OFFICE OF COMMUNICATIONS

Impact Assessment

Food Advertising to Children

Impact Assessment

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Section 1

Introduction

1.1 This annex when read in conjunction with the rest of this policy statement and the Impact Assessments (IAs) in the March consultation document, June update and the November statement and further consultation represents an IA, as defined by Section 7 of the Communications Act 2003 ("the Act"). IAs form part of best practice policy making and are commonly used by other regulators. This is reflected in Section 7 of the Act, which means that generally we have to carry out IAs where our proposals would be likely to have significant effect on businesses or the general public, or where there is a major change in Ofcom's activities. In accordance with Section 7 of the Act, in producing this IA, Ofcom has had regard to such general guidance as it considers appropriate, including related Cabinet Office guidance and our own IA guidelines[1].

1.2 The November document consulted on the specific question of whether the restrictions in Package 1 (which included programmes of particular appeal to children under 10) should be extended to cover programmes of particular appeal to children under 16 (Modified Package 1). This IA focuses on the costs, benefits and differences between these two policy packages to inform the final policy decision set out in the main policy statement. It does not repeat the economic rationale for intervention, the detailed explanation of the methodology for estimating the costs or benefits of the different policy options or the work Ofcom has undertaken to confirm the robustness of the modelling results which were all included in the November IA[2].

1.3 While economic analysis, such as the analysis presented in this IA can provide a valuable tool for evaluating and selecting different options for regulation, other factors, such as public policy considerations, also need to be taken into account. Ofcom recognises that there are inherent difficulties in seeking to quantify the likely costs and benefits of the options proposed. Analysis of the estimated costs and benefits of broadcasting restrictions should therefore be seen in this wider context.

1.4 Ofcom's duties, the way in which Ofcom performs these duties and the regulatory principles it has adopted are set out in Section 2 of the main statement.

1.5 This Impact Assessment is structured as follows:

- Section 2 sets out the response to particular issues;
- Section 3 sets out the assessment of costs and benefits of the options; and
- Section 4 compares the policy options.

[1] http://www.ofcom.org.uk/consult/condocs/ia_guidelines/condoc.pdf
[2] The November IA can be found at http://www.ofcom.org.uk/consult/condocs/foodads_new/ia.pdf

Section 2

Responses to the IA on particular issues

Introduction

2.1 This section deals with the issues raised in responses to the November IA. In some cases these issues have been dealt with in the main statement, in which case the discussion is not duplicated in this IA. Where relevant Ofcom has made a distinction between issues that have been raised before and new issues arising from the November Statement. Where issues have been raised and addressed in earlier consultation documents or where issues are not relevant to the issues for decision (e.g. they relate to decisions that have already been taken), they are noted but not dealt with in any detail.

2.2 This section groups the responses by topic and explains how Ofcom has developed its analysis and taken on board the consultation responses. It covers the following issues: whether Modified Package 1 represents an intrusion into adult airtime; the disproportionate impact on certain channels; mitigation factors; the impact on programming; the impact on UK licensed channels broadcasting overseas; the estimation of health benefits; the modelling of the impact of the content rules; and the Race Impact Assessment. Responses on other issues are dealt with in the main statement.

2.3 As with the March consultation, there was no substantive criticism of the methodology or approach used in the modelling; most of the comments that were made were in relation to the assumptions that Ofcom had used in the modelling. Although Ofcom has carried out further analysis of the options under consideration, it has not made any changes to the methodology or overall approach that it has used to model the impact of the proposed restrictions. The further analysis is set out in Section 3.

2.4 In a number of cases, broadcasters submitted responses which offered alternative estimates of the potential financial impact of the policy packages and also commented on issues around implementation. In all cases, the financial data provided was confidential and specific to those channels, so Ofcom is not able to discuss the differences in this document. However, in general terms the main reasons for differences appear to be that broadcasters were more pessimistic about the extent of opportunities to mitigate the potential impact of the proposed restrictions and have made arguments about the specific impact in terms of how advertising is sold, the knock-on effects on programming budgets etc.

2.5 Responses from consumer and health groups on issues pertaining specifically to the IA tended to be limited in scope. Where appropriate those comments have been taken into account.

Modified Package 1 represents an intrusion into Adult airtime

2.6 A number of industry responses argued that by extending the scheduling restrictions to under-16s, Modified Package 1 represented an intrusion into viewing by a significant number of adults. McDonalds argued that this would be inconsistent with Ofcom’s regulatory objective of avoiding intrusive regulation of advertising during adult airtime.

2.7 However, Ofcom notes that some broadcasters welcomed Ofcom's proposals to extend the volume and scheduling restrictions to children under the age of 16 in Modified Package 1. One broadcaster argued that the application of volume and scheduling restrictions only to children under 10 (as is the case with Package 1) was too narrowly targeted and would simply have resulted in advertising switching from children's channels to more generalist channels. The extension of the volume and scheduling restrictions to children under 16 would make such a substitution away from children's channels less likely and would therefore increase the effectiveness of the advertising restrictions. The same broadcaster also argued that this extension of scope would provide a stronger incentive for manufacturers to reformulate their products than would have been the case with more narrowly defined restrictions.

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2.8 The purpose of using the 120 viewing index within Package 1 and Modified Package 1 to identify programmes of particular appeal to child audiences is to ensure that (as far as possible) the intrusion into adult viewing time is kept to a minimum, while extending the restrictions beyond children's airtime alone.

2.9 As is demonstrated by the analysis carried out by Which? in its response to the consultation, this is not the same as targeting programmes which have large children's audiences. Programmes which have large children's audiences often also have very significant adult audiences and restricting advertising of HFSS products to adults in and around these programmes could be a disproportionate intrusion into adult airtime.

2.10 Paragraphs 4.17 – 4.19 of this IA consider the intrusiveness of Package 1 and Modified Package 1 into adult airtime and conclude that while Modified Package 1 is slightly more intrusive into adult airtime than Package 1 (primarily because of the difference in treatment of Music channels), this difference is not significant.

Disproportionate impact on certain channels

2.11 One broadcaster argued that its relatively small size in the TV advertising market meant that it had little bargaining power with advertisers, and that advertisers committed advertising spend across its channels as a block rather than being concerned with seeking to allocate spend to individual channels. On that basis the broadcaster argued that it was likely to lose all HFSS product advertising and sponsorship across all of its channels because advertisers would choose to move away from its portfolio of channels *en bloc*, rather than just from those channels which might be affected. It provided estimates of what it considered to be the likely financial impact given that it would be likely to lose HFSS advertising across all of its channels.

2.12 The broadcaster did recognise that on a channel basis the majority of its programming across the block of channels did not index more than 120, with perhaps the exception of weekdays during school holidays. It also indicated that it was in the process of installing a new airtime sales system which would allow it to sell advertising space on a channel by channel basis although such a system would not be in place until later in 2007.

2.13 The broadcaster suggested that the impact of the proposals could be mitigated by allowing channels to implement restrictions on HFSS advertising only during those time-bands when the index is likely to be over 120.

2.14 A different broadcaster estimated that the impact of Modified Package 1 would be of the order of 1.3% of its revenue and that the scale of impact was disproportionate against the purported benefits of the restrictions.

Ofcom's Assessment

2.15 The modelling in Ofcom's IA work has been carried out at the level of individual channels. Ofcom therefore recognises that broadcasters could potentially be exposed to a greater financial impact if, as the broadcaster has suggested, advertisers simply withdraw all HFSS food and drink advertising from across a number of channels regardless of whether they were likely to be affected or not.

2.16 However, this is not an automatic response to the scheduling restrictions proposed by Ofcom. In part this particular impact would be a function of the way in which the broadcaster has chosen to sell advertising airtime across a block of channels in order to increase its leverage with advertisers. The broadcaster itself indicated that a new airtime trading system would allow it to allocate advertising spend on a channel by channel basis, and it could, if it chose, also move to selling airtime on a channel by channel basis. This would reduce the potential loss.

2.17 The use of the audience index is intended to be applied as a predictive tool for identifying programmes of particular appeal to children. Ofcom therefore expects broadcasters to exercise a certain amount of judgement in determining how they make use of this tool - this could include developing a time-banding approach. Ofcom has conducted some further modelling of the effects of bundling channels and time-banding on the revenue loss associated with the restrictions for this broadcaster (see paragraphs 3.24 - 3.27). Based on this analysis Ofcom believes that over 60% of the potential revenue loss could be offset by using time-banding (compared to a pre-9pm ban) and around a third of the remainder could be offset by selling channels separately.

2.18 Furthermore, Ofcom has applied a series of mitigation factors to the amount of HFSS advertising at risk in order to arrive at realistic figures for the likely impact of the proposed restrictions. These factors are different for dedicated children's channels and music channels to those for PSB channels and other cable and satellite channels. This in part reflects the fact that Ofcom considers that different channels are likely to have differing levels of difficulty in offsetting the potential losses from the restrictions. Ofcom has therefore already made an allowance for the differing impact of the advertising restrictions on different types of channels.

2.19 In response to the second broadcaster, Ofcom's IA recognised that different broadcasters would be impacted to a greater or lesser extent depending on the nature of their programming mix. Table 9.6 of the November IA explicitly set out not just the average impact across different categories of broadcasters but also the highest estimated impact (in percentage terms) on any one broadcaster in that particular category and the number of broadcasters with a greater than 5% revenue loss. In the case of cab-sat channels, Ofcom estimated that the average impact would be in the order of 0.2% but that the greatest impact would be up to 6.3% of total revenue. It also estimated that there could be up to 9 channels that could lose more than 5% of their total revenue. In addition, paragraphs 4.20 – 4.22 of this IA explicitly address the question of the proportionality of the packages under consideration on channels and broadcaster groups.

2.20 Therefore Ofcom specifically recognised the effects on individual channels in determining whether the different policy options under consideration were disproportionate.

Mitigation Factors

2.21 In its response one broadcaster argued that the mitigation factor for its type of channel was likely to be lower than the range suggested by Ofcom. It argued that this was because it had ended 2006 with a small proportion of unsold advertising capacity and that this was likely to get worse in 2007 with the proposed restrictions on the advertising of HFSS products.

2.22 The broadcaster also argued that some advertisers will avoid its portfolio of channels altogether because of “bad press” arising from Ofcom’s consultation and the possibility that – given the way it sells its airtime – all of its channels will be deemed to be of particular appeal to children. It argued that the proposed restrictions would require advertisers to make minor adjustments to agreed day-part and channel allocations. However, because of its relative size in the marketplace, advertisers would not be prepared to invest the time and effort to do this and would simply withdraw their advertising spend altogether.

Ofcom’s Assessment

2.23 The mitigation factors which Ofcom used in the November IA had themselves been adjusted from those used in the original March IA to take account of responses made to that consultation. The revised mitigation factors used by Ofcom explicitly accepted the fact that DCCs and music channels would have less opportunity to mitigate the impact of the proposed scheduling restrictions than other channels.

2.24 One of the factors Ofcom took into account when adjusting the mitigation factors was that several of the DCCs had indicated that they had not been able to sell all their advertising airtime in the previous year and that this would have an effect on their ability to mitigate potential losses. Therefore Ofcom considers that it has already taken this effect into account in the adjusted mitigation factors and does not propose to make further adjustments.

2.25 Given that the restriction will be applicable to all TV channels, Ofcom does not believe that the broadcaster will be singled out because of the particular audience make up it may attract. Similarly given that advertisers are likely to need to make some adjustments resulting from these restrictions for all channels on which they might advertise, Ofcom does not believe that the broadcaster would be particularly disadvantaged.

Impact on Programming

2.26 Pact argued that a consequence of the recommendations could be a significant reduction in the amount of money that commercial broadcasters invested in new British children’s programming. It estimated that at present commercial broadcasters invest around £35m per annum in new UK children’s programming. It pointed out that Ofcom had estimated that the potential revenue impact of Modified Package 1 could be up to £39m per annum before mitigation. Pact argued that broadcasters would seek to cut costs by acquiring more imported programmes and that independent producers of children’s and animation programmes would be particularly hit. Pact also pointed out that children’s programming currently accounted for 15% of all UK programme exports. The primary commission was important initial investment and that if the volume of original children's programming was reduced then so too would programme exports.

2.27 One broadcaster argued that the proposed extension will have a "devastating" impact in terms of its ability to produce and commission high quality content. It argued that the loss of most of its HFSS advertising revenue across all its channels would have a direct impact on its bottom line and that it would have to consider relying more heavily on repeats and imported material. It has also argued that there could be a knock-on impact from changes in its programme schedule on the carriage fees it could expect to receive from Sky and ntl/Telewest.

Ofcom's Assessment

2.28 The arguments made by Pact were not new and Ofcom had already acknowledged the possible impact on children's programming in the November IA.

2.29 Ofcom has examined the arguments put forward by the broadcaster. It recognises that the broadcaster had aspirations to increase the amount of original UK commissioning that it undertook – albeit from a low base. Ofcom considers that the actual loss of advertising revenue suffered by the broadcaster – after taking into account how the index 120 component might be expected to work – is likely to be significantly less than that estimated by the broadcaster. Ofcom accepts that there could still be some reduction in its aspirations to commission more original content, but that this has already been taken into account in Ofcom's previous IAs.

Underestimation of Health benefits

2.30 The response from the International Association for the Study of Obesity (IASO) argued that Ofcom had been inhibited in adopting a more extensive package of restrictions. It argued that the assessment of benefits had not taken into account "*any estimates of the health costs of overweight, non-obese individuals, affecting a far larger proportion of the population*". The IASO submission went on to argue that the estimates of the potential benefits should be more than doubled to take account of the impact among overweight, non-obese adults and that Ofcom should initiate a review of the balance of costs and make stronger restrictions.

2.31 The response from Heart of Mersey argued that there would be additional health benefits in terms of adults not being exposed to HFSS advertising which could be factored into the benefits analysis as well.

Ofcom's Assessment

2.32 IASO appear to have misunderstood the way in which the estimates of the health benefits have been constructed. The benefit assessment provided by the FSA includes not just the benefits of addressing childhood obesity, but also wider health benefits of the reduced incidence of strokes, CHD and cancer. Indeed, the benefits of reducing childhood obesity are relatively small and it is the wider health benefits which yield the vast majority of the benefits.

2.33 In relation to HoM's comments, the FSA benefits analysis recognises this point. The FSA point out that they have adopted a conservative approach to the valuation of benefits and have not attempted to quantify this potential benefit. In addition, Ofcom's regulatory objectives relate to significantly reducing the exposure of *children under 16* to HFSS advertising (emphasis added), rather than the exposure of adults.

Content Rules

2.34 A number of respondents on both sides of the debate argued that Ofcom had not taken into account the significance of the content rules.

2.35 The FDF response argued that they were "*probably the strongest set of content rules*" anywhere in the world and that, coupled with Package 1 volume and scheduling restrictions, they would significantly reduce the number of food advertisements targeted at the "*Government's key audience of primary school children*". They thus expressed surprise that Ofcom was proposing to extend the restrictions to include young people up to 16 years old.

2.36 Responses from consumer groups (NCC, Children's Food Campaign. Which?) argued that the content restrictions should be extended to include children up to 16 years old to be consistent with the scheduling restrictions. Responses pointed out that Ofcom was proposing to extend the scheduling restrictions to include children up to the age of 16 after considering all available evidence and there was no suggestion that older children were not susceptible to advertising methods featuring licensed characters, celebrities etc. They argued it would be illogical for Ofcom to recommend content rules which would not include children under 16.

2.37 The response from the National Heart Forum argued that Ofcom should conduct a discrete impact assessment of the content rules on the grounds that it was not possible to judge their effect as distinct from the impact of the scheduling rules. It argued that without such an assessment, it was not possible to know whether the rules were likely to alter current advertising practices and therefore it was difficult to accept assurances that these rules were a meaningful and effective addition to the scheduling restrictions.

Ofcom's Assessment

2.38 The March and November IAs drew attention to the difficulties associated with trying to assess the financial impact of the content restrictions. Although responses to the two consultations have suggested that Ofcom ought to model the impact of the content restrictions, there have been no suggestions as to how such an assessment could be made and no-one has proposed a particular methodological approach. Given the range of factors that would need to be taken into account, Ofcom did not consider that it was possible to devise a robust methodology to make a separate assessment of the content restrictions – this remains our position. Instead we pointed out that the content restrictions were aimed at supporting the volume and scheduling restrictions.

2.39 The Department of Health intends to monitor the balance of food promotion to children later in 2007 and Ofcom itself has proposed a review of the operation of its restrictions at the end of 2008[3]. Ofcom considers that such reviews provide at least an initial opportunity to consider how the content of food advertising has changed as a result of the proposed restrictions. That should enable a judgement to be made about the impact of the content restrictions and to inform a decision as to whether further, separate analysis is required.

[3] http://www.ofcom.org.uk/media/news/2006/11/nr_20061117

Race Impact Assessment

2.40 As noted in the race impact assessment published with the November Statement[4], there is evidence that advertising restrictions would benefit people from ethnic minorities. Ofcom's review of available research found that children who are of Asian descent are four times more likely to be obese that those who are white, and that women of Black Caribbean and Pakistani descent are at particularly high risk[5]. Given that people from these ethnic minorities have been shown to be particularly susceptible to obesity, Ofcom believes that the policy options it has set out should have a beneficial impact on children from these groups. As indicated elsewhere in the impact assessment and consultation document, the effect of changes to advertising regulation are likely to be modest in isolation, and will need to be supported by other measures to promote better diets and healthier lifestyles.

[4] November Statement (http://www.ofcom.org.uk/consult/condocs/foodads_new/foodads3.pdf)
[5] Saxena, S., Ambler, G., and Majeed, A. (2004) Ethnic group differences in overweight and obese children and young people in England: a cross sectional survey. *Archives of Disease in Childhood*, 89, pp 30-36. www.fetalneonatal.com/cgi/content/abstract/archdischild; 89/1/30. See also House of Commons Health Committee (2004) Obesity Third Report of Session 2003-2004 Volume 1, para 38, p.16. London: The Stationery Office Limited.

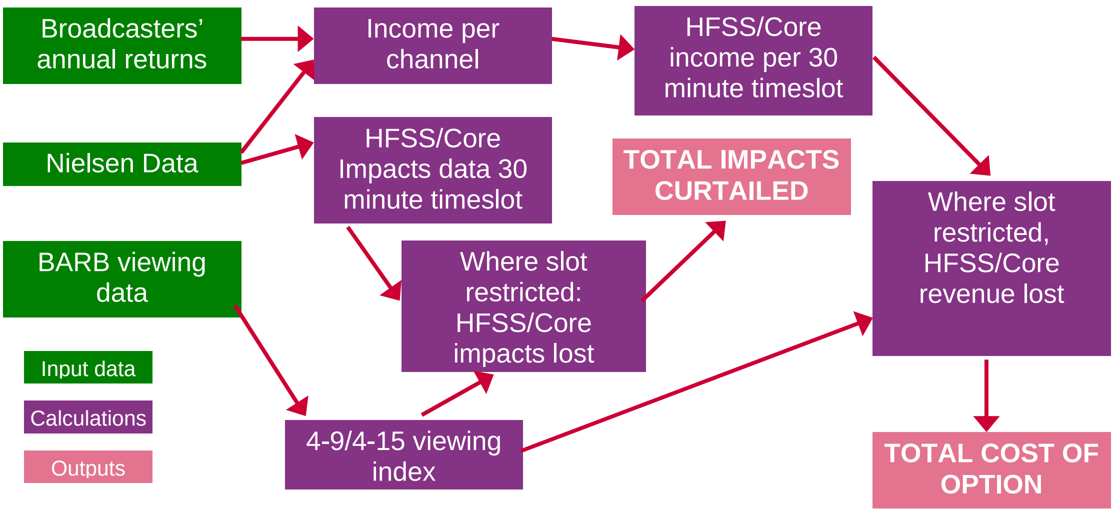
Section 3

Assessment of costs and benefits of the options

Methodology for Assessing the Costs of the Policy Options

3.1 The methodology used to assess the costs of the policy options is set out in detail in Section 5 of the November IA. Figure 3.1 shows the modelling logic used to assess the costs to broadcasters of the policy options considered.

Figure 3.1: Modelling of Costs to Broadcasters



3.2 Ofcom undertook a number of pieces of analysis to confirm the robustness of the modelling results. This included:

- comparison of the results based on averaged data from the model with a more detailed 5 week sample;
- comparison of Ofcom estimates of impacts reduced with estimates from the FAU;
- comparison of Ofcom estimates of revenue affected with broadcaster's own estimates of the impact on the their revenues; and
- analysis of the robustness of the viewing index threshold chosen.

3.3 These pieces of analysis when taken together provided confidence that the estimates provided by the model are consistent with alternative approaches and sufficiently robust to support policy decisions relating to restrictions on advertising and sponsorship on commercial television.

3.4 Ofcom noted that the impact of the move towards digital switchover (DSO) in 2012 was likely to increase the impacts restricted by the policies over time.

3.5 Ofcom recognised that the data sources used did not cover audiences outside the UK and sought to estimate this impact by sending out data requests to DCCs broadcasting overseas. Based on the data they provided, we assessed the likely impact on them assuming that they would have no scope to mitigate the revenue losses and that there were unlikely to be any offsetting health benefits.

3.6 Ofcom also calculated an upper bound for the loss of revenue to advertising agencies using a notional 15% commission while recognising that in practice the actual loss would be significantly lower than this. Market intelligence suggests that in practice the level of commission is of the order of 1.5 to 2.5%.

3.7 Ofcom also considered the impact on food manufacturers and advertisers and considered that this was likely to be modest.

Methodology for Assessing the Benefits of the Policy Options

3.8 As discussed in the March and November IAs, Ofcom has no expertise in nutrition or health related areas. We have therefore relied on the Food Standards Agency (FSA) in conjunction with the Department of Health (DH) to make the health benefits assessment.

3.9 Ofcom took the FSA estimate of the health benefits in terms of lives saved and quality adjusted life years (QALYs) gained from removing all HFSS adverts from television and adjusted the values downward to reflect the reduction in HFSS impacts between 2003 (when the Secretary of State announced the Government's decision to review the codes on food and drink advertising)[6] and 2005 (the base year for the cost analysis). This adjusted estimate was then scaled down to reflect the proportion of impacts restricted by each policy option to give the estimated benefit for each policy option.

3.10 To monetise the benefits, the FSA have suggested the use of both a statistical value of life (VoL) and a quality adjusted life-year (QALY) measure. Given that the two methodologies for estimating the benefits give different results and that this is relevant to the choice between the packages, Ofcom has considered how it should interpret the two measures.

The FSA's position

3.11 The question of whether to use QALYs or VoLs was raised by the Food and Drink Federation (FDF) in their response to the March IA[7]. They argued that QALY was the appropriate measure because the methodology has more credibility in economic decision making in the public health area than the VoL approach, for example NICE[8] guidance favours the QALY approach, as do other reimbursement agencies internationally. They argued that in this case, since the life being 'saved' (ie lengthened) is for relatively elderly people who are avoiding cancer, CHD and stroke etc, diseases that typically occur later in life, the lengthening of life which might actually occur is much lower than for a fatal road accident victim. This means that the QALY approach would rightly take account of a) the lower than average

[6] It should be noted that the benefits analysis was not based on 2003 data, but reflected evidence from a range of sources including the 1983 Bolton study, 1997 NDNS, 2002 Health Survey for England and 2002 House of Commons Select Committee – further details are set out in the November IA, Annex A.
[7] November IA, Annex B, Section 6.1
[8] National Institute for Clinical Excellence

lengthening of life and b) that it occurs in an age group which suffers from other illnesses and hence less than perfect health. (Another way of putting this is that the VoL approach is based on saving younger, healthier lives[9] than are typically saved by the measures that we are considering to restrict HFSS advertising[10] and therefore would have a higher value - which means that the benefits based on VoL may overstate the true benefits).

3.12 The FSA response[11] was:

> Whilst largely accepting the comments of the FDF above – that in general the QALY methodology may have more credibility in the current context. The FSA does not consider it appropriate to finally conclude that the traditional use of QALYs is the correct monetising tool here. A key reason for this being the growing understanding of researchers that in empirical WTP [Willingness to PAY] studies most people exhibit a "pure value of living" per se which is not trivial. As using traditional money values for QALYs will fail to capture this effect, the FSA considers it best to report both the QALY and WTP/VOL monetised figures as a range within which the true value is expected to lie.

3.13 The FSA also quote evidence from Prof. Michael Jones-Lee[12] that:

> "It seems pretty clear both intuitively and from the empirical evidence that some sort of pure value of life exists for most people. So, to ignore it completely and treat the extension of a sick 80 year old's life by, say two years as being only "worth" two times the value of a QALY (eg about 2 x £30.000) just seems to be misguided".

3.14 The FSA also characterise their estimate of benefits as "*potentially conservative*" (due to the approach they have taken to modelling dietary changes) and "*that they may not fully take account of the potentially significant life-long health effects of rising childhood obesity and its associated (sometimes irreversible) medical conditions*". They also advocate the use of the Precautionary Principle in formulating policy in this area.

Comparing the two approaches to valuing the benefits

Value of Life (VoL)

3.15 The FSA use a VoL of £1.42m in Q4 2005[13] to estimate the costs avoided by preventing a death. The calculation of VoL is based on a Department for Transport (DfT) methodology which includes medical costs, output and human costs – the latter element accounts for by far the largest part (94%) of the total cost (estimated using a willingness to pay [WTP] methodology) to value a statistical life. As mentioned above these are generally used in the context of valuing/avoiding deaths from traffic accidents, where the accident victim is typically younger[14] and healthier than the

[9] The mode age of road death is 20-29 years
[10] Reflected in the acceptance by the FSA that "*the majority of diet related health outcomes will tend to occur later in life … when they are 65 or 75 years old*".
[11] November IA, Annex B, Section 6.1
[12] University of Newcastle upon Tyne Business School
[13] Derived from June 2003 value of £1.31m provided by the DfT and inflated by the GDP per capita inflator from Q3 2003 to Q4 2004.
[14] The modal age of road death is 20-29 years.

typical sufferer from a diet related disease. Applying the same VoL methodology to estimate the value of life for those dying from poor diets rather than from traffic accidents might be expected to lead to a (possibly significantly) lower valuation of the benefits. However the HM Treasury appraisal guidance note[15] states that:

> "Longer life expectancy may not necessarily yield higher willingness to pay valuations, as some may, for instance, be willing to pay much to lengthen their lives by small amounts. (Someone finding out that he or she only has 1 year left to live may be willing to pay much to extend this by 6 months: potentially more so than someone with an expected 10 years left to live." (p.49)

3.16 The guidance note reports that in practice research indicates that willingness to pay values could be affected by a range of factors including: fear, old age, attitude to risk, factors specific to the risk context (such as the sense of personal control) etc. Specifically in the case of old age the guidance note reports that:

> "[M]ost studies have indicated that values tend to decline significantly only with those aged over around 70 years old; but some suggest that the values do not decline as significantly." (p.49)

3.17 This suggests that the "pure" value of life component in the DfT estimate could remain significant throughout most of a person's life and thus could still be important in an estimate of the value of preventing dietary related deaths even where they involve elderly people.

3.18 Taking this into account, the £1.42m VoL figure used by the FSA while not developed for the purpose of valuing the prevention of dietary related deaths, might overstate the upper limit of the benefits (of restricting HFSS advertising to children), but not significantly.

Quality Adjusted Life Years (QALY)

3.19 The FSA's QALY figure of £30,000 per extra year of good health is based on a number of sources including: the value NICE is believed to apply as a passmark in appraisal of health technologies; a recent study of air pollution for DEFRA; and a study for DoH of willingness to pay for a QALY.

3.20 QALYs provide a means of making an assessment of the impact of different health interventions in terms of the quality and quantity of life. It involves surveying patients and inviting them to rank their health state with existing illnesses and their health states under particular interventions on a scale – where 1 represents perfect health and 0 represents death. Thus it allows the comparison of one intervention which yields an extra 10 years of life at a health state of 0.5 (giving 5 QALYs) with an alternative intervention which yields an extra 8 years of life in a health state of 0.75 (giving 6 QALYs). Comparing the costs of the different interventions would allow them to be ranked based on cost per QALY.

3.21 The QALY measure of benefits is generally accepted for use in a health context. However, it is essentially a measure of cost effectiveness and as such it does not include a "pure" value of life component. It may therefore place a relatively low value on the life of elderly people which may not properly reflect WTP results or a reasonable reflection of society's true valuation of these lives.

[15] Managing risks to the public: appraisal guidance

3.22 For this reason, QALY's can be less effective in terms of measuring interventions where the health benefits take a long period to emerge. For instance, a short paper on QALYs referenced in the Treasury guidance suggests that:

> "Chronic diseases, where quality of life is a major issue and survival is less of an issues, are difficult to accommodate in the QALY context … Similarly preventive measures where the impact of health outcomes may not occur for many years may be difficult to quantify using QALYs because the importance attached to each of the health dimensions is highly dependant on age, life context and life responsibilities."[16]

3.23 Therefore it is not clear that the QALY measure can be treated as a reasonable estimate of the lower limit of the benefits, since it excludes an important aspect of these benefits. Adjusting the QALY measure to include an absolute value of life is not straightforward. However it is possible to make some observations about the magnitude of such an adjustment. The previously mentioned guidance that the 'pure' value of life can be significant (over £1m per statistical life based on valuations of road accidents) and that it does not decline significantly with age until a person is over 70 years old, suggests that an 'augmented QALY' based calculation of benefits flowing from the reduction in HFSS impacts might be significantly higher than the equivalent calculation based on the QALY figure used by the FSA.

Further Analysis

3.24 Ofcom conducted some further analysis to see whether indices were sufficiently similar across time-periods to consider using averaging to address the problem of broadcasters with small audiences facing large fluctuations in their audience make-up that might otherwise make the use of indexing problematic. This modelled in detail the effects of a 4-15 child index restriction on the music channels. It followed a similar structure to Ofcom's main model (outlined in Figure 3.1 above), however instead of treating the whole year as one block, it split days into 30 minute time-slots in three categories: school term weekdays, school holiday weekdays and weekends (including public holidays)[17].

3.25 For each music channel and for each day category and for each 30 minute time-slot, Ofcom obtained the total 4-9 and 4-15 HFSS impacts, the total HFSS advertising spend[18] from Nielsen, and the average 4-9 and 4-15 viewing indices. Ofcom then used the main modelling approach outlined above to run three separate models to calculate the impacts restricted and the associated revenue losses incurred for each music channel.

3.26 The results of this analysis show that if the music channels were to adopt time-banded restrictions over three distinct period which might represent children's viewing habits, then the losses they would incur for Modified Package 1 as a whole might be less than those given in the November interim statement (£2.2m as a whole as opposed to £2.4m).

3.27 For Package 1, the disaggregated analysis shows that there might be more of an effect than was given in the November statement, a loss of £125,000 as opposed to

[16] *What is a QALY?*, Philipps and Thomson, available at www.evidence-based-medicine.co.uk
[17] Half term weekdays were included in term weekdays as the dates vary across the UK.
[18] Advertising spend was normalised to be consistent with the HFSS advertising spend in the November modelling

£35,000. However, even this increased loss represents a very small proportion of the revenues of the music channels.

Section 4

Comparison of the policy options

4.1 This section compares the two options being considered and how they deliver Ofcom's regulatory objectives. For ease of reference Tables 4.1 and 4.2 below repeat the summary of the impacts of Package 1 and Modified Package 1 from the November IA.

Table 4.1: Summary of the Impact of Package 1

	Reduction in HFSS Impacts (%)		**Estimated revenue loss** (£million pa)			Estimated revenue loss as % of total revenue	Highest % loss for a channel in each category
	4 - 9	4 - 15	Low	Central	High		
All Channels	**49**	**37**	**13.3**	**17.6**	**20.8**	**0.3%**	**15.3%**
PSB	21	16	6.9	9.9	11.9	0.3%	0.6%
DCC	100	100	4.6	5.2	5.9	4.7%	15.3%
Music	2	1	0.0	0.0	0.0	0.0%	0.3%
Other Cab-sat	15	12	1.7	2.4	2.9	0.1%	2.4%

Number of channels with >5% revenue loss	**Efficiency**		**Benefits** (£million pa)					
			QALY			VOL		
	Adult impacts per 4-15 HFSS impact	Adult impacts per 4-9 HFSS impact	Low	Central	High	Low	Central	High
4	**1.3**	**2.6**	**19**	**38**	**76**	**92**	**184**	**368**

4.2 Table 5.1 above shows that Package 1 would lead to a **49%** or **37%** reduction in 4-9 or 4-15 HFSS impacts respectively. For each 4-9 or 4-15 HFSS impact restricted, **2.6** or **1.3** adult impacts respectively would be restricted.

4.3 Package 1 would have an estimated cost of **£13.3m - £20.8m pa** compared to an estimated benefit of **£19m – £76m pa** (QALY) or **£92m – £368m pa** (VoL). Just over half of this cost (£6.6m - £11.9m pa) would fall on PSBs which would account for about 0.3% of their revenues. The cost to children's channels would be just under **5% of their total revenues** with one children's channel estimated to lose **over 15% of its total revenue**. Four channels are estimated to lose more than 5% of their revenue.

4.4 It should be noted that the ranges given for the costs and benefits are independent. so the low estimate of the costs could occur alongside the high estimates of the benefits and vice versa. However, the two measures used to estimate the benefits are linked because they rely on the same assumption relating to the mapping of nutrient intake substitution into adulthood. Therefore the high QALY estimate could not occur in conjunction with the low or central VoL estimate.

Table 4.2: Summary of the Impact of Modified Package 1

	Reduction in HFSS Impacts (%)		**Estimated revenue loss** (£million pa)			Average revenue loss as % of total revenue	Highest % loss for a channel in each category
	4 - 9	4 - 15	Low	Central	High		
All Channels	**51**	**41**	**17.4**	**22.6**	**26.5**	**0.4%**	**15.3%**
PSB	20	17	7.3	10.4	12.4	0.3%	0.7%
DCC	100	100	4.6	5.2	5.9	4.7%	15.3%
Music	41	44	2.1	2.4	2.7	1.9%	8.8%
Other Cab-sat	22	23	3.4	4.6	5.4	0.2%	6.3%

Number of channels with >5% revenue loss	**Efficiency**		**Benefits** (£million pa)					
	Adult impacts per 4-15 HFSS impact	Adult impacts per 4-9 HFSS impact	QALY			VOL		
			Low	Central	High	Low	Central	High
9	**1.4**	**3.0**	**21**	**42**	**84**	**101**	**203**	**405**

4.5 Table 4.2 above shows that Modified Package 1 would lead to a **51%** or **41%** reduction in 4-9 or 4-15 HFSS impacts respectively. For each 4-9 or 4-15 HFSS impact restricted, 3.0 or 1.4 adult impacts respectively would be restricted.

4.6 Modified Package 1 would have an estimated cost of **£17.4m - £26.5m pa** compared to an estimated benefit of **£21m – £84m pa** (QALY) or **£101m – £405m pa** (VoL). A little less than half of this cost (£7.3m - £12.4m pa) would fall on PSBs which would account for about 0.3% of their revenues. The cost to children's channels would be just under **5% of their total revenues** with one children's channel estimated to lose **over 15% of its total revenue**. The cost to music channels would be about **1.9% of their revenue** with one music channel estimated to lose **almost 9% of its revenue**. Nine channels are estimated to lose more than 5% of their revenue.

4.7 However, while the tables above reflect the costs of the two policy options to broadcasters who broadcast to the UK, as noted in paragraphs 3.5 - 3.7, they do not account for three other categories of cost that were identified in the March and November IAs:

- Costs to manufacturers and advertisers;
- Loss of advertising agency commission; and
- Loss of revenue to UK licensed channels who broadcast overseas.

Costs to manufacturers and advertisers

4.8 The March IA[19] and the November IA[20] concluded that the impact of the policy options considered (which included a pre-9pm ban) on manufacturers and advertisers was likely to be modest. We did not receive any consultation responses

[19] Paragraphs 6.16-6.26
[20] Paragraphs 3.47-3.51

(even from food manufacturers) challenging this conclusion. Given that the extra impact of MP1 over P1 is less than 2% of the impact of the pre-9pm ban (based on reduction in total impacts), we consider that this factor is likely to be *de minimis*.

Loss of advertising agency commission

4.9 The March IA[21] and the November IA[22] recognised that if advertising revenue were to fall there would be a loss of revenue to advertising agencies. We noted that media agencies receive a notional commission of 15%, but in practice the commission received is much smaller than this – in the range of 1.5-2.5%. This would suggest an extra loss of around £75-125k pa under Modified Package 1.

Loss of revenue to UK licensed channels who broadcast overseas

4.10 The November IA[23] recognised that the modelling did not include UK licensed channels who broadcast overseas, since these were not covered by the data sources on which it was based. It is likely that the vast majority of the extra impact of MP1 on UK licensed channels broadcasting overseas will be on Music channels and that the proportion of their overseas HFSS revenue affected will be similar to the proportion of their UK HFSS revenue. This suggests an extra loss of around £0.6m pa.

4.11 These extra potential costs of around £0.7m per annum of Modified Package 1 over Package 1 have been included in the incremental comparison between the two packages below.

4.12 In addition, since the end of 2005 (the year in which the model is based), there are likely to have been important changes in the channels broadcasting and the audiences which they attract. These changes may have a significant effect on the costs and benefits of the two packages of restrictions under consideration. Some changes, such as the launch of Nick Jr 2 and the CITV channel will have similar effects for Package 1 and Modified Package 1 as both are children's channels and would be completely restricted under either Package.

4.13 Other changes may have differing effects on the two packages. For example, as noted in the November IA[24], Trouble altered its target audience away from young teenagers towards a demographic of 16-24 year olds at the end of February 2006. This is likely to have reduced Trouble's audience of 10-15 year olds, and may have stopped many of its programmes indexing over 120. This could potentially reduce both the costs and benefits of Modified Package 1.

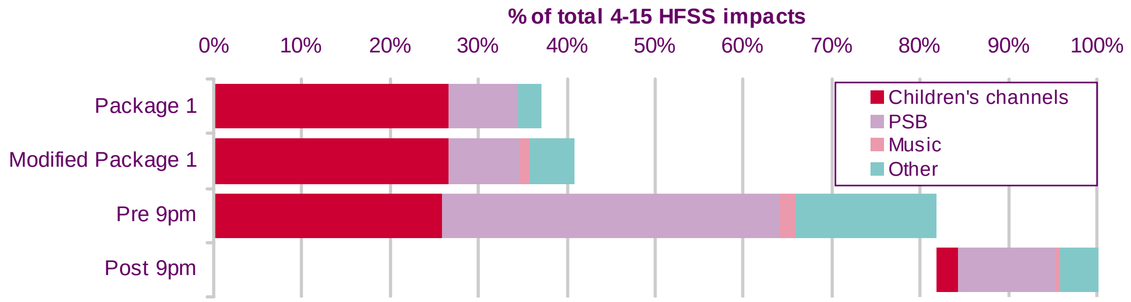
4.14 However, it is not possible to calculate the effects of these changes upon either package without knowing what happened to the viewing habits of children who may no longer watch Trouble. These children may have switched towards other children's channels, music channels or may have stopped watching television altogether. A complete analysis of 2006 data would be required to gauge the consequences of these effects. Some of this is not yet available and so Ofcom has continued to use data based on the calendar year 2005.

[21] Paragraph 9.13
[22] Paragraph 7.17
[23] Paragraphs 3.27-3.32
[24] Paragraphs 3.23-3.26

Reducing the Exposure of Children to HFSS Advertising

4.15 One of Ofcom's regulatory objectives is to reduce significantly the exposure of children under 16 to HFSS advertising.

Figure 4.1: Reduction in Impacts from Package 1 and Modified Package 1



4.16 Figure 4.1 above compares the reduction in 4-15 HFSS impacts between the Package 1 and Modified Package 1 and as a reference the composition of 4-15 viewing pre and post 9pm. The key differences are:

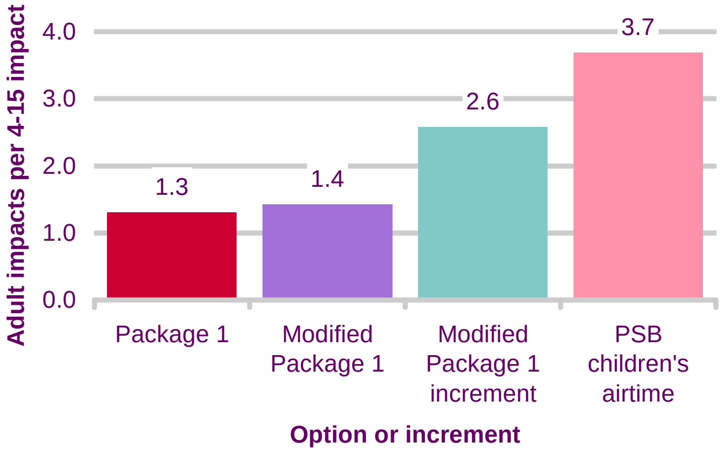
- MP1 restricts 4% more 4-15 HFSS impacts than P1 across all channels (41% compared to 37%);
- This 4% extra reduction represents a 6% reduction in 10-15 year olds impacts (31.4% compared to 25.6%);
- Of this 4% extra reduction, about 1% is from Music channels, the remaining 3% is mostly from other cable and satellite channels;
- The impact on Children's channels is identical and that on PSBs is virtually identical under both packages;
- MP1 restricts 44% of the impacts on Music channels compared to around 1% for P1.

Avoiding intrusive regulation during adult airtime

4.17 Another of Ofcom's regulatory objectives is to avoid intrusive regulation of advertising during adult airtime. In line with the November IA[25], Ofcom has developed a measure of the 'efficiency' of a package - the number of adult impacts restricted for each HFSS child impact restricted, to assess the extent to which the packages meet this objective (a high measure suggests restrictions intruding into adult viewing).

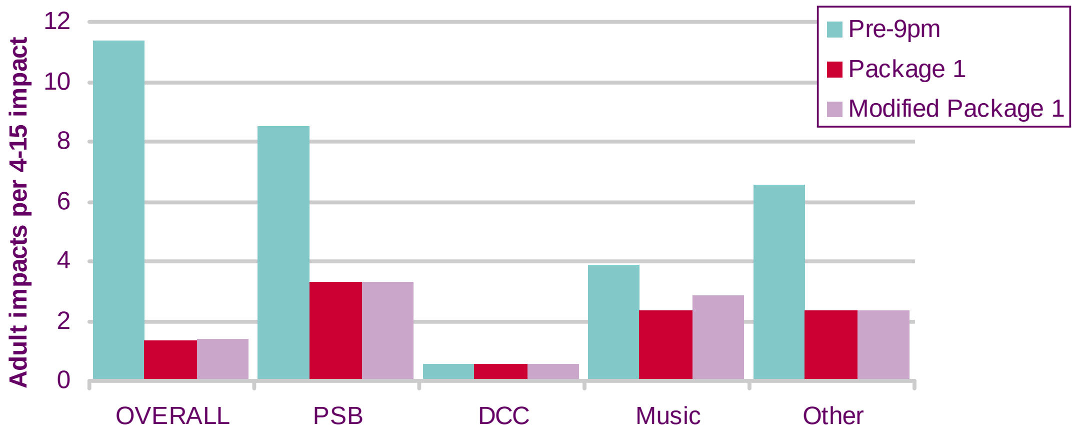
[25] See paragraphs 7.11-7.12 of the November IA

Figure 4.2: Comparison of the efficiency of the different packages



4.18 Figure 4.2 shows that Modified Package 1 is slightly more intrusive into adult airtime than Package 1 and that the increment of MP1 over P1 is more intrusive than either package. However comparing these to a restriction on PSBs during children's airtime (which has been accepted as part of the minimum restriction for both packages) shows that both packages and the increment are less intrusive than such a restriction.

Figure 4.3: Comparison of the efficiency of the composition of the Packages

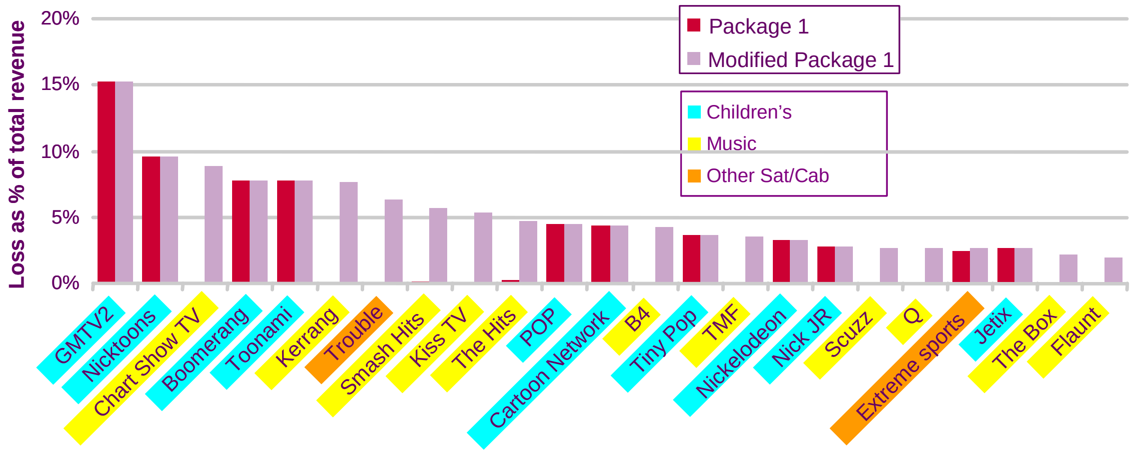


4.19 Figure 4.3 shows that the small difference in overall efficiency between the two packages arises from the difference between the efficiencies of the restrictions on Music channels, but these are still less intrusive than the restrictions on PSBs under either package. Both packages are significantly less intrusive than a pre-9pm ban.

Avoiding a Disproportionate Impact on Broadcasters' Revenues

4.20 Ofcom's remaining regulatory objective relates to seeking to avoid a disproportionate impact on the revenue of broadcasters. Ofcom has considered both the impact on individual channels and also the impact on broadcaster groups - recognising that these often comprise a number of channels which may face different impacts.

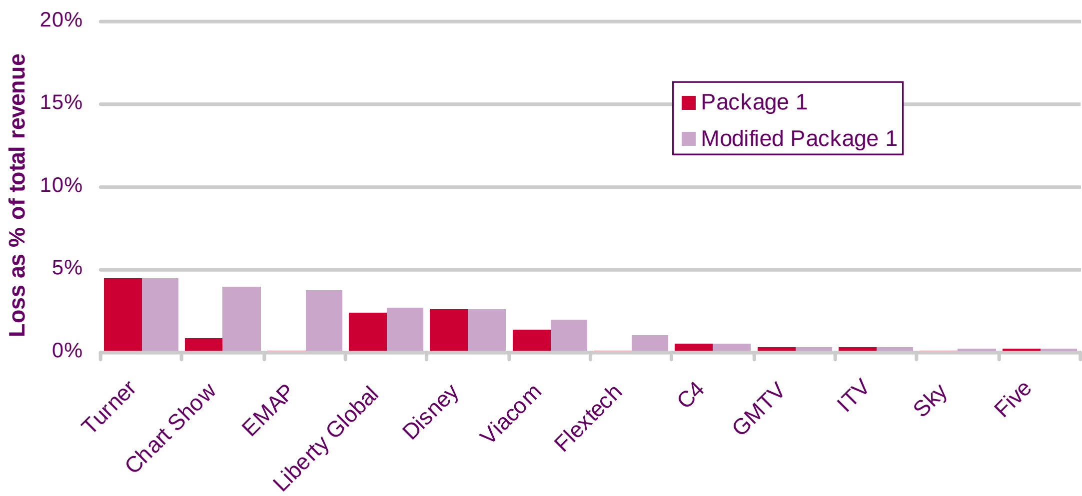
Figure 4.4: The Effect on Different Channels



4.21 Figure 4.4 shows the proportionate impact of the packages on all the channels with a greater than 2% loss of revenue. These are all either Children's or Music channels (with the exception of Trouble and Extreme Sports). It shows that:

- Under P1 Music channels are estimated to lose very little of their revenue, while under MP1 they are estimated to lose a similar proportion of their revenue to the Children's channels;
- Five extra channels would face a loss of over 5% of their revenue under MP1 compared to P1;
- However no channel faces a worse position under MP1 than the two hardest hit channels under P1 (GMTV2 and Nicktoons);
- The extra costs of MP1 over P1 are split between Music channels (46%), other cab-sat channels (44%) and PSBs (10%);
- In absolute terms Music channels face an estimated loss of £2.4m pa and Children's channels £5.2m pa.

Figure 4.5: The Effect on Broadcaster Groups

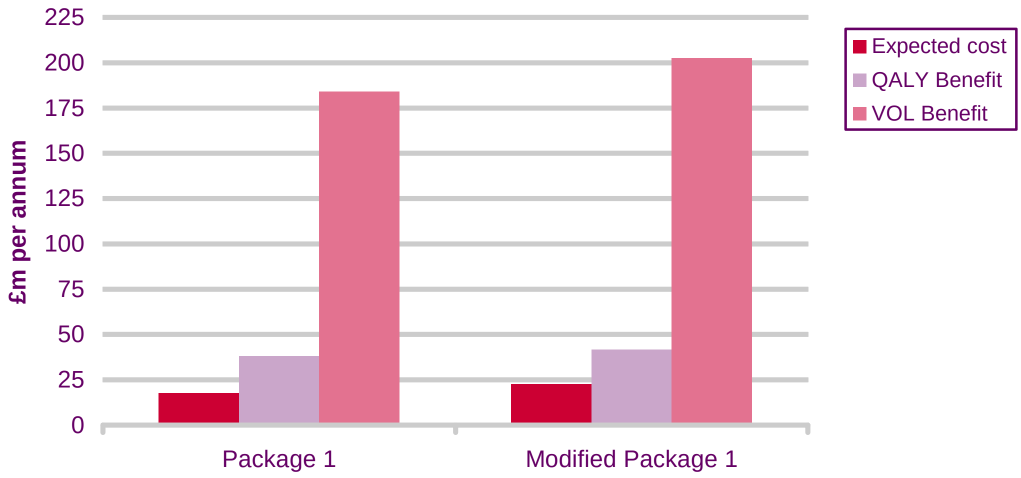


4.22 Recognising that channels are, in the main, part of broadcaster groups which may face different impacts, Figure 4.5 shows the proportionate impact on broadcaster groups. It shows that:

- While some broadcaster groups face an increased loss under MP1, they are all less than 5% of their total revenue;
- Broadcaster groups who operate a range of music channels (Chart Show, EMAP, and to a lesser extent Viacom) all face a significantly increased estimated loss of revenue under MP1, as does Flextech (the owners of Trouble);
- However no broadcaster group faces a worse position under MP1 than the hardest hit group under P1 (Turner).

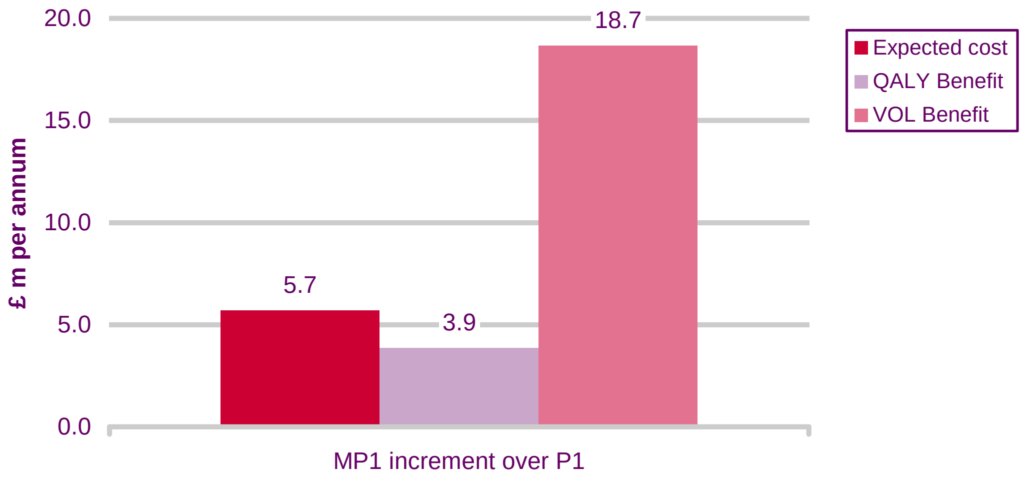
Comparing the Costs and Benefits of the Packages

Figure 4.6: The Costs and Benefits



4.23 Figure 4.6 shows that for each package the benefits significantly exceed the costs - whichever measure of benefit Quality Adjusted Life Years (QALY) or Value of Life (VoL) is used.

Figure 4.7: The Incremental Costs and Benefits[26]



4.24 Figure 4.7 above shows that when measured on a VoL basis the extra benefits of Modified Package 1 are clearly greater than the extra costs, however when measured on a QALY basis, the extra benefits are lower than the extra costs.

4.25 As set out in Chapter 3 above, a QALY measure, unadjusted for an absolute value of life, would understate the lower limit of the benefits. To make the QALY more accurate would require it to be adjusted to include the pure value of life. The resulting 'augmented QALY' measure would be significantly greater than the pure QALY measure. This would significantly raise the lower limit of the incremental benefit of Modified Package 1 over Package 1.

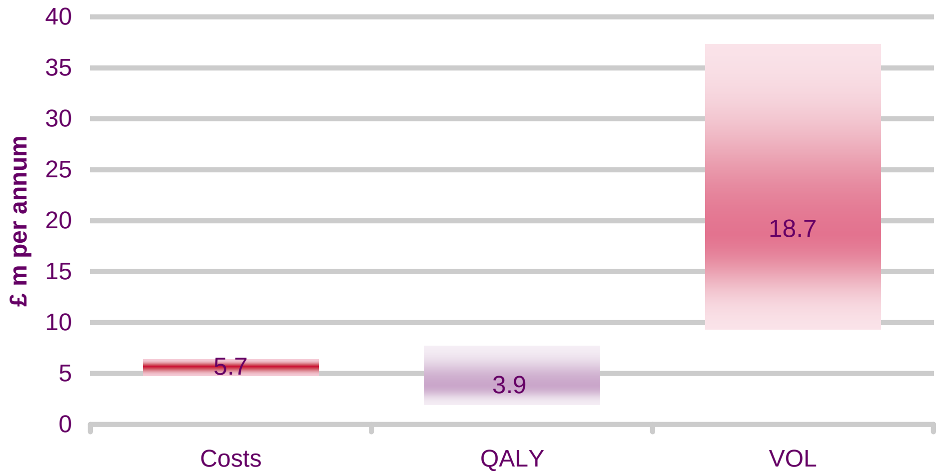
4.26 The VoL measure may appear to overstate the benefits since it is generally used to value lives saved from traffic accidents, and these are typically much younger and healthier than the victims of dietary diseases. However, Treasury guidance on risk appraisal[27] suggests that the most significant element of the VoL valuation, the human cost, does not decline significantly with age. For these reasons the VoL may overstate the upper limit of incremental benefit of Modified Package 1, but not significantly.

4.27 Therefore it is reasonable to conclude that the likely range within which the incremental benefit of Modified Package 1 over Package 1 lies is defined by an augmented QALY measure and a slightly lowered VoL measure. On the basis that an augmented QALY measure is likely to be significantly higher than the unaugmented QALY measure, the net benefits of Modified Package 1 are likely to be greater than those for Package 1.

4.28 The position above is based on central estimates of the incremental costs and benefits in terms of QALYs and VoLs between Package 1 and Modified Package 1. However, as shown in Tables 4.1 and 4.2, each of these central estimates belongs to a range of possible outcomes.

[26] This comparison of the incremental cost and benefit of the packages includes the further incremental costs of Modified Package 1 discussed in paragraphs 4.8 to 4.10 above.
[27] Managing risks to the public: appraisal guidance

Figure 4.8 – The Range of Incremental Costs and Benefits



4.29 Figure 4.8 demonstrates the ranges for the incremental cost and benefits of Modified Package 1, with the darkest sections of the bars representing the central estimates. On a VoL measure, the entire range of incremental benefits of Modified Package 1 exceeds the whole range of costs by a margin of over £5m per annum. However, on an unaugmented QALY measure, the extra costs of Modified Package 1 lie within the range of benefits.

4.30 The inclusion of an absolute value of life in the QALY benefits estimate would result in a new augmented QALY measure with a range that is higher than the unaugmented QALY range. Ofcom has estimated that if an absolute value of life of £200,000 were included in the QALY calculation, the central case of the augmented QALY measure would exceed the high case of the costs[28].

4.31 The absolute value of life adjustment that should be added to the unaugmented QALY based calculation of benefits is a similar concept to the willingness to pay for life element of the VoL calculation. Since, in that calculation, the pure value of life accounts for £1.3m of the VoL, and it is believed not to decline significantly with age, it seems reasonable to believe that the appropriate augmentation in the QALY case is at least the £200,000 necessary to lift the central case of the augmented QALY measure above of the upper limit of the costs[29].

4.32 For the reasons set out above, considering the costs and the VoL and QALY based estimations of the benefits, along with their likely ranges, Ofcom considers that the net benefits of Modified Package 1 are greater than those of Package 1.

Summary of the Comparison of the Policy Options

4.33 The above discussion suggests that:

[28] The inclusion of a pure value of life of £200,000 was offset by decreasing the value of each QALY to £25,775. The offsetting reduction ensures that there is some consistency between the VoL and QALY measures of benefit.

[29] Further evidence from a recently published paper (H. Mason, A Marshall, M Jones-Lee and C Donaldson for the SVQ Project Team, *Estimating a Monetary Value of a QALY*, 2006 available at http://pcpoh.bham.ac.uk/publichealth/nccrm/PDFs%20and%20documents/RM03_JH31_Final_Report.pdf) cited by the FSA after Ofcom's Board made its decision to adopt Modified Package 1, suggests a pure value of life of around £400,000 for mortality in a person in their mid-70s.

- MP1 restricts 4% more 4-15 HFSS impacts than P1, about 1% of this is from Music channels, the remaining 3% is mostly from other cable and satellite channels;

- MP1 is slightly more intrusive into adult airtime than P1, but not significantly so;

- Under MP1 the effect on Music channels is similar to effect of P1 on Children's channels;

- Five extra channels (four Music channels plus Trouble) lose more than 5% of their revenue under MP1 than P1, however no channel faces a worse position under MP1 than the two hardest hit channels under P1 (GMTV2 and Nicktoons);

- No broadcaster group faces a loss of more than 5% under P1 or MP1;

- Although some broadcaster groups face an increased loss of revenue under MP1 compared to P1, none faces a worse position under MP1 than the hardest hit group under P1 (Turner);

4.34 For the reasons set out above in this Impact Assessment, Ofcom considers that the net benefits of Modified Package 1 are greater than those for Package 1.