Introduction

There is a close association between obesity and type 2 diabetes. The likelihood and severity of type 2 diabetes are closely linked with body mass index (BMI). Obese women are 13 times more likely to develop type 2 diabetes than normal-weight women. 47% of type 2 diabetes is attributable to obesity.¹

Being overweight or obese is the main modifiable risk factor for Type 2 diabetes. Therefore effective preventative measures require a focus on tackling the rates of overweight and obesity in the general population as well as targeted weight loss interventions for those at high risk.

Obesity Action Scotland support population wide measure to improve diet and tackle weight including:

1. Regulation to tackle price promotions on unhealthy foods
2. Restricting advertising and sponsorship associated with unhealthy food
3. Regulate to control portion size
4. Implementation and monitoring of the Soft Drinks Industry Levy
5. Implementation and extension of UK reformulation programme to make products healthier

Obesity Action Scotland would also wish to see the inconsistencies in weight management services across Scotland addressed to ensure a better service for those at high risk of type 2 diabetes. These inconsistencies include referral criteria, referral pathways, length of intervention, mode of delivery and accessibility of services as outlined in this paper.

To what extent do you believe the Scottish Government’s Diabetes Improvement Plan 2014 and the approach by Integration Authorities and NHS Boards is preventative?

The Diabetes Improvement Plan 2014 outlined actions to develop and implement an appropriate framework for assessing risk of diabetes for people currently undiagnosed to support early identification, diagnosis and treatment of those at risk of developing type 2 diabetes.

It highlighted “the important role of the diabetes community working alongside public health colleagues in developing and supporting practical approaches to the challenge and, crucially, signposting people at risk of developing diabetes towards relevant information and services (e.g. weight management services).”
There has not been a consistent approach to diabetes prevention interventions across Scotland, with no coordinated work between weight management services (funded through Health Scotland and managed by Directorates of Public Health) and the Scottish Diabetes Group. The recently formed Scottish Government Diabetes Prevention working group is the first step towards this, but key to its success is the implementation of the recent funding commitment announced within “A Healthier Future – Actions and Ambitions on Diet, Activity and Healthy Weight” consultation.

Weight management services across Scotland vary significantly and there is not a consistent approach to weight management in people at high risk of type 2 diabetes. Research undertaken in 2014 gathered information from 9 health boards across Scotland on weight management services. It found there were differences in referral criteria, referral pathways, provision, length and frequency of follow-up, dietary intervention, quantity and type of physical activity intervention and provision of specialist interventions. Many services do not include high diabetes risk as a specific category for referral and do not allow patients with a BMI from 25-30 (a category which a large number at high diabetes risk are in) to attend services. The major barriers to improving services are low funding levels and short term budgets that are often at threat of non-recurrence.

Existing services are under-utilised in general with a specific under-referral of patients with type 2 diabetes. This is often due to lack of knowledge of the services in primary and secondary care and circuitous referral routes. However it has to be acknowledged the attitudes also persist that patients are to blame for their obesity and that it is not the clinician’s role to assist with behaviour change. This requires to be addressed.

For services related to pregnancy (either pre- or post- or during pregnancy, including before a subsequent pregnancy) even greater inconsistency exists. Services can be very localised with variation within boards as well as between.

**Are the services and Diabetes Improvement Plan 2014 being measured and evaluated in terms of cost and benefit?**

Data collection on all of these requires improvement. There is no routine reporting of outcomes from weight management in general, let alone for diabetes prevention. There is no routine reporting of the identification and follow-up of high diabetes risk. These are treatment areas where the evidence base for the best format for services is not well established and only through data collection, scrutiny and continuous improvement loops will outcomes ultimately improve.

**What are the most effective initiatives for preventing Type 2 diabetes?**

There are key opportunities that exist within the current Scottish Government Programme for Government including the consultation “A Healthier Future – Actions and Ambitions on Diet, Activity and Healthy Weight” and the proposed Good Food Nation Bill. These should ensure that we implement measures within Scotland to improve the diet of the nation and turn around levels of overweight and obesity across the population. We must ensure these programmes include:

1. Regulation to tackle price promotions on unhealthy foods
2. Restricting advertising and sponsorship associated with unhealthy food
3. Regulation to control portion size
4. Implementation and monitoring of the Soft Drinks Industry Levy
5. Implementation and extension of UK reformulation programme to make products healthier
While the above actions will support weight management efforts, they will not be sufficient to help those who already have overweight and obesity to lose weight. We are already in a situation where 65% of the population are overweight or obese. Therefore weight loss interventions also require to play a major role in diabetes prevention. The consultation “A Healthier Future – Actions and Ambitions on Diet, Activity and Healthy Weight” includes proposals to invest £42m over five years to establish supported weight management interventions as a core part of treatment services for people with, or at risk of, type 2 diabetes. We must ensure these programmes include all the criteria as recommended by NICE and provision and access across Scotland is adequate and consistent. We must also ensure that the programme of investment is delivered in a way that tackles the inequality issues associated with obesity and type 2 diabetes.

The main components of an effective lifestyle programme for diabetes prevention are outlined by NICE (table 1). The main areas where current programmes in Scotland would fail to meet these criteria are in physical activity and length of programme.

<table>
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<tr>
<th>Table 1: NICE Recommendations for effective diabetes prevention programmes*</th>
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<td>1. Aim to promote changes in both diet and physical activity.</td>
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<td>2. Use established, well defined behaviour change techniques (e.g. Specific goal-setting, relapse prevention, self-monitoring, motivational interviewing, prompting self-talk, prompting practice, individual tailoring, time management).</td>
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<td>3. Work with participants to engage social support for the planned behaviour change (i.e. engage important others such as family, friends, and colleagues).</td>
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<td>4. Maximize the frequency or number of contacts with participants (within the resources available).</td>
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<td>5. Use a coherent set of ‘self-regulatory’ intervention techniques (specific goal setting (ideally with coping planning aka ‘relapse prevention’); prompting self-monitoring; providing feedback on performance; problem-solving; review of behavioural goals).</td>
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<td>6. Use a group size of 10-15. This recommendation is designed to balance cost and effectiveness, rather than to be an exact specified range, so we coded for “a group size of no more than 15” (the point at which effectiveness is expected to be diminished).</td>
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<td>7. Provide at least 16 hours of contact time over the first 18 months</td>
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<td>8. Ensure programmes adopt a person-centred, empathy-building approach</td>
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<td>9. Allow time between sessions, spreading them over a period of 9-18 months</td>
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<td>10. Information provision: to raise awareness of the benefits of and types of lifestyle changes needed</td>
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<td>11. Exploration and reinforcement of participants’ reasons for wanting to change and their confidence about making changes.</td>
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<td>12. Gradual building of confidence (self-efficacy) by starting with achievable and sustainable short-term goals and setting of graded tasks</td>
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Obesity Action Scotland are also aware that in early December 2017 Professor Mike Lean of University of Glasgow will present an update on the DiRECT study (Diabetes Remission Clinical Trial). This is a key piece of research into low calorie, diet based treatment for type 2 diabetes and up to date findings from this study could be discussed at the Health and Sport Committee hearing.
Is the current approach adequate or is more action needed?

More action is needed on the following issues:

1. Regulation and action to improve the food environment in Scotland through the finalisation and implementation of the measures outlined in “A Healthier Future – Actions and Ambitions on Diet, Activity and Healthy Weight”

2. Implementation of increased funding for primary care to identify and follow-up individuals at high diabetes risk, with national agreement on risk scoring and follow-up requirements

3. Investment, innovation and evaluation of weight management services that are accessible and effective for diabetes prevention

4. A “hearts and minds” educational campaign for both clinicians and public on the value of diabetes prevention.

5. Investment in effective pregnancy services that are better integrated with adult weight management

6. Mandatory reporting of weight management service outcomes, high risk identification and follow-up and pregnancy-related services.

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