

## Appendix

### Appendix One:

#### **Certificate in Diabetes Care**

##### **Audit**

1536513

12/5/2016

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#### The Health Promotion in the prevention of type 2 Diabetes

##### Justification

World Health Organisation (WHO) (2014), states Diabetes as a leading cause of death and disability worldwide it's global prevalence was about 8% in 2011 and predicted to rise to 10% by 2030.

It is paramount that those most at risk are identified early and managed appropriately, with a view to delaying the onset of diabetes.

Nice (2011), recommends health professionals working in National and Local Public Health Services to implement early intervention strategies to prevent type 2 diabetes, identifying those most at risk, people that are overweight or obese, whether someone is physically active or not and certain ethnic groups.

The author in view of the practice population of 400 prediabetes patients largely obese, with small areas of low socioeconomic pockets and varied ethnic groups, felt that the current identification and management of such patients is inadequate and although as discovered Emis population reporting, the current GP contract has no clinical indicators for pre-diabetes the author feels that we have a duty of care to these patients and on discussion with colleagues prediabetes could become a QOF indicator in the future.

## Aim

The author intends to audit the practice population of patients with a diagnosis of prediabetes and explore the care intervention the patients received and examine evidence based care recommended for prediabetes and plans to develop a working template to improve patient care.

## Objectives

- Discuss with colleagues the current regulation of patients with a pre-diabetes diagnosis
- Research best practice for the management of pre-diabetic patients
- Plan time with admin staff to run reports required to pursue the audit
- Analyse the data collected
- Draw conclusions as to any recommendations for improvement to patient care

## Standards and Evidence Criteria

The author has discovered through colleague dialogue that the practice currently is 'ad hoc' in the identification of patients at risk of prediabetes and delivers inconsistent intervention. The practice population has a high ethnic minority background, largely obese with areas of low socioeconomic groups, a population considered to be at risk. O'neil (2014) states 5% to 10% of people with pre-diabetes go on to develop type 2 diabetes, a potential 18 million people in the UK fall into the need for health intervention. NICE (2011) made recommendations that these groups should benefit from early intervention suggesting those working in National and Local public health services Gps and Practice nurses develop strategies in the prevention of Type 2 Diabetes, promoting a healthy diet and physical activity among communities at high risk.

Diabetes.co.uk (2016) describes prediabetes as a higher than normal blood glucose, normal being less than 6.0% (42 mmol/mol), a diagnosis of pre-diabetes is a Hba1c of 6.0% (42 mmol/mol) to 6.4%(47mmol/mol) and describes pre-diabetes as a high risk of developing type 2 diabetes, the individual should have Hba1C checked annually and aim to reduce blood glucose to a normal range, furthermore

American Diabetes Association(2016) advises that there is a 58% lower risk of a diabetes diagnosis when a 7% of body weight loss is achieved. The National Service Framework for Diabetes (2001) sets standards that the NHS will develop, implement and monitor strategies to reduce the risk of developing type 2 diabetes in the populations as a whole and to reduce the inequalities in the risk of developing type 2 diabetes but also identify people who do not know they have diabetes.

Nice (2011) lists recommendations to help prevent type 2 diabetes among populations and communities of adults who are at high risk and in summary public health services are to provide -:

- National and Local assessment and action to promote a healthy diet and physical activity to those identified as a high risk of developing type 2 diabetes, that conveys messages that are consistent, clear and culturally appropriate.
- Training for those involved in helping to spread awareness of risks associated with the condition.
- Provide early intervention as part of an integrated package of local measures to promote health by working in partnership to develop cost effective physical activity, dietary and weight management interventions.

### Methodology

The practice population electronic EMIS population reporting system was used to identify patients with a read code of pre-diabetes in the last 6 months, it was decided that 12 months produced too large a cohort to audit in the time frame, which generated a patient count of 63, 36 females and 23 males, aged between 33 and 83, a manageable number.

The author devised a data collection sheet to analyse the following -:

- Age
- Gender
- Ethnicity
- Weight at diagnosis and at follow up appointment
- Hba1c at diagnosis and at follow up appointment
- Type of education received i.e. leaflet, Online, Verbal, referral, group
- Any physical activity recorded

## Results

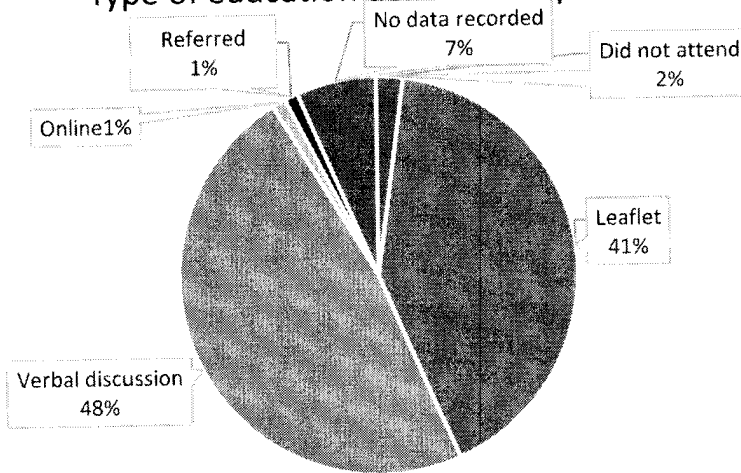
Of the 63 patients 74% had no ethnicity recorded. NSF (2001) suggested that people of South Asian, African, Afro-Caribbean or Middle Eastern descent are at a higher than average risk of developing diabetes and is non-modifiable risk. Unfortunately, the practice has no current means of identifying this population at risk. NSF (2001) states Type 2 diabetes is often captured during routine examination or investigation of another problem, the author believes that the practice can more readily identify those at risk of developing type 2 diabetes at for instance new patient checks which would include data such as recording of ethnicity.

It was frustrating that 12% had an increase in HbA1c despite as the pie charts show over 40% having had some source of education. However, 12% did see a reduction in hbA1c and GP online (2016) states clinical complications are reduced if even a 1% reduction in hbA1c is achieved and that there is a relative reduction of 21% for diabetes related deaths, 14% myocardial Infarction and 37% microvascular complications.

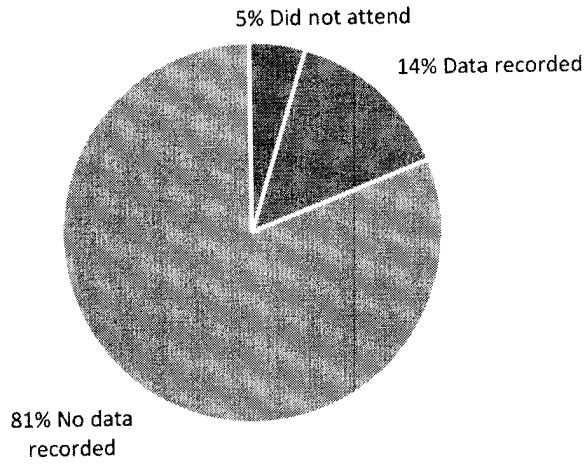
The practice recorded 92% of patients' weight at diagnosis, however 8% of patients had no record of weight having been recorded. It was disappointing to find that of 57% of patients eligible for follow up that only 22% had lost weight. The author was most shocked that 81% of the population had no data regarding any physical activity being recorded. Nice ((2011) recommends lifestyle interventions aimed at changing individuals diet and increasing the amount of physical activity they do can halve the number with pre-diabetes who go on to develop type 2 diabetes.

The following pie charts demonstrate the most significant results.

### Type of education delivered to patient



### Any physical activity recorded



### Ethnicity of patients

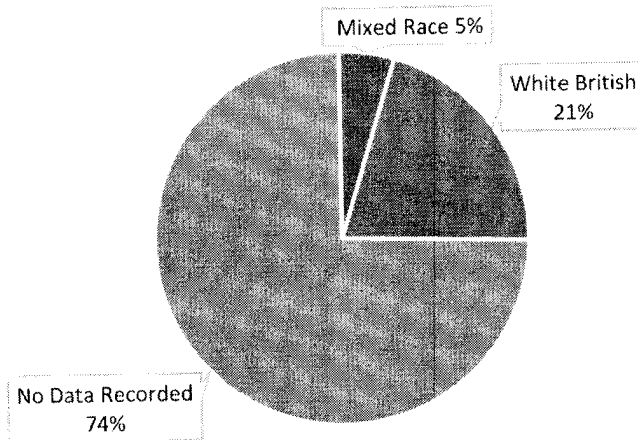


Chart showing audit results

Age	The age ranges of the patients were between 33 and 83
Gender	36 Females and 23 Males
Ethnicity	3 Mixed race 13 White British and 47 no date recorded.
Weight	58 patients had a record of weight recorded at diagnosis. 5 had no data recorded.
Hba1c at follow up	Pre-diabetes diagnosis Hba1c range is between 42mmol/mol and 48mmol/mol. The patients Hba1c ranged from 38 to 48. 4 patients had a Hba1c of 38 mmol/mol-39 mmol/mol.
Hba1c at follow up	5 did not attend. 29 were not applicable within the current year of audit. 8 had a decrease in weight since diagnosis and 8 had an increase in weight since diagnosis. 2 remained the same.
Follow up appointment	36 were not applicable to current year of audit. 19 attended for follow up and 8 did not attend.
Education	2 did not attend. 38 were given a leaflet on pre-diabetes. 44 had had a discussion on lifestyle choice. 1 had online information given. 1 had a dietician referral. 6 had no data recorded.
Weight at follow up	5 did not attend. 8 had an increase in weight. 14 had a decrease in weight.
Any Physical Activity recorded	3 did not attend. 9 had documented physical activity encouraged. 51 had no data recorded.

## Recommendations for change in practice and Expected Improvements in diabetes care

The aim as Nice (2015) advises in the prevention of type 2 diabetes is to

- Highlight the need to patients to reduce the amount of time being sedentary
- Highlight the importance of being more physically active, adopting a healthy lifestyle.
- Increase awareness of healthier food choices, calorie content and nutritional value of standard portion size meals and drinks.

The author believes as the National Service Framework for diabetes (2001) that the education of health professionals delivering care to those at risk of developing type 2 diabetes receive continuous education in the risk factors associated with diabetes and potential for prevention through modification of such risk factors and be aware of interventions that are effective in the prevention i.e. managing patients who are overweight, obese and increasing physical activity.

The author plans initially to have a nurse education session to highlight evidence based dietary advice, a reminder as to 'what is healthy eating'. Also to reintroduce the use of General Practice physical Activity Questionnaire (GPPAQ) at Healthy Heart screening and Obesity review clinics and to make aware of the physical activity guidelines for adults aged (19 to 64) produced by The Department of Health. Advise of local programmes offering patient education for lifestyle change. Advice on the use of risk score assessment tools such as Diabetes.co.uk Assessment tool.

Secondary to the education session, the author plans to improve the practice template for pre-diabetes to incorporate ethnicity, physical activity recommendations and healthy eating advice.

The author believes patient care will be improved as a result of this change as the National Diabetes Education Programme (2016) suggests successful diabetes care requires a systematic approach to supporting patients behaviour change efforts including lifestyle choices, physical activity, healthy eating, smoking cessation, weight management and effective coping and as Diabetes.org (2015) states by the time of type 2 diabetes diagnosis half the people had signs of complications and goes on to say it is likely that these figures would be reduced with better diabetes screening programmes and raised awareness.

The author plans to re audit in 6 months post recommended changes.

### Self-Reflection

The author has found that care intervention is not consistent and with a closer inspection and increased knowledge believes care intervention improvements are achievable with good communication and a team approach with colleagues and patients' alike change may be successful in preventing type 2 diabetes.

### Reference list

Diabetes Association (2016) [online] *Are you at risk from type 2 diabetes?*  
<http://www.diabetes.org/are-you-at-risk/prediabetes/?loc=atrisk-slabnav>. Accessed 13.4.16

Diabetes.co.uk (2016) *Guide to Hba1c* [online] – [www.diabetes.co.uk/what-is-hba1c.html](http://www.diabetes.co.uk/what-is-hba1c.html). Accessed 13. 4.16

Diabetes.org.uk (2015) [online] *Facts and Stats*.  
[https://www.diabetes.org.uk/About\\_us/What-we-say/Statistics/](https://www.diabetes.org.uk/About_us/What-we-say/Statistics/). Accessed 29.4.16

GP online (2016) *Achieving Hba1c targets reducing risk and complications* [online]  
[www.gponline.com/achieving-hba1c-targetsreducing-risk-complications/diabetes/article/860260](http://www.gponline.com/achieving-hba1c-targetsreducing-risk-complications/diabetes/article/860260). Accessed 6.5.16

National Diabetes Education (2016) *Principle 2: manage prediabetes, prevent type 2 diabetes* [online]  
<https://www.betterdiabetescare.nih.gov>. Accessed 6.5.16

National Service Framework for diabetes (2001) *National Service Framework for Diabetes: Standards* [online] <http://www.doh.gov.uk/nsf/diabetes.htm>. Accessed 6.5.16

Nice (2011) *Type 2 diabetes prevention: population and community -level interventions* [online] <https://www.nice.org.uk/guidance/ph35/chapter/1-recommendations#/definitions>. Accessed 13.4.16

Nice (2015) *Diabetes in adults. Quality Statement 1: Structured Education* [online]  
<https://www.nice.org.uk/guidance/qs6/chapter/quality-statement-1-structured-education>. Accessed 27.4.16



O'Neil (2014) *Prediabetes: what's it all about?* [Online]

<https://www.diabetes.org.uk/about.us/news/prediabetes-whats-it-all-about/>.

Accessed 13.4.16

World Health Organisation (2016) *Prevalence of diabetes and prediabetes and their risk factors among Bangladeshi adults: a nationwide survey* [online]

<http://apps.who.int/iris/bitstream/10665/4358811/9241594934eng.pdf>. Accessed

13.4.16