

Costing statement: Preventing type 2 diabetes: population and community interventions

Introduction

This costing statement discusses the cost implications of implementing the recommendations made in 'Preventing type 2 diabetes: population and community-level interventions in high-risk groups and the general population' (NICE public health guidance 35).

The guidance considers early intervention to prevent type 2 diabetes as part of an integrated package of local measures to promote health and prevent a range of non-communicable diseases (including cardiovascular disease [CVD] and some cancers).

The guidance also recommends national action to address the adverse environmental factors driving the increasing prevalence of type 2 diabetes.

Due to wide variation in current practice, it has not been possible to estimate the national resource impact. This costing statement discusses the recommendations which may have the most significant resource impact locally.

Costs will vary according to local practice and both NHS organisations and local authorities are advised to assess what additional resources are needed locally.

Background

With rates of obesity on the increase and the population becoming more sedentary (The Health and Social Care Information Centre 2009) type 2 diabetes is becoming more prevalent. Certain communities are particularly at

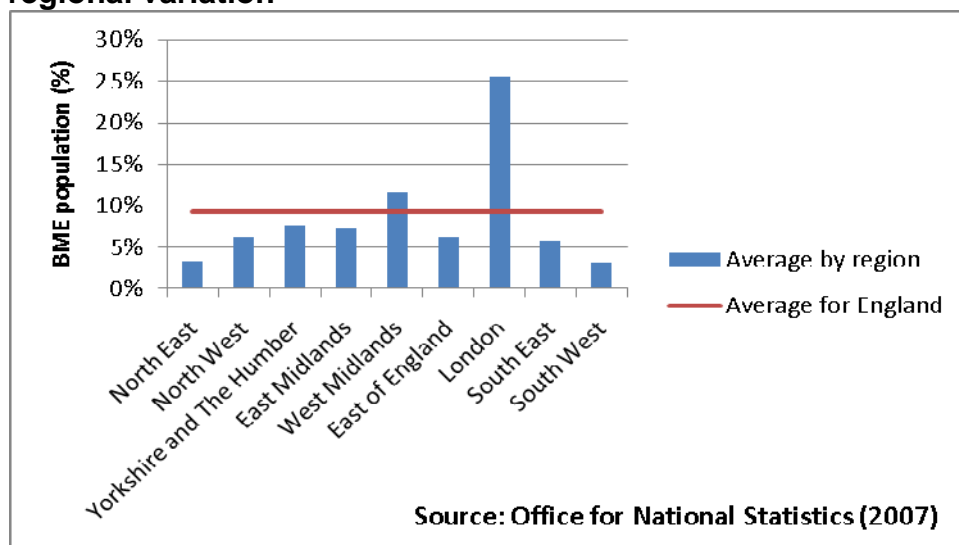
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risk. This includes people of South Asian, African-Caribbean, black African and Chinese descent and those from lower socioeconomic groups.

Approximately 9% of the population (about 4.5 million people) in England are of South Asian, African-Caribbean, black African and Chinese descent (Office for National Statistics 2007). The lowest socioeconomic group is defined as the bottom quintile (that is the bottom 20% or just over 10 million) of the population.

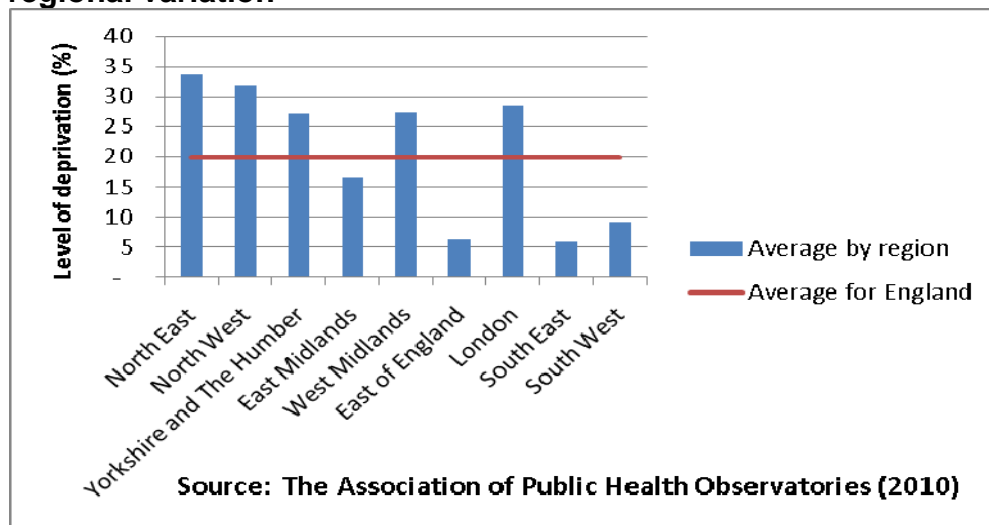
In 2007, approximately 40% of people from black and minority ethnic groups in England lived in London (see diagram 1). The greatest concentration of people in the bottom socioeconomic quintile live in the north of England and London (see diagram 2). Note, groups overlap, with some people falling into both categories.

Diagram 1 People from black and minority ethnic groups in England: regional variation



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Diagram 2 People from lower socioeconomic groups in England: regional variation



The costs of acute hospital care for treating people with diabetes have increased markedly over recent years, and now exceed 12% of revenue. Diabetes is estimated to account for 12.6% of the total annual cost of hospital admissions and 10.8% of total cost of outpatient attendances (Morgan et al. 2010).

For most people, type 2 diabetes can be prevented or delayed by maintaining a healthy weight, improving dietary intake and being physically active.

Recommendations

Type 2 diabetes has similar risk factors to other non-communicable diseases (such as CVD and some cancers). As a result, many of the recommendations on weight management and physical activity draw on previous NICE publications. This includes 'Obesity' (NICE clinical guideline 43 [2006]) and 'Cardiovascular disease' (NICE public health guidance 25 [2010]).

The resources required will depend on whether or not the previous NICE recommendations have been implemented. Where additional resources are

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required, some or all of the cost may be offset by potential future savings arising as a result of an effective intervention.

Recommendation 1: Integrating national strategy on non-communicable diseases

Part of recommendation 1 says:

When developing national strategy to target non-communicable diseases with a major link to diet, physical activity and obesity (for example, type 2 diabetes, cardiovascular disease, certain cancers), consider:

- integrating the strategy with other relevant national actions to prevent related non-communicable diseases
- addressing the key risk factors (for example, being overweight or obese, a sedentary lifestyle and an unhealthy diet)
- highlighting the contribution that partners in national and local government, industry, healthcare and the voluntary sector can make by working together to reduce the risk of non-communicable diseases for the population as a whole.

Potential benefits and savings

Developing an integrated national strategy may help to better utilise scarce resources and secure funding. Working in partnership to prevent or delay the onset of type 2 diabetes and other non-communicable diseases with the same risk factors, could enable organisations to share the cost and increase effectiveness.

Having an integrated national strategy may assist in developing a local strategy (see recommendation 3).

Recommendation 4: Interventions for communities at high risk of type 2 diabetes

Part of recommendation 4 advises:

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Commission culturally appropriate and financially accessible weight management programmes... These should be provided in community settings in areas where populations at high risk of type 2 diabetes live. (For example, they could be provided in religious venues or community and social clubs).

Potential resource implications

If weight management services need to be introduced or current capacity needs to be expanded, there will be an incremental cost. This will vary locally depending on the type of intervention used, who it is commissioned from and whether or not it is subsidised. Where services are provided based on a contribution from the service user a subsidy may be needed to encourage people to attend, particularly those from lower socioeconomic groups.

Costs could be kept lower if services are commissioned from public sector organisations, such as local authority leisure centres, during off-peak times. Or sessions could be commissioned in bulk to obtain group discounts from private sector organisations. (Interventions may include, for example, privately run slimming classes, or exercise classes at a local leisure centre.)

Recommendation 5: Conveying messages to the whole population

Part of recommendation 5 says:

Identify and make use of existing campaign materials, messages and resources, including those from other countries, where appropriate. Messages and materials should:

- highlight the need to reduce the amount of time spent being sedentary
- highlight the importance of being physically active, adopting a healthy diet and being a healthy weight
- increase awareness of healthier food choices, and the calorie content and nutritional values of standard-portion size meals and drinks.

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Recommendation 6: Conveying messages to the local population

In summary, recommendation 6 says:

Ensure national messages and information about type 2 diabetes and other non-communicable diseases are tailored for, and disseminated locally to, groups at higher risk of type 2 diabetes. It advises using a range of local mechanisms including newspapers, online social media and local radio targeted at specific high-risk groups.

Potential resource implications of recommendations 5 and 6

National campaigns such as 'Measure up' and 'Silent assassin' from Diabetes UK aim to raise awareness of diabetes and encourage behaviour change. Diabetes UK has also teamed up with Cancer Research UK and the British Heart Foundation to support the Department of Health's Change4Life campaign.

These campaigns could lead to an increase in the number of people requiring an intervention as a result of an increase in awareness. Initially, as a result, NHS costs may increase. However, in the longer term, savings may be made by reducing the need for future medical interventions (or by reducing the number of expensive interventions people may need).

The cost of a local media campaign would need to be estimated locally. To get the greatest impact at lowest cost, advertising material could be produced once and then disseminated to as wide an audience as possible. For example, if a radio advert costs £1000 to produce and transmit and 100 people hear it, then the cost per head will be £10. If 100,000 people hear it then the cost per head will be 1p. Where it is possible for local campaigns to tie in with national media coverage then this could also improve the impact.

Using local newspapers, online social media, television and radio channels targeted at specific communities may involve multiple advertising campaigns. There may also be additional translation costs. However, the cost of

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advertising in local media will be less expensive and could be complimentary to national campaigns (see recommendation 1).

Using local places of worship, social establishments, local businesses and cultural centres to convey preventive messages or run programmes may incur little if any cost.

Recommendation 8: Promoting a healthy diet: local action

Part of recommendation 8 advises:

Provide nutrition education sessions (theory and practice) at times to suit people with children (or provide a crèche) or to fit with working hours.

Sessions should take place in acceptable, accessible venues such as children's centres.

Potential resource implications

The cost of providing nutrition education will depend on who is delivering it, where it is delivered, how many classes each person attends and if crèche facilities are provided.

Classes are likely to be delivered by public health nutritionists or dietitians. Even if other people are trained to run the classes, a dietitian or public health nutritionist would need to help set up and design the course and supervise them.

If the classes are carried out in community settings, such as children's centres, there should not be any additional facility costs.

Savings and benefits

It is not possible to accurately quantify the long-term savings as a result of preventing or delaying type 2 diabetes among adults and any potential savings are not likely to be realised for a number of years after the initial costs are incurred.

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However, if there was a reduction in the number of cases of type 2 diabetes, or onset was delayed for a number of years, this could lead to savings for the NHS. It could also potentially lead to savings for other sectors, such as social services, who care for people who have become blind or have had limbs amputated because of the condition.

Reducing the number of people with type 2 diabetes may also reduce the number of people with other non-communicable diseases which share similar risk factors (such as CVD). This, in turn, may lead to additional savings for the NHS and other public sector services.

Where it is not possible to prevent type 2 diabetes, delaying its progression means people may require less medical attention generally – and may never require expensive interventions, such as an amputation.

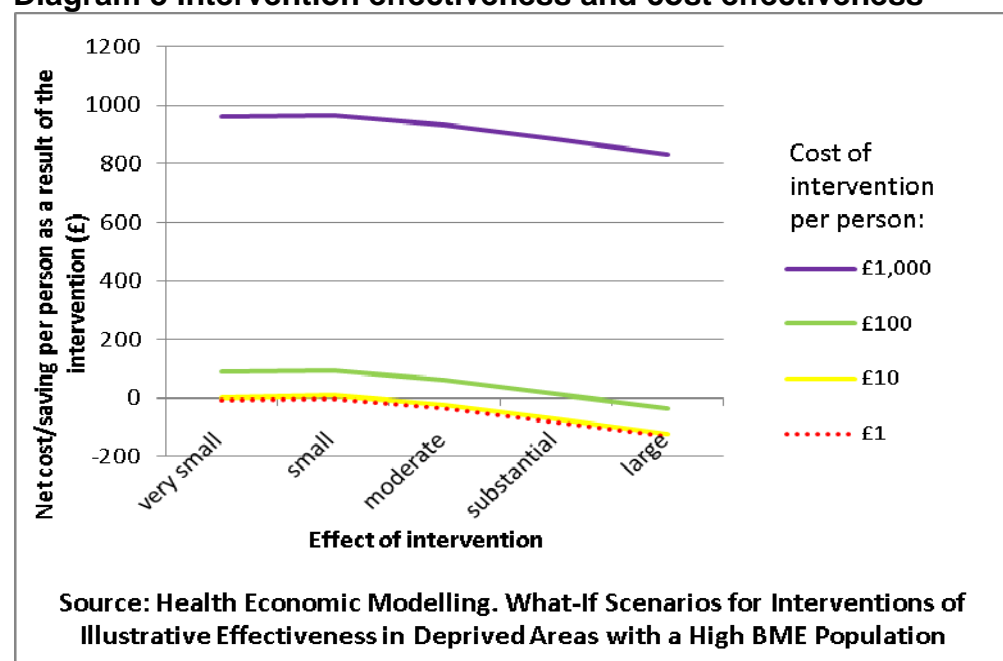
In terms of interventions, the cost of targeting high risk groups at population level to prevent or delay raised glucose levels is likely to be lower than the cost of one-to-one interventions to stop people with raised glucose levels progressing to type 2 diabetes.

The health economic modelling for the guidance shows that apart from cost, the biggest impact on whether or not there will be an overall saving is the effectiveness of the intervention. For example, a weight management intervention is only effective if it results in a certain amount of weight loss maintained over a certain period of time. Costs can also vary according to whether an intervention is targeted at the general population or at high-risk groups, for example, additional resources may be required to translate materials.

Diagram 3 uses data from the what-if scenarios in the health economic modelling to illustrate that inexpensive interventions (up to £10 per person) do not need to have a large effect to generate a saving in the long run. However, more costly interventions (£1000 per person) are unlikely to generate savings.

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Diagram 3 Intervention effectiveness and cost effectiveness



Conclusion

Due to wide variation in current practice and the type of interventions used, it has not been possible to estimate the national cost of implementing this guidance. Local costs will vary according to local practice and both NHS organisations and local authorities are advised to assess what additional resources are needed.

The recommendations on commissioning interventions for high-risk groups, including weight management programmes, media campaigns and the provision of nutrition education sessions are likely to be the most costly.

However, some or all of the costs may be offset by potential savings from a reduction in the number of people with type 2 diabetes and possibly, other non-communicable diseases. Working in partnership with national and local government, industry, healthcare and the voluntary sector to develop a national strategy to tackle these diseases at population level could maximise the utilisation of scarce resources.

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