

Nudging in Public Health – An Ethical Framework

A Report by the National Advisory Committee on Bioethics

**Department of Health
December 2015**



1. Introduction

1.1 Focus of the Report

When policymakers seek to interfere in personal lifestyle choices, they frequently face criticism that they are running a “nanny state”. Nevertheless, governments are increasingly faced with complex health and economic concerns that prompt their intervention in lifestyle habits, either through the traditional methods of legislation, regulation and education or, more recently, by using initiatives such as behavioural change programmes. Nudging represents one such behavioural change option.

Given its relative novelty, policymakers are considering the potential of nudging to shape public health programmes. One of the purported advantages of nudging is its promise of cost effectiveness, especially since the global economic collapse of 2008 and the effect this had on the provision of public services. Indeed nudging has been described as a form of low-cost, light-touch regulation. Nevertheless, the novelty of nudging requires policymakers to consider the main ethical concerns that may arise. This report is provided to help policymakers consider these concerns

1.2 Irish Context

One of the Department of Health’s key priorities is to safeguard and improve the health and wellbeing of the population. The main focus is on prevention and keeping people healthier for longer, by developing policies to create greater awareness of the positive impact of healthy living and to ensure it is easier for people to make healthy choices. In practical terms, this has involved using a mix of regulation (including legislation restricting access to sunbeds, introducing minimum unit pricing for alcohol and standardising cigarette packaging) and more traditional public health interventions, such as education and information campaigns. While traditional public health approaches have mostly concentrated on restricting choice or the banning of certain behaviours, there is increasing recognition that legislation in isolation is unlikely to provide the solution. Therefore, it might be timely and prudent that policymakers consider looking beyond such orthodox approaches and reflect on the efficacy and acceptability of adopting behavioural economics in general and nudging in particular, as a method of promoting and protecting health and wellbeing.

1.3 Structure of the Report

This report starts with a section on nudging looking at its origin, definition, effectiveness and its policy alternatives. It then reviews the ethically challenging aspects by focusing on the most widely

cited applications of nudging (see Table 1) and their associated ethical considerations. Next the report presents a framework aimed at contributing to the work of policymakers who are tasked with developing and implementing public health programmes that may involve aspects of behavioural change or nudging. The framework is based on a number of key ethical principles (see Table 2), which are: autonomy; proportionality; justice and equity; non-discrimination; protection of vulnerable populations; respect for cultural diversity and pluralism; solidarity and trust and accountability.

2. Nudging

2.1 Origins

While the field of “nudging” has emerged from a century of research in psychology, sociology and economics, it is most closely associated with a branch of economics known as behavioural economics.¹ In the past decade, behavioural economics has become popular amongst academics and policymakers. While traditional economics holds that humans, as rational beings, make choices to maximise their welfare, behavioural economics relies on cognitive-psychology to overturn those assumptions, teaching instead that humans have “bounded rationality” and so make decisions that sometimes run counter to their interests.² Indeed, behavioural economics has been defined as the application of the “inductive scientific method to the study of economic behaviour”.³ In short, this means that instead of assuming how people behave (i.e. rationally and in their own best interests), behavioural scientists conduct empirical research into how people actually behave. As a consequence, behavioural economics has changed perceptions regarding behaviour patterns. For instance, it claims that people’s decisions vary within particular contexts⁴, often to a significant degree and that behavioural scientists can change the way people make decisions on the basis of how and when information is presented (framing), the accuracy of people’s perceptions, judgments and memories and by reference to what other people do. What has become apparent, is that people may be motivated by incentives but have a stronger aversion to losses than an affinity for gains, follow pre-set options (i.e. defaults), are influenced by things that seem relevant and vivid to them

¹ World Bank (2015), *World Development Report 2015: Mind, Society and Behaviour*. Washington DC: World Bank. DOI:10.1596/978-1-4648-0342-0.

² Stewart SA. (2005), Can Behavioural Economics Save Us From Ourselves? *The University of Chicago Magazine*, 97: 3. Available at: <http://magazine.uchicago.edu/0502/features/economics.shtml>.

³ Lunn P (May 2015), Behavioural Economics, Nudging and Policymaking, presentation given at: *Influencing healthy Lifestyles: Nudging or Shoving? The Ethical Debate*, hosted by the Department of Health, Dublin.

⁴ Institute for Government and the Cabinet Office, *MINDSPACE: Influencing Behaviour Through Public Policy*, March 2010. Available at: <http://www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf>

personally, seek to be consistent with their public promises and commitments, and act in ways that make them feel better about themselves.⁵ In addition, behavioural economics suggests that the context and environment in which decisions are made can have an impact on the decision-making process. The emergence of this perspective on human decision-making has led to the development of “choice architecture” (i.e. the practice of designing decision-making contexts).

While behavioural economics has a broad spectrum of applications, the most well-known and increasingly widely used is referred to as nudging. This phenomenon arose in the wake of the publication of Thaler and Sunstein’s 2008 book entitled *Nudge. Improving Decisions About Health, Wealth and Happiness*.⁶ This has proved to be one of the most important books, in terms of social policy, in the last decade. Its central ethical tenet, “libertarian paternalism”, is that policymakers should not deny people options but that they should consider manipulating the choice architecture to promote “better” choices. Consequently, nudging has been increasingly applied in a public health context, not least as a result of the fact that six of the ten biggest contributors to the global disease burden are related to individual lifestyle habits, including tobacco use, alcohol consumption, high blood pressure, unsafe sex and obesity. The well documented connection between lifestyle choices, disease incidence and healthcare cost has led governments around the world to seek more creative ways to influence behaviour and steer populations towards making healthier lifestyle choices.

2.2 Definition

Despite its common usage, there is some divergence of opinion on what the term “nudge” means. Thaler and Sunstein themselves use multiple definitions in their book. For some commentators, the term represents an ambiguous set of actions or beliefs⁷, while others have attempted to provide a clear definition of what nudging is. For example, one of the explanations Thaler and Sunstein use suggests that a nudge signifies “any aspect of choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentives”.⁸ Another definition suggests that a nudge consists of an intervention, which aims to suggest one choice over another by gently steering individual choices in welfare-enhancing directions without imposing any significant limit on available choices.⁹ Nudging, in the policy sense, has come to mean

⁵ *Ibid.*

⁶ Thaler R and Sunstein C (2008), *Nudge. Improving Decisions about Health, Wealth and Happiness*, Yale University Press.

⁷ Marteau TM, et al. (2011), Judging Nudging: Can Nudging Improve Population Health? *British Medical Journal*, 342: d228.

⁸ *Supra* 6.

⁹ Ménard JF (2010), A “Nudge” for Public Health Ethics: Libertarian Paternalism as a Framework for Ethical Analysis of Public Health Interventions? *Public Health Ethics*, 3(3): 229-238.

any actions that include defaults (e.g. opt-out systems), warnings of various kinds (e.g. on alcohol containers), changing the layouts and features of different environments (e.g. sweets no longer being placed in front of checkouts), reminding people about their choices, drawing attention to social norms and using framing in order to change behaviour.¹⁰ Unlike policy instruments such as laws or bans, nudging does not relate to economic and fiscal measures, e.g. taxes or subsidies.¹¹

There has been debate about the term “libertarian paternalism”, as proposed by Thaler and Sunstein, who define it as guiding people towards beneficial decisions without removing choice. According to Thaler and Sunstein, the goal is to protect people from harm – not from external factors but from themselves (e.g. pitfalls in “systematic reasoning, inertia and intuition¹²). The term hadn’t been in widespread use prior to their book. Paternalism is a long established (and somewhat controversial) concept in health care bioethics and it refers to the ‘fatherly’ role that health professionals traditionally assumed in relation to patients i.e. making treatment decisions in their patients’ best interests. The term libertarianism has been used much more in a political context. It has taken on many different hues, from being an expression of free will, to an anti-authoritarian approach to government, to an endorsement of free-market economics. An alternative suggestion for the views expressed in Thaler and Sunstein’s book is the term “soft” paternalism (might also be referred to as “paternalism with liberty”), without the legislative and regulatory framework of traditional paternalism.

2.3 Effectiveness

Whilst nudging may be a relatively new phenomenon in the political sphere, industry has been using choice architecture for a number of years by placing enticing products at prominent in-store locations, using convincing statistics (4 out of 5 customers...) and exploiting the power of consumer inertia.¹³ The question for politicians and policymakers is whether or not such successes can be translated into the social and health policy arenas. Encouraging people to be more physically active, eat more healthily or attend their medical appointments is a very different challenge to selling products, not least because of the complexities associated with many lifestyle diseases, including psychological and socioeconomic factors. Nevertheless, due to the success of Thaler and Sunstein’s book, David Cameron instructed every Conservative Party candidate to read it in the run up to the 2010 General Election. Upon assuming office, Cameron also oversaw the establishment of the

¹⁰ *Supra* 4.

¹¹ *Supra* 6

¹² Gigerenzer G (2015), On the Supposed Evidence for Libertarian Paternalism, *Review of Philosophy and Psychology*, 6(3): 361-383.

¹³ Bovens L (2008), The Ethics of Nudge, Volume 42 of the series *Theory and Decision Library* (2009) pp 207-219). Available at: <http://www.bovens.org/theethicsFV.pdf>.

Behavioural Insights Team (“Nudge Unit”), which was housed at No. 10 Downing Street and tasked with improving efficiencies and using nudging to save the exchequer money.¹⁴ The results of studies conducted by the Behavioural Insights Team, in association with the Department of Health’s in-house team, suggest that nudging may be an effective and inexpensive means of initiating behaviour change.

Three recent randomised controlled trials have demonstrated how simple changes to the content of letters or text messages and on relevant websites can have a positive impact by optimising systems already in place. In the first study, the contents of a text message that was being sent out to patients to remind them of upcoming NHS appointments was altered to include a phone number for people to ring if they wished to cancel or rearrange their appointments as well as the cost to the NHS (approx. £160) of not attending the hospital appointment. Missed appointments were reduced by a quarter compared to the original text message reminder that was being sent out.¹⁵ In the second trial, a prompt to consider joining the NHS Organ Donor Register appeared on a webpage once individuals completed either renewing their vehicle tax or registering for a driving license online. Eight different webpage variations were trialled and once individuals completed a transaction they were randomly assigned to one of the variants. The message variants included: a simple request to join the register; social norms messages e.g. “every day thousands of people see this page and decide to join the register”; loss frames e.g. “three people die every day because there are not enough organ donors”; gain frames e.g. “you could transform up to 9 lives as an organ donor”; reciprocity message e.g. “if you needed an organ transplant would you have one – if so please help others”; and a message to spur people from intention into action e.g. “if you support organ donation, please turn your support into action”. The trial ran for five weeks during which over one million people saw one of the eight variants (over 135,000 for each). The study highlighted that the reciprocity message was the most effective in getting people to join the register and in the course of the trial 1,203 more people registered under this variant (over the course of a year this would lead to approximately 96,000 additional registrations compared to the control group).¹⁶ The third example relates to a letter that was sent out to the 20% of GPs with the highest antibiotic prescription rates in an effort to reduce antibiotic resistance. The letters were personally addressed, included a social norms message (i.e. “the great majority (80%) of practices...prescribe fewer antibiotics per head than yours”), highlighted three simple actions from good clinical practice

¹⁴ Benedictus L, The Nudge Unit – Has It Worked So Far?, *The Guardian*, May 2nd 2013. Available at <http://www.theguardian.com/politics/2013/may/02/nudge-unit-has-it-worked>.

¹⁵ Department of Health, Imperial College London, The Behavioural Insights Team, Barts Health NHS Trust, NHS, *A Zero Cost Way to Reduced Missed Hospital Appointments* (London, 2014).

¹⁶ Behavioural Insights Team, *Applying Behavioural Insights to Organ Donation: Preliminary Results from a Randomised Controlled Trial* (London, 2014).

guidelines and was signed by the Chief Medical Officer (as a trusted authority figure). This trial has only just been completed and final results are pending but preliminary results have shown a significant reduction in prescription rates amongst the trial cohort.¹⁷ The total budget for this trial was £6,000, which was spent on stationery and postage.

Nonetheless, despite such successes, critics have pointed out that no long-term studies have been conducted involving the use of nudging in policy formation and implementation.¹⁸ Similarly, others have noted that nudging policies have so far been targeted at small, very specific measures: an observation that has led some to argue that nudging is just a 'cute technocratic solution to mainly minor problems'.¹⁹ Some commentators have postulated that it is more likely nudging will play a complementary role to other policies.²⁰ For example, legislation aimed at tackling childhood obesity may in the future contain a nudging element (such as requiring supermarkets to remove sugary treats from tills). They suggest that while nudging may be cost effective, it should be part of an armoury and not completely replace other tools such as regulation, bans, public information etc.

2.4 Policy Alternatives

To put nudging within a public health context, it could be said that there is a continuum of public health interventions with nudging falling somewhere between education and information provision at one end of the spectrum and legislation and regulation at the other end. For many commentators, nudging represents an alternative to clearly interventionist approaches – an attempt at a third way between the two ends of the spectrum.

Education: Some commentators regard health education as an ideal public health intervention, since it is completely voluntary and seeks to empower people to make their own decisions regarding their health once they are equipped with accurate information. From an ethical perspective, education clearly poses few, if any, burdens. Health education, however, although an essential component of most public health campaigns, is not appropriate for all situations. Critics would, for instance, question the effectiveness of education and information campaigns in changing long-standing behaviours such as smoking and poor diet or about its ability to connect with all sections of society including people living in consistent poverty.

¹⁷ Berry D (May 2015), Nudging in Health: The UK Experience, presentation given at: *Influencing healthy Lifestyles: Nudging or Shoving? The Ethical Debate*, hosted by the Department of Health, Dublin.

¹⁸ McDaid D and Merkur S (2014), To Nudge, or Not to Nudge, That is the Question, *Eurohealth Observer*, 20(2):3-5.

¹⁹ Chakraborty A, Cameron's Hijacking of Nudge Theory is a Classic Example of how Big Ideas Get Corrupted, *The Guardian*, 7th December 2010. Available at:

<http://www.theguardian.com/commentisfree/2010/dec/07/david-cameron-hijacked-nudge-theory>.

²⁰ *Supra* 18.

Legislation and Regulation: From an ethical perspective legislation and regulation are, strictly speaking, coercive, in that they impose penalties for noncompliance. As such, they pose risks to liberty and self-governance. While many of these measures, such as reduced speed limits, the banning of junk food advertising aimed directly at children and the banning of smoking inside public spaces have demonstrated efficacy, they nonetheless represent the most intrusive approach to public health.

3. Ethical Considerations

It is important to be cognisant of the reality that while nudging does not involve compulsion, it is a powerful tool of persuasion that might impact on personal autonomy and consequently raises a number of ethical concerns. Its use in public health raises questions about the relationship between the State, key stakeholders (such as medical professionals and industry) and the general public - even to the level of the individual. Indeed, one of the key questions in public health is, whose job is it to ensure that people lead healthy lives? Is it up to individuals to make choices such as eating and drinking less or should Government do more to tackle the binge drinking and obesity crises? These responsibilities need not be mutually exclusive but it is important to note that the positive impact of achieving public health objectives must be balanced against the means by which they are realised. Policymakers must be mindful that social and economic inequalities lead to inequality in health. In fact, almost half of people living in consistent poverty in Ireland report having some form of chronic illness.²¹ Therefore, it is important, from a social justice perspective, that consideration be given to the appropriateness of harnessing nudging to influence the behaviour of people living in consistent poverty as opposed to using resources to improve the environment, health and wellbeing of those living in economically disadvantaged communities

Moreover, health promotion policies that promote nudging strategies have been accused of placing too much weight on the idea of the individual as an autonomous and independent agent. While health promotion activities are often deemed to be paternalistic in nature, there is a danger that focusing too much on personal choice infers that the individual is wholly responsible for his/her health or lifestyle. Making lifestyle a moral issue is problematic on a number of levels. For instance, the question arises as to where the focus should be placed e.g. on those who eat, drink or smoke too much; or on workaholics, non-compliant patients or people who engage in extreme sports. Consideration must be given to the potential consequences of making people responsible for their own adverse state of health. In contrast, others have argued that nudging's absence of concern for

²¹ Combat Poverty Agency in association with the Institute of Public Health in Ireland (2008), *Tackling Health Inequalities - An All-Ireland Approach to Social Determinants*.

the development of moral independence infantilises those for whom it directs choice.²² Commentators have also queried whether nudging negatively impacts on our capacity for self-control and that the short-term benefits (e.g. immediate weight loss) may result in long-term failure (e.g. when a particular programme and its associated supports ends or when there is a change of Government). Nudging also raises ethical concerns in relation to transparency because in order for it to be most effective it must operate on a subliminal level.

The following is a brief overview of some of the most widely cited applications of nudging and their associated ethical considerations. These categories of nudge are based on *MINDSPACE: Influencing Behaviour Through Public Policy*, a report by the UK Institute for Government and the Cabinet Office (MINDSPACE – **M**essenger, **I**ncentives, **N**orms, **D**efaults, **S**aliency, **P**riming, **A**ffect, **C**ommitments and **E**go)²³ see Table 1. While this framework has since been distilled down to the EAST (Easy, Attractive, Social and Timely) framework²⁴, the MINDSPACE framework is considered a more comprehensive introduction to the various categories of nudging.

Messenger	People are heavily influenced by who communicates information
Incentives	People’s responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
Norms	People are strongly influenced by what others do
Defaults	They “go with the flow” of pre-set options
Saliency	Attention is drawn to what is novel and seems relevant
Priming	Acts are often influenced by sub-conscious cues
Affect	Emotional associations can powerfully shape actions
Commitments	People seek to be consistent with public promises, and reciprocate acts
Ego	People act in ways that make them feel better about themselves

Table 1. MINDSPACE

3.1 Messenger

The weight people give to information depends greatly on the impressions they have of the source of that information i.e. people are affected by the perceived authority of the messenger and are more likely to act on the information if delivered by an expert or figure of authority. It has also been

²² *Supra* 13.

²³ *Supra* 4.

²⁴ The Behavioural Insights Team (April 2014), *EAST. Four Simple Ways to Apply Behavioural Insights*. Available at: http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf

shown that demographic and behavioural similarities between the messenger and the recipient can improve effectiveness. In relation to addressing inequalities, it has been shown that those from lower socioeconomic groups are more sensitive to the characteristics of the messenger, and this has highlighted the need to use messengers from diverse demographic and behavioural backgrounds.²⁵ There has also been some research to show that communication amongst peer groups is also effective. For instance, a US study involving a “Health Buddy” scheme involved older students receiving healthy living lessons from their schoolteachers. The older students then acted as peer teachers to deliver the lessons to younger “buddies”. Compared with control students, both the older and younger “buddies” showed an increase in knowledge about healthy living and behavioural change, which in turn had beneficial effects on weight.²⁶ Finally, research has demonstrated that people are affected by the feelings they have towards the messenger and are more likely to irrationally discard advice given by someone they dislike.

Ethical considerations: The messenger technique raises ethically relevant questions, particularly regarding the balance of power between the messenger and the person being nudged. If the messenger is, for example, an authority figure such as a physician or a popular peer, then the person nudged may accept the messenger’s recommendations unquestioningly and this could be detrimental to personal autonomy or wellbeing.

3.2 Incentives

Incentives are used as a way to motivate behavioural change. Their impact depends on factors, including form, magnitude and timing. Research has shown that people dislike losses more than they like gains. Therefore, while most current incentive schemes offer rewards for participation in certain activities e.g. cheaper health insurance for gym members, some incentives are being framed as a charge that will be imposed if people fail to do something. One recent study on weight loss asked some participants to deposit money into an account, which would only be returned to them (with a supplement) if they met weight loss targets. After seven months this group showed significant weight loss compared to their entry weight. The weight of participants in a control group was not

²⁵ Durantini MR, Albarracín D, Mitchell AL, Earl AN and Gillette JC (2006) Conceptualizing the Influence of Social Agents of Behavior Change: A Meta-Analysis of the Effectiveness of HIV-Prevention Interventionists for Different Groups. *Psychological Bulletin* 132: 212–248.

²⁶ Stock S, Miranda C, Evans S, Plessis S and Ridley J, et al. (2007) Healthy Buddies: a Novel, Peer-Led Health Promotion Program for the Prevention of Obesity and Eating Disorders in Children in Elementary School. *Pediatrics* 120:e1059-68.

seen to change. In this case, it would appear that the fear of losing money may have created a strong incentive to lose weight.²⁷

Ethical considerations: The use of incentives to influence behaviour is not without ethical concern. Several factors should be considered before using incentives: the amount of incentive offered, whether the incentive will disadvantage certain sections of society, whether it will result in the group that fails to meet the criteria being treated unfairly, whether it will harm the patient–physician relationship and whether it is fairly directed.²⁸ The amount of incentive offered is ethically relevant for two reasons. If the amount is too high then the offer could be considered to unduly influence and interfere with the person’s ability to make an autonomous decision (i.e. a shove rather than a nudge). The amount offered is also ethically relevant because if the amount is unnecessarily high, meaning that a lesser amount could have achieved the same effect, then resources are not being used effectively. For example, in the case of incentives for picking up HIV results, researchers found that pickup increased only slightly when the amount of incentive was increased.²⁹ In addition, the incentive must not disadvantage the people most in need. Research has shown that the participation rates in incentive programmes are almost double for those in the top socioeconomic quintile as they are among those in the poorest quintile.³⁰

Similarly, it must be considered whether the incentive will unfairly treat groups unable to meet specified criteria. Critics argue that such a “consumerist” policy has worrying implications for equity and solidarity because the benefits of an incentive system are unlikely to be available for everyone especially those who are already in a disadvantaged or vulnerable position. In addition, many incentive programs are targeted toward reducing obesity and smoking. Both of those examples are, at least arguably, not entirely under a person’s control (i.e. the behaviours might be linked to other factors including stress, abuse, poverty and hopelessness in complex, non-linear ways) and have great variability among individuals regarding how easily results can be achieved. Therefore, it might be advisable to consider setting different standards for the attainment of the incentive offered relative to how difficult it is for an individual or group to achieve it.

²⁷ Volpp J, John A, et al. (2008), Financial Incentive-Based Approaches for Weight Loss, *Journal of the American Medical Association*, 300(22):2631-2637.

²⁸ Schmidt H, Volgt K, and Wikler D, (2010), Carrots, Sticks and Health Care Reform – Problems with Wellness Incentives, *New England Journal of Medicine*, 362(2): e3.

²⁹ Thornton RL, (2008), The Demand for, and Impact of, Learning HIV Status, *American Economic Review*, 98(5):1829-1863.

³⁰ *Supra* 28.

3.3 Norms

Nudging also relies on the principle that people are strongly influenced by what others do. Humans are social creatures, and as a result rely on other people for behavioural and decisional cues. Some social norms have a powerful automatic effect on behaviour (e.g. wearing seatbelts) and can influence actions in positive and negative ways. Their power may come from the social penalties for non-compliance, or the social benefit that comes from conforming. Behavioural interventions using social norms have been successful in a number of areas, and most are based on telling people what other people do in a similar situation (e.g. charity fundraisers might hint at how much a person's neighbours donate). Another example of how the norms principle is used is giving people information not in absolute terms (e.g. your risk for breast cancer is 30%) but in relative terms (e.g. your risk for breast cancer is 30% and most other people's risk is 10%). The latter frame is regarded as being substantially more motivating.³¹ Of course, this raises the question of who decides what a societal norm is and which ones are best harnessed in the case of public health nudging.

Ethical considerations: One of the dangers of using norms is that we could end up nudging people toward things that are bad for them as a consequence of "herd mentality". For example, in one study, when households were given information about average energy usage, those who consumed more than the average reduced their consumption – but those who were consuming less than the average increased their consumption. However, this "boomerang" effect was eliminated if a happy or sad face was added to the bill, thus conveying social approval or disapproval.³² As a result of the effect of herd mentality, there may be a temptation, especially in cases where what most people are doing or deciding is unwise, to construct a more positive/healthier narrative about what the majority of people are doing that is untrue or a misrepresentation. However, such misrepresentations would never be considered ethically permissible, irrespective of the intentions.

3.4 Defaults

Behavioural economists might seek to change health behaviours and decisions through the use of defaults. By adhering to the principle that people tend to go with the flow of defaults, choice architects can pre-set options that promote health and wellbeing, requiring those who want to go against the grain to "opt out". One of the most controversial uses of defaults is the presumed consent model for organ donation (i.e. donation is presumed to be the preferred option unless a

³¹ Lipkus I, Klein W, Skinner SC, Rimer b (2005), Breast Cancer Risk Perceptions and Breast Cancer Worry: What Predicts What? *Journal of Risk Research*, 8(5): 439-452.

³² Schultz, Nolan, Cialdini, Goldstein and Griskevicius (2007) The Constructive, Destructive, and Reconstructive Power of Social Norms. *Psychological Science* 18: 429–434.

person opts out by indicating that s/he is not willing to donate his/her organs upon death). Another contentious use of defaults is making “do not resuscitate” (DNR) the default status for particular patients, such as those with end-stage dementia. Defaults have the potential to produce substantial benefits in terms of health care (e.g. in increasing donor numbers).

Ethical considerations: There are two key ethically relevant dimensions that require deliberation when using defaults to influence health related decisions or behaviours. First, it must be relatively easy for people to opt out of the default option in order for freedom of choice to be preserved and respected. This requires that people are aware of the existence of the default, know how to opt out, and can opt out without significant burden. The second dimension relates to the need to ameliorate the effects of the default on vulnerable populations. In relation to presumed consent for organ donation, some commentators have raised concerns regarding the obligation to indicate on a driving license or an identity card whether or not one wants to be an organ donor and question, for instance, how a homeless person would express his/her dissent. Similarly, where a patient’s opposition to organ removal must be made in writing, certain individuals e.g. with literacy impairment or linguistic vulnerability, may face a serious obstacle.³³

3.5 Salience

Nudging also makes use of the principle that people are influenced by novel or personally relevant information and explanations. The modern phenomenon of inundating people with information and stimuli has resulted in them unconsciously filtering out any unnecessary material. Consequently, people are more likely to register and react to stimuli that are new, accessible and simple. In addition, people are more likely to respond to messages that relate more directly to their personal experiences than to things presented in a more abstract manner. One of the most widely discussed examples of this category of nudge is the requirement that restaurants put easy to understand calorie amounts on menus (which has resulted in people ordering meals containing fewer calories and therefore restaurants lowering the calorie count in meals)³⁴. Since people find losses more relevant than gains, they react differently when messages are framed in terms of one or the other (e.g. a 20% chance of survival versus an 80% chance of death), which might have a significant impact on important medical decisions.³⁵

³³ Jacob M A (2006), Another Look at the Presumed-Versus-Informed Consent Dichotomy in Postmortem Organ Procurement. *Bioethics* 20(6): 293–300.

³⁴ Rabin RC (2008), New Yorkers Try to Swallow Calorie Sticker Shock. MSNBC, July 16. Available at: http://www.msnbc.msn.com/id/25464987/ns/health-diet_and_nutrition.

³⁵ Hansen PG, Jespersen AM (2013), Nudge and Manipulation of Choice. A Framework for the Responsible Use of the Nudge Approach to Behaviour Change in Public Policy, *European Journal of Risk Regulation*, 4(1): p.3-28.

Ethical considerations: Some commentators argue that most, if not all, instances of the use of salience could be regarded as manipulation. Manipulation occurs when one influences another by bypassing their capacity for reason, either by exploiting non-rational elements of psychological makeup or by influencing choices in a way that is not obvious to the subject.^{36,37,38} By virtue of it bypassing a person's capacity for reason, manipulation also bypasses the exercise of autonomy in that it blocks the consideration of all options and threatens a person's ability to act in accordance with his/her own preferences (as opposed to someone else's). Manipulation falls somewhere in between coercion, which involves obvious attempts to influence that are impossible to refuse (e.g. force or severe and credible threats), and rational argument, or rational persuasion, which uses overt reason and argument to influence the subject.^{39,40} It could also be argued that if the person being nudged is informed up front that they are being manipulated (known as transparent nudges⁴¹, e.g. the use of images, footprints painted on a floor leading to a staircase), they can choose whether or not to be manipulated or nudged. Therefore, consideration should be given to whether manipulation can ever be justified or whether it is always morally reprehensible. For instance, it has been argued that one can bypass a person's reasoning capabilities for a good purpose (e.g. the person's reasoning powers are impaired) and for good ends (e.g. to prevent the person from harming himself/herself).^{42,43,44} Nonetheless, the risks and benefits of manipulating someone to change health behaviours must be carefully weighed and there must be a valid reason for using these techniques as opposed to engaging in rational argument.

3.6 Priming

A further way in which nudging is deployed to influence health behaviours and decisions is by making use of the principle that people's acts are influenced by subconscious cues. These cues can be strategically used as primers for healthy behaviours. One successful way in which this technique has been used is in the arrangement of food in cafeterias e.g. healthy food being placed earlier in the

³⁶ Mele A (2001), *Autonomous Agents: From Self-Control to Autonomy*. New York, NY: Oxford University Press.

³⁷ Baron M (2003), Manipulativeness. *Proceedings and Addresses of the American Philosophical Association* 77: 37–54.

³⁸ Greenspan P (2003), The Problem with Manipulation. *American Philosophical Quarterly* 40(2): 155–164.

³⁹ Faden RR and Beauchamp TL (1986). *A History and Theory of Informed Consent*. New York, NY: Oxford University Press.

⁴⁰ Powers P (2007), Persuasion and Coercion: A Critical Review of Philosophical and Empirical Approaches. *Healthcare Ethics Committee Forum: An Interprofessional Journal on Healthcare Institutions' Ethical and Legal Issues* 19(2): 125–143.

⁴¹ *Supra* 35.

⁴² *Supra* 37.

⁴³ *Supra* 38.

⁴⁴ Cave EM (2007), What's Wrong with Motive Manipulation? *Ethical Theory and Moral Practice* 10(2): 129–144.

sequence and in more prominent positions. In a similar vein, people can be primed to eat less or eating more healthily by altering the size of food containers or by reducing the number of holes in saltshakers, thus decreasing salt consumption. The most famous example of priming is the trial involving a picture of a fly being etched into urinals at Schiphol Airport in Amsterdam, which subtly primed men to aim directly at the urinal and reduced spillage by 80%.⁴⁵

Ethical considerations: As with all other forms of nudging, the decision to use the priming technique should be evidence-based. There should be good evidence that, for example, breastfeeding is best for babies and that too much salt is detrimental to one's health and that those behaviours that are being sought are compatible with the values of the individuals involved. Similar to the case of using defaults, one should consider whether it is relatively easy for people to go their own way and to choose a different direction than the one that they are being primed toward.

As with the case of using salience and affect (see 3.7), one should consider whether priming counts as an instance of justified manipulation. Priming to influence behaviour will by its very nature likely be an instance of manipulation, given that the use of subconscious cues to motivate behaviour inherently involves a side-stepping of a person's reasoning capabilities. In many cases the person will have no awareness of being primed (non-transparent nudges⁴⁶). The manipulation can only be justified if a careful consideration shows that the benefits outweigh the risks, and if an explanation can be offered for why priming is being used in place of rational argument.

3.7 Affect

Affect (the act of experiencing emotion) is a formidable tool in choice architecture. Emotional responses to words, images and events can be rapid and automatic, so that people can experience a behavioural reaction before they realise what they are reacting to. The emotional associations elicited remain readily available in memory and as a result powerfully shape decisions and behaviours. Many social marketing campaigns have harnessed the power of affect to stimulate behavioural change (e.g. the use of public service broadcasts to advertise the dangers of smoking or the importance of wearing seatbelts) and have the potential to be used to encourage civically minded behaviours such as blood donation or volunteering. Affect has also been used to nudge physicians toward better health outcomes for patients. For instance, in one study, the attachment of

⁴⁵ *Supra* 6.

⁴⁶ *Supra* 35.

patient photographs to x-rays resulted in radiologists providing longer, more detailed reports and feeling more connected to their patients⁴⁷.

Ethical considerations: As with other forms of nudging there may be concerns that affect relies on the power of manipulation in order to achieve desired results. In addition, it is worth noting that there is a risk that this technique may be viewed by people as a scare tactic (especially if what is being represented is exaggerated or misrepresented as opposed to true and accurate) and subsequently alienate people, which will then have a negative impact on relationships not least, the therapeutic alliance.

3.8 Commitments

This method of nudging to change behaviour makes use of the principle that people seek to be consistent with their public promises and commitments. People are generally aware of their will-power weaknesses (e.g. in terms of habits like the inability to quit smoking, overeating or overspending) and look to commitment devices to achieve long-term goals. It has been shown that commitments usually become more effective as the costs for failure increase. One common method for increasing such costs is to make commitments public, since breaking the commitment will lead to significant reputational damage. Even the very act of writing a commitment can increase the likelihood of it being fulfilled, and commitment contracts have already been used in some public policy areas.⁴⁸ A number of programmes have been developed that allow people to commit themselves to achieving certain goals, such as losing weight, exercising, quitting smoking or reducing alcohol consumption. For instance, in one commitment device aimed at helping smokers to quit, individuals were offered a savings account in which they deposited a sum of money for six months, after which time they took a test for nicotine. If the test showed no presence of nicotine, then the money was returned, otherwise it was forfeited. The savings account commitment increased the likelihood of smoking cessation by 30%.⁴⁹ Surprise tests at 12 months showed an effect on lasting cessation.

⁴⁷ Turnery N and Hadas-Halpern IPI, (2008), *The Effects of Including Patient's Photograph to the Patient's Radiographic Examination*. Presented at Conference: Radiological Society of North America 2008 Scientific Assembly and Annual Meeting.

⁴⁸ Cialdini RB (2007) *Influence: The psychology of persuasion*. New York: Harper Business, Revised Edition. Available at:

<http://ir.nmu.org.ua/bitstream/handle/123456789/116954/06b89c8343b30b05a99d5723277c39f8.pdf?sequence=1>

⁴⁹ Gine X, Karlan D, Zinman J (2008), Put Your Money Where Your Butt Is: A Commitment Contract for Smoking Cessation, *American Economic Journal: Applied Economics* 2(4):213-235.

Ethical considerations: Exploiting people’s desires to be consistent with public promises and commitments in order to nudge them toward healthier behaviours has various ethically relevant dimensions that should be considered. Some of the dimensions are similar to ones mentioned in relation to the other nudging techniques. For example, considerations surrounding manipulation are especially relevant in the use of this technique. Other considerations arise by virtue of the fact that commitments, especially self-binding commitments, raise their own set of complex philosophical and ethical issues. These types of self-commitments constitute a sort of “Ulysses Contract” i.e. a situation where one agrees to have present requests overridden in favour of past requests, just as Ulysses anticipated the results of his self-destructive request to steer his ship toward the Sirens and so agreed to have his men tie him to the mast. The philosophical difficulty lies in explaining why certain requests or desires (e.g., I want to lose weight) have more value and deserve more respect than others (e.g. I want to have this piece of cake right now).

3.9 Ego

The final method of using nudging to change behaviour makes use of the principle that people seek to act in ways to make them feel better about themselves and which supports the impression of a positive and consistent self-image. The private sector has often taken advantage of these facts. One study demonstrated that male respondents donated more to charity when approached by attractive female door-to-door fundraisers, suggesting that giving is also the result of a desire to maintain a positive self-image.⁵⁰ This focus on positive self-image may mean that self-esteem could be an effective route for change (e.g. pointing out that smoking causes yellow teeth and impotence). Similarly, it has been shown that the greater the expectation placed on people, the better they perform (known as the Pygmalion effect)⁵¹ i.e. a self-fulfilling prophecy is created, whereby people behave in a way that is consistent with the expectation of others.

Ego has been shown to play a role in the effectiveness of many nudges. For example, the nudges of putting mirrors in front of donuts and putting calorie counts on menus. Ego has an impact not because people are particularly concerned with being healthy, but because they are particularly concerned with looking good (e.g. the UK’s Department of Health is undertaking fieldwork to encourage women to reduce alcohol consumption by focussing on their appearance [sagging skin, premature ageing and obesity] rather than on the health benefits [breast and bowel cancer, irritable bowel syndrome and liver disease]).

⁵⁰ Landry CE, Lange A, List JA, Price MK, Rupp NG (2006). Toward an Understanding of the Economics of Charity: Evidence from a Field Experiment. *Quarterly Journal of Economics* 121:747–782.

⁵¹ Rosenthal R and Jacobson L (1968) Pygmalion in the Classroom, *The Urban Review*, 3(1): 16-20.

Ethical Considerations: Exploiting people’s desires to act in ways that make them feel better about themselves in order to nudge them toward healthier behaviours raises ethical questions in relation to the use of manipulation (see sections 3.5 and 3.6) and the impact the technique might have on self-esteem.

4. Ethical Framework

The dilemma facing public health officials is how to implement behavioural change policies in a manner that is equitable, reasonable, proportionate, in compliance with national and international legislation and which does not discriminate against particular groups or individuals.

One of the key issues in public health is the need to resolve the tensions between individual and community interests. Public health practitioners and policymakers have a responsibility to uphold the “common good” and at the same time are required to respect privacy, liberty and self-determination.

When formulating public health policy that involves an aspect of nudging, a question that should be broached is whether it is acceptable for the state to attempt to steer individual behaviour towards, what it views to be, options that are in an individual’s best interest. While ethics may not always be able to offer precise answers to these difficult questions, it can provide useful tools to help address the issues involved, weigh up competing interests and reach appropriate decisions.^{52,53} An ethical framework enables the different aspects of a particular decision to be teased out and deliberated upon, before a final decision is made.⁵⁴ Dealing with the potential issues that could arise in advance of policy development and implementation will help to provide a justification for the decisions that are ultimately made.^{55,56}

The following is a list of the key ethical principles, which should be taken into account when considering public health initiatives involving nudging. It is important to recognise that there is a degree of interaction between these principles and that they cannot be applied in isolation.⁵⁷

⁵² Berg J and King N (2006) Strange Bedfellows? Reflections on Bioethics' Role in Disaster Response Planning, *American Journal of Bioethics*. 6(5):3-5.

⁵³ World Health Organization (2007). *Ethical Considerations in Developing a Public Health Response to Pandemic Influenza*. World Health Organization, Geneva, 24pp.

⁵⁴ *Supra* 52.

⁵⁵ Thompson AK, Faith K, Gibson JL and Upshur REG (2006). Pandemic Influenza Preparedness: An Ethical Framework to Guide Decision-Making. *BMC Medical Ethics* 7: 12 doi:10.1186/1472-6939-7-12.

⁵⁶ *Supra* 52.

⁵⁷ Giacomini M, Kenny N and DeJean D (2009). Ethics Frameworks in Canadian Health Policies: Foundation, Scaffolding, or Window Dressing? *Health Policy* 89: 58-71

Decisions aimed at safeguarding one principle may conflict with another.⁵⁸ Moreover, the importance assigned to particular ethical principle may vary depending on the context and/or the specific measures under consideration.⁵⁹ A number of case studies are also included to illustrate the ethical principles that might be engaged as a result of certain practices.

Autonomy	The principle of autonomy refers to one's right to make independent choices on the basis of one's own beliefs and values without undue external influences.
Proportionality	The principle of proportionality requires that those considering limiting personal rights for the purpose of public health policy must balance the level of the interference with the intensity of the social need for such interference. It must be determined that the positive effect will outweigh the negative effect and that the negative effect is only permissible if there is a proportionate reason for permitting the foreseen negative effect.
Justice and Equity	Justice recognises that different groups in society may be advantaged/disadvantaged, e.g. on the basis of socio-economic status, gender, ethnicity, and this leads to diminished health and wellbeing. Justice and Equity require the fair distribution of the likely benefits and burdens of public health policies amongst the population.
Non-Discrimination	No individual or group should be discriminated against, disadvantaged or stigmatised on any grounds, in violation of human dignity, human rights and fundamental freedoms.

⁵⁸ *Supra* 53.

⁵⁹ *Supra* 53.

Protection of Vulnerable Populations	Human vulnerability should be taken into account when considering the introduction of nudging policies. Individuals and groups of special vulnerability should be protected and the personal integrity of such individuals respected.
Respect for Cultural Diversity and Pluralism	The importance of cultural diversity and pluralism should be given due regard.
Solidarity	Solidarity requires that populations share the benefits, risks and burdens of public health policies. At a basic level, solidarity reflects a collective commitment to carry e.g. financial, social, emotional or other “costs” in order to assist others.
Trust and Accountability	Public trust is essential in ensuring the success of public health initiatives. In order to maintain public trust, public health initiatives involving nudging need to be evidence-based and have specific and reasonable objectives.

Table 2. Ethical Principles

Against the backdrop of the above set of principles policymakers should consider the following list of questions when designing public health measures that involve aspects of nudging. During their deliberations, policymakers should consult the ethical principles listed in Table 2 above.

4.1 What are the public health goals of the proposed intervention?

The first step when considering a public health intervention involving nudges should be to identify the programme’s goals. These goals generally ought to be framed in terms of public health improvement, e.g. the reduction of morbidity or mortality, the reduction of smoking or obesity rates or the improvement of a particular service. For example, an HIV screening programme should have fewer incidents of HIV as its ultimate goal, not merely that a certain number of individuals will decide to be tested. Likewise, a nudge to encourage organ donation should have as its main objective an increase in the number of registered organ donors rather than simply raising

awareness. ***While it is not suggested that every intervention will achieve its stated end, it is essential that appropriate and realistic goals be clearly identified from the outset.***

Case study: Nudge to Increase Fruit Consumption

Green footprints were placed on the floor of a shop. The footprints directed the customer from the shop entrance to the shelf where fruit was located. The purpose was to ascertain whether this nudge would increase overall amounts of fruit purchased.

After six weeks (half the time with the footprints in place and half the time without – in order to measure the difference) fruit sales went up by nearly 100% (99.6%).

This project is an example of a nudge which is equitable, and there are no issues with proportionality, the nature of the intervention is minimal. This is also an example of a “transparent nudge” - while customers are not explicitly informed about the project, the footprints are clearly visible and easy to ignore. The aim of increasing fruit sales and presumably fruit consumption is a worthwhile goal to improve health.

Source: Hansen PG, *A Fruitful Nudge Towards a Healthy Diet*, 29th July 2013. Available at: <http://inudgeyou.com/a-fruitful-nudge-towards-a-healthy-diet/>

4.2 How effective will the proposed intervention be in achieving its stated goals?

There are concerns that nudging is based on an assumption that all citizens are blank slates and that behavioural economics fails to fully recognise individual values, life experiences and perspectives. Policymakers must interrogate such assumptions and investigate what evidence, if any, exists to validate their proposed interventions.

A further consideration for policymakers is, what amount of evidence is sufficient to justify a programme’s implementation? ***As a rule of thumb, the greater the burdens posed by a specific intervention—for example, in terms of cost, constraints on liberty, or targeting particular, already vulnerable or disadvantaged sections of the population — the stronger the evidence must be to demonstrate that the intervention will achieve its goals. If the evidence does not support the assumptions, then proceeding with the intervention in question would be ethically problematic.***

One of the cornerstones of nudging in public health is the use of randomised controlled trials to test

the effectiveness of particular initiatives (see the work of the UK's Behavioural Insights Team, the UK's Department of Health's nudge team (as referenced above) as well as the work of the Danish nudge unit INudgeyou.

Case study: Reducing the Incidence of Missed Hospital Appointments

Around one in ten hospital outpatient appointments are missed every year in England. Missed appointments lead to worse patient care and can waste NHS resources (an estimated £225 million in 2012-13). Many hospitals send patients a text message reminder before their appointment. A randomised controlled trial tested the content of appointment reminders and tested how different reminder messages affected missed appointment rates.

Approximately 20,000 patients at five clinics (who would have received the standard text message reminder) were randomly assigned one of a number of different reminder messages. The reminders were sent five days before their appointment. The result showed that the wording of a text message reminder can substantially reduce missed appointments. The most effective message told patients the specific cost to the NHS (c £160) from not attending. Missed appointments were reduced by a quarter compared to the original text message.

This particular project does not raise any issue in relation to proportionality, with minimal harms to participants, and a clear aim to improve the efficiency in attendance at hospital appointments. It also does not affect autonomy, in that patients can very easily ignore the information contained within the text message if they wish to do so.

Source: Department of Health, Imperial College London, The Behavioural Insights Team, Barts Health NHS Trust, NHS, *A zero cost way to reduced missed hospital appointments* (London, 2014).

In order to assist policymakers to ascertain the potential effectiveness of nudging in a particular area, they might refer to the Behaviour Change Wheel – a model of characterising and designing behaviour change interventions (see Figure 1).⁶⁰ At the centre of this mechanism are three essential conditions: capability (physical, psychological), opportunity (physical, social) and motivation (automatic, reflective). Placed around this core are nine intervention functions aimed at addressing one or more deficiencies in the essential conditions (education, persuasion, incentivisation, coercion, training, restriction, environmental restructuring, modelling and enablement) and seven policy categories that might enable the success of those interventions (communication/marketing, guidelines, fiscal, regulation, legislation, environmental/social planning and service provision). The

⁶⁰ Michie S, van Stralen M, West R (2011), The Behaviour Change Wheel: A New Method for Characterising and Designing Behaviour Change Interventions, *Implementation Science*, 6(42): 1-11.

Behaviour Change Wheel has been successfully used by the UK's Department of Health and the National Institute of Health and Clinical Excellence (NICE).

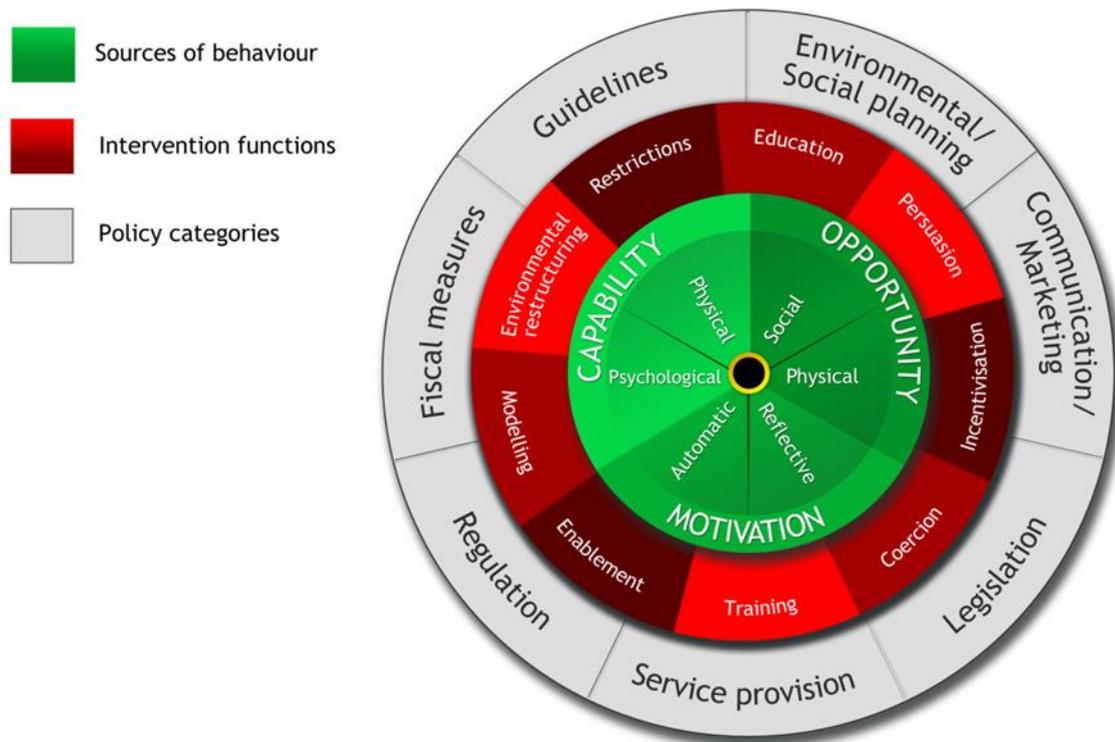


Figure 1. Behaviour Change Wheel

4.3 What are the known or potential burdens of the proposed intervention? Can burdens be minimised? Are there alternative approaches?

Policymakers should identify burdens or harms that might occur as a result of the planned intervention. A variety of burdens or harms might exist in public health programmes e.g. risks to autonomy as well as risks to equity - if policymakers propose targeting public health interventions only to certain groups. In some instances, burdens might be minimised by ensuring alternative options are available and that it is easy for individuals to identify and select those alternatives.

When deciding whether or not it is justifiable for society to intervene in private lives, at least four criteria should first be met: the person's condition should be harmful; the intervention must be likely to work by reducing the harm caused; the intervention should not itself lead to harm; and the intervention should not infringe on the rights of others.

Policymakers should strive to minimise any identified burdens to individuals or specific communities. If there is a prospect that an intervention may carry potential or actual burdens, policymakers are ethically required to determine whether the intervention could be modified in ways that minimise the burdens while not greatly reducing the intervention's efficacy. They should also consider whether an alternative, less burdensome, intervention might achieve similar outcomes.

4.4 Is the programme implemented fairly?

Human behaviour is shaped by numerous factors *e.g.* an individual's character, family background, socio-economic context as well as previous lifestyle choices. Behavioural change can be slow to occur and has particularly exposed the polarisation between social groupings. There has been much debate relating to the role of social contexts and their influence on individual decision-making processes. Social contexts have emerged that make it harder for many people to make healthy choices regarding exercise, diet and other lifestyle habits. Moreover, it has been claimed that the rationale for nudge stems from the mistaken belief that people act against their own best interests because of individual flaws rather than because of "poverty, inequality and a lack of hope".⁶¹ Some commentators have argued that social inequalities constitute a strong argument against nudging in favour of targeting the industries that profit from selling certain products (*e.g.* foods containing trans fats or tobacco)– rather than merely placing them on a different shelf in shops and cafes.⁶²

While health has both an instrumental and an inherent value, namely that good health concerns people's normal functioning and capabilities and that it is also an essential part of people's overall wellbeing, it is generally accepted that public health measures should be equitable, *i.e.* that they should provide a fair distribution of likely benefits and burdens. ***If public health nudging policies aspire to reduce health inequalities, then they should include measures specifically aimed at improving the quality of life of particular individuals and/or groups who are disadvantaged and/or at risk. Nonetheless, it is imperative that such measures do not result in the stigmatisation of people who are already marginalised or disadvantaged.***

The principle of solidarity can help to create nudges that are sensitive to social inequalities and that avoid increasing stigma. A solidarity-based perspective urges policymakers to be mindful of how they define target groups. Nudges that are based specifically on differences between people might, in

⁶¹ Wilby p, "The Kindly Words of Nudge are Cameron's Ideal Veneer", *The Guardian*, August 15th 2010. Available at: <http://www.theguardian.com/commentisfree/2010/aug/15/nudge-cameron-veneer-thaler-dogma>.

⁶² Gerberding, JL (2009). Safer Fats for Healthier Hearts: The Case for Eliminating Dietary Artificial Trans Fat Intake. *Annals of Internal Medicine*, 151, 137–138.

practice, work against a sense of shared vulnerability in the face of illness and death within health care systems. This problem is even more pronounced in nudges where the distinguishing features used for defining the target group carry the risk of stigma, or if the nudge itself is likely to increase existing stigmatisation or discrimination. For instance, in cases where nudges are aimed at groups whose members are seen as lacking - economically, intellectually, or morally (e.g. smoking pregnant women).⁶³ In such a case the nudge itself can increase stigma; examples are financial incentives such as vouchers or small cash payments to nudge pregnant women to stop smoking. ***In the interest of solidarity, nudges should be devised in such a way that they avoid setting marginalised groups apart from mainstream society, or patronising them. Ideally, such nudges should address larger and less specified target groups, or use incentives that focus on shared characteristics or behaviours.*** For example, policymakers might devise incentives for healthier living during pregnancy, rather than focusing on a specific issue, such as smoking. ***Policymakers should consider what characteristics define a target group. They should investigate whether there is evidence to suggest that those characteristics correlate with the problem that is sought to be addressed.***

Case Study: Offering Financial Incentives to Increase Breastfeeding Rates in Economically Disadvantaged Mothers

The Nourishing Start for Health (NOSH) scheme involved a pilot study involving 108 women living in three economically deprived areas where breastfeeding rates were low. If they breastfed their baby, they could claim £40 of vouchers for supermarkets and high street shops at five different stages - when their baby was two days, ten days, six weeks, three months and six months old, worth £200 if they stayed the full course. The pilot study found that over half the eligible women – 58 mothers – chose to join the scheme, 48 claimed the two-day vouchers, 45 claimed 10-day vouchers and 37 claimed the six to eight-week vouchers (34.3%).

Midwives or healthcare visitors had to co-sign the claim form so as to certify that the mothers were actually breastfeeding their babies. Mothers taking part in the project reported spending the vouchers on groceries as well as nappies, baby clothes and toys. Some women used the scheme to set personal goals, and saw the vouchers as a reward for breastfeeding to two days, 10 days or six weeks.

While the goal of increasing breastfeeding is clearly laudable, this project is specifically targeted at an “at risk” population based on an economic model, and has been criticised in some quarters for stigmatising economically disadvantaged women. Others argue that the scheme amounts to bribery and penalised women who were unable to breastfeed.

Source: <http://www.noshvouchers.org/>

4.5 How can the benefits and burdens of a program be fairly balanced?

If it is determined that a proposed nudging intervention, policy, or programme is likely to achieve its stated objectives, if its potential burdens are recognised and minimised, and if the programme is expected to be implemented in a non-discriminatory way, a decision must be reached about whether the expected benefits justify the identified burdens. Recognising that public health policy is based on multiple considerations, the question remains whether, from an ethical perspective, the intervention should be implemented. ***Policymakers have a responsibility not only to advocate programmes that improve health but also to eschew programmes that are unethical, whether because of insufficient evidence, or because they involve discriminatory procedures, or place unjustified or disproportionate limitations on personal freedoms.***

4.6 Which should take precedence: individual freedoms or the common good?

One of the potential “moral costs” of nudging is its capacity to curtail individual freedom to lead one’s life as one might choose, albeit in a less restrictive way than legislation or regulation. Bioethics gives significant weight to personal autonomy and individual freedoms. However, the question arises as to whether it is always appropriate to apply concepts such as autonomy to the domain of public health. It has been argued that objections to public health interventions dissipate over time (i.e. in the case of childhood immunisation) and that measures that were once regarded as undesirable are now well established components of the public health toolkit.

Critics of nudge and libertarian paternalism argue that ‘attempts to change people’s lifestyle choice are potentially patronising and condescending’ and embody ‘excessive state interference’.⁶⁴ It has also been argued that people have other interests besides their own personal health (e.g. the enjoyment of espresso and cognac at the end of a rich meal) and when one of those interests is in conflict with their health interest they will not necessarily take the view that their health interest should prevail. Individuals might differ in what they are willing to “sacrifice” in favour of their health and may make decisions “autonomously, consciously and deliberately” that appear irrational or contrary to public health ideals.⁶⁵ It has similarly been argued that using positions of public authority

⁶⁴ Rainford P and Tinkler J, (2011), *Designing for Nudge Effects: How Behaviour Management can Ease Public Sector Problems*, Originally presented at Designing for nudge effects: how behaviour management can ease public sector problems, Innovating through design in public sector services seminar series, 23 February 2011, LSE Public Policy Group. Available at:

http://eprints.lse.ac.uk/37810/1/Designing_for_nudge_effects_%28sero%29.pdf.

⁶⁵ ten Have M, (2014) *Influencing Lifestyle: Between Nannying and Neglect*, Centre for Ethics and Health, the Netherlands..

to try to change the behaviour of citizens (even if this behaviour may be better for the citizens themselves) “violates spheres of privacy, integrity and autonomy”.⁶⁶

While an individual’s personal autonomy should ideally be respected and upheld, this right also has to be balanced against the needs of society overall, i.e. the common good. However, the call to “common good” should not be over utilised in order to implement certain interventions without adequate justification. To be justified, a nudging intervention must represent a proportional response to meeting the challenge at hand. The principle of proportionality requires that a balance be struck between the goal a policy is hoping to achieve and the means by which this goal is to be realised. ***Harms to health caused by unhealthy lifestyle, not only affect the individual concerned. In a healthcare system that is founded on the principle of solidarity, the healthcare costs resulting from unhealthy behaviour are borne by everybody in a society. Nonetheless, the extent to which economic harms to the wider population can be used as a defence of nudging policies needs careful consideration.***

It is important when designing or implementing nudging policy, that society is not benefited to the detriment of individuals, as measures that curtail individual freedom are likely to be met with opposition.

Applying the principle of proportionality encourages a detailed examination of the proposed intervention and, by its very nature, requires that any decision is shown to be based on credible evidence and reasoning in order to be justified. ***A decision must be made as to whether the effect on autonomy is acceptable given the potential benefits of the intervention.***

4.7 What role can the concepts of trust and accountability play in the field of nudging, which works better “in the dark”?

It is important that any state-led public health programmes ensure that all parties feel that they are involved and included in the decision-making process. Admittedly, this is not always possible or even desirable when implementing policies that involve some aspect of nudging. Although it should be emphasised that there are some forms of nudging which involve a measure of transparency e.g. painting footprints on shop floors in order to lead consumers to healthier snacks or the use of prompted choice to increase organ donor number (transparent nudges).

In political terms the concepts of transparency and accountability are important for ensuring good governance. While accountability enables feedback only after a decision has been made or action

⁶⁶ Oliver A and Brown LD (2012) A consideration of user financial incentives to address health inequalities. *Journal of Health Politics, Policy and Law*, 37 (2): 201-226.

taken, transparency allows for feedback during the process of making decisions and taking actions. As mentioned above, public health policies involving elements of nudge are often introduced without consultation. While, there may be a general acceptance of the good intentions behind such interventions, there is a potential for serious public backlash if major errors were to occur due to a lack of evidence, or if people felt their personal freedoms were unfairly impinged upon. According to Rawls' "publicity principle" policymakers should refrain from 'selecting a policy that it would not be able to defend publicly'.⁶⁷

As previously mentioned, certain categories of nudging are prone to accusations of manipulation (e.g. the use of salience, priming, affect and ego). Manipulating target groups is problematic because, by its nature, manipulation infringes on the right to personal autonomy. Nevertheless, the use of manipulation may, in limited circumstances, be ethically defensible, for example where a person's capacity is impaired or to protect people from harm (e.g. as in the case of fake bus stops to prevent patients with Alzheimer's leaving nursing home campuses). However, policymakers must carefully weigh the risks and benefits of using manipulation to initiate behaviour change and be capable of providing a sound rationale for its use. ***Programmes that are manipulative should be kept to a minimum, should never be implemented when there is a less restrictive alternative, which would achieve comparable goals, and should be only be implemented in the event of a clear public health need and sound evidence demonstrating effectiveness.***

⁶⁷ *Supra* 13.

Case study: Nudge to Stop Patients with Alzheimer's Wandering off from a Nursing Home

A nursing home placed a fake bus stop in front of its premises. The aim was to reduce the number of patients leaving the campus and the need to rely on emergency services to locate and accompany them safely back to the nursing home. Alzheimer's patients' short term memory has been significantly hindered by the disease, yet their long term memory remains active. They recognise the colour scheme of the bus stop and are aware that if they stand at the stop a bus will come along and take them to their desired location. While they are waiting, nursing home staff approach the patients, inform them that the bus will not be along for some time and invite them into the home for a coffee.

This project does raise ethical issues. The target group is one which may be limited in their capacity to understand what is happening, and involves at best manipulation and at worst actual deception of the patient. The goal of the project is to minimise the likelihood of patients who may be confused becoming lost and becoming a risk to themselves and potentially others, which is worthy. The other goal is economic, to reduce the burden on nursing home and emergency staff. The specific ethical question is whether the manipulation or deception of people with dementia justifies both the goals set out for the project.

Source: <http://dnn9ciwm8.azurewebsites.net/Fake-Bus-Stops-For-Alzheimers-patients-in-Germany>

The acceptability of public health measures is linked to the notion of trust. The interrelated concepts of transparency and accountability are very important in fostering a climate of trust. ***With any public health intervention communicating policy decisions and the rationale behind them in an open and transparent way has been identified as one of the crucial factors in increasing the acceptance and co-operation of those who will be affected by these decisions. In terms of nudging, policymakers should consider using "transparent nudges" before "non-transparent nudges", where feasible.***

5. Concluding Remarks

The National Advisory Committee on Bioethics hopes that this ethical framework will contribute to the work of policymakers who are tasked with developing and implementing public health programmes, particularly those that may involve aspects of behavioural change or nudging.

Weighing alternatives according to this framework should help public health policymakers to distinguish between ethical and unethical nudging strategies. When considering the implementation

of a public health policy that incorporates some form of nudging, an ethical analysis should be conducted as a matter of routine, because it will embed ethical principles such as justice, equity, and proportionality into these public health initiatives and assure their integrity. Also nudging programmes will be more effective if such an analysis is undertaken.

Utilising this framework of ethical principles and related questions will encourage more meticulous and defensible reasoning and will ensure policymakers advocate particular interventions on the basis of ethically sound goals and clear evidence rather than prejudice and assumptions. In addition, the population at large must feel confident that public health policymakers will harness only those interventions that will improve the health of the public, that proposed measures are minimally burdensome, and that a fair procedure has determined that the magnitude of the problem and the ensuing benefits justify overriding conflicting moral claims to personal autonomy and/or transparency.