NHS GREATER GLASGOW AND CLYDE

BOWEL SCREENING PROGRAMME

Clinical Policy Guidelines

Management of patients with diabetes undergoing colonoscopy procedure following positive FOB test

Date approved: 25 April 2016	Approved by: Bowel Screening Steering Group Short Life Working Group
Expiry Date: April 2018	Review Date: April 2016
Version: 2.0	

INTRODUCTION

All people aged between the ages of 50 and 74 will be invited to take part in the Scottish Bowel Screening Programme and will be sent a FOB test kit to complete at home. The first part of the screening process is the analysis of a 3 stool FOB sample.

Positive results from this patient group will result in an invitation for colonoscopy. Colonoscopy will be classed as a potentially high risk procedure if any of the patient group has diabetes.

AIM OF THE POLICY

The aim of this policy is to clearly set out a the guidelines for managing patients with diabetes who require colonoscopy following a positive FOB test after taking part in the Scottish Bowel Screening programme.

SCOPE OF THE POLICY

This policy applies to all clinical and nursing staff involved in the bowel screening programme in NHS Greater Glasgow and Clyde.

PROCEDURE

Pre-Assessment

1. The Pre-assessment Nurse will pre-assess patients in line with guidelines for management with diabetes (Appendices 1a, 1b, 1c, 1d and 2).

2. The Pre-Assessment nurse should identify if patients have type 1 or type 2 diabetes and whether they can look after their diabetes during the days of bowel prep. If in doubt the nurse should contact either the patient's GP or DSN/clinic where the patient normally attend for management of their diabetes"

3. The Bowel Screening Administrator will ensure the patient is first on the screening list and that the Endoscopist and Endoscopy Unit are aware of the patient's diabetes status.

4. The Pre-assessment nurse will check SCI Store and pre-assessment screenings in the Bowel Screening IT system for relevant medical, drug and social histories.

5. The Pre-assessment nurse will check if the patient uses a dosset box and, if required, will advise the patient to visit the Community Pharmacy to reduce medication in their dosset box.

6. The Pre-assessment nurse will explain the protocol to the patient and if there are difficulties the patient should be instructed to contact the team who normally looks after their diabetes. Admission should be considered for patients assessed as being unable to manage their diabetes and bowel preparation.

APPENDIX 1: CHECKLIST

Patients who require admission:

- Those who are district nurse dependent for insulin administration
- Those with a history of recurrent severe hypoglycaemic episodes requiring aid from another person. This will include those with loss of hypoglycaenmic awareness.
- Those with complex medical histories including those on steroid therapy and/or those with frequent admissions due to poorly controlled diabetes
- Those on insulin who cannot self-monitor

APPENDIX 2a

Advice and action to be taken for patients with Type 2 diabetes on oral medication and non-insulin injectables attending for colonoscopy

Should be advised to take Klean Prep preparation as per instructions

↓

To take usual oral medications the **day before** colonoscopy as follows:

- If on long-acting sulphonylureas (i.e. gliclazide MR or glibenclamide) reduce dose by half i.e., gliclazide MR 120mg – take 60mg, glibenclamide 10 mg – take 5 mg.
- If on short-acting sulphonylurea (i.e. glimepiride, gliclazide, glipizide) or repaglinide or nateglinide, take morning dose only.
- If taking metformin, rosiglitazone, pioglitazone or combination tablets (Competact, Avandamet), sitagliptin, vildagliptin, saxagliptin or combination tablets (Eucreas, Vildagliptin/Meformin combination), take morning dose only.
- If taking exenatide, or liraglutide stop treatment

↓

In order to prevent hypoglycaemia, patients should be advised to take sugary carbohydrates regularly throughout the day before their appointment as per the patient information sheet provided. If Patient is hypoglycaemic take either 100mls Lucozade, 200mls of ordinary cola, 400mls ordinary lemonade or 6 glucose tablets

↓

On the day of colonoscopy:
Withhold oral medications and injections of exenatide/liraglutide on morning of colonoscopy

↓

Patient to bring oral medications with them to hospital

↓

Check blood glucose (BG) levels prior to procedure and one hour post procedure if patient is still within the department:

Prior to colonoscopy

- If result is above 4mmol/l, it is safe to proceed with colonoscopy
- If result is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls Lucozade
- Recheck BG level in 15 minutes and repeat as necessary until result is above 4mmol/l

Post colonoscopy

- If result is above 4mmol/l and patient is being provided with a breakfast, usual dose of oral medication should be taken
- If level is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls Lucozade and provide breakfast. Advise patient to withhold oral hypoglycaemic until the following day..

NB Ensure patient's BG level is above 4 mmol/l prior to leaving the department.
If BG is > 20 mmol/l check a formal laboratory blood glucose, U&Es and urinary ketones. If any concerns, contact the patient's local diabetes centre or medical staff.

APPENDIX 2b

Advice and action to be taken for patients with Type 2 diabetes on once daily insulin +/- oral hypoglycaemics attending for colonoscopy

Should be advised to take Klean Prep preparation as per instructions

↓

To take insulin therapy the **day before** colonoscopy as follows:

- If on once daily insulin in the morning (e.g. Insulatard, Humulin I, Lantus, Levemir) take $^{2}/_{3}$ of usual dose i.e. if on 36 units daily take 24 units.
- If on once daily insulin at any other time of the day, take ½ dose.
- If taking oral hypoglycaemics as well as insulin, please refer to advice sheet for type 2 patients on oral medications.

Patients should check blood glucose levels a minimum of 4 times daily.

↓

In order to prevent hypoglycaemia, patients to be advised to take sugary carbohydrates regularly throughout **the day before their appointment** as per the patient information sheet provided (Appendix 1)
If patient is hypoglycaemic, take either 100mls Lucozade, 200mls of ordinary cola, 400mls ordinary lemonade or 6 glucose tablets.
If BG is 25 mmol/l or more, contact local diabetes centre, GP or NHS 24 out of hours.

↓

On the day of colonoscopy
Withhold oral medications and insulin (if on morning dose) on day of colonoscopy

↓

Patient to bring insulin and oral medications with them to hospital

↓

Check blood glucose (BG) levels prior to procedure and one hour post procedure if patient is still within the department:

Prior to colonoscopy

- If result is above 4mmol/l, it is safe to proceed with colonoscopy
- If result is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls Lucozade
- Recheck BG level in 15 minutes and repeat as necessary until result is above 4mmol/l

Post colonoscopy

- If result is above 4mmol/l, patient will be provided with a breakfast and usual dose of oral medication should be taken
- If level is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls Lucozade and provide breakfast
- Recheck BG level prior to giving oral medication and take usual dose of morning insulin. If patient takes their insulin at night time, take half the night-time dose now and half the dose at the usual time that night.

NB Ensure patient's BG level is above 4 mmol/l prior to leaving the department.
If BG is > 20 mmol/l check a formal laboratory blood glucose, U&Es and urinary ketones . If any concerns, contact the patient's local diabetes centre or medical staff.

APPENDIX 2c

Advice and action to be taken for patients with Type 1 diabetes or Type 2 diabetes on twice daily insulin attending for colonoscopy

Should be advised to take Klean Prep preparation as per instructions

↓

Patients **must** have a **morning** appointment for the procedure, otherwise it will be necessary to admit them on the day before procedure

↓

To take insulin therapy on the day before colonoscopy as follows;
If patient is taking oral hypoglycaemic therapy as well as insulin, please refer to advice sheet for Type 2 patients on oral medications
Patient should take usual dose of morning insulin on day before colonoscopy. Patient should reduce evening dose of insulin by half.
Patient should check blood glucose every 2-3 hours

↓

In order to prevent hypoglycaemia, patients to be advised to take sugary carbohydrates regularly throughout **the day before their appointment** as per the patient information sheet provided (Appendix 1)
If patient is hypoglycaemic, take either 100mls Lucozade, 200mls of ordinary cola, 400mls ordinary lemonade or 6 glucose tablets.

↓

If BG > 20 mmol/l, use a ketostix, if available, to check for urinary ketones. If testing shows more than + ketones, patient must contact GP, local diabetes centre or NHS 24 if out of hours.

↓

On day of colonoscopy
Withhold oral medications and insulin on morning of colonoscopy

↓

Patient to bring insulin and oral medications with them to hospital

↓

Check blood glucose (BG) levels prior to procedure and one hour post procedure if patient is still within the department:

Prior to colonoscopy

- If result is above 4mmol/l, it is safe to proceed with colonoscopy
- If result is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls Lucozade
- Recheck BG level in 15 minutes and repeat as necessary until result is above 4mmol/l
- If patient has type 1 diabetes and >1+ketones, contact the local diabetes team.

Post colonoscopy

- If result is above 4mmol/l ; patient is provided with a breakfast, usual dose of oral medication should be taken
- If level is below 4mmol/l provide patient with 6 dextrose tablets or 100 mls of Lucozade and provide breakfast
- Recheck BG level prior to giving oral medication and usual dose of morning insulin
- If patient is on an unusual insulin regimen (e.g. thrice daily fixed mixture, basal plus one short acting insulin) contact local diabetes team for advice.

NB Ensure patient's BG level is above 4 mmol/l prior to leaving the department.
If BG is > 20 mmol/l check a formal laboratory blood glucose, U&Es and urinary ketones. If any concerns, contact the patient's local diabetes centre or medical staff.

APPENDIX 2d

Advice and action to be taken for patients with Type 1 diabetes or Type 2 diabetes on more than twice daily insulin attending for colonoscopy

Should be advised to take Klean Prep preparation as per instructions

↓

Patients **must** have a **morning** appointment for the procedure, otherwise it would be necessary to admit them on the day before procedure

↓

To take insulin therapy **on the day before** colonoscopy as follows;

If patient is taking oral hypoglycaemic therapy as well as insulin, please refer to advice sheet for Type 2 patients on oral medications

Patient should take normal dose of rapid acting insulin in the morning with breakfast along with usual dose of long acting insulin taken in the morning. ¾ of the lunch time and evening time doses of short acting insulin should be taken unless the blood glucose is >15mmol/l when the usual doses should be taken.
Patient should take half the evening dose of long acting insulin (Lantus, Levemir, Insulatard) dose on day before colonoscopy, unless blood glucose is >15mmol/l when full dose should be taken.
Patient should check blood glucose a minimum of four times daily.

↓

In order to prevent hypoglycaemia, patients to be advised to take sugary carbohydrates regularly throughout **the day before their appointment** as per the patient information sheet provided (Appendix 1)
If patient is hypoglycaemic, take either 100mls Lucozade, 200mls of ordinary cola, 400mls ordinary lemonade or 6 glucose tablets.

↓

On day of colonoscopy
Patient to bring insulin and oral medications with them to hospital

↓

Check blood glucose (BG) levels prior to procedure and one hour post procedure if patient is still within the department:

Prior to colonoscopy

- If BG is < 4mmol/l, give 6 Dextrose tablets or 100ml Lucozade
- Withhold morning insulin
- If patient has type 1 diabetes and BG is above 15mmol/l – check for urinary ketones. If >1+ketones, give normal morning dose of insulin, postpone the procedure and contact the local diabetes team for advice.

Post colonoscopy

- If result is above 4mmol/l and patient is being provided with a breakfast, usual dose of oral medication should be taken and usual short acting insulin
- If level is below 4mmol/l, provide patient with 6 dextrose tablets or 100 mls glass of Lucozade and provide breakfast
- Once BG > 4 mmol/l give usual insulin(s) and (if applicable) oral medication

NB Ensure patient's BG level is above 4 mmol/l prior to leaving the department.
If BG is > 20 mmol/l check a formal laboratory blood glucose U&Es and urinary ketones. If any concerns, contact the patient's local diabetes centre or medical staff.

Appendix 3

NHS Greater Glasgow and Clyde

Bowel Preparation for Colonoscopy for people with Diabetes on Insulin or Diabetic Tablets

Please follow the diet below for the first 2 of the 3 days before your appointment - see overleaf for details of the day before your appointment

If taking iron tablets, please stop 1 week before your appointment.

Which Food to Choose		
Choose		**Avoid**
Milk, cream, cheese, natural yoghurt, eggs, butter/ margarine, soya milk.	**Dairy Products**	Cheese with fruit or herbs added. Fruit yoghurt.
White bread. Low fibre cereals, e.g. cornflakes, rice crispies. White flour. White rice / pasta.	**Bread and Cereal Products**	Wholemeal, granary and brown bread. Bread with dried fruit added e.g. teacakes. High fibre cereals e.g. porridge, Weetabix, Shredded Wheat, muesli, Bran cereals e.g. Branflakes/All Bran. Wholemeal/brown flour, brown rice/ pasta.
All fresh meat and poultry portions.	**Meat and Poultry**	Processed meat products e.g. sausages, black pudding, haggis. Stewed meats e.g. casseroles, chilli con carne, curry, bolognaise etc. Pies, bridies, sausage rolls. Meat or poultry in breadcrumbs.
All fish and seafood.	**Fish**	Fish pastes
Strained fruit juice.	**Fruit and Vegetables**	All fruit including tinned and dried fruit. All vegetables and salad items including pickles, textured vegetable protein (TVP). All peas, beans & pulses & products including baked beans, hummus, lentils, tofu.
New or old potatoes with skins removed – boiled fried or roasted. Potato waffles. Crisps.	**Potatoes**	New or old potatoes with skins remaining. Baked potatoes in jackets. Croquette potatoes.

Which Food to Choose (continued)		
Choose		**Avoid**
Custard. Strained clear soups. White bread sauce without onion. Cheese sauce, white sauce, salad cream, French dressing, mayonnaise. Gravies made without vegetables.	**Soup and Sauces**	Soups containing vegetables, peas, beans and / or pulses. Onion sauces. Fruit and vegetable chutneys and sauces including tomato and brown sauce. Pickles. Horseradish sauce, mint sauce.
Cream crackers, white crispbread, rich tea biscuits, ginger biscuits.	**Biscuits**	Digestives, hob nobs, rye crispbread, oatcakes. Wheatmeal crackers. Biscuits with dried fruit and / or nuts.
Coffee, tea. Strained fresh fruit juices. Diet cordials and fizzy drinks. Alcoholic beverages.	**Drinks**	Unstrained fresh fruit juice. Tomato juice.
Plain scones made with white flour. Marmite, Bovril, salt, vinegar, sugar-free jelly.	**Miscellaneous**	Jam / marmalade with real fruit pieces, lemon curd. Fruit cake. Wholemeal / fruit scone. All nuts & products including peanut butter.

Choosing your meals for Day 1 and Day 2 of the 3 days before your appointment.

The following meals are just a selection of suitable foods that can be used to make up your meals:

Breakfast	Strained fruit juice, cornflakes, white toast, low-fat spread, pure jelly jam, tea or coffee.
Light meal	Clear soup, white bread sandwich with cold meat, eggs, cheese, natural yoghurt, rich tea biscuits.
Main meal	Clear soup or strained fruit juice, fresh meat, poultry or fish, potatoes without skins or white rice or pasta, cheese sauce or gravy, sugar-free milk pudding, natural yoghurt or sugar-free jelly.

Choosing your meals for the day before your appointment

On the day before your appointment do not eat any solid food. You need, however, to include fluids containing sugar i.e.

- 150mls unsweetened smooth orange juice
- 250mls ordinary lemonade
- 150mls unsweetened clear apple juice
- 150mls ordinary cola
- 150mls ordinary sweetened fruit squash (diluted to taste with water)
- 2 tablespoons (100g) sweet jelly (not red)
- 75 mls Lucozade original

Suggested Eating Plan

Breakfast	150 ml unsweetened smooth orange juice + 2 tablespoons (100g) sweet jelly (not red).
Mid-morning	75mls Lucozade original.
Lunch	250mls ordinary lemonade + 150mls ordinary fruit squash diluted to taste with water.
Mid-afternoon	150mls unsweetened clear apple juice.
Evening meal	150mls ordinary cola + 2 tablespoons (100g) sweet jelly (not red).
Bedtime	250mls ordinary lemonade.

In addition to the above you can take freely:

- Tea/coffee with sweetner, if required and a small amount of milk
- Sugar-free table jelly
- Strained soup
- Sugar-free fruit cordials
- Water
- Bovril
- Sugar-free fizzy drinks
- Marmite
- Oxo

Important Information

If you have any hypoglycaemic symptoms, take either 100ml Lucozade or 200ml sugary fizzy drink or 6 glucose tablets.