University of Salford MANCHESTER

Building the case for funded leisure in Public Health

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About me

- Led review on workplace PA intervention effectiveness for NICE, (2007) – workplace PA guidance
- PDG for PA guidelines for children, NICE, (2009)
- Development and evaluation of programmes for obese children and families, GOALS, in Liverpool (2003-2012)
- Evaluation of effectiveness and cost-effectiveness of Free Swimming in Wigan (2009-2012)

Aims of the session

- The imperative to be active
- Evidence from the Wigan free swimming initiative
- Evaluation of public health interventions including physical activity
- Future policy and opportunities – group discussion

Physical activity guidelines for England

(DH, 2011) state that for adults aged 19-64 years:

- **They should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours or 150 minutes) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week.**
- **Alternatively, comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week or a combination of moderate and vigorous intensity activity.**
- **Adults should also undertake physical activity to improve muscle strength on at least two days a week.**
- **All adults should minimise the amount of time spent being sedentary (sitting) for extended periods (Biddle et al., 2010).**

How active are we?

- ✓ Eurobarometer Survey (2010)

- ✓ 54% adult UK population rarely active
  c.f. 28% adult Swedish population

A lot of surveys rely on self-reported PA which is often an over-estimate!

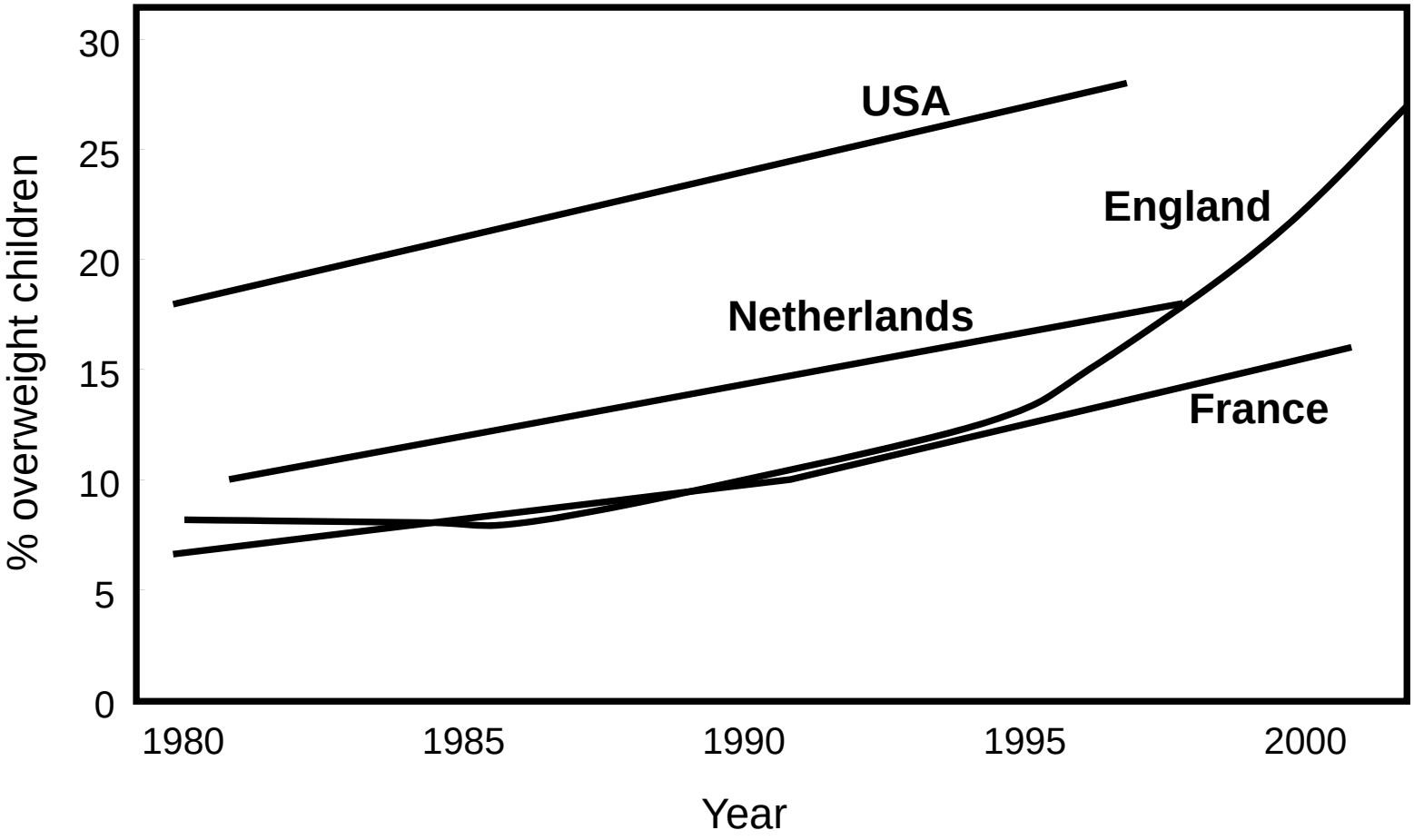
Childhood obesity: A global challenge

"Childhood obesity is one of the most serious public health challenges of the 21st century"

(World Health Organisation)

- Obese children more likely to become obese adults *(Singh et al. Obes Rev 2008; 9: 474)* and at heightened risk of future morbidity and mortality *(Maffeis & Tato Horm Res 2001; 55: 42)*
- In England, 1 in 3 children leave primary school overweight or obese *(National Child Measurement Programme, 2009-2010)*
- Obesity prevalence stabilised in recent years, but socioeconomic gap widened *(Stamatakis et al. Int J Obes 2010; 34: 41)*

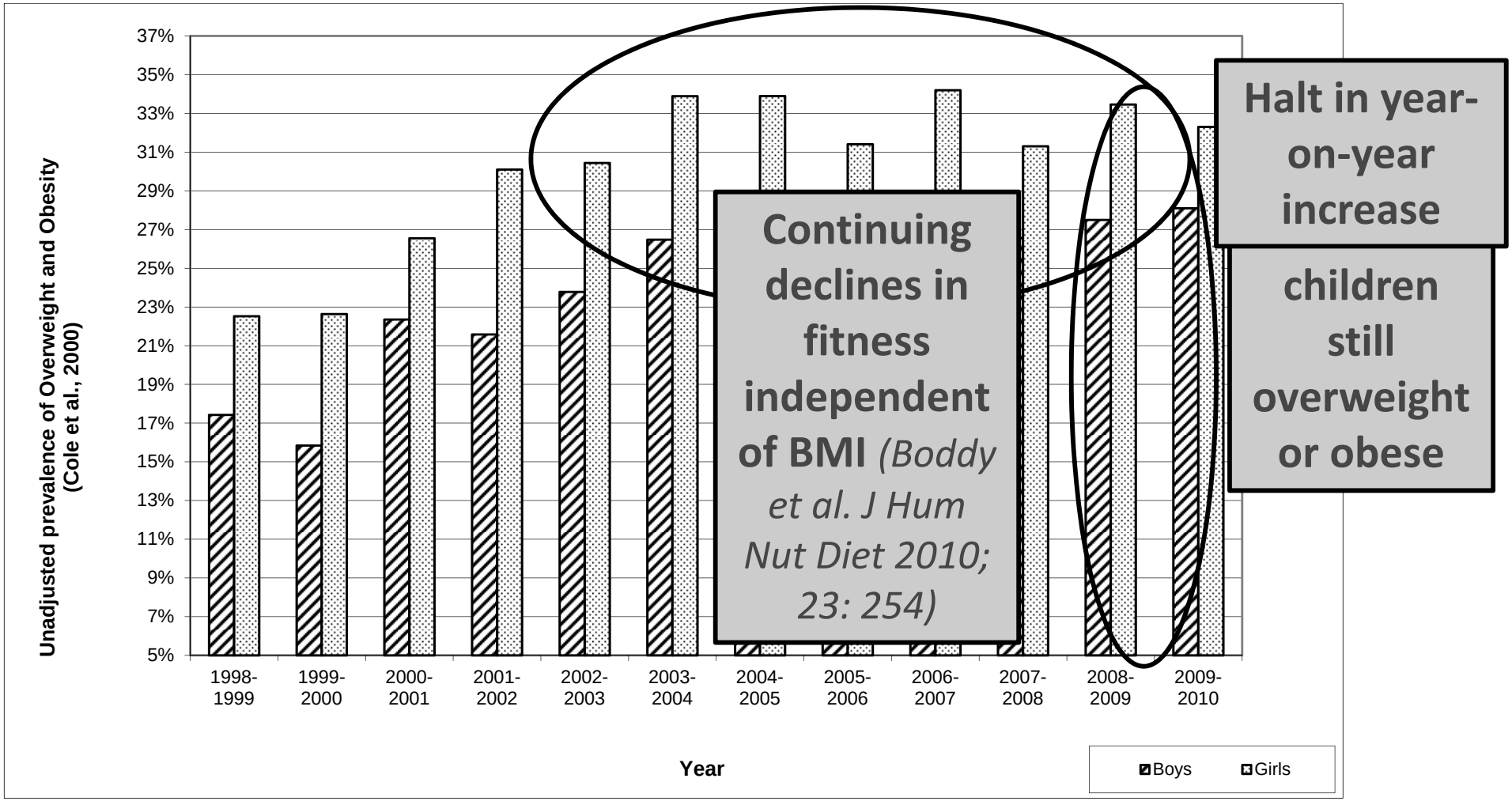
International trends on the rising prevalence of overweight children



England demonstrates one of the worst trends in Europe in the acceleration of obesity

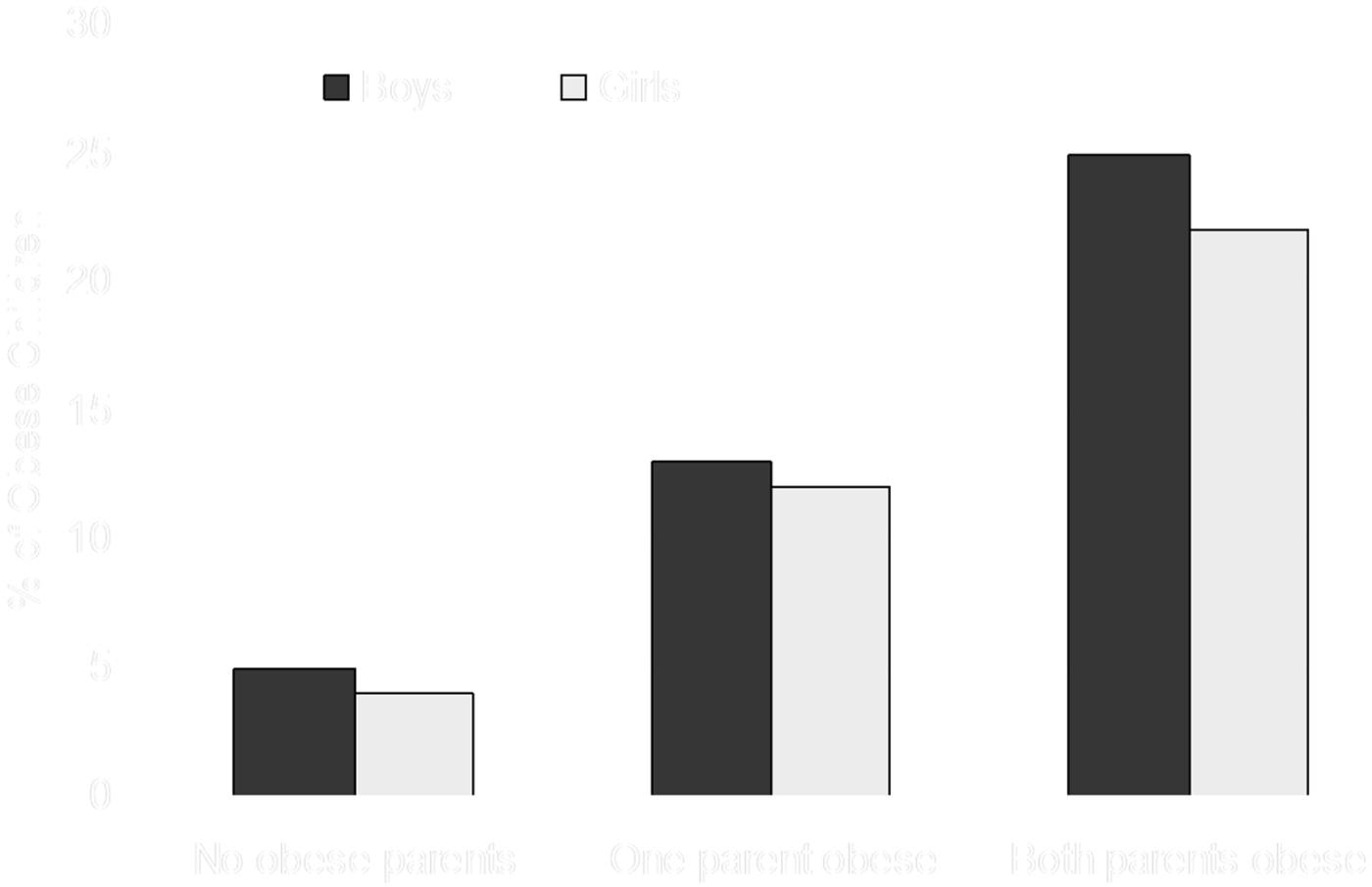
Source: International Obesity Task Force briefing paper, March 2005. NB: Other countries use different methodologies and some data may be self-reported

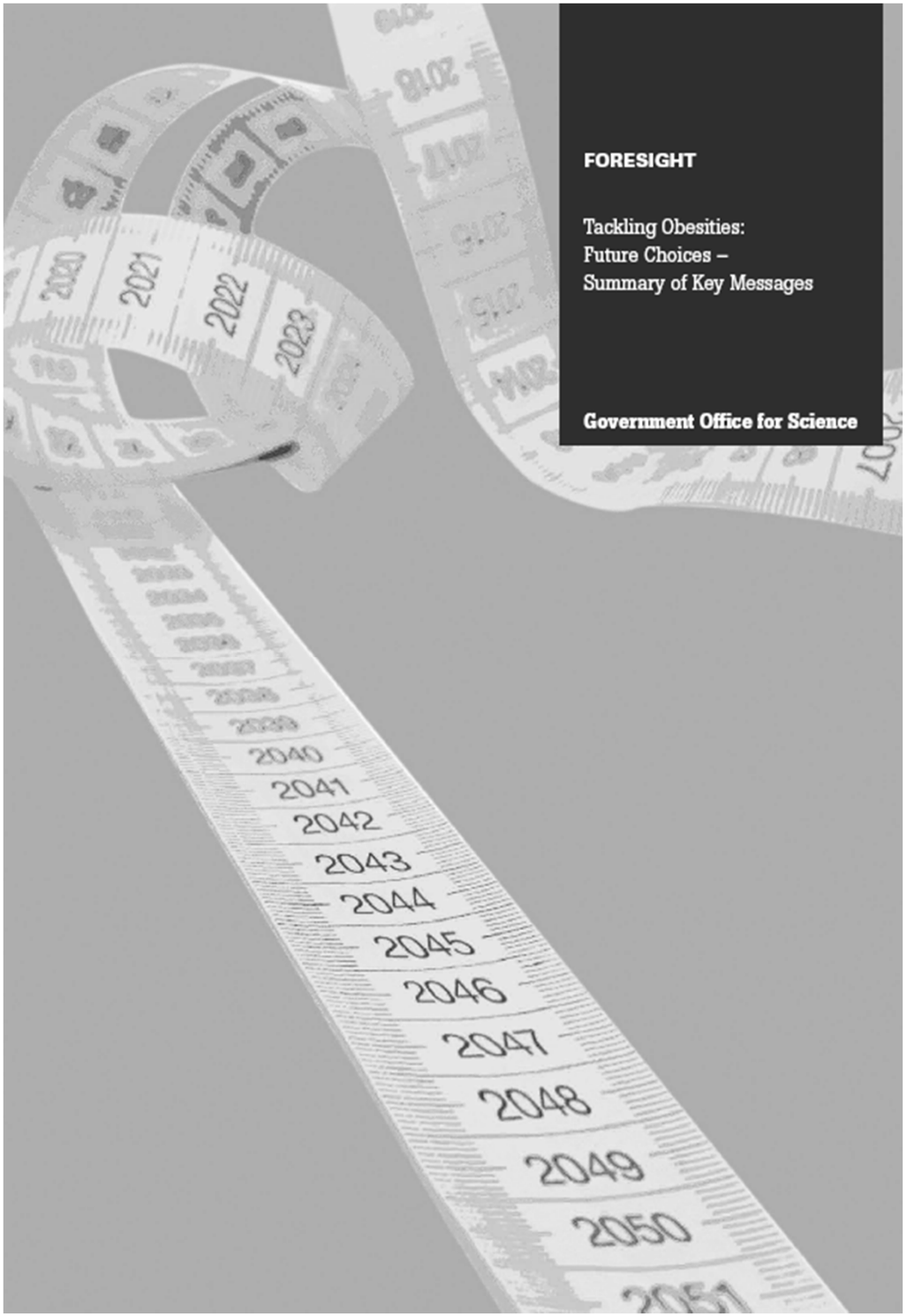
Overweight & obesity in 9-10 year olds in Liverpool 1998 – 2010



Boddy L, Hackett A & Stratton G Liverpool *Sports*Linx programme

Prevalence of obese children by parental obesity





By 2050 obesity prevalence:

- 60% adult men
- 50% adult women
- 25% under 16s

By 2050 the cost:

- NHS – £10 billion
- Wider society - £50 billion

The Olympic Legacy? How do we get a nation active?

63% of adults in post-Olympic survey said they DID NOT intend to become more active

June 2008, the Labour government announced a £140 million investment in the Free Swimming Initiative.

A cross-government intervention designed to increase participation in swimming in England leading to subsequent health and economic benefits (DCMS, 2010).

It specifically targeted those aged 16 and under and those aged 60 and over.

- **The FSI aimed to:**

contribute to the physical activity participation target outlined in the London 2012 Olympic and Paralympic Games Legacy Action Plan (DH, 2009).

make a significant contribution to the government's commitment to the provision of five hours of physical education and sport for 5-16 year olds and three hours of sporting opportunities for 16-19 year olds (DH, 2009).

Free Swimming - rationale

What are the assumptions on removal of entry cost for swimming:

- ✓ Increases frequency of swimming in current swimmers
- ✓ Increases swimming in current non-swimmers (assuming people can swim or have access to lessons)

UK evidence on impacts of FS

- ✓ When the entry cost was removed, swimming visits increased significantly (unclear as to whether this was from existing or new users) (The CLR, 1993; Parsons, 2004; Glasgow City Council, 2001, cited in Coalter, 2006; Bolton *et al*, 2008; SIRC, 2009; PricewaterhouseCoopers LLP PwC, 2010)

- ✓ The majority of schemes demonstrated limited long term success (past 12 months) (The CLR, 1993; Glasgow City Council, 2001 cited in Coalter,2006; Bolton *et al*, 2008)

- ✓ In some cases swimming usage (visits) settled at a higher volume than at baseline (although most evidence was pre-recession) (Coalter, 2006; Bolton *et al*, 2008; PricewaterhouseCoopers LLP PwC, 2010)

National response to the evidence?

- ✓ May 2010, the national FS scheme was considered too expensive to continue - discontinued as part of £73 million savings made by the DCMS.

- ✓ The decision was made in the light of the commitment

  - ➢ to cut the budget deficit and
  - ➢ in response to evidence that although 18 million free swims were taken during the first year of the national scheme, around 83% of those aged 60 and over and 73% of those aged 16 and under would have gone swimming anyway, even if they had to pay for it

    (PricewaterhouseCoopers LLP PwC, 2010).

PA in Wigan

- **APS (2009/2010), 17% of Wigan adults participated in sport for at least three sessions a week (moderate intensity for at least 30 minutes) which did not significantly differ from the preceding surveys of 2007/2008 and 2008/2009.**

- **slightly lower than the regional North West average (17.7%)**
- **slightly higher than the national average (16.5%).**

- **10.7% of Wigan adults were classified as being physically active at the level recommended by CMO (5x30 minutes moderate physical activity/week threshold) - less than the England average of 11.5% (DH, 2011).**

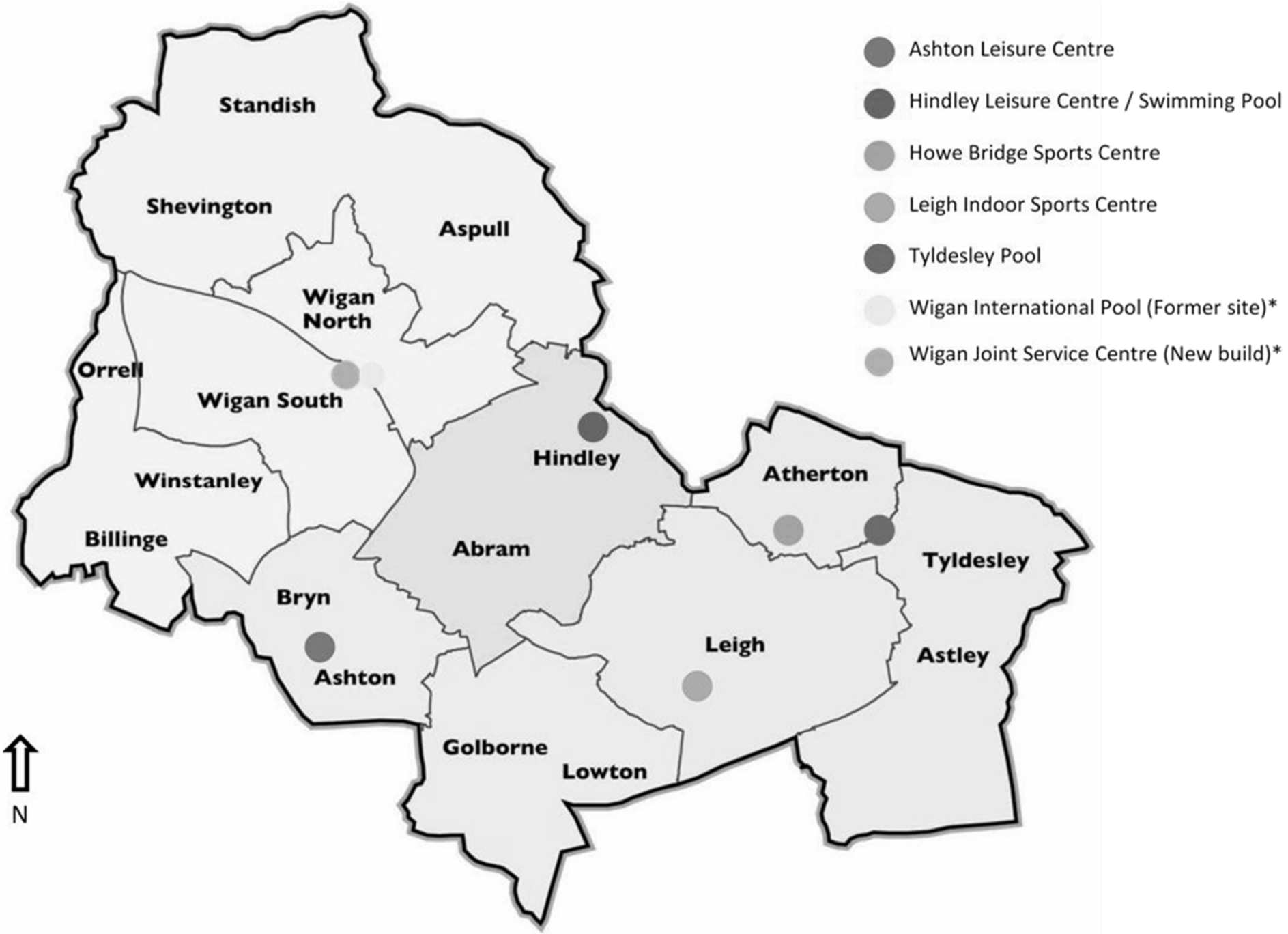
N.B. this is all self-report data

Costs of Physical Inactivity in Wigan

- **costs attributable to physical inactivity in Ashton, Leigh and Wigan Primary Care Trust for 2006/07 were £5.9M or £1.96M/100,000 pop (DH, 2009; attributable to five key diseases related to physical inactivity),**

- **higher than national average costs**

- **not as high as some neighbouring PCTs such as Manchester where costs attributable to physical inactivity were £11.1M or £2.36M/100,000 pop**


Standish
Shevington
Aspull
Wigan North
Orrell
Wigan South
Winstanley
Billinge
Hindley
Abram
Atherton
Tyldesley
Bryn
Ashton
Leigh
Astley
Golborne
Lowton
N
Ashton Leisure Centre
Hindley Leisure Centre / Swimming Pool
Howe Bridge Sports Centre
Leigh Indoor Sports Centre
Tyldesley Pool
Wigan International Pool (Former site)*
Wigan Joint Service Centre (New build)*

Wigan Borough's FS offer

Apr 2008-Mar 2009 – Free for 16 and under and 60+

Apr 2009-Dec 2010 – Free for all (for general swimming)

Jan 2011-Dec2011 – Free for 16 and under in school holidays, and 65+

Evidence: (evaluation conducted by Universities of Salford and Leeds)

- Analysis of Wigan Leisure and Culture Trust (WLCT) leisure management data including Lifestyle Card data (including socio-demographic variables)
- Cross-sectional questionnaire survey (n=529)
- Leisure centre management interviews (n=17)
- User and non-user interviews (n=34)
- Cost data

Wigan Borough's FS Evaluation Aims

- How did the universal Free Swimming offer in Wigan impact on swimming participation by gender, age group, ethnicity, deprivation and disability, and across pools?

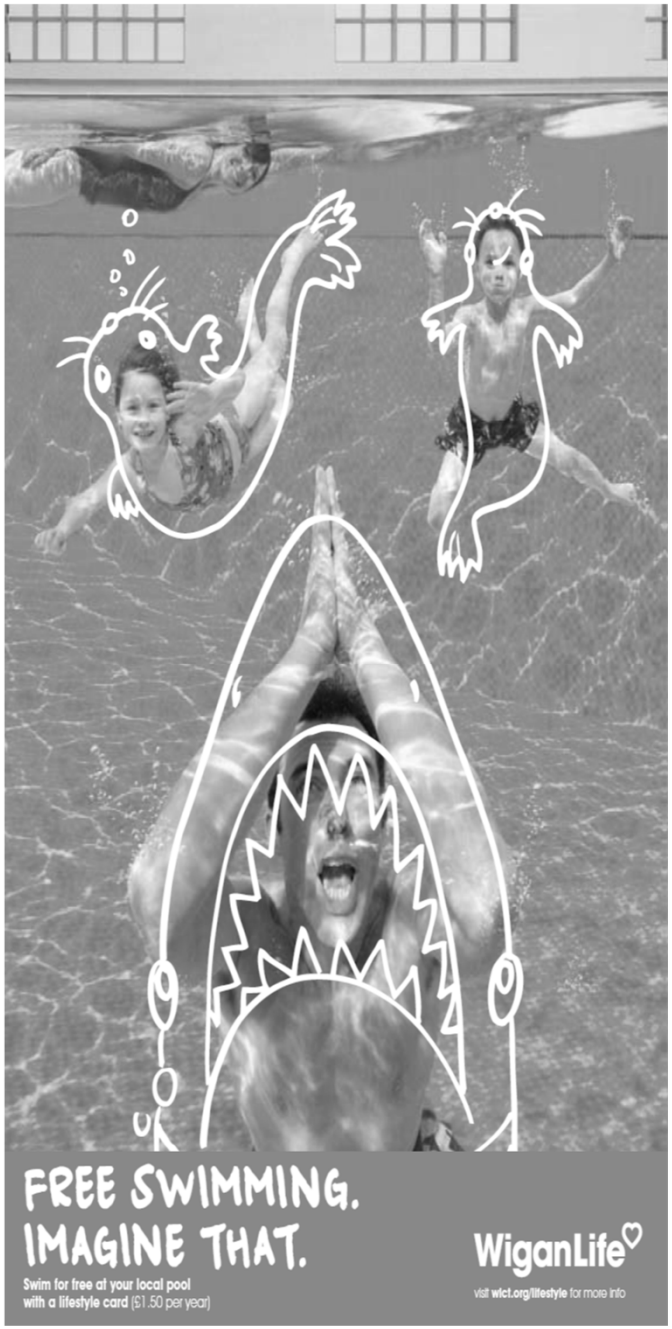
- Did the universal Free Swimming offer encourage previous non-users?

- How did swimming participation change with the revised Free Swimming programme (2011-2012)?

- Were the universal Free Swimming offer and the revised Free Swimming programme cost effective?

- What were the barriers to non-users?

- What were the views of Leisure Managers on the impact of the FSI?

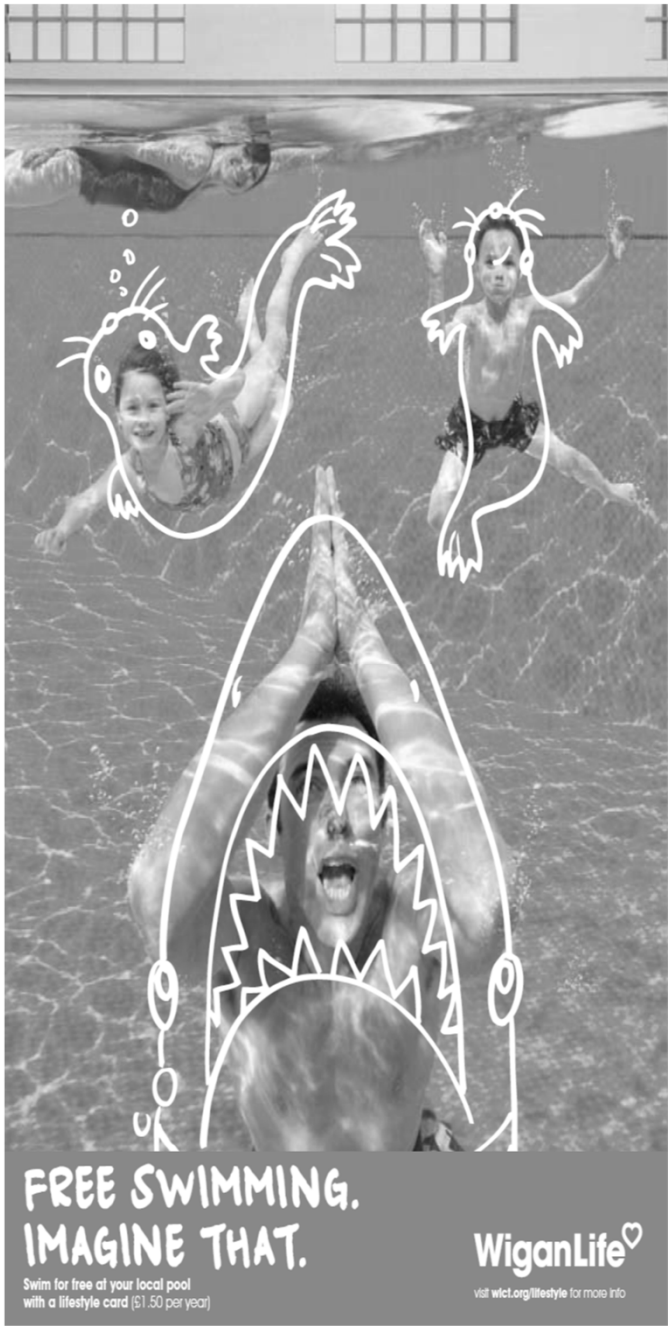


Key findings:

- Total visits increased by 15.1% in the year following the introduction of universal FS;
- increases were mainly in 17-59 age group for whom access to FS was new
- 34,111 ‘new’ members as a result of universal FS

N.B. limitation of data – cannot tell if they are ‘new’ swimmers or just those who now need a card to access FS.

Would be helpful to track new users through the data management system

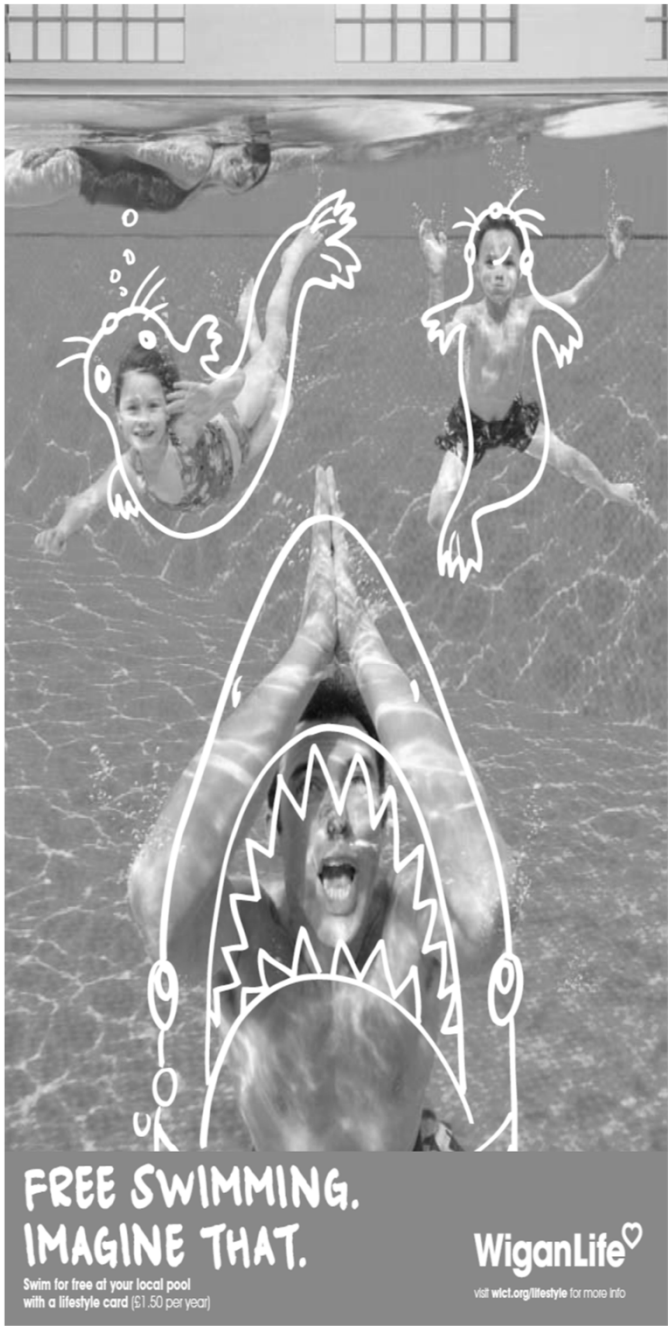


Key findings:

- This is particularly significant in that it defies the general swimming trend measured via the Active People Survey, - swimming participation across the North West decreased from 8.2% (2007-2008) to 7.2% in (2010-2011)

- APS for Wigan - slight (non-significant) increase in swimming participation, from 6.2% (2007-2008) to 6.8% (2010-2011) (Sport England, 2011)

N.B. Participation here is % people who swam at least 1x30 minute session/week of at least moderate intensity

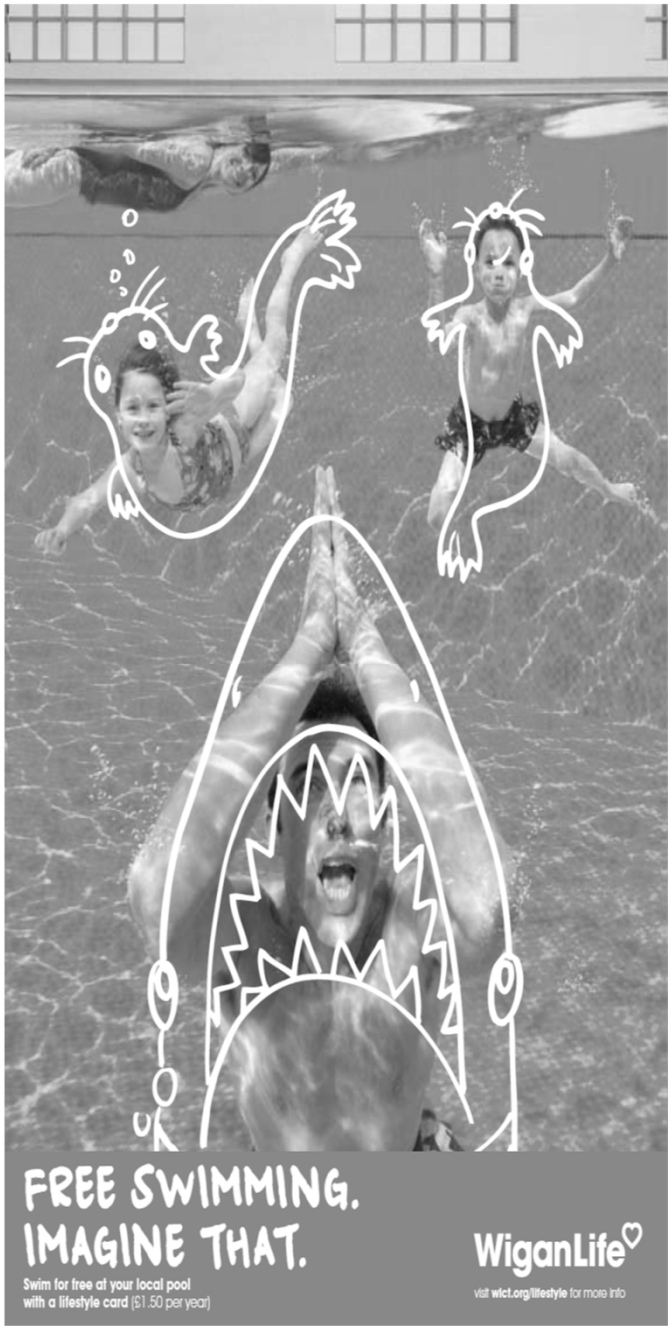


Key findings:

- The majority of other UK FS schemes demonstrated limited long term success (past 12 months)

- the findings from this evaluation concur with this national evidence as increases were not maintained into the second year of the universal FS offer - total visits decreased by 12.1%

N.B. at the stage of year 2 FS in Wigan, the government had announced national withdrawal of funding for FS, and local marketing in Wigan had ceased

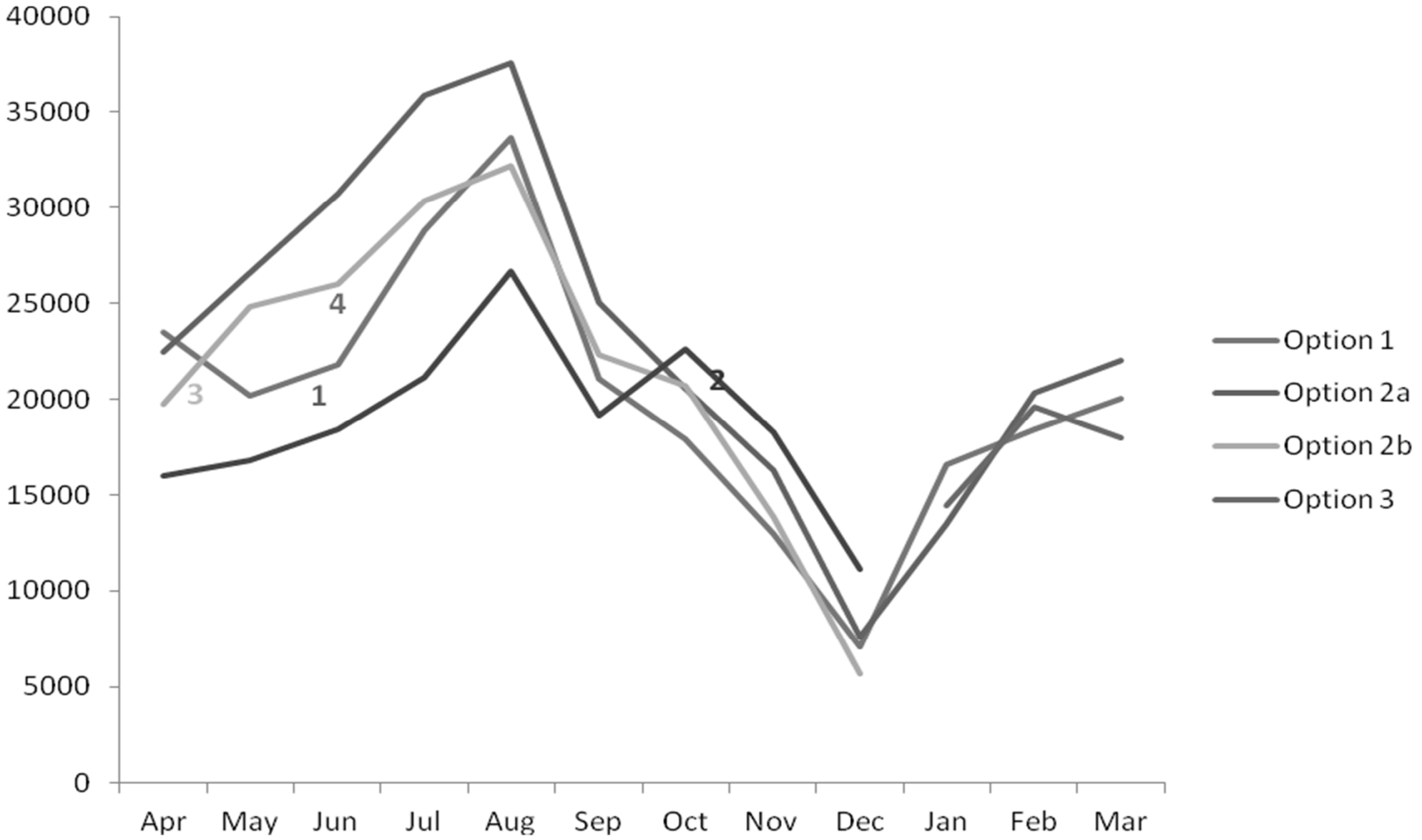


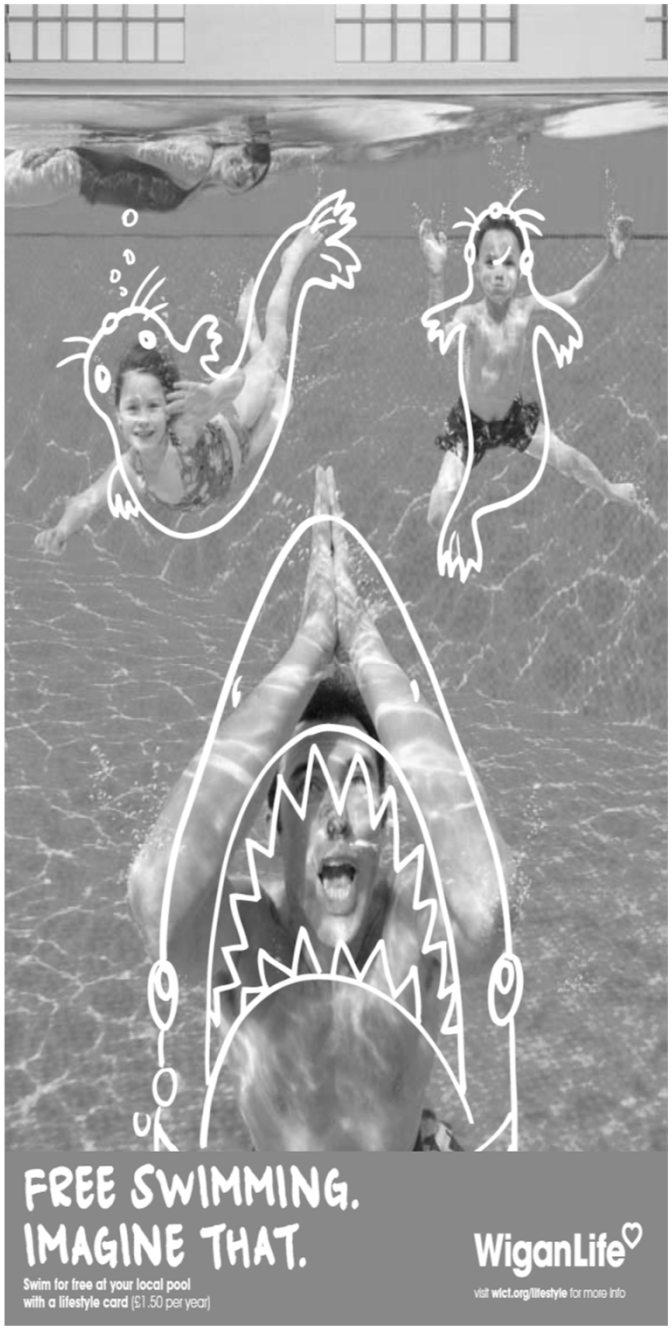
Key findings:

- In some examples of other UK FS schemes, swimming visits settled at a higher volume than at baseline (although most evidence was pre-recession) (Coalter, 2006; Bolton *et al*, 2008; PricewaterhouseCoopers LLP PwC, 2010)
- Wigan visits decreased by 9% compared with baseline in the year after universal FS

N.B. Wigan ‘baseline’ already offered FS to 16 and under, and 60+ (not ‘true’ baseline)

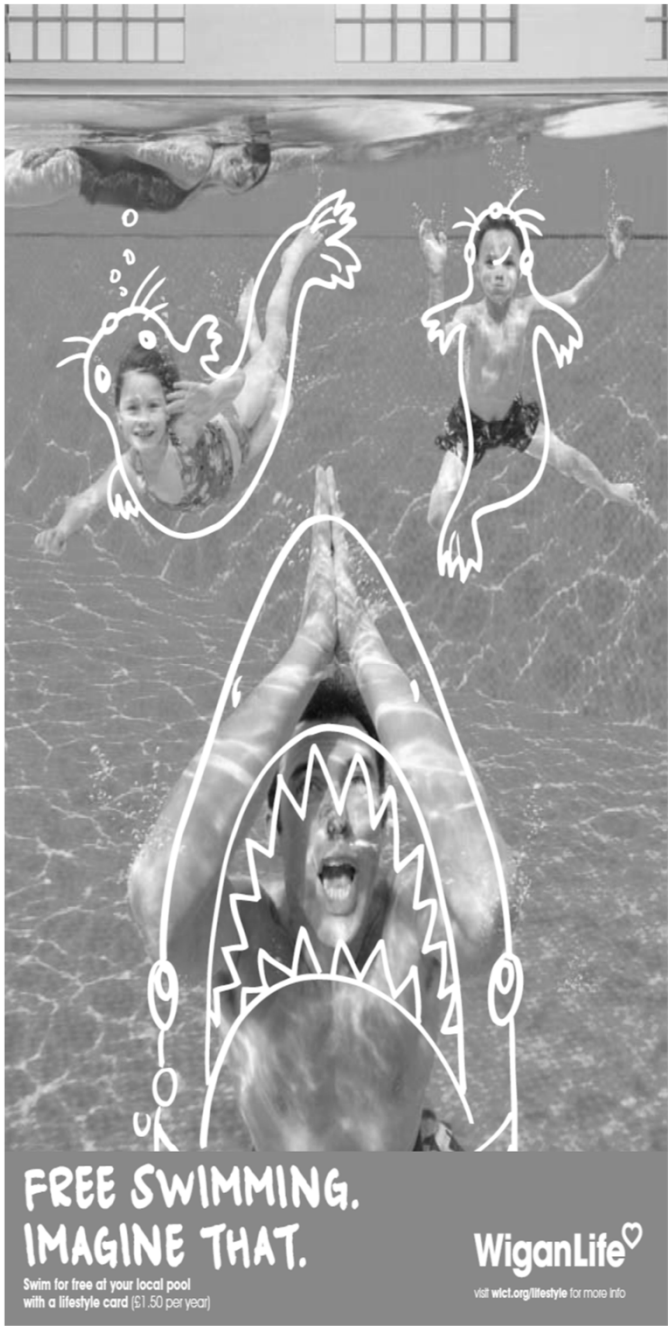
Total number of swim visits by swimming offer





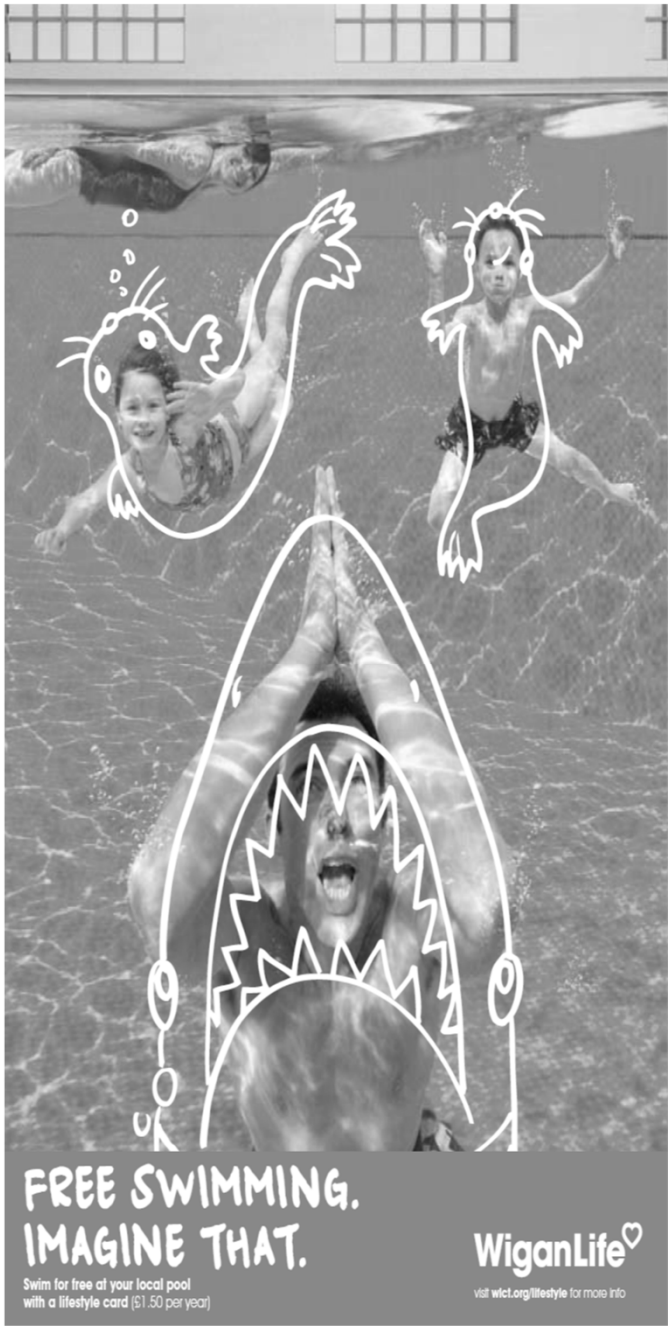
Key findings:

- Average monthly swims were low for all swimmers. The highest values were achieved by members who swam across all options (1.1 swims per month) and lowest in those who only attended in universal FS (0.23 swims per month)
- Those aged 60 and over displayed higher number of swims per week than all other groups
- only those aged 80 and over averaged more than 3 swims per month



Key findings:

- Universal FS increased membership and frequency of swimming in areas of higher deprivation; however, these increases were not dissimilar to population values, suggesting equitable ***access*** to the provision of FS across Wigan Borough



Key findings:

- **Cost benefit:** the scheme represented value for money to society, as the benefits were greater than the costs; for every £1 cost there were £1.30 in benefits to society
- **Cost effectiveness:** Cost per QALY gained in year 1 FS was £42k, this became even higher under year 2 FS.
- This is above the NICE threshold of £20k-£30k indicating the initiative was not cost effective, representing a cost to the public per swim of £9.34
- Cost per QALY for the 17–59 age group was much lower than when all ages were considered together at £24K per QALY.

QALY – quality adjusted life year

Are PA interventions cost-effective?

- **Investment in physical activity is cost-effective, especially with respect to walking and cycling interventions (Lewis et al., 2010; Muller-Riemenschneider et al., 2009).**

  "The return on investment in physical activity can be significant and in some cases can be realised in the short term. Individuals can gain benefits from becoming more active, even if they have previously been inactive until middle age and beyond. Indeed, exercise in the prevention of coronary heart disease has been described as "today's best buy in public health" ". **(DH, 2009)**

Recommendations under consideration

- Continue to adopt the free usage for those aged 16 and under in the school holidays as evidence suggests an increase in total visits for this age group; however, in order to promote long term swimming behaviour, Free Swimming for those aged 16 and under **across the year** may be beneficial

- Decrease the age limit to those aged **60 and over** to increase average swims in this age range and therefore potential health gains

- Introduce strategies to encourage **non-swimmers** to access pools for health gains and safety benefits through subsidised or free provision of swimming lessons; provide subsidised family memberships for swimming to encourage parents to accompany younger children during the school holiday period

- In order to maximise health gain, the **average monthly swimming rates** need to improve; consequently to increase regularity of swimming, cost incentives need to be put in place to encourage frequent visits to pools, e.g. family memberships as above; means-testing or a flat fee of £1/visit

The need for more and better evidence!

- **More information is needed to identify the most effective approaches for getting people physically active and on evaluating the impact of community based physical activity interventions (NICE, 2006; NICE 2007).**

- **It is also imperative to ensure that interventions are both targeted at, and taken up by, those people most in need of physical activity opportunities in order to ensure that health inequalities are improved rather than worsened (The Marmot Review, 2010).**

Recommendations

- Accurately measure all factors affecting **costs** related to Free Swimming, e.g. increased income from increased sales of food and swimming products, increased use of amenities leading to increased cleaning, staffing costs etc.

- Estimate **pool capacity values** to establish more accurate measures of usage and efficiency

- Set up **leisure data management systems** so they can collect relevant data for performance evaluation purposes e.g. to collect information about new users for example (ensure you assign unique identifiers to individuals)

Evaluating Sport and Physical Activity Interventions

A guide for practitioners

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