

GUIDELINES FOR MEDICINES MANAGEMENT FOLLOWING BARIATRIC SURGERY

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

INTRODUCTION

This guideline covers medication issues in adult patients following bariatric surgery. Perioperative antibiotic prophylaxis is not included.

THIS GUIDELINE IS FOR USE BY THE FOLLOWING STAFF GROUPS :

All qualified healthcare professionals involved in prescribing, managing or administering medication to patients who have had bariatric surgery.

Lead Clinician(s)

Chris Parry	Clinical Support Pharmacist
Keith Hinton	Lead Pharmacist, Critical Care, Surgery and Theatres

Approved by Surgical Clinical Governance on: 31ST October 2018

Ratified by Medicines Safety Committee on: 3rd November 2018

Review Date: 3rd November 2020

This is the most current document and is to be used until a revised version is available

Key amendments to this guideline

Date	Amendment	by:
January 2018	Inclusion of advice for the management of diabetes for bariatric surgery patients Alternatives to Forceval included	Keith Hinton
August 2018	Relaxation of the necessity to use soluble/liquid preparations postoperatively Removal of ursodeoxycolic acid from the prescribing checklist	Keith Hinton

GUIDELINES FOR MEDICINES MANAGEMENT FOLLOWING BARIATRIC SURGERY

BACKGROUND

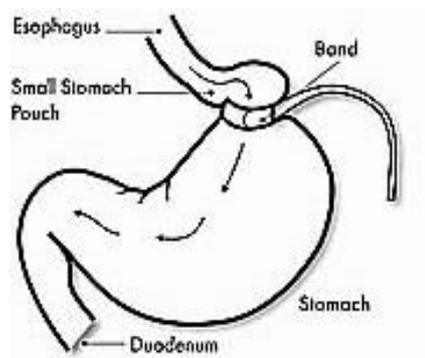
Within the context of an emerging obesity epidemic, healthcare professionals are increasingly encountering patients who have undergone bariatric surgery. This guideline explores some of the medicines management issues after bariatric surgery.

TYPES OF SURGERY

Bariatric surgery includes a range of different procedures, each with differing effects on drug therapy. This guideline focuses on the most commonly performed in Worcestershire:

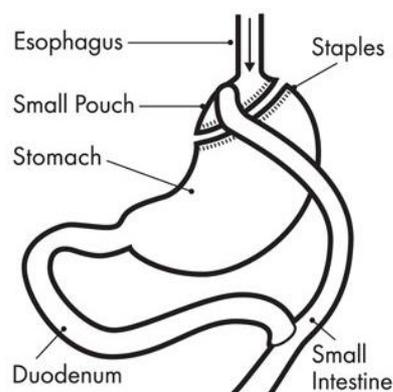
Laparoscopic adjustable gastric banding (LAGB)

RESTRICTIVE



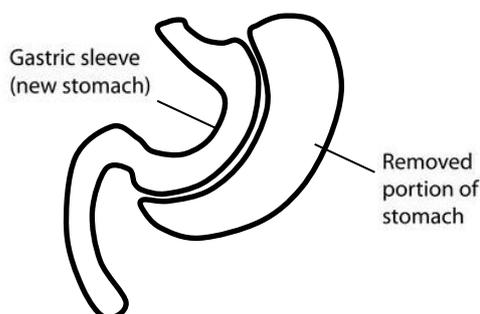
Roux-en-Y gastric bypass (RYGB)

RESTRICTIVE + MALABSORPTIVE



Laparoscopic sleeve gastrectomy (LSG)

RESTRICTIVE



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The potential effects and consequences that bariatric procedures may have on absorption and action of medications should be carefully considered before surgery. Bariatric surgery may introduce anatomical and physiological changes in the gastrointestinal tract which may affect drug pharmacokinetics. Absorption of drugs is predominantly affected, but tissue distribution, drug metabolism and elimination may also be affected.

Theoretical pharmacokinetic effects of bariatric surgery include:

- Reduced surface area for absorption
- Quicker transit through gastric pouch
- Raised pH (less acidic environment) due to reduced stomach acid production
- Reduced pre-systemic metabolism may increase bioavailability (attributed to one reported fatal case of enalapril toxicity following RYGB). Caution should be exercised when restarting medications postoperatively, particularly with compounds known to be metabolized by the P450 cytochrome system.
- Reduced enterohepatic cycling.
- Reduced mixing of stomach contents leading to reduced disintegration and dissolution.
- Reduced bioavailability of those drugs which rely on food for their absorption e.g. carbamazepine, lithium and spironolactone.
- Altered pharmacokinetics due to significant weight loss.

Medicines that require plasma level monitoring should be checked more frequently after surgery to assess the effect of these potential altered pharmacokinetics.

PRE-OPERATIVE MEDICATION

- Oestrogen therapy should be stopped at least one month pre-operatively to reduce the risk of post-operative thromboembolism.
- Candidates for bariatric surgery may take several medicines to treat or prevent co-morbidities. Following LAGB, LSG or RYGB, most patients find they can stop or reduce their dose of:
 - Antihypertensives
 - Lipid-lowering agents
 - Diuretics
 - Analgesics
 - Insulin (for type 2 diabetes mellitus)
 - Sulphonylurea
- Oral hypoglycaemics may be discontinued postoperatively under the guidance of the diabetes team if there is clinical resolution of diabetes demonstrated by normalised blood glucose and HbA1c.
- If metformin is required to continue postoperatively consider using a reduced dose after RYGB due to the possible increased bioavailability.
- Patients must be closely monitored to titrate down doses or stop medication that is no longer required, thereby avoiding hypotensive or hypoglycaemic episodes.

These medicines may need to be restarted if weight is regained.

KEY PHARMACEUTICAL CONSIDERATIONS

Guidelines for medicines management following bariatric surgery		
WAHT-PHA-019	Page 3 of 24	Version 2

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There may be a problem swallowing certain tablets following surgery and each patient should have a medication review with their GP. Patients will be individually assessed as part of their pre-operative assessment with their medication and if appropriate some medications may need to be adjusted to aid swallowing after the surgical procedure.

If you require further advice in managing medication in a patient who has had bariatric surgery contact should be made with the ward pharmacist or Medicines Information (ext 30235). Out-of-hours: for urgent enquiries contact the on-call pharmacist via switchboard

Checklist for medication review

- Up to 8 weeks after surgery:** Oral medication may need to be in a liquid, crushed or chewable form - crushing tablets or opening capsules is not always appropriate and is usually off-label (out of licence).
- Liquid medicines:** Stagger doses to prevent overloading the small gastric pouch.
- Consider **non-oral routes** where possible.
- Enteric-coated (gastro-resistant) or modified-release** oral preparations should be switched to immediate-release preparations or alternative drugs where possible.
- Peak plasma concentrations may occur quicker without changing overall amount of drug absorbed. Anecdotally, more frequent, smaller doses (e.g. of opioids) may circumvent this problem. This caution extends to alcohol.
- Weight-based doses** of medicines may require adjustment e.g. infliximab.

There is very little evidence for these effects in practice so this guideline cannot make specific recommendations on individual drugs.

The effect of bariatric surgery on pharmacokinetics of medicines is a complex mix of the issues above. Changes should not be made to drug therapy based on just one of these effects. Instead, all patients should have frequent monitoring to identify decreased efficacy or adverse effects, particularly for drugs of narrow therapeutic index.

MANAGEMENT OF PATIENTS WITH DIABETES UNDERGOING BARIATRIC SURGERY

Establish and clearly document whether the patient has Type 1 or type 2 Diabetes

MANAGEMENT OF TYPE 2 DIABETES

PRE-OPERATIVE

Oral hypoglycaemic tablets

- Check HbA1c 1 – 2 months before surgery – if above 70mmols liaise with the diabetes team.
- All patients with Type 2 diabetes should stop all oral hypoglycaemic agents except metformin when starting the preoperative diet unless otherwise advised by the diabetes team.
- Patients who have continued on oral hypoglycaemic tablets (except metformin) need regular blood glucose monitoring. This should include a daily pre-breakfast blood glucose test, twice weekly pre meal and before bed tests (4 point profile) when commencing the pre op diet.

Injectable therapies

Continue taking GLP-1 agonists e.g. liraglutide, exenatide, lixisenatide, dulaglutide while on the pre op diet but stop on the day of surgery. If experiencing hypoglycaemia (blood glucose below 4mmols) or tight glycaemic control (blood glucose 4-7mmols) stop GLP1 agonist.

Insulin treated type 2 diabetes.

- Refer to DSN team by Tier 3 dietitian when patient is ready to attend the presurgery groups.
- Increase blood glucose monitoring to 4 times daily (before meals and before bedtime).
- Reduce the usual insulin dose by 50% once commenced on the preoperative diet. The insulin dose subsequently may need to be adjusted or stopped during the pre op diet depending on blood glucose monitoring results.

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- **On day of surgery stop all insulin therapy unless otherwise stated by the Diabetes team – but continue blood glucose monitoring 4 times daily.**

MANAGEMENT OF TYPE 2 DIABETES

POST OPERATIVE.

Continue monitoring blood glucose 4 times daily before meals and before bedtime, stop if results are within normal range 4 – 7mmols.

If blood glucose consistently between 7 – 11mmols consider recommencing metformin as tolerated (restart at a reduced dose)

Check HbA1c 3 months post-surgery for patients:

- **On insulin**
- **On multiple oral diabetes agents,**
- **On a GLP1 agonist**
- **Has had diabetes diagnosed for over 10 years duration**
- **blood glucose above 11mmols**

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MANAGEMENT OF TYPE 1 DIABETES

PRE-OPERATIVE

- All patients to be referred to the Diabetes Specialist Team by the Tier 3 dietitian.
- All patients must continue with insulin.
- If they are on basal insulin (Levemir, Lantus, Abasaglar, Tresiba, Toujeo) this will require a dose reduction of 20% when commencing the pre op diet. Titrate the dose according blood glucose levels.
- Quick acting insulin (Novorapid, Humalog, Apidra) will be required with meals but reduce by up to 50% when starting the pre op diet. Titrate the dose according blood glucose levels.
- Regular home blood glucose monitoring required (pre-meal and pre-bed) with access to ketone testing if blood glucose levels are elevated.

POST-OPERATIVE

- **Continue basal insulin** (reduce the dose by 20%) **alongside CVRIII** if indicated – see Guideline WAHT-END-011
- **Quick acting insulin (Novorapid, Humalog, Apidra) will be needed once tolerating carbohydrates above 20 grams per meal, as advised by the DSN**

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Impact of surgery on nutrition

All patients will have a comprehensive nutritional assessment prior to bariatric surgery. Any nutritional deficiencies identified pre-operatively will be corrected as clinically indicated. Nutritional deficiencies may also occur as a result of the surgery (see below)

Surgical procedure	Impact on nutrition
Gastric band	No impact on absorption. Over tight gastric bands can affect nutritional quality of diet due to poor tolerance of healthy foods, particularly those rich in protein and iron.
Sleeve gastrectomy	May be some impact on absorption including iron and vitamin B12
Gastric bypass	Impacts on absorption of iron, vitamin B12, calcium and vitamin D Long limb bypasses may affect absorption of protein, fat, vitamin A and trace elements

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POST-OPERATIVE COMPLICATIONS

Thromboembolism – If VTE risk outweighs bleed risk, offer mechanical thromboprophylaxis and/or enoxaparin until mobility no longer significantly reduced (usually a minimum of 14 days after bariatric surgery but may be extended to 28 days on clinician advice) – dosing as follows (UKCPA 2010):

Weight	50-100kg	100-150kg	>150kg
Enoxaparin dose	40mg od	40mg bd*	60mg bd*
*unlicensed doses recommended by UK Medicines Information			

Post-operative nausea and vomiting – can be caused by analgesics, eating too much, eating too quickly or not chewing sufficiently. Due to the risks posed by vomiting to the post-operative gut, prophylactic antiemetics should be prescribed. A combination of two antiemetics working by different mechanisms may be needed. Severe vomiting may warrant electrolyte and/or vitamin supplementation.

Gout – high protein diets and weight loss can precipitate gout.

- In patients with a history of gout, consider prophylactic allopurinol. Initiate several weeks before surgery and continue until no longer clinically appropriate.
- In an acute attack, consider colchicine before NSAIDs.

Gallstones – rapid weight loss can precipitate gallstones.

Ulceration and reflux – prescribe ranitidine 150mg *nocte* to continue for 3 months post-op. In the case of ongoing reflux, consider continuation of ranitidine beyond 3 months (Malone 2005). PPIs may be considered in place of ranitidine, but balance benefit against the risk of *Clostridium difficile*.

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Improved fertility –

- In women of child-bearing age, significant weight loss may restore ovarian function, menstrual cycle regularity and fertility.
- It is generally recommended that pregnancy is avoided for 18 months post-operatively due to the risk of nutrient deficiencies. Recent bariatric surgery would not be grounds for termination.
- Contraceptive options should be discussed. RYGB *may* alter the pharmacokinetics of oral contraceptives due to disruption of enterohepatic recirculation. This may result in reduced efficacy although evidence of this is unclear. Since efficacy cannot be monitored like other medicines, it would be prudent to consider barrier methods, implantable contraceptives (medroxyprogesterone acetate), intrauterine device or vaginal rings. Limited evidence suggests these are not influenced by bariatric procedures or significant weight loss.
- Any patient who becomes pregnant in the 18 months after bariatric surgery should be referred to Obstetrics usually under the care of a consultant.

Patients are advised to contact the bariatric team when planning a pregnancy or becoming pregnant. Multivitamin and mineral supplements will need to be reviewed and changed to pregnancy suitable options. British Obesity and Metabolic Surgery Society recommend 5mg folic acid pre-conceptually and for 12 weeks post conception.

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ADVERSE EFFECTS

Some drugs should be used with caution or avoided in patients who have had bariatric surgery.

Gastrointestinal toxicity

- Drugs which may cause nausea, vomiting, diarrhoea, reflux, gallstones, ulcers or obstructions should be used with caution or avoided where possible.
- Non-steroidal anti-inflammatory drugs (NSAIDs) increase the risk of marginal ulcer 11-fold. A marginal ulcer occurs in the duodenal lining and could be detrimental to the integrity of the surgical pouch. **Avoid NSAIDs if possible** – paracetamol ± codeine may be considered. Use caution with low-dose aspirin and COX-2 selective inhibitors.
- Bismuth salicylate should be avoided in the early postoperative period due to formation of black stools which may mask malaena.
- PPIs could be considered for gastroprotection, but there is little evidence for their use post-bariatric surgery.
- Drugs known to cause oesophagitis or acid reflux should be avoided where possible. These include doxycycline, bisphosphonates such as alendronate (see below), theophylline, nitrates and nifedipine.

Bone protection

- Bisphosphonates are commonly prescribed to offset the increased risk of osteoporosis due to rapid weight loss and/or calcium malabsorption. However, oral bisphosphonates have the potential to cause serious damage if lodged in the oesophagus and should be avoided.
- Consider early bone densitometry and check serum parathyroid hormone, total calcium and 25-hydroxyvitamin D levels.
- If bisphosphonate therapy is required, then intravenous route of administration is preferred.
- All RYGB/LSG patients should take calcium and vitamin D supplements (see below). Where possible minimise medication which may lower calcium, such as loop diuretics and carbamazepine.
- Glucosamine can cause nausea, vomiting and epigastric discomfort while chondroitin is better tolerated.

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Simple sugars –

- Dumping syndrome occurs in around 75% of RYGB patients. This involves rapid gastric transit with mostly-undigested food entering the small intestine, leading to abdominal pain, diarrhoea, light-headedness, flushing, tachycardia and syncope.
- Simple sugars can exacerbate dumping syndrome. The total intake of oral medicines containing sucrose, sorbitol, corn syrup, maltose, fructose, lactose, honey and mannitol should be limited where possible.

Lactose intolerance

- Some patients may develop lactose intolerance post-operatively.
- The lactose content of medication does not usually cause problems, but should be considered in severe intolerance or where single doses exceed 400mg lactose. Liquid preparations are usually lactose-free.

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NUTRIENT DEFICIENCY

- A dietitian must tailor the nutritional support of every patient to avoid under- or over-supplementation.
- As a minimum, all patients should take a complete multivitamin and mineral supplement indefinitely, e.g. Forceval once daily or two daily Sanatogen A-Z Complete, Superdrug A-Z multivitamins and minerals, Tesco Complete multivitamins and minerals, Lloydspharmacy A-Z multivitamins and minerals.
- RYGB and LSG patients will need additional supplementation.
- Long-term nutritional monitoring may be needed since deficiencies can develop over a number of years. Suggested monitoring schedules:

Postoperative blood tests following gastric band

Blood test	Frequency
U+E, LFT, FBC	Monitor annually and more frequently if any concerns regarding nutritional intake
HbA1c and FBG in patients with preoperative diabetes	Monitor as appropriate
Lipid profile	Monitor in those with dyslipidaemia
Serum 25 hydroxy Vitamin D	Routine monitoring is usually not required unless the patient has symptomatic vitamin D deficiency

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Postoperative blood tests following sleeve gastrectomy, gastric bypass

Blood test / Procedure	Frequency
HbA1c and/or FBG in patients with preoperative diabetes	Monitor as appropriate
Lipid profile	Monitor in those with dyslipidaemia
U+E, LFT, FBC, ferritin, folate, calcium, vitamin D, PTH	3, 6 and 12 months in first year then annually
Thiamine	Routine blood monitoring of thiamine is not required but clinicians should be aware that patients with prolonged vomiting can develop acute thiamine deficiency, which requires urgent treatment.
Vitamin B12	6 and 12 months in first year then annually No need to monitor if patient has intramuscular vitamin B12 injections
Zinc, copper Gastric bypass and DS only	Annually. Monitor zinc if unexplained anaemia, hair loss or changes in taste acuity. Monitor copper if unexplained anaemia or poor wound healing. Note the zinc levels affect copper levels and vice versa
Vitamin A Gastric bypass and DS only	Measure if concerns regarding steatorrhoea or symptoms of vitamin A deficiency e.g. night blindness Annually May need to monitor more frequently in pregnancy
Vitamin E, K Gastric bypass and DS only	Measure vitamin E if unexplained anaemia, neuropathy. Consider measuring INR if excessive bruising / coagulopathy as may indicate vitamin K deficiency
Selenium Gastric bypass and DS only	Monitor if unexplained fatigue, anaemia, metabolic bone disease, chronic diarrhoea or heart failure

General considerations – not an exhaustive list:

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Calcium and vitamin D

- Calcium deficiency after RYGB/LSG is common, increasing the risk of fracture. Calcium carbonate is poorly absorbed due to increased stomach pH post-operatively.
- All patients should take calcium with vitamin D3 long-term e.g. Adcal D3 chewable one twice a day. Titrate the dose to serum calcium and vitamin D plasma levels. If patients are taking a separate vitamin D supplement use calcium supplement only (i.e. not combination). Calcium supplements may also reduce the absorption of certain medicines, advice will be provided by the pharmacist.
- In patients who remain hypocalcaemic, use of calcium citrate (1200-1500mg/day) may be indicated as evidence exists that this is better absorbed than calcium carbonate in RYGB patients. Vitamin D supplementation will also be required.
- Patients identified as vitamin D deficient should be managed in line with the National Osteoporosis Society Guidelines.
- Give at least 2 hours before or after iron or phosphate doses.

Iron

- Iron-deficiency anaemia occurs in up to 50% of RYGB patients, particularly premenopausal women.
- Prophylactic supplementation with Fersamal (ferrous fumarate) syrup 5mL bd should be prescribed for all patients. If oral supplements are not tolerated or anaemia persists, consider IV iron supplementation (Cosmofer) – consult WAHT-OBS-107. (Fujioka 2011)

Vitamin B12 –B12-deficiency after RYGB is likely as absorption relies on stomach acid and intrinsic factor. Consider hydroxocobalamin IM injection 1mg every 3 months for all bariatric surgery patients to maintain normal range levels. Monitor Hb and mean corpuscular volume.

Folate – patients should choose a multivitamin preparation containing the recommended daily intake of fat-soluble vitamins and folic acid. If deficient check compliance with multivitamins and minerals. If compliant check for Vitamin B12 deficiency before recommending additional folic acid supplementation. Recheck in 4 months.

Vitamin K – Deficiency may alter oral anticoagulant control. For all patients, check the INR if the patient experiences excessive bruising or bleeding.

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Zinc and copper – Forceval contains sufficient zinc and copper for supplementation. However if the patient elects to take an alternative preparation, ensure that the patient is taking 1mg of copper for each 8-15mg of zinc with a minimum of 2mg copper taken each day.

Selenium - A complete multivitamin and mineral supplement, which contains selenium, should be sufficient to meet needs after bariatric surgery. If additional selenium is required, patients may prefer to eat two to three Brazil nuts a day as these are a rich source of selenium.

Future admissions – consider nutrient deficiencies as a cause of presenting symptoms, eg bleeding due to Vitamin K deficiency, encephalopathy due to Vitamin B deficiency. Unexplained anaemia, poor wound healing, hair loss, neutropaenia, peripheral neuropathy or cardiomyopathy may be symptoms of zinc, copper or selenium deficiency and so levels should be checked if there are any concerns.

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Please attach patient sticker here or record:
Name:.....
NHS No:
Hosp No:
D.O.B: Male Female
Consultant: Ward:

CHECKLIST FOR MEDICINES OPTIMISATION IN INPATIENTS FOLLOWING BARIATRIC SURGERY

To be completed by responsible clinician within 24 hours of surgery and filed in patient notes.

Inpatient has been prescribed:

- Review medication for a form the patient is able to swallow.....
- Antiemetics
- Gastroprotection (usually ranitidine 150mg *nocte*)
- **No NSAIDS**
- Enoxaparin as appropriate (see VTE assessment/Op note).....
- Multivitamin + mineral supplement 1 OD
- Adcal D3 chewable 1 *bd* (or calcium citrate with vitamin D)
- Ferrous fumarate syrup 5mL *bd* (*RYGB + LSG patients*).....
- Hydroxocobalamin 1mg IM 3/12 *added to EDS for GPs to initiate*

Improved fertility and contraceptive options discussed (women only)

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MONITORING TOOL

This should include realistic goals, timeframes and measurable outcomes.

How will monitoring be carried out?

Who will monitor compliance with the guideline?

STANDARDS	%	CLINICAL EXCEPTIONS	Person responsible
All patients planned for bariatric surgery will have a full dietetic review and follow up	100%	None	Emma White
All bariatric surgery patients will have a medication review by a pharmacist	90%	Patient stay that falls outside Monday to Friday ward service.	Keith Hinton

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Supporting Document 1 – Checklist for review and approval of key documents

This checklist is designed to be completed whilst a key document is being developed / reviewed.

A completed checklist will need to be returned with the document before it can be published on the intranet.

For documents that are being reviewed and reissued without change, this checklist will still need to be completed, to ensure that the document is in the correct format, has any new documentation included.

1	Type of document	Guideline
2	Title of document	GUIDELINES FOR MEDICINES MANAGEMENT FOLLOWING BARIATRIC SURGERY
3	Is this a new document?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If no, what is the reference number _____
4	For existing documents, have you included and completed the key amendments box?	Yes <input type="checkbox"/> No <input type="checkbox"/>
5	Owning department	Pharmacy
6	Clinical lead/s	Keith Hinton
7	Pharmacist name (required if medication is involved)	As above
8	Has all mandatory content been included (see relevant document template)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
9	Does the document have a completed Equality Impact Assessment included?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
10	Please describe the consultation that has been carried out for this document	Circulated to key individuals for comments
11	Please state how you want the title of this document to appear on the intranet, for search purposes and which specialty this document relates to.	As above

Once the document has been developed and is ready for approval, send to the Clinical Governance Department, along with this partially completed checklist, for them to check format, mandatory content etc. Once checked, the document and checklist will be submitted to relevant committee for approval.

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Implementation

Briefly describe the steps that will be taken to ensure that this key document is implemented

Action	Person responsible	Timescale

Plan for dissemination

Disseminated to	Date
General Surgeons	
Surgical Pharmacists	
Dietitians	

1	<p>Step 1 To be completed by Clinical Governance Department</p> <p>Is the document in the correct format? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Has all mandatory content been included? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Date form returned ____/____/____</p>	
2	Name of the approving body (person or committee/s)	
	<p>Step 2 To be completed by Committee Chair/ Accountable Director</p>	
3	Approved by (Name of Chair/ Accountable Director):	
4	Approval date	____/____/____

Please return an electronic version of the approved document and completed checklist to the Clinical Governance Department, and ensure that a copy of the committee minutes is also provided (or approval email from accountable director in the case of minor amendments).

Office use only	Reference Number	Date form received	Date document published	Version No.

WAHT- PHA-019

It is the responsibility of every individual to check that this is the latest version/copy of this document

Supporting Document 2 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	Does the policy/guidance affect one group less or more favourably than another on the basis of:		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
2.	Is there any evidence that some groups are affected differently?	No	
3.	If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?	N/A	
4.	Is the impact of the policy/guidance likely to be negative?	No	
5.	If so can the impact be avoided?	N/a	
6.	What alternatives are there to achieving the policy/guidance without the impact?	N/A	
7.	Can we reduce the impact by taking different action?	N/A	

If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources.

WAHT- PHA-019

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Supporting Document 3 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	Yes/No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	To ensure full appropriate medicines review will require pharmacist support to pre-admission clinic (see business case)
3.	Does the implementation of this document require additional manpower	Yes, See above
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval