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The Use of the Health Survey for England in policy-making and monitoring

Professor Oyinlola Oyebode

Health Studies User Conference 2025

Agenda

- Introduce the Health Survey for England
- How has it been used at each stage of the policy cycle
  - Agenda setting
  - Policy development and implementation
  - Evaluation and Monitoring
- Strengths of the Health Survey for England as official statistics
- Possible future directions

Health Survey for England webpage on the NatCen website

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The Health Survey for England

1991

The year of the first Health Survey for England!

heart of Europe


NEWSPAPER

BUSH ANNOUNCES THE LIBERATION OF KUWAIT

President George H, W. Bush has declared that the Gulf state of Kuwait has been liberated after a swift and decisive military campaign.

The United States-led coalition forces drive Iraqi forces out of Kuwait following months of occupation by Saddam Hussein's regime leading to an announcement of a ceasefire and the end of hostilities in the Gulf War by Bush.


night of pneumonia brought on by Aids, his publicist said.

A day earlier, the 45-year-old Mercury had ended intense media speculation about his health by issuing a statement that he was stricken with the disease.

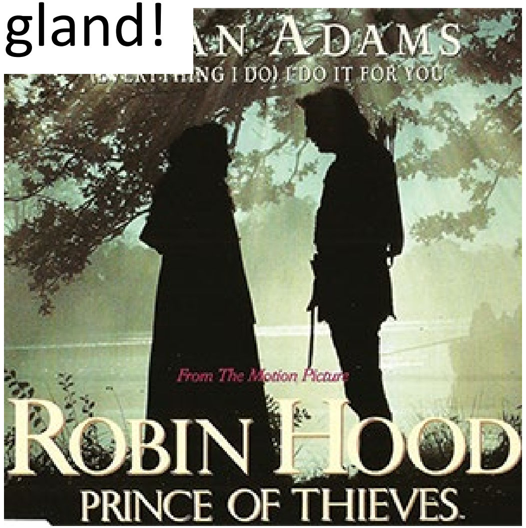
Mercury died peacefully at his home in Kensington, London, said his spokeswoman, Roxy Meade.

"His death was the result of broncho-pneumonia brought on by Aids," said a statement from his publicity company.

In his disclosure on Saturday, Mercury said: "I felt it correct to keep this information private to date in order to protect the privacy of those around me.

"However, the time has now come for my friends and fans around the world to know the truth, and I hope that everyone will join with me, my doctors and all those worldwide in the fight against this terrible disease." — Sapa-AP.

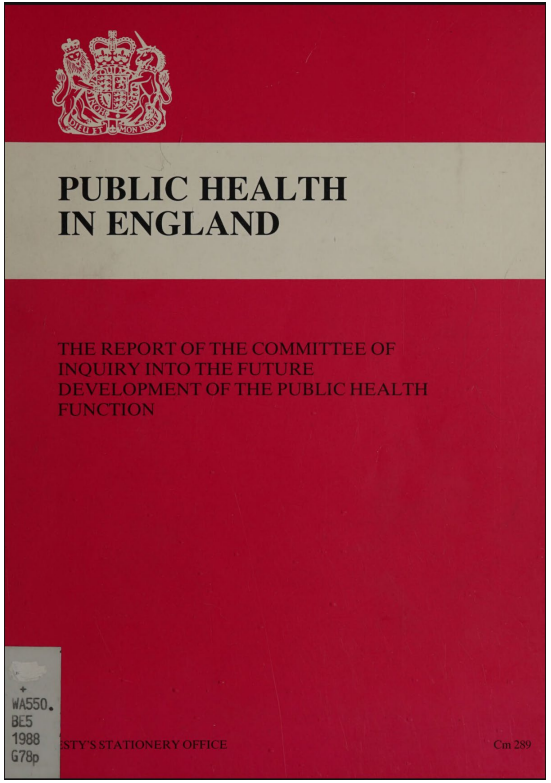
Flamboyant Freddie Mercury . . . at the height of Queen's success.



1988: Acheson Report

A central focus for public health

4.5 One of the things which has struck us most forcibly in examining the present framework of administration is the lack of a specific focus at the centre with the capacity to monitor the health of the population and to feed the results of any analysis into the development of health policy, strategy and management. The office of Chief Medical Officer does of course carry responsibility for monitoring the nation's health but the present administrative structure does not facilitate the exercise of this function. *We therefore RECOMMEND that a small unit should be established within DHSS, bringing together relevant disciplines and skills to monitor the health of the public.*



Images of the command paper from the Wellcome Collection

The Health Survey for England

- Funded by the Department of Health and Social Care specifically to allow government to plan health services and make important policy decisions
- Samples a nationally representative random cross section of the free-living general population of England
- An interviewer visits to recruit up to ten adults and up to two children per household
- Interviewer collects socio-economic data, information on health and health-related behaviours and measures height and weight
- Trained nurse takes physical measurements such as waist and hip circumference and blood pressure and collect biological samples and information on medication use

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Measurements																				
Blood pressure 5+	•	•	•	•	•	•	.3	•	•	•	•	•	•	•	•	•	.8	•	•	•
Demi span		•	•	•		•	.3	.2	•				.2	.2	.2	.6				
ECG							.3	.1												
Grip strength													.2							
Physical function – balance													.2							
Lung function 7+			•	•	•		.3		•	•		•						•		
Infant length									•	•	•	•	•	•	•					
Step test																.7				
Upper arm circumference			•	•	•	•	.3													
Waist/hip circumference 11+	•	•			•	•	.3	.2	•	•	•	•	•	•	•	•	•	•	•	•
Walking speed													.2							
Blood sample																				
C reactive protein						•	.3				•	•		•			•			
Cotinine	•	•		•	•															
Creatinine																	•	•		
Fibrinogen	•	•				•	.3	.1			•	•	.2	•			•			
Influenza antibodies																				•
Gamma gt	•	•																		
Glycated haemoglobin	•	•					.3	.1			•	•	.2	•		•	•	•	•	•
Haemoglobin + ferritin	•	•	•	•	•	•	.3	.1	•	•		•	.2	•			•			
HDL cholesterol						•	.3	.1			•	•	.2	•		•	•	•	•	•
IgE/HDM Ige			•	•	•		.3		•	•		•								
MCV								.1					.2							
Serum albumin								.2					.2							
Serum transferin													.2							
Total cholesterol	•	•				•	.3	.1			•	•	.2			•	•	•	•	•
Vitamin D								.2					.2					•		
Vitamin B12													.2							
Fasting blood sample																				
Glucose							.3				•	•								
LDL cholesterol							.3				•	•								
Triglycerides							.3				•	•								
Saliva sample																				
Cotinine				•	•	•	.3		.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.5	.4
Urine sample 16+																				
Sodium, potassium, creatinine											•	•	•	•	•		•	•		•
Albumin																	•	•		
Melatonin																		•		

[1]65+ in care homes only; [2]All 65+; [3]Minority ethnic group respondents only; [4]Children aged 4–15; [5]Children aged 4–15, adults 16+; [6]Aged 25–44, 65+; [7]Aged 16–74; [8]Aged 16+.

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How has the Health Survey for England been used by policy-makers?

Oyebode and Mindell *Archives of Public Health* 2014, **72**:24
http://www.archpublichealth.com/content/72/1/24

ARCHIVES OF PUBLIC HEALTH

RESEARCH Open Access

A review of the use of health examination data from the Health Survey for England in government policy development and implementation

Oyinlola Oyebode* and Jennifer S Mindell

Abstract

Background: Information is needed at all stages of the policy making process. The Health Survey for England (HSE) is an annual cross-sectional health examination survey of the non-institutionalised general population in England. It was originally set up to inform national policy making and monitoring by the Department of Health. This paper examines how the nurse collected physical and biological measurement data from the HSE have been essential or useful for identification of a health issue amenable to policy intervention; initiation, development or implementation of a strategy; choice and monitoring of targets; or assessment and evaluation of policies.

Methods: Specific examples of use of HSE data were identified through interviews with senior members of staff at the Department of Health and the Health and Social Care Information Centre. Policy documents mentioned by interviewees were retrieved for review, and reference lists of associated policy documents checked. Systematic searches of Chief Medical Officer Reports, Government 'Command Papers', and clinical guidance documents were also undertaken.

Results: HSE examination data have been used at all stages of the policy making process. Data have been used to identify an issue amenable to policy-intervention (e.g. quantifying prevalence of undiagnosed chronic kidney disease), in strategy development (in models to inform chronic respiratory disease policy), for target setting and monitoring (the 1992 blood pressure target) and in evaluation of health policy (the effect of the smoking ban on second hand smoke exposure).

Conclusions: A health examination survey is a useful part of a national health information system.

Keywords: Policy, Evidence, Surveillance, Health examination survey

Background

Reliable health data and statistics are necessary to underpin health policies, strategies, and their evaluation and monitoring, as well as providing the basis for sound health information for the general public. Health surveys that recruit a representative sample of the population are the most appropriate way of collecting data on health determinants, morbidity, and unmet health need for use by national policy-makers. Health interview surveys collect data through interview or self-administered questionnaires, while health examination surveys involve taking some physical and/or biological measurements to complement self-reported data.

The National Health Survey undertaken in the USA in 1935 and 1936 was the first large survey examining health status. Its aim was to study the extent and nature of disability in the general population, particularly chronic disease and physical impairment [1]. It became the main data source contributing to the government's health proposals [1]. Since then the National Health and Nutrition Examination Survey (NHANES) has run intermittently since the 1960s and on a rolling basis since 1999; anecdotal evidence links this survey to many health policy decisions [2].

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Public Health

Use of data from the Health Survey for England in obesity policy making and monitoring

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Summary

Health data and statistics are the foundation of health policy. Over the last 20 years, numerous government documents have been commissioned and published to inform obesity strategies in the UK. The Health Survey for England, an annual cross-sectional survey of a nationally representative random general population sample in England, collects information on health, lifestyle and socioeconomic factors, physical measurements and biological samples. Heights and weights measured by the Health Survey for England are believed to have played a major part in promoting, shaping and evaluating obesity strategies. A formal review of how these data have been used has not been conducted previously.

This paper reviews government documents demonstrating the contribution of Health Survey for England examination data to every stage of the policy making process:

- quantifying the obesity problem in England (e.g. Chief Medical Officer's reports);
- identifying inequalities in the burden of obesity (Acheson report);
- modelling potential future scenarios (Foresight);
- setting and monitoring specific, measurable, attainable targets (calorie reduction challenge in manufacturers' Responsibility Deal);
- developing and informing strategies and clinical guidance; and
- evaluating the success of obesity strategies (*Healthy Weights, Healthy Lives* progress report).

Measurement data are needed and used by governments to produce evidence-based strategies to combat obesity.

Keywords: Evidence-based policy, health examination survey, obesity strategy.

obesity reviews (2013) **14**, 463–476

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Introduction

Obesity has become an important problem in populations worldwide. Many governments have produced strategies to tackle this problem. In the 20 years since the *Health of the Nation* Strategy was published in 1992, successive UK governments have commissioned and published numerous documents, targets and strategies to deal with growing levels of obesity.

National health examination surveys; a source of critical data

Paula Margozzini,[a] Hanna Tolonen,[b] Antonio Bernabe-Ortiz,[c] Sarah Cuschieri,[d] Chiara Donfrancesco,[e] Luigi Palmieri,[e] Luz Maria Sanchez-Romero,[f] Jennifer S Mindell[g] & Oyinlola Oyebode[h]

Abstract The aim of this paper is to contribute technical arguments to the debate about the importance of health examination surveys and their continued use during the post-pandemic health financing crisis, and in the context of a technological innovation boom that offers new ways of collecting and analysing individual health data (e.g. artificial intelligence). Technical considerations demonstrate that health examination surveys make an irreplaceable contribution to the local availability of primary health data that can be used in a range of further studies (e.g. normative, burden-of-disease, care cascade, cost and policy impact studies) essential for informing several phases of the health planning cycle (e.g. surveillance, prioritization, resource mobilization and policy development). Examples of the use of health examination survey data in the World Health Organization (WHO) European Region (i.e. Finland, Italy, Malta and the United Kingdom of Great Britain and Northern Ireland) and the WHO Region of the Americas (i.e. Chile, Mexico, Peru and the United States of America) are presented, and reasons why health provider-led data cannot replace health examination survey data are discussed (e.g. underestimation of morbidity and susceptibility to bias). In addition, the importance of having nationally representative random samples of the general population is highlighted and we argue that health examination surveys make a critical contribution to external quality control for a country's health system by increasing the transparency and accountability of health spending. Finally, we consider future technological advances that can improve survey fieldwork and suggest ways of ensuring health examination surveys are sustainable in low-resource settings.

Abstracts in عربي, 中文, Français, Русский and Español at the end of each article.

Introduction

National health examination surveys have been developed to gather important information that cannot be obtained from other sources. In these surveys, trained field staff take objective, biophysical measurements (e.g. of anthropometric variables or blood pressure) and collect biological samples (e.g. of blood or urine) for laboratory analysis. The data obtained complement the self-reported data collected, for example, by health interview surveys, which include only self-reported information. In addition, health examination surveys are the observational studies with the greatest external validity because they are based on randomized, representative household samples. Consequently, the information obtained is relevant for both population (i.e. public health) and individual health.[1]

Health examination surveys provide more accurate information than health interview surveys. For example, people tend to overestimate their height and underestimate their weight compared with measurements taken by trained staff, which results in underestimates of their body mass index – a measure widely used for assessing people for obesity and for predicting morbidity from several chronic noncommunicable diseases.[2,3]

Most high- and middle-income countries conduct national health interview surveys that use questionnaires to collect basic information about the general population. For European Union member states, European health interview surveys are mandatory.[4] Far fewer countries regularly conduct health examination surveys. Nevertheless, many low- and middle-income countries have conducted at least one small health examination survey in accordance with the World Health Organization (WHO) STEPwise approach to noncommunicable disease risk factor surveillance, known as STEPS.[5] In addition, many low- and middle-income countries conduct Demographic and Health Surveys (DHS), which are funded by the United States Agency for International Development, at least every 5 years and some (e.g. Peru) conduct them annually. These surveys include a small number of biophysical assessments, such as anthropometry and anaemia testing.[6] However, few countries have a track record of frequent health examination surveys that include a wide range of biophysical measurements. The longest running health examination survey series in Europe has been conducted by Finland every 5 years since 1972 (i.e. the national FINRISK study).[7] In the United States of America, National Health and Nutrition Examination Surveys started in the 1960s and have been run as a continuous programme since 1999.[8]

Existing national health examination surveys differ in the age groups covered, the range of measurements taken and the way they are organized. For example, most health examination surveys in mainland Europe and the United States make use of clinical examination centres, whereas those in the United Kingdom of Great Britain and Northern Ireland and Latin America involve visiting participants in their own homes.[9,10] Despite some differences, they share many features, particularly sampling methods, survey questions, anthropo-

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Methods

In 2012

- Systematic searches of CMO reports, command papers and clinical guidance
- Interviewed stakeholders at Department of Health and Health and Social Care Information Centre
- Retrieved additional policy documents identified through the interviews

In 2023

- Sought information from those running national HES in Europe and the Americas
- Asked for examples of use of their examination data in national or regional policy-making
- Snowballing to colleagues in national ministries and governmental agencies to ask for examples

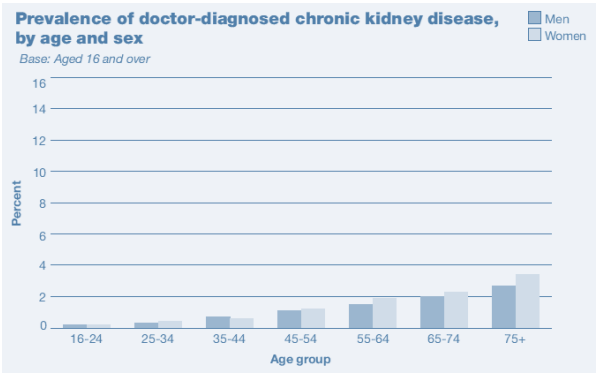
Measurements	Recognition of health issue	Strategy Development	Monitoring, evaluation and review	PQs
Height and weight measurement; Demispan; Upper arm circumference; Waist/hip circumference (11+); Infant length	Acheson report 1998; Health Profile of England; CMOs annual report 2003 and 2004; Healthy Lives Healthy People: A call to action on obesity	Healthy Lives Healthy People: A call to action on obesity (2 targets); Responsibility Deal, calorie reduction target	The Health of the Nation obesity target; The Public Health Outcomes Framework; Monitoring of PSA Delivery target 12	PQ48492; PQ47026; PQ3094
Blood pressure 5+	Acheson Report 1998	The Health of the Nation 1992, blood pressure target states "baseline to be derived from new national health survey"	The Health of the Nation blood pressure target; Falaschetti et al, 2009; Primatesta P et al, 1998	
HDL cholesterol; Total cholesterol; LDL cholesterol; Triglycerides;	CMO 2012	Used in economic modelling for vascular checks DH 2008	Mindell, 2006, 2011; Mainos et al, 2010; Bajekal et al 2012	PQ64112
Blood cotinine; Saliva cotinine	Acheson Report; Jarvis et al, 2001; Healthy Lives, Healthy People: A Tobacco Control Plan for England		"A New Vision for Tobacco Control in England" 2010; Bauld 2011; Sims et al 2012; Jarvis et al, 2011	

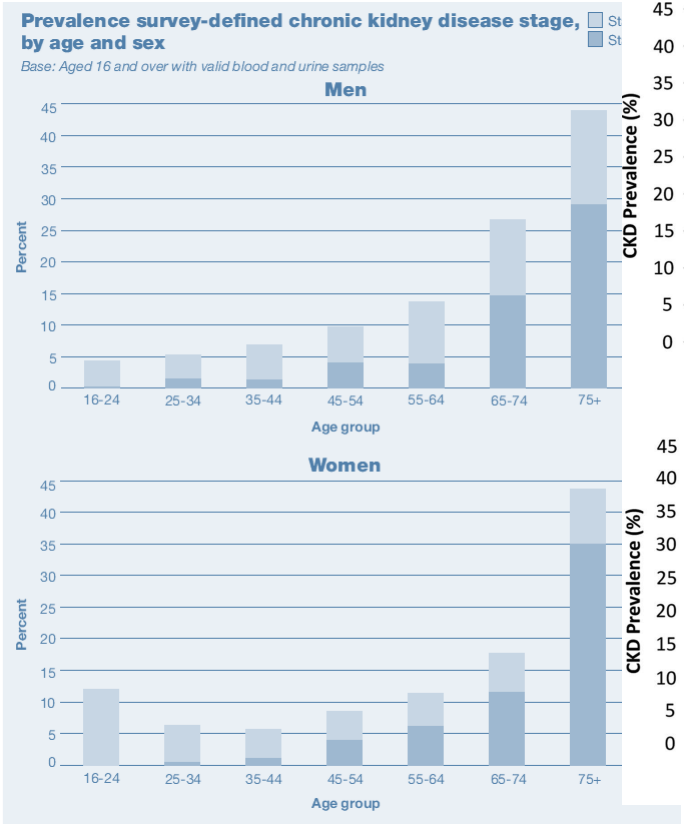
Without the Health Survey for England

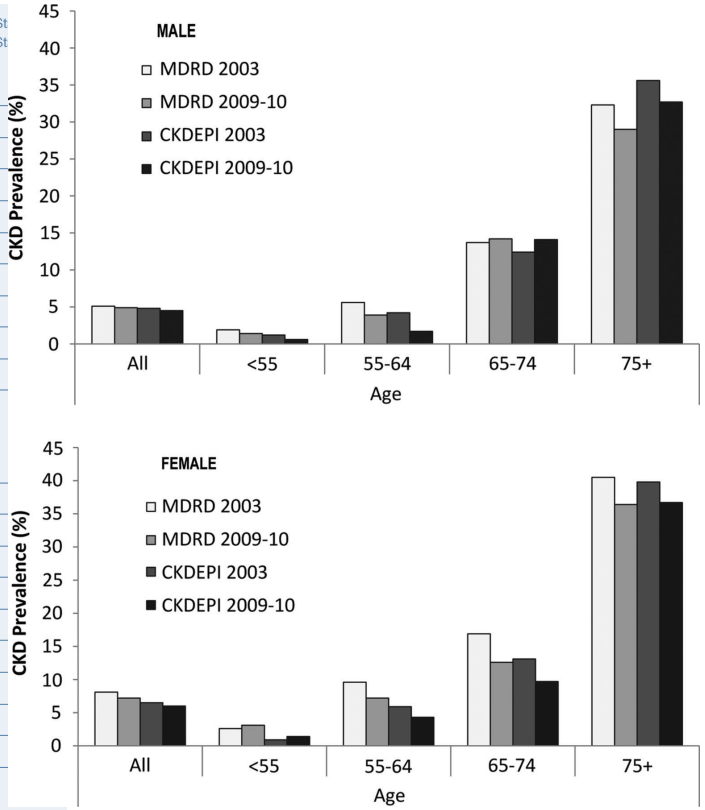
- Health of the Nation 1992 obesity target:
- “To reduce the proportion of men and women aged 16-64 who are obese by at least 25% and 33% respectively by 2005 to no more than 6% of men and 8% of women”
- (in 2005, HSE data showed that 23.1% of men and 24.8% of women had obesity)

Target

Agenda-setting: Chronic Kidney Disease







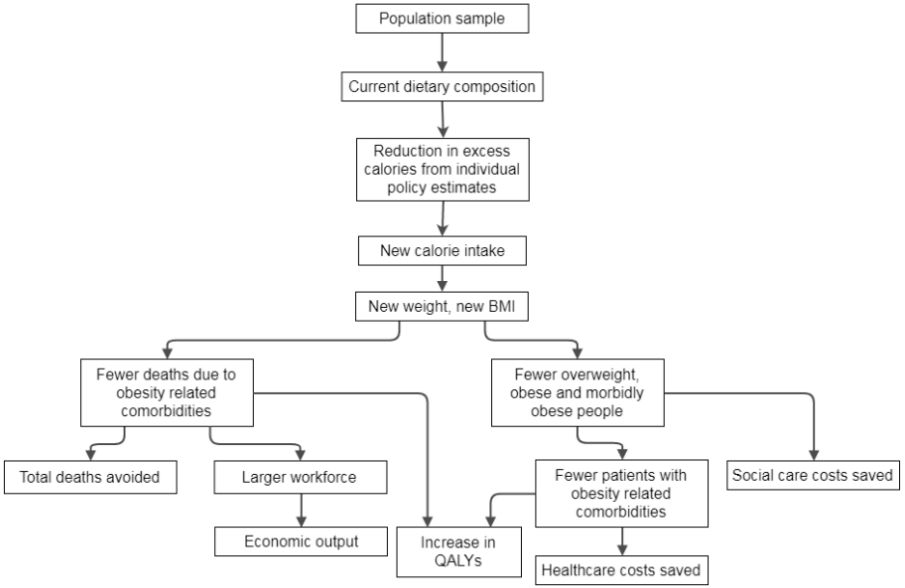
Health Survey for England 2010

Aitken GR, Roderick PJ, Fraser S*, et al* Change in prevalence of chronic kidney disease in England over time: comparison of nationally representative cross-sectional surveys from 2003 to 2010 *BMJ Open* 2014

Policy development: Department of Health and Social Care Calorie Model

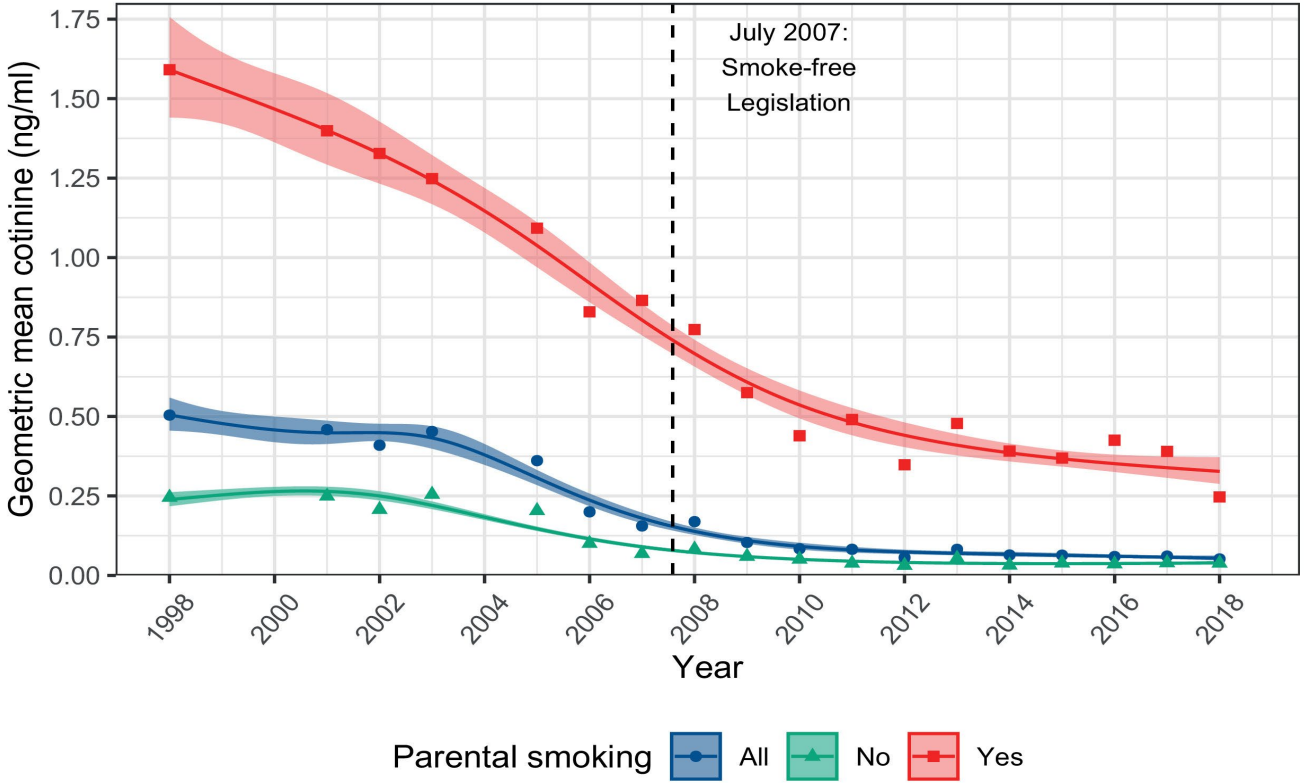
- Uses age-group and sex specific height and weight data
- Tested:
  - Ending the sales of energy drinks to children
  - Mandating energy labelling of food and drink in out-of-home settings
  - Restricting price promotions for HFSS foods
  - Restricting checkout, end of aisle and store entrance sales of HFSS food and drinks
- Used in the 2020 obesity strategy

Figure 2: High level overview of model structure for a scenario of reduced calorie imbalance.



DHSC Calorie model from the technical consultation document, 2018

Monitoring and evaluation: Impact of smoke-free legislation



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Strengths of the Health Survey for England

How are Health Survey for England data well suited to use by policy-makers

- National sampling frame and random sample
  - Can estimate non-response rates
  - Captures the health burden for those not seeking care
  - No matter where the population is receiving care
- Objective measurement of disease control
  - Which drugs are being taken and whether they are working effectively
- Standardised methods, comparable data across locations, years (and countries)
- Linked with vital statistics and health records

Health data and tool for measuring health

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Future directions

Future directions

- Objective assessment of cost-effectiveness
- International initiatives to produce guidelines on how to use the results of health examination surveys to support additional studies
  - Normative studies, care cascade and health system performance studies, global burden of disease and attributable risk…
- Digital tools to reduce costs?
- Increase in marketing or dissemination could improve response rates?

Futuristic data

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Conclusions

The use of the Health Survey for England in policy-making and monitoring

- Used extensively in policy-making and monitoring across all phases of the policy cycle
- Provides unique data that can act as an external quality control for the entire health system
- Further work could be done collaborating with international partners
- Future developments could focus on reducing costs and increasing response rates

A crowd of people

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Sunflowers

Thank you

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