Tackling socially determined dental inequalities:

ethical aspects of *Childsmile*, the national child oral health demonstration programme in Scotland

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Abstract

Many ethical issues are posed by public health interventions, including whether they ought to be aimed at improving health across society or reducing specific health inequalities, whether they should be targeted or universal and the issue of which targeting criteria ought to be used. Although abstract theorising about these issues can be useful, it is the application of ethical theory to real cases which will ultimately be of benefit in decision-making.

To this end, this paper will analyse the ethical issues involved in *Childsmile*, a national oral health demonstration programme in Scotland that aims to improve the oral health of the nation's children and reduce dental inequalities through a combination of targeted and universal interventions. With Scotland's level of dental caries among the worst in the Western world, *Childsmile* represents perhaps the largest programme of work aimed at combating oral health inequalities in the UK. The areas of ethical interest include several contrasting themes: reducing health inequalities and improving health; universal and targeted interventions; political values and evidence base; prevention and treatment; and underlying all of these, justice and utility.

Introduction

In the decade since Daniels *et al*'s in-depth analysis of the interface between bioethics and social determinants of inequalities[1], mainstream bioethics has remained concerned with its focus on clinical medicine and the doctor-patient relationship, with scant attention paid to public health inequalities. The ethical aspects of social determinants of health have largely been neglected, which is perhaps partially due to the fact that addressing health inequalities in terms of social determinants involves interventions outside the 'normal' bioethical sphere of hospitals, clinics, and labs. It has been suggested that reducing health inequalities requires policy changes that go far beyond the sphere of healthcare: "reform efforts to improve health inequalities must be intersectoral and not focused just on the traditional health sector" [2]. In this sense, the bioethics of reducing socially determined inequality through policy must cross over into political philosophy to some extent, invoking principles of equality and justice more than is common in traditional medical ethics. This paper will use a specific public health intervention to illuminate the theoretical (and practical) aspects of, and ethical decisions involved in, addressing the social determinants of health inequalities.

Health inequalities can be both in terms of health outcomes and access to health care services – and both follow from socioeconomic inequalities. Kawachi *et al.*[3] provide a helpful glossary of the terminology in this field, defining health inequalities as the differences in health of individuals and groups most commonly associated (but not exclusively) by socioeconomic factors. Inequalities and socioeconomic inequalities in health are almost synonymous, such that other non-socioeconomic

[1] N. Daniels, B.P. Kennedy & I. Kawachi. Why Justice is Good for our Health: the Social Determinants of Health Inequalities. *Daedalus* 1999; 128: 215-252.
[2] *Ibid*; G. Rose. 1992. *The Strategy of Preventive Medicine*. Oxford: Oxford University Press.
[3] I. Kawachi, SV. Subramanian, N. Almeida-Filho. A glossary for health inequalities. *J Epidemiol Community Health* 2002; 56: 647-652.

related inequalities usually require further definition (e.g. age- or sex-related inequalities).

It is important to first understand the context of these issues and the epidemiology of dental disease. The considerable, continuing burden of dental decay in children in Scotland (and in some other parts of the UK) may not be fully appreciated[4]; data from NDIP - the National Dental Inspection Programme - show that almost half of Scottish 5-year olds experience significant dental decay[5]. There are stark socioeconomic inequalities underlying this headline - with those from the most deprived communities bearing the greatest burden. In those children who have experienced decay, the average number of decayed (into dentine), missing, and filled teeth per child is nearly 5. Oral health disorders are the most common reason for elective hospital admission (and General Anaesthesia) of children in Scotland, accounting for over 10,000 episodes per year[6]. Registration with dental practitioners of very young children - who would benefit most from anticipatory preventive care - is very low, at around 30%[7] with those from more deprived communities less likely to access dental services than those in affluent areas. *Childsmile* was developed as a response to these socioeconomically determined public health challenges. Figure I shows the percentage of children in Scotland with no obvious dental decay classified by Carstairs deprivation category.[8]

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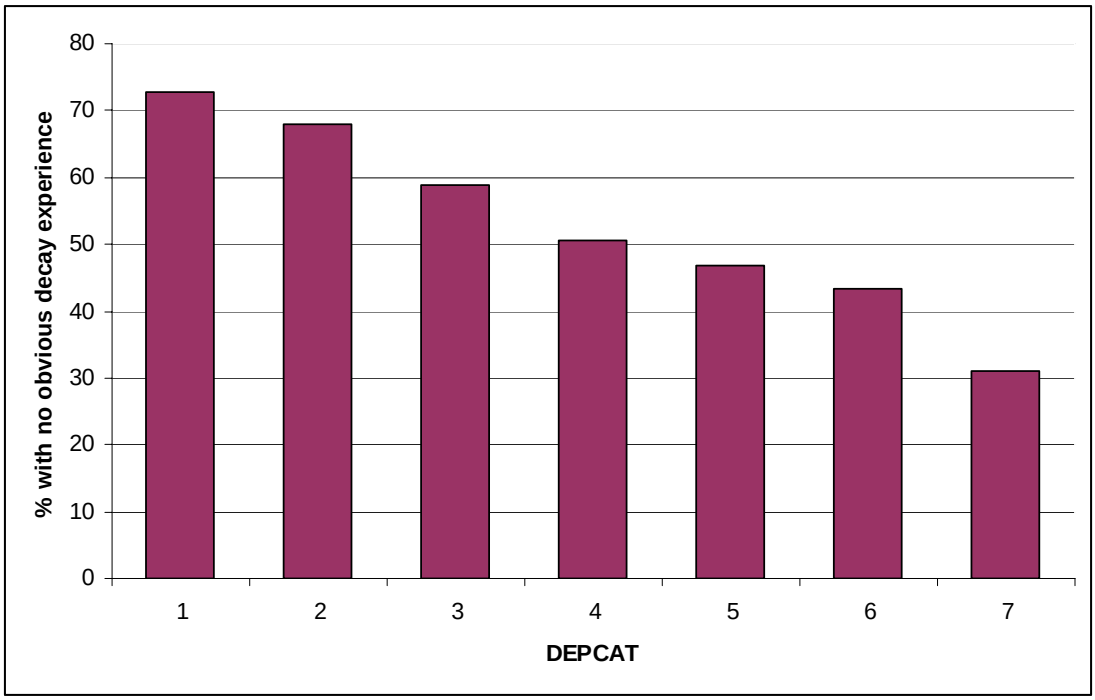
[4] National Health Service Scotland (NHS Scotland). 2008. National Dental Inspection Programme. Available at: http://www.scottishdental.org/dentalinspection.htm
[5] *Ibid*.
[6] NHS Scotland Information Services Division (NHS ISD). 2007. Child Health Programme. Available at: http://www.isdscotland.org/isd/4336.html
[7] Scottish Dental Practice Board (SDPB). 2007. Annual Report. Available at: http://www.sdpb.scot.nhs.uk/.
[8] Ibid; NHS Scotland (2008) *op cit*.;NHS ISD (2007) *op cit*; SDPB (2007) *op cit*; Scottish Government. 2007. *Better Health, Better Care: Action Plan*. Available at: www.scotland.gov.uk/Publications/2007/12/11103453/0; Scottish Executive. 2005. *Dental Action Plan for Improving Oral Health and Modernising Dental Services in Scotland*. Available at: www.scotland.gov.uk/Resource/Doc/37428/0012526.pdf; Scottish Intercollegiate Guidelines Network(SIGN). 2000. *SIGN 47: Preventing Dental Caries in Children at High Caries Risk (6-16 years)* Available at :http://www.sign.ac.uk/pdf/sign47.pdf; SIGN. 2005. *SIGN 83: Prevention and management of*

Figure 1 Proportion of P1 children by Carstairs deprivation category (DEPCAT) with no obvious decay experience



The primary measure of neighbourhood deprivation used for targeting in *Childsmile* was the recently developed Scottish Index of Multiple Deprivation (SIMD), created by the Scottish Executive (government) for monitoring and planning purposes. The SIMD is calculated using Census data including 6 domains of: income, employment, housing, health, education, geographical access to services / telecommunications derived from 31 individual indicators of deprivation at the level of 'data zones'[9]. Data zones are stable and consistent small geographical areas in Scotland. They are groups of 2001 Census Output Areas which have populations of between 500 and

dental decay in the pre-school child. Available at: http://www.sign.ac.uk/pdf/sign83.pdf; Childsmile – the national oral health demonstration programme. Available at: http://www.child-smile.org/; Scottish Dental Clinical Effectiveness Programme (SDCEP). Clinical guidance – Oral Health Assessment and Management of Dental Caries in Children in Scotland. Available at: http://www.scottishdental.org/cep/

[9] Scottish Executive. *Scottish Index of Multiple Deprivation 2004*. Edinburgh: Scottish Executive; 2004. Available at http://www.scotland.gov.uk/stats/simd2004

1,000 residents nested within Local Authority boundaries. They are intended to be effective at identifying small areas with similar social and economic characteristics[10].

Childsmile also used the traditionally reported area-measures of deprivation (based on data from the 2001 Census) for targeting: the Carstairs-2001 deprivation scores. These comprise four variables from the UK decennial Census: the proportion of: males unemployed; people in social class IV and V; people with no car ownership; and a measure of overcrowding – the proportion of people living in private household with a density of more than one person per room[11].

Childsmile – The Programme

The *Childsmile* programme was developed from the Scottish Executive's (government) policy document *Action Plan for Improving Oral Health and Modernising Dental Services in Scotland*[12]. *Childsmile* is the national child oral health demonstration programme in Scotland, which began in January 2006. It is based on the health promotion framework set out in the WHO *Ottawa Charter* [13] – building healthy public policy; creating supportive environments; strengthening community action; developing personal skills, and reorientating health services. It has three main arms:

[10] Scottish Executive. 2004. Scottish Neighbourhood Statistics. Edinburgh: Scottish Executive, Edinburgh. Data zones. Available at http://www.scotland.gov.uk/Publications/2004/02/18917/33243
[11] V. Carstairs & R. Morris. 1991. *Deprivation and Health in Scotland*. Aberdeen: Aberdeen University Press.
[12] Scottish Executive, *op cit*.
[13] World Health Organisation. 1986. *The Ottawa Charter for Health Promotion*. Available at: http://www.who.int/healthpromotion/conferences/previous/ottawa/en/

(i) the *Childsmile Core - Toothbrushing Programme* is a Scotland wide initiative. Free toothbrushes, fluoride toothpaste, and a feeding cup (to encourage healthy weaning) are distributed to al children via health visitors and nurseries. Further, all children in local authority and private nurseries have the opportunity to participate in supervised toothbrushing schemes.

(ii) *Childsmile Practice* is focused on children (and parents) from socioeconomically deprived areas (initially in the west of Scotland). It involves parents of newborn children who are assessed to be at risk of developing tooth decay being referred to the programme by their health visitor. While in the first instance it will focus on infants under three years, it will expand to include children up to 16 years as the programme develops. Additional support is offered via a dental health support worker, who: facilitates regular attendance at a local dental practice; provides additional dental health advice and information; and links families into other community health improvement initiatives. On attendance at the dental practice trained dental nurses provide toothbrushing instruction, and diet advice. As the child gets older, the dental practice team also provide additional preventive care such as fluoride varnish and fissure sealants.

(iii) *Childsmile Nursery / School* is a series of further targeted initiatives whereby nursery schools in deprived areas initially in the east of Scotland are involved in additional preventive initiatives in the form of twice yearly fluoride varnish applied to children's teeth by *Childsmile* teams. These teams comprise dental nurses and dental health support workers. The *Childsmile* teams also deliver oral health promotion advice.

It is planned that both the *Childsmile Nursery / School* and *Childsmile Practice* components will both roll out across the rest of Scotland over the next two years. It is

envisaged that while both of these components will move to universal coverage, they will retain targeted elements comprising of additional intensive activity and support utilising community dental health support workers.

There is a comprehensive evaluation in place which is following an action research model whereby the programme is learning and evolving as it develops. Furthermore, the evaluation has a number of research components including: economic evaluation, behaviour change, participation, communication skills and training, impact on health services, and health outcomes including oral health and general health measures. The complex decisions are also being evaluated through an ethics research component – with this being the base-line paper

Ethical analyses

The next four sections will look at the different ethical aspects of the *Childsmile* programme as it has developed and continues to do so. The first will examine the potential tensions between the programme's twin aims of improving oral health and reducing health inequalities. The second will look at the issue of targeting the different strands of *Childsmile*, and the rationale for making particular elements universal or targeted. The third section will examine the issue of political values and evidence base in relation to the programme's development; and the fourth section will explore the closely linked areas of the cost-effectiveness of *Childsmile* and whether prevention should be prioritised over treatment. Finally, the fifth section will consider how *Childsmile* 'scores' in terms of utility and justice. Given the interconnected nature of the ethical concerns here, there will be some overlap between sections.

Reducing inequalities and improving health

Several intertwined ethical elements are involved in a consideration of socially determined health inequalities. Perhaps the most obvious, particularly in the Scottish context, is the potential contradiction involved in implementing the two main expressed aims of NHS Scotland to improve Scotland's health and reduce inequalities[14].The first of these aims is traditional and typical of health services all over the world, but the second indicates a more recent social justice agenda (the NHS in England and Wales also has these two objectives, but health in Scotland is a devolved matter under the control of the Scottish Parliament).

Although these two aims of the NHS in Scotland are laudable independently, they can be problematic when attempting to implement one of them compromises the other; for example, the surest way to reduce health inequalities might well be to stop trying to improve the health of the most affluent. This would obviously run counter to the first objective of improving health. In effect, the incompatible aspect of the two NHS objectives is that the first is universal, and the second specific, suggesting that improving the health of a specific group is more important than improving the health of another. The potential tension between these aims indicates the delicacy with which interventions must be designed if they are to complement rather than contradict each other.

Given that the political theory of John Rawls underpins the social justice agenda to a large extent, it will be useful to apply his principles to healthcare inequalities. Rawls argued that any unequal distribution of resources is only justified if it is to the benefit of the worst-off. Thus, if we have a choice between five people being allocated 1 year of life and five 10 years as the result of a healthcare distribution decision, and five getting 2 years and five 9 years, the more just allocation is the second, as the worse-

[14] Scottish Government (2207) *op. cit.*

off are better off under this distribution. In fact, Rawls would prefer the second distribution even if the 9 years were replaced with 8; the inequality would be smaller even though the total number of years would also be lessened.

Of more practical importance than the potential contradiction between the two NHS objectives is the possibility that a universal objective of improving health might itself increase health inequalities, with educational campaigns, for example, benefiting those from more affluent backgrounds more than those from deprived areas and thus increasing the gap between these groups[15]. Once again, the two key questions are whether the intervention improves health and whether it reduces health inequalities. Dental health education in general works to improve health at the individual chair side one-to-one level[16]. But it has also been found to widen inequalities – with the rich accessing, and acting on the advice more than poorer contemporaries. This was noted in a dental health education project in Scotland which was more successful among higher SES groups – and dental health inequalities widened[17]. Other interventions may also have the outcome of having no effect on inequalities – benefitting all SES groups equally, or some may reduce inequalities if the poor benefit more. However, as will be seen in the next section *Childsmile* may manage to avoid this potential pitfall for two reasons.

The stated objectives of the *Childsmile* programme are similar to those of the NHS mentioned above: to improve the oral health of the nation's children and reduce dental inequalities. In terms of the Rawlsian analysis mentioned above, it seems

[15] L. Schou & C. Wight. Mothers' educational level, dental health behaviours and response to a dental health campaign in relation to their 5 year old children's caries experience. *Health Bulletin* 1994; 52: 232-239

[16] A.J. Sprod, R. Anderson & E.T. Treasure (1996) Literature Review. Health Promotion Wales *Technical Report 20*; E.J. Kay, D. Locker. Is dental education effective? A systematic review of current evidence. *Community Dent Oral Epidemiol* 1996; 24: 231-235.

[17] L. Schou & C. Wight. Does dental health education affect inequalities in dental health? *Community Dent Health* 1994; 11: 97–100.

unlikely that any particular group will be worse off in terms of oral health because of the creation of the *Childsmile* programme: had the scheme not been initiated, things would have continued as before, and there is no reason to think that any strand of the programme will damage anyone's oral health (although only the results of the evaluation will confirm or deny this). However, *Childsmile* does not exist in a vacuum, it has, of course, opportunity costs, and money spent on it could have been spent elsewhere; in other words, it is possible that *Childsmile* has diverted funding and resources from areas (both in general health or other dental health areas) where they could have been used more efficiently. This in turn means that those who were already badly off could now be even worse off, not because of any direct effect of *Childsmile*, but because they might have received more funding or resources had *Childsmile* never been created. Although this is a possibility, it would be very difficult to establish if this were the case, and if so, to what extent. An attempt will nonetheless be made to evaluate whether dental services have increased their efforts on the Childsmile target age-group at the expense of other age-groups in the population, in addition to similar considerations as part of the comprehensive economic evaluation.

Universal and targeted

Closely related to the twin aims of improving health and reducing inequality is the issue of whether universal or targeted approaches are best suited to achieving these aims. Should programmes such as *Childsmile* be aimed at all members of society, or a select target group? Population approaches, as opposed to individual approaches, were originally defined by Rose[18]. The population approach according to Rose would prevent higher numbers of cases of disease than an individually targeted approach. This basic concept has subtly expanded to compare 'population' approaches to 'targeted' or 'high risk' group approaches. This can readily be conceptualised with an

[18] G. Rose. Sick individuals and sick populations. *Int J Epidemiol* 1985; 1: 32-38.

example: Batchelor and Sheiham's analysis of dental caries distribution in the UK child population[19]. While there is a smaller proportion with high levels of dental caries, potential interventions which target the whole population will shift not only those at the high end but the rest of the population towards lower decay levels. However, a layer of complexity that is not always explicitly acknowledged, arises when 'the problem' is socioeconomic inequalities in the distribution of disease, whereby population approaches potentially may perpetuate or increase the unequal distribution of the disease[20], while the converse – a targeted approach – may bring those in most need who are most socioeconomically deprived to a level more comparable with the population and thus reduce the inequality.

We can also look at this from a Rawlsian perspective. Imagine that we have 100 people with caries. There is an unequal distribution of caries among this population: 20 of the people have 80 carious teeth between them, and the other 80 people have only 20% of the total caries between them (let's say 1 in 4 has one carious tooth, so our total of people with caries overall is 40). Now let's imagine that we adopt a universal approach that 'fixes' 1 tooth per person among the 40 who have caries. Thus the 80 better-off folk now have no caries at all among them (as the 20 who had caries have had it fixed), and each person in the worst-off group has 3 carious teeth each. We now have a situation where 20% of the population carries 100% of the problem, despite the fact that caries levels have decreased overall. A utilitarian would say that the universal approach has improved the situation; a Rawlsian would disagree. The latter would prefer a targeted approach where only the worst 20% are targeted. Assuming that the same budget or resources are available, we would have repaired half the carious teeth of those in the worst-off group. Now the worst-off 20%

[19] P. Batchelor & A.Sheiham. The limitations of a 'high-risk' approach for the prevention of dental caries. *Community Dent Oral Epidemiol* 2002; 30: 302-312.
[20] M. Joffe & J. Mindell. A tentative step towards healthy public policy. *J Epidemiol Community Health* 2004; 58: 966-968.

of the population has 67% of the problem, which is a much more equitable outcome than 100%. The same number of teeth have been repaired, but the inequality has decreased, rather than increasing has it did under the universal intervention. *Childsmile* is about preventing caries rather than fixing it, but the same principles apply: utility is not necessarily the most important value, and the *distribution* of benefit can be more important than the *amount* of benefit.

These are difficult ethical, economic resource allocation, and societal issues – one which policy has so far failed to fully address – leading to inconsistencies in the adoption of 'universal' and 'targeted' policies on a range of health issues exemplified by the debate around the provision of health visiting services and the resulting report by Hall and Ellimen (known as the 'Hall 4 Report')[21].

The issue of water fluoridation as a means of improving the dental health of those in deprived areas is a whole ethical debate in itself, with important issues of paternalism and autonomy raised by the prospect of what some call mass medication; these are unfortunately beyond the scope of this paper. However, from the perspective of improving health and reducing inequalities, fluoridation is an interesting example of a universal intervention. Systematic reviews of the evidence of the effectiveness of water fluoridation for reducing dental decay and inequalities have been undertaken recently[22]. Both reviews note the limited quality of evidence in the field but nonetheless suggest that there is some evidence that dental health inequalities are reduced. There is much debate on this specific issue REF BDJ Treasure debate.

[21] D.M.B. Hall & D. Elliman (eds). 2003. *Health for all children*. Oxford University Press: Oxford.
[22] York Centre for Reviews and Dissemination (CRD). 2000. *Fluoridation of the Water Supply: a Systematic Review of its Efficacy and Safety*. University of York, UK; Medical Research Council. 2002. *Working Group Report on water fluoridation and health*. London: MRC.

Another interesting ethical issue is that the methods used for targeting *Childsmile*, SIMD and Carstairs, are both area-based measures of socioeconomic circumstance and so there is the potential problem known as the "ecological fallacy" whereby individuals in each area socioeconomic strata are wrongly classified as all being of the same individual socioeconomic status. Thus there is the potential for those individuals of high socioeconomic status (albeit) in smaller numbers who live in lower socioeconomic areas taking up opportunities to access services or take up the health improvement messages. This is a possible flaw in the targeting methods used in *Childsmile*, but attempts have been made to undertake individual child risk assessment to determine the level of additional "targeted" intervention and support required within *Childsmile Practice*. [**MORE FROM DC/LM HERE on other risk factors involved here]**

Of the three *Childsmile* "arms", one is universal and two are more targeted. The *Childsmile Core - Toothbrushing Programme* is a universal initiative, currently in place across Scotland. *Childsmile Practice* is targeted in socioeconomically deprived areas (initially in the west of Scotland). While this will be rolled out across Scotland and become more "universal" it will retain a targeted approach to ensuring additional resources are in place in more socioeconomically deprived communities and disadvantaged families. *Childsmile Nursery / School* is a series of further targeted initiatives whereby nursery schools in deprived (high need) areas initially in the east of Scotland are involved, and the intention is to roll this out to nurseries in deprived communities across Scotland.

We can see from this description that *Childsmile* adopts neither a wholly targeted, nor a wholly universal approach. The possible problems of a universal public health education initiative have already been discussed, but it is important to remember that *Childsmile Practice* and *Childsmile Nursery / School* are not universal educational

schemes, but targeted community interventions with a health promotion component. The problem of greater uptake among more affluent groups, and the attendant increase in inequality, simply cannot occur in these arms of the programme, because the approach is not universal but targeted. Furthermore, even if the educational aspect of *Childsmile* were to be unsuccessful, the treatment provision component of the programme, such as the fluoride varnish, could still have a beneficial effect on the target groups. However, access to services and the need for parents to "opt in" still represents a challenge that could affect the ability to reduce inequalities.

Political values and evidence base

Another element is the potential for conflict between political values and scientific evidence of effectiveness. Reducing inequalities is obviously a powerful political value set and one that appeals to many voters' sense of justice. Different political values place different emphases on targeted and universal approaches. Macintyre (2007) argues that on one hand the evidence may suggest that universal initiatives may be easier to implement, more cost-effective, and provide more health gain – but this may be seen only in the better off in society. While targeting the disadvantaged may be more difficult to implement, have greater relative cost, and provide less health gain. Thus political value judgements have to be made[23].

However, it might be that ploughing money into targeted inequality-reducing interventions is much less cost-effective in terms of outcomes than more simple universal initiatives. If, for example, evidence emerged that the targeted, but expensive, components of *Childsmile Nursery / School and Childsmile Practice* , while moderately successful in reducing inequalities, did not improve the nation's health as much as *Childsmile Core* Toothbrushing Programme, it may seem logical

[23] S. Macintyre. Inequalities in health in Scotland: what are they and what can we do about them? Occasional Paper 17, 2007. MRC Social and Public Health Sciences Unit: Glasgow.

to discontinue the inequality-reducing scheme. But this might not be acceptable politically. Although we must await the results of the evaluation, it may well be that the targeted aspects of *Childsmile* are actually more effective than the universal ones, as has been suggested of health interventions in general[24]. However, the possibility remains that targeted interventions may be more costly or less cost-effective.[25]

Difficulties in balancing political values and expediency with evidence was also observed in *Childsmile*, with the political decision made to roll out *Childsmile Practice* and *Childsmile Nursery / School* across Scotland before the results of the evaluation of the programme are known; this may be a case of political pragmatism jumping the gun slightly in terms of the evidence base. This paper has the merit of ethical objectivity, given that the data on *Childsmile* is not yet available; the ethical questions considered here have helped develop the evaluation by clarifying research questions, and will also be used to establish whether the approach of the intervention meets its objectives.

Prevention and treatment

Closely related to the issue of effectiveness is how to achieve the right balance between prevention of disease and treatment of disease. But it is now accepted that preventing illness can be much more effective than treating it:

> Many societies have historically been more likely to favor identified persons and to allocate resources for critical care, even if evidence exists that preventive care is more effective and efficient…good evidence exists to show that public health expenditures targeted at poorer communities for preventive

[24] M. Woodward & I. Kawachi. Why reduce health inequalities? *J Epidemiol Community Health* 2000; 54: 923-929.
[25] Macintyre, *op. cit.*

measures, such as prenatal care, save many more times that amount in future care. [26]

The emerging model of care in NHS / health policy in Scotland (Scottish Government, 2008) is one of anticipatory care[27]. This represents an evolution from care which is hospital-centred, doctor-dependent, reactive, and passive-patient, to care which is team-based, continuous, integrated, preventive, and where the patient is a partner in their care. *Childsmile* clearly falls into the category of anticipatory (preventive) care, and in this sense is a very important step towards eradicating the notion that dentistry is all about "drilling and filling" teeth. Despite the modernisation of undergraduate dental curricula,[28] many dentists remain too focused on intervention rather than prevention. It has even been proposed (informally) that the best way to change this mindset, save money, and improve oral health across Scotland would be to remove one dental chair from each practice and devote the extra space to oral health promotion activities. Such 'extreme' measures are unlikely, but if *Childsmile* succeeds it will be at least a step in the right direction. Of course, even if *Childsmile* succeeds on its own terms, the socioeconomic inequalities that necessitated the programme's creation will still persist.

Justice and utility

Finally, underlying all of these issues are the contrasting notions of justice and utility. As mentioned, it might be that one's political values stress the importance of justice

[26] T. Beauchamp and J. Childress. 2001. *Principles of Biomedical Ethics*. Oxford University Press, USA, p.252.
[27] Scottish Government (2007) *op cit*.

[28] General Dental Council (GDC). 2005. The First Five Years A Framework for Undergraduate Dental Education. GDC, London. Available at: http://www.gdc-uk.org/News+publications+and+events/Publications/Guidance+documents/The+First+Five+Years.htm

as the be-all and end-all, with utility (and cost-effectiveness) a poor second. Alternatively, one might think that, while justice is important, the primary concern must be the most useful distribution of health and of healthcare within a system that has access to only finite resources. This brings us to the issue of why we attempt to reduce inequalities at all. Woodward and Kawachi identify four reasons:

1. Inequalities are unfair.
2. Inequalities affect everyone (through spillover effects such as crime and increased strain on the health system).
3. Inequalities are avoidable.
4. Interventions to reduce heath inequalities are cost-effective.[29]

These reasons will have different priority according to one's own values. For the person whose paramount concern is justice, the first and third reasons are the most important: it is the unfairness, and the fact that it is rectifiable, that necessitate us to reduce inequalities. For the utilitarian, the second and fourth reasons are the important ones. How do these contrasting values relate to *Childsmile*?

It is certainly the case that oral health inequalities are unfair, but it is sometimes difficult to articulate exactly why they are unfair. However, there is little dispute when it comes to the health of children, which is not determined by free choices that they make. It is not so immediately obvious that dental inequalities affect everyone, but there are nonetheless spillover effects here too. To take just one example, many people in rural (affluent) parts of Scotland find it very difficult to access an NHS dentist perhaps as a result of the socioeconomically determined issues of inequality in access to dental services. If the oral health of the next generation is improved through programmes like *Childsmile*, people will not have to visit the dentist as

[29] Woodward & Kawachi, *op cit*.

frequently, and ease of access should improve accordingly. To put it differently, current inequalities in access to dental care may be alleviated through schemes such as *Childsmile* that tackle dental inequalities. Although the social determinants of health in deprived areas can make it challenging to reduce dental inequalities, the *Childsmile* approach has demonstrated a determination and a will to take on this challenge as an ethical duty.

Finally, although it is difficult to measure the cost-effectiveness of *Childsmile* in the short-term, it is highly probably that the improvement in oral health will result in long-term cost-saving if the children involved continue to maintain their oral health (which will in turn have wider health benefits). If this does turn out to be the case, it will illustrate how a programme motivated largely by the wish to reduce socially determined health inequalities can also accommodate the objectives of the health utilitarian, with everyone in Scotland potentially benefiting from the increased cost-effectiveness brought about by Childsmile.

To end this section, it seems appropriate to deal head-on with those who oppose the targeted pursuit of reducing inequalities. As already mentioned, Batchelor and Sheiham argue that universal approaches are better, but they failed to consider the issue of socioeconomic inequalities being part of the problem[30]. Going further, McLachalan has argued that inequalities do not necessarily appeal to justice, stating that: “If, on average, people who are poor are more likely to suffer from ill health and to die younger than people who are rich, then – whether or not it might be a good idea to try to install laws and public policies to alter the situation – the situation is not necessary [sic] an injustice nor the result of one.”[31]

[30] Batchelor & Sheiham, *op cit.*
[31] Hugh V. McLachlan. 2005. Social Justice, Human Rights and Public Policy. Glasgow: Humming Earth, p. 70-72.

McLachlan seems to be arguing two things: that although it might be beneficial to fight inequalities, it is not a matter of justice. The obvious response, as mentioned above, is that even if one believes that adults can freely choose to live as they please, and try to break free of the influence of any social determinants that might exist, their children cannot, and this is certainly unjust. It is because children are the most vulnerable members of society that anticipatory programmes such as *Childsmile* are so important. Second, making it more pleasant to be poor is not the point of tackling inequalities: the aim is to make it *fair* to have a low salary (part of which must mean that such a salary itself is fairer and more equal), and not have one's postcode dictate one's life expectancy. Free-market attitudes like those of McLachlan fundamentally neglect the moral obligation to have a society that treats people fairly and ironically goes against the notion of a truly fair free society.

Conclusion

Childsmile is a response to both health outcome inequalities and health service access inequalities. It aims to address health outcome inequalities through primarily reorientating oral health services, but also via community activities and nursery / school setting health promotion initiatives. It comprises both universal and targeted elements. There is a central irony to the situation that *Childsmile* addresses, however: although *Childsmile* targets those who are socioeconomically disadvantaged, it cannot itself address the actual socioeconomic inequalities that it uses for targeting. Although *Childsmile* reaches out to communities and combines health service with health promotion components, it cannot address the wider socioeconomic inequalities of income, education, and opportunity that cause the oral health inequalities in the first place. These can only be addressed by more fundamental public social and economic policy changes that address the structural causes of inequality. To put it differently, while *Childsmile* is probably a successful example of anticipatory care and preventive medicine, it can anticipate but not

prevent the social determinants of health themselves. Oral health is determined by factors far wider than health services and access to health services. Factors including: income, education, access to healthy food and to fluoride, personal skills, to empowerment to make healthy choices free from the burden and stress of low socioeconomic circumstance.

It is obviously beyond the traditional model of healthcare itself to address income and education distribution, yet doing so is key to reducing health inequalities:

> "Since good health is the result of factors which are beyond the control of the NHS, the goal of improving people's health will be served by spending outside and not only within the NHS, while the balance of NHS resources needs to be shifted further towards prevention rather than treatment, Spending a larger proportion of national income on the treatment of ill-health does not necessarily improve a nation's health".[32]

Childsmile can be regarded as a Rawlsian attempt to address the unjust distribution of social determinants of oral health. As Beauchamp and Childress put it in their discussion of Norman Daniels' application of Rawls to healthcare: "this theory recognizes a positive societal obligation to eliminate or reduce barriers that prevent fair equality of opportunity, an obligation that extends to programs to correct or compensate for various disadvantages. It views disease and disability as undeserved restrictions on persons' opportunities to realize basic goals."[33] Although *Childsmile* is still a relatively new project, it seems probable that the programme has set on a course to meets both its objectives of improving health and reducing inequalities

[32] Commission on Social Justice.1994. *Social Justice: Strategies for National Renewal*. Vintage, London, pp.291-292.

[33] Beauchamp and Childress, op cit., p.234.

without any contradiction. Only time will tell whether *Childsmile* succeeds in achieving a successful balance between the contrasting themes highlighted here; this analysis of the ethics of Childsmile ensures that the evaluation will be able to assess the evidence objectively.

To conclude, the following three quotes seem to capture in turn: the moral truth concerning, the required remedy to, and the challenge in tackling socially determined health inequalities:

'Massive poverty and obscene inequality are such terrible scourges of our times…that they have to rank alongside slavery and apartheid as social evils'

- Nelson Mandela[34]

'The primary determinants of disease are mainly economic and social, and therefore its remedies must also be economic and social' . – Geoffrey Rose[35]

'Economic injustice will stop the moment we want it to stop and no sooner, and if we genuinely want it to stop the method adopted hardly matters.' – George Orwell [36]

Acknowledgements

We would like to thank all who participate in the *Childsmile* Programme and Evaluation, and are indebted to colleagues for their input into some of these debates.

[34] N. Mandela (2005) Make Poverty History campaign speech. Trafalgar Square: London. http://news.bbc.co.uk/1/hi/uk_politics/4232603.stm [accessed Nov. 2007].

[35] Rose, *op. cit.*, (1992) p.129

[36] G Orwell. 1937. *The road to Wigan Pier*. Penguin Books: London, p.139.