© 2013 Scottish Universities Medical Journal
Published online: September 2013

Vol 2 Issue 1: page 31-36

Davies R (2013). Addressing Unhealthy Individual Lifestyle Choices – Education, Health Promotion & Patient Engagement

Addressing Individual Lifestyle Choices – Education, Health Promotion, and Patient Engagement

Robert Davies (1st year BSc (Hons) Dietetics)

Correspondence to: Robert Davies: robert.davies-8@students.plymouth.ac.uk

ABSTRACT

The NHS has a growing user-demographic, and with rising demand, the NHS cannot function in the same way as people have come to know and expect. Innovative ways need to be employed to improve the accessibility and sustainability of health services. Lifestyle is a major contributor to the rise in NHS demand as there has been a move away from personal responsibility and accountability to a culture where cure is better than prevention. To improve health services, it would be advantageous to design better health campaigns that employ engaging behaviour models to instil long-term behavioural changes with regards to lifestyle behaviours and choices. This article will discuss the need for effective health campaigns with an emphasis on behaviour models.

Key Words: health promotion; obesity; patient centred care

The NHS – At a critical point

Health services are largely encompassed by the National Health Service (NHS), with the Department of the Health (DoH) managing public health campaigns. The NHS is a much appreciated institution providing quality care and treatment for patients and has been an intrinsic aspect of many individuals' lives. The U.K. population has increased incrementally over the past decades and in mid-2012 the population was 63.7 million, approximately 420,000 more than that recorded in mid-2011[1]. As the population increases , so too does the demand on healthcare services, putting strain on the NHS which is already struggling to cope with the rising number of users as a result of an ageing population who are living longer[2]. It is therefore apparent that healthcare provision needs to be examined in order to cope with the increase in demand. However, reforms to the NHS are not easy to enact as the British people hold the NHS in high regard and rely on it to be freely accessible and ever-present in the form they have known. Hence, the recent government proposals to reform the NHS have been met with opposition, exemplified by the 'obituary' to the NHS written in *The Independent*[3] criticising the way in which the NHS is being exposed to increasing privatisation. The NHS simply cannot function effectively and efficiently in its current form, providing care and treatment to those in need of it, with its current user-demographics.

Patient lifestyle choices – a major economic burden on the NHS

The NHS annually spends more than £5 billion on obesity-related conditions[4], £5 billion on smoking-related conditions[5], and £2.7 billion on alcohol-related conditions[6]. These

conditions are the result of lifestyle choices impacting on an individual's health[7], accounting for over £10 billion in healthcare costs, approximately 9% of the current NHS budget[8]. As a measure to improve the health of the nation, and the resources and sustainability of the NHS, it would be advantageous to explore ways in which an individual's lifestyle choices could be changed to promote health and prevent lifestyle-related diseases burdening the NHS.

According to the 2011 Health Survey for England, obesity has increased substantially over the period of 1993 to 2011 from 13% to 24% in men and 16% to 26% in women. 23% of adults are obese with a BMI of over 30 and 61% are overweight or obese with a BMI greater than 25[9]. Incredibly, 33% of 10-11 year olds and 23% of 4-5 year olds also have a BMI greater than 25[10]. In 2010, obesity was responsible for 11,173 episodes of treatment in hospitals equating to 25,322 bed days with a mean stay in hospital of 3.7 days[11]. If current trends in obesity remain, the estimated annual cost to the NHS in 2015 for diseases related to being overweight and obesity amount to £15 billion with obesity alone predicted to demand £9 billion[12].

Obesity causes a huge array of medical problems including complications arising in surgery, using general anaesthetic safely, immobility, vascular disease, arthritis, and diabetes. Doctor-diagnosed diabetes prevalence increased in men from 2.9% in 1993 to 7% in 2011, and 1.9% to 4.9% in women over the same time period[9]. It is estimated there are 2.8 million people with diabetes and it is predicted to increase to 4 million by 2025[13]. The rise in obesity is predicted to correlate with a rise in diabetes prevalence of 6-8.5 million and 5.7-7.3 million cases of stroke and heart disease[7]. Evidently, more needs to be done to change the attitudes and behaviours of individuals to lifestyle choices in order to promote health and prevent disease, consequently easing the strain on NHS services and resources that is currently imposed upon them.

Changing Patient Behaviour – the Holy Grail of Health Promotion

There has been great interest in the extent to which government legislation can enact on individual lifestyle choices and associated behaviours. A number of countries have enacted laws in an effort to curb lifestyle-related diseases by targeting the products, such as food[14], smoking[15], and alcohol[16,17]. These measures have sought to change the behaviour of the individual indirectly via legislation, rather than try to directly alter the individual's behaviour. These efforts have had some effect notably with regards to smoking and alcohol consumption. The smoking ban in the U.K has brought about decreases in the cases of asthma and heart disease[18-19]. There has also been success across Europe where France, Germany, and Spain have seen decreases in the numbers of smokers since the introduction of legislation pertaining to smoking in those countries[15].

Alcohol consumption has also been seen to be curtailed related to government policy most notably in the Soviet Union[16] and in Sweden[17]. In the Soviet Union, Mikhail Gorbachev established in 1985 an anti-alcohol campaign in an effort to reduce mortality rates. This campaign saw prices of alcohol increase and its sale was restricted. During the time between 1985 and 1990, alcohol consumption reduced by a substantial 40%, and the male mortality

rate decreased by 25%. However, after dissolution of the Soviet Union, this act was repealed due to popular dissatisfaction, and to the lost revenue from reduced alcohol consumption. The high mortality rates resumed after the repeal with a 40% surge between 1990 and 1994[16]. This example highlights the short-term effect of legislation and the need for long-term behavioural change. If people had been engaged with and aspects of lifestyle behaviours dealt with accordingly rather than dictated to, then when the anti-alcohol campaign had been repealed there may have been a positive outcome. In Sweden, the problem of alcohol was tackled in a different way. A government initiative was launched in 2004 due to the high consumption of alcohol. It was designed to be an active and engaging programme that rarely used didactic methods. It aimed to promote awareness of risk and stressed the importance of early detection while giving issues relating to alcohol a prominent position in the health care service, and it invested heavily in educating the staff fronting alcohol treatment services on how to engage with service users effectively. The programme was successful in its aims but long terms quantitative data has yet to come to fruition[17].

Legislation on food has also been attempted in light of the obesogenic pandemic. In 2011, Denmark enacted a tax on foods that had a nutritional profile of more than 2.3% saturated fat. This tax was expected to generate 200 million euro per year while reducing the consumption of saturated fat by 4%[14]. However, in 2012 this tax was repealed largely on the grounds that consumers were going to neighbouring countries (Germany and Sweden) to buy these taxed products at a lower price[20]. Hungary, Finland, and France have similar legislation, enacted in 2011, for foods high in sugar, and salt[14], but whether these taxes will result in any meaningful changes in terms of lifestyle behaviours and choices is yet to be seen. They may work, but they may not and echo the outcomes mentioned above of Russia and Denmark.

The crux then comes when the government dictates the lifestyle behaviours and choices of its citizens resulting in an infringement of civil liberty and freedom of choice. It must surely be more advantageous and in accordance with a democracy to give people the information, tools, and support to facilitate their own lifestyle changes. Public health campaigns should be more than mere didactic diatribes, they should engage with the people they are seeking to reach. Public health campaigns are successful in increasing awareness but they fail to encompass mechanism to instil behavioural change that leads to the adoption of healthier lifestyle behaviours being non-existent[17].

In order for long-term and efficient lifestyle behaviour change, there needs to be an alternative to the indirect and seemingly short-lived effects that enactment of taxation and legislation can bring. The government is unable to force people to change their behaviours and attitudes to lifestyle choices, but it should make available sufficient information to allow individuals to make informed decisions about their lifestyles. By acting in this way, lifestyle-related diseases and associated conditions may reduce which would ease the strain being seen on the current NHS system. This is achievable through the implementation of behaviour models[21], of which there are numerous forms that focus on instilling change in the individual. These include the health behaviour model (HBM), the information-

motivation-behaviour skills model (IMBSM), theories of planned behaviour (TPB) and reasoned action (TRA), and social cognitive theory (SCT) (see table 1).

Behaviour models, exemplified in table 1, can be comprehensive tools to assess the potential success and/or failure, and efficacy, of a health and lifestyle campaign. Without understanding the importance of behaviours towards health, health campaigns may meet with limited success[22]. The DoH has used the above models, in conjunction with social marketing, to tackle behaviours relating to smoking (Smokefree), stroke (FAST), and obesity (Change4life)[23]. Furthermore, the Expert Patient scheme incorporates these models to instil in the individual change from within rather than relying on didactic means[24].

Table 1 Behaviour Models explained and contextualised

Model	How it works	Example
HBM	The behaviour of an individual is determined by the perceptions of susceptibility to and severity of a health related condition, alongside the benefits and barriers of engaging in action to overcome the condition, including treatment.	An individual may feel impenetrable by the flu virus on account of a perceived strong immune system so does not adhere to hand washing practices, and in a flu epidemic does not feel the need to take precautions (i.e. Flu vaccination, wearing a face mask).
IMBSM	Focuses on: knowledge to support motivation; opportunity to move towards favourable attitudes to new behaviour(s) while making use of social support networks; and reinforcement through actions.	Providing weekly/monthly informative workshops on nutrition and cooking, followed up by a cooking demonstration/session, with time to cook/eat with others and share experiences of food/recipes/cooking. This may aid in the adoption of cooking more often and engaging more with the food eaten.
TRA	Looks at the individual's: behavioural intent; attitude to that behaviour; and how the individual sees how people known to him/her view that behaviour being performed (subjective norm). Both attitude and subjective norm need to be present to lead to behavioural intent, and then to the behaviour being adopted.	An individual may want to do more exercise because they feel over-weight. His/her family may think it is a good idea, thus reinforcing the individual's intent leading to a more likely adoption of the chosen behaviour.
TPB	Expands on TRA to include perceptions of behavioural control which encompasses how the individual may see how difficult the behaviour is to be adopted. The perception of behavioural control can feed into the attitude and subjective norm as well as into the intention.	An individual may want to do more exercise because they feel over-weight. His/her family may think it is a good idea, thus reinforcing the individual's intent leading to a more likely adoption of the chosen behaviour. However, to do more exercise, the individual feels they must go to the gym regularly which will cost money and the individual is unable to afford it which may result in the behaviour not being adopted.
SCT	The behaviour is dependent on the interaction between the individual's cognitive processes (thoughts, feelings, memory); the observations of others; and of the interaction between the environment and the individual's behaviour. Self-efficacy is the major influencing factor.	Seeing a famous person of similar age/gender/ethnicity following a healthy diet may incite an individual to identify with that person leading to greater self-efficacy awareness, and to the adoption of that new behaviour.

Examples of Public Health Campaigns Changing Patient Behaviour

The expert patient scheme is designed to enable those suffering with chronic conditions to self-manage, increase confidence, and improve quality of life. The scheme involves the

patient taking control of their condition, with support from healthcare professionals, as well as sharing responsibility for treatment. Feedback from the scheme shows that patients have increased self-efficacy, and are more confident in managing symptoms and pain[25]. Furthermore, patients are more resourceful and they are more engaged with healthcare professionals and treatment, with reduced visits to GPs and Accident and Emergency departments[24].

FAST is a campaign designed to make people aware of the signs of stroke, as well as the causes and results of having had a stroke[26]. £8 million has been invested in the FAST programme and it has resulted in healthcare costs of £25 million being saved[23].

The Smokefree campaign targets smokers and provides them with reasons to stop smoking and it also offers tools and aids to facilitate quitting the habit[27]. Smokefree in 2001/2 cost £24.7 million but this has increased substantially to £88.2 million in 2011/12 and the initiative has saved the health service £1.5 billion by the number of smokers quitting the habit[23]. The effect of the Smokefree campaign may explain the reduction in smoking over the period 1993 to 2011 as it reduced from 28% to 23% in men and from 26% to 19% in women with smoking over 20 cigarettes a day also reducing from 11% to 5% in men and 8% to 3% in women over the period 1993 to 2011[9].

Change4life is a campaign to reassure people that it is not too late to alter behaviour. It encompasses not just diet, but other lifestyle activities such as smoking, alcohol consumption, and physical activity. It is a multifaceted health campaign with an interactive focus aimed at engagement[28]. The Change4life programme has, in 2011/12, been provided with £14 million to continue its delivery focusing on dietary and lifestyle choices the results of which can take time to become apparent[10]. Possibly as a result of the 5-a-day campaign, fruit and vegetable consumption of 5 or more portions a day slightly increased over the period 2001 to 2011 from 22% to 24% in men and 25% to 29% in women with peaks in 2006 of 26% in men and 32% in women[9]. Adults, aged 19-64 years, consume, on average, 4.1 portions of fruit and vegetables with older adults consuming 4.4 portions, and 11-18 year old boys consume, on average, 3 portions per day and girls 2.8 portions[29].

These schemes seek to engage individuals with their health, helping them to understand lifestyle choices, to encourage changes in attitudes and behaviours, and to ease the economic and resource burden on healthcare services.

Nutrition – An Area where Public Health Should Focus

By giving individuals control over their own health and by engaging with them rather than dictating what they should do, the health of the nation may improve. An aspect with which engagement is crucial is diet. Nuijten and Lenoir-Wijnkoop[30] suggest that the way to improve public health and healthcare systems' expenditure and sustainability is to encourage nutrition to be at the focus of public health campaigns. Lenoir-Wijnkoop[31] et al suggest that nutrition will have a positive impact on reducing the economic burden placed on healthcare systems through adverse lifestyle choices. Nutrition could be the key to preventing lifestyle-related diseases, improving the quality of life for those suffering with chronic conditions, and

to improving the accessibility and sustainability of health services as less people would be reliant on them due to fewer cases of lifestyle-related diseases demanding healthcare resources. However, Lenoir-Wijnkoop and Nuijten both state that the beneficial role nutrition can have on individuals will take time to come to fruition as it needs to become an intrinsic aspect of an individual's life, as exemplified by the 5-a-day and Change4life health campaigns. Consequently, the behaviours of an individual towards diet and lifestyle choices need to be examined further in order to design effective campaigns that target behaviours to improve health and well-being. By incorporating behaviour models into health campaigns, focusing on behavioural change, health services may be better equipped to deal with non-lifestyle-related diseases. Resources and finances would become more available as fewer people would be using healthcare services for lifestyle-related diseases. By shifting the balance from treatment of disease to prevention, healthcare services would become less burdened, with resources more available to those in desperate need of them.

References

1. Office for National Statistics. UK population estimated to be 63.7 million in mid-2012. http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/mid-2011-and-mid-2012/sty---uk-population-estimates.html (accessed 26th August 2013).
2. Cracknell, R. The Ageing Population. http://www.parliament.uk/documents/commons/lib/research/key_issues/Key%20Issues%20The%20ageing%20population2007.pdf (accessed 18th April 2013).
3. Jones, O. Farewell to the NHS, 1948-2013: a dear and trusted friend finally murdered by Tory ideologues. http://www.independent.co.uk/voices/farewell-to-the-nhs-19482013-a-dear-and-trusted-friend-finally-murdered-by-tory-ideologues-8555503.html?fb_action_ids=987314367302%2C10151401233018598%2C10151510837 (accessed 1st April 2013).
4. Department of Health. Reducing obesity and improving diet. https://www.gov.uk/government/policies/reducing-obesity-and-improving-diet (accessed 1st April 2013).
5. BBC news. Smoking disease costs NHS Â£5bn. http://news.bbc.co.uk/1/hi/health/8086142.stm (accessed 31st March 2013).
6. The NHS Information Centre, Lifestyles Statistics. Statistics on Alcohol: England, 2011. https://catalogue.ic.nhs.uk/publications/public-health/alcohol/alco-eng-2011/alco-eng-2011-rep.pdf (accessed 31st March 2013).
7. NHS Choices. Half of UK obese by 2030. http://www.nhs.uk/news/2011/08August/Pages/half-of-uk-predicted-to-be-obese-by-2030.aspx (accessed 31st March 2013).
8. NHS Choices. The NHS in England. http://www.nhs.uk/NHSEngland/thenhs/about/Pages/overview.aspx (accessed 18th April 2013).
9. Health and Social Care Information Centre. Health Survey for England - 2011, Trend tables. http://www.hscic.gov.uk/searchcatalogue?productid=10152&topics=1%2fIllnesses+and+conditions%2fCirculatory+system+diseases&sort=Relevance&size=50&page=1#top (accessed 31st March 2013).
10. Department of Health. Healthy Lives, Healthy People: A call to action on obesity in England. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/134840/dh_130487.pdf (accessed 31st March 2013).
11. Health and Social Care Information Centre. HES on...obesity. https://catalogue.ic.nhs.uk/publications/hospital/monthly-hes/hes-on-obes.pdf (accessed 31st March 2013).

12. Swanton, K. Healthy weight, healthy lives: A toolkit for developing local strategies. http://image.guardian.co.uk/sys-files/Society/documents/2008/10/07/heart.pdf (accessed 31st March 2013).
13. NHS Confederation. Key Statistics on the NHS. http://www.nhsconfed.org/priorities/political-engagement/Pages/NHS-statistics.aspx (accessed 31st March 2013).
14. The Organisation for Economic Co-operation and Development (OECD). Obesity Update 2012. http://www.oecd.org/health/49716427.pdf (accessed 26th August 2013).
15. Spinney, L. Public smoking bans show signs of success in Europe. The Lancet 2007; 369: 1507-1508. www.thelancet.com (accessed 26th August 2013).
16. Bhattacharya, J., Gathmann, C., Miller, G. The Gorbachev Anti-alcohol Campaign and Russia's Mortality Crisis. American Economic Journal: Applied Economics 2013; 5(2): 232-260.
17. Perez-Cueto, F.J.A., Aschemann-Witzel, J., Shankar, B., Brambila-Macias, J., Bech-Larsen, T., Mazzocchi, M., et al. Assessment of evaluations made to healthy eating policies in Europe: a review within the EATWELL Project. Public Health Nutrition 2011; 15(8): 1489-1496.
18. Roxby, P. Smoking ban's impact five years on. http://www.bbc.co.uk/news/health-18628811 (accessed 26th August 2013).
19. Boseley, S. Smoking ban 'has reduced asthma and heart attacks'. http://www.theguardian.com/society/2012/jun/29/smoking-ban-health-benefits (accessed 26th August 2013).
20. Elbel, B., Taksler, G.B., Mijanovich, T., Abrams, C.B., Dixon, L.B. Promotion of Healthy Eating Through Public Policy A Controlled Experiment. American Journal of Preventive Medicine 2013; 45(1): 49-55.
21. Reid, A.E. and Aiken, L.S. Integration of five health behaviour models: Common strengths and unique contributions to understanding condom use. Psychology and Health 2011; 26(11): 1499-1520.
22. Backett, K.C. and Davidson, C. Lifecourse and Lifestyle: The Social and Cultural Location of Health Behaviours. Social Science and Medicine 1995; 40(5): 629-638.
23. Department of Health. Changing Behaviours, Improving Outcomes: A social marketing strategy for public health. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147325/dh_126449.pdf (accessed 31st March 2013).
24. NHS Choices. The Expert Patients Programme (EPP). http://www.nhs.uk/NHSEngland/AboutNHSservices/doctors/Pages/expert-patients-programme.aspx (accessed 31st March 2013).
25. Phillips, J. Experts Patient Programme. http://www.expertpatients.co.uk/sites/default/files/files/Evidence%20for%20the%20Health.pdf (accessed 26th August 2013).
26. NHS Choices. Stroke - act FAST. http://www.nhs.uk/actfast/Pages/stroke.aspx (accessed 26th August 2013).
27. NHS Choices. Smokefree. http://smokefree.nhs.uk/ (accessed 26th August 2013).
28. NHS. Change4Life. http://www.nhs.uk/Change4Life/Pages/why-change-for-life.aspx (accessed 26th August 2013).
29. National Diet and Nutrition Survey. Headline results from Years 1, 2 and 3 (combined) of the Rolling Programme (2008/2009 - 2010/11). : http://www.natcen.ac.uk/media/978078/ndns-y3-report_all-text-docs-combined.pdf (accessed 18th April 2013).
30. Nuijten, M. and Lenoir-Wijnkoop, L. Nutrition economics: An innovative approach to informed public health management. European Journal of Pharmacology 2011; 68(S): 133-137.
31. Lenoir-Wijnkoop, I., Dapoigny, M., Dubois, D., van Ganse, E., Gutierrez-Ibarluzea, I., Hutton, J. et al. Nutrition economics - characterising the economic and health impact of nutrition. British Journal of Nutrition 2011; 105: 157-166.