smoking by "*a lot to a fair amount*" and 80% of participants confident in their ability to stop smoking [S10].

5. Sources to corroborate the impact

[S1] PHE Social Marketing Strategy 2017 – 2020: <https://tinyurl.com/y35sv8pl> and PHE Social Marketing Strategy 2014-2017: One year on: <https://tinyurl.com/y3cmd69o>

[S2] web.archive.org/web/20200421232143/https://www.nhs.uk/smokefree/acknowledgements

[S3] Atusingwize E., Lewis S., Langley T. (2015). 'Economic evaluations of tobacco control mass media campaigns: a systematic review'. *Tob Control*. **24**, 320-327. DOI:[10.1136/tobaccocontrol-2014-051579](https://doi.org/10.1136/tobaccocontrol-2014-051579).

[S4] Fenton K. 'Stoptober': Supporting smoking cessation in England'. (2016). *Bull Epidemiol Hebd.*(30-31), 496-8. http://beh.santepubliquefrance.fr/beh/2016/30-31/pdf/2016_30-31_1.pdf

[S5] Hansard: 17 December 2015 '[Tobacco Control Strategy](#)' (Volume 603) and 12 November 2020 '[Smokefree England: Covid-19 and PHE Abolition](#)' (Volume 683)

[S6] Media coverage (PDF)

[S7] Development and evaluation papers by INPES, France:

Djian A., Guignard R., Gallopel-Morvan K., et al. (2019). 'From "Stoptober" to "Moi(s) Sans Tabac": how to import a social marketing campaign'. *Journal of Social Marketing*. **9**(4), 345-356. DOI: [10.1108/JSOCM-07-2018-0068](https://doi.org/10.1108/JSOCM-07-2018-0068)

Guignard R, Richard J-B, Andler R, et al (2019). 'Effectiveness of Mois sans tabac 2016, a French social marketing campaign against smoking', *Eur. J. Public Health*, **29**(4). DOI:[10.1093/eurpub/ckz186.453](https://doi.org/10.1093/eurpub/ckz186.453)

[S8]<https://web.archive.org/web/20161104172715/>

<http://inpes.santepubliquefrance.fr/CFESBases/equilibre/numeros/110/edito.asp>

[S9] Independent peer-reviewed papers authored by S A Troelsta: Troelstra S A, Harting J, Kunst AE. (2019) Effectiveness of a Large, Nation-Wide Smoking Abstinence Campaign in the Netherlands: A Longitudinal Study. *Int. J. Environ. Res. Public Health*, **16**, 378. DOI: [10.3390/ijerph16030378](https://doi.org/10.3390/ijerph16030378); Troelstra S A, Kunst AE, Harting J. (2019) "Like you are fooling yourself":

how the 'Stoptober' temporary abstinence campaign supports Dutch smokers attempting to quit. *BMC Pub Health*, **19** (1): 522 DOI: [10.1186/s12889-019-6833-y](https://doi.org/10.1186/s12889-019-6833-y); Tiek A, Troelstra SA, Hoekstra T, Kunst AE (2019) Associations of the 'Stoptober' smoking cessation program with information seeking for smoking cessation: A Google trends study. *Drug Alcohol Depend*, **194**:97-100.

DOI: [10.1016/j.drugalcdep.2018.08.040](https://doi.org/10.1016/j.drugalcdep.2018.08.040)

[S10] <https://www.smokefree.org.nz/files/images/Stoptober%20-%20March%202015.pdf>