Lifestyle modification

In preparation for surgery, you should aim to be as active as possible. Aim for at least 30 minutes of moderate activity (such as brisk walking) on at least 5 days of the week. This will help you to recover better from surgery.

Your BMI is x, in keeping with obesity. You should aim to lose weight through eating a balanced diet with portion control. Avoid fast food, fried food, takeaway and sweet treats. Aim to include five serves of fruit and vegetables in your diet every day**.**

Diabetes

Diabetes is is not adequately optimised on the following regime. HbA1C x.

- Does not require admission the day before surgery
- Omit gliclazide on the morning of surgery and whilst NBM
- Omit metformin 2 days before surgery and on the day of surgery (delete as necessary according to whether contrast is used during surgery).
- Long acting insulin taken once a day in the evening. Give 80% of your usual dose, ie. X units the night before your surgery.
- Long acting insulin taken once a day in the morning. Give 80% of your usual dose on the morning of surgery ie x units on the morning of surgery
- Take half the dose of mixed or intermediate acting insulin i.e. x units x on morning surgery
- Omit novorapid on the morning of surgery
- Omit long acting sulphuronylureas e.g. glibenclamide on the morning of surgery
- Stop SGLT-2 inhibitor, x, 3 days before surgery (4 days for ertugllifozin)
- Only use sliding scales for CBG ≥11 with sepsis, vomiting or prolonged NBM

Morbid obesity (weight >130kg BMI >40)

When admitted please ensure;

- transport services informed if required
- theatre & ward informed of need for bariatric equipment e.g. chair, bed, hoist
- manual handling procedures are followed
- correct size blood pressure cuff is used
- weight based thromboprophylaxis prescribed

Long term management. GP please consider:

- referral to dietician to help with weight management
- referral for exercise/physiotherapy class for help with graded exercise regime

Cognitive impairment

Based on the history and MOCA of x Mr/Mrs x has likely MCI/dementia. Patient and (add relative) have been counselled about this. This raises the following issues;

- Capacity

Does not display capacity to consent to proposed procedure. *Please use consent form 4.*
Displays capacity to consent to proposed procedure.

- Delirium risk – Please see below
- Long term management - Please could GP monitor and consider referral to memory assessment services as appropriate.
- Power of attorney explained to patient and family. They are advised to consider this for future care planning.

Risk of postoperative Delirium (POD)

At increased risk of developing POD. Patient and xxx have been counselled about this and written information provided. When admitted please ensure that:

- Precipitating drugs are avoided where possible
- Adequate hydration is maintained
- Constipation and urinary retention are avoided
- Falls risk is assessed

- Day night routine is maintained
- Sensory impairments are optimised (give patient glasses / hearing aids)

Risk of postoperative pulmonary complications

At increased risk of postoperative pulmonary complications. Chronic lung disease is optimised on current regime. Baseline oxygen saturations were x%. When admitted please ensure that;

- target saturations x-x%
- early mobilisation is promoted
- self directed breathing exercises taught in clinic are performed
- early physiotherapy input

Smoking

Smoking cessation advice given. We would be grateful if the GP could follow this up. When admitted:

- Ensure Trust EPR smoking cessation form is complete
- Offer and prescribe nicotine replacement as per Trust protocol

Risk of alcohol withdrawal

At risk of alcohol withdrawal. When admitted please ensure that;

- Trust guidance is followed with prescription of Thiamine & Chlordiazepoxide
- Risk of falls and delirium are regularly assessed

Risk of acute Kidney Injury

CKD stage x, baseline creatinine x, baseline eGFR x. When admitted please ensure that;

- Fluid balance is closely monitored
- Trust guidelines on the prevention of contrast induced nephropathy are followed for any procedures/ investigations involving contrast.
- Nephrotoxic mediations are avoided (eg. NSAIDS)
- All medications are dosed according to creatinine clearance (with particular attention to opioids and thromboprophylaxis)
- All medications are reviewed daily in light of trends in renal function
- Early discussion with renal / POPS if any deterioration in renal function

Risk of perioperative cardiac complications

At risk of cardiac event / arrhythmia during the perioperative period. Currently optimised on above treatment regime. When admitted please ensure that;

- Current medication is continued
- Serum potassium is maintained at ≥4.5 and magnesium around 1.0

Cardiac device

- PPM/ICD inserted due to ……..
- Reviewed at …..
- Preoperative PPM check ordered on EPR
- Emailed :heartdevices@gstt.nhs.uk

Hypertension

Optimised for surgery according to AAGBI/BHS guidance and adherent with current medication. On the morning of surgery;

- Omit ACE inhibitor
- Take other blood pressure medication at 06.00 with water

Risk of postoperative functional decline

In order to minimise this;
Preoperatively;

- OT screened in clinic. Intervention provided as required (see enoting)
- Aspects of frailty optimised

Postoperatively;

- Ensure adequate analgesia and early mobilisation
- OT/Physio ward input
- Early goal setting and discharge planning
- Discuss at POPS led MDM

Risk of falls

At risk of falls whilst in hospital.

Preoperatively;

- Medical risk factors have been modified
- OT screened in clinic. Intervention provided as required (see enoting)

In hospital;

- Please assess falls risk on admission
- Follow trust falls guideline

Risk of constipation

At risk of constipation during inpatient surgical stay. When admitted please ensure that;

- Laxatives are prescribed & bowel chart reviewed regularly for need of extra medication (e.g. glycerine suppositories)
- Urinary catheters are removed promptly as per Trust TWOC guidance

Risk of urinary retention

At risk of urinary retention. To minimise risk;

- ensure bowels opening regularly (maintain bowel chart)
- prescribe usual drugs (Tamsulosin, Finasteride)
- follow Trust guidance on insertion and removal of urinary catheters

Risk of malnutrition

Score 2: weight loss of x over x

Advise:

- Use of red trays and high calorie snacks during admission
- Team to reassess weight weekly during hospital stay using MUST

Score 4-6 *or* BMI <19.5kg/m2

- Weight loss of x over x
- Will/not require dietician inpatient/outpatient referral.
- Team to reassess weight per MUST assessment guideline.

Parkinson's Disease (PD)

This requires careful management during the perioperative period. PD medications should never be stopped suddenly.

- Advised to bring own medications to hospital
- Medications are time critical and must be prescribed and given at usual times (see top of letter).
- Parkinson's medications to be taken up to 2 hours before surgery with clear fluids
- For surgeries where prolonged postoperative intubation and ventilation is expected, stop usual oral medications on day of surgery and start Rotigotine patch according to trust guidance on the morning of surgery (to be administered prior to surgery).
- You can also calculate patch doses using the calculators via this link: https://www.parkinsons.org.uk/professionals/resources/nil-mouth-medication-dose-calculators-and-guidelines
- Give usual medications as soon as possible after surgery, when able to tolerate oral medication again.

- For further guidance please consult Trust Guideline on perioperative management of Parkinson's disease, or contact POPS/PD team if any concerns with nil by mouth status and alternative medication administration route for PD medications.
- Do not prescribe metoclopramide, prochlorperazine or haloperidol (may make Parkinson's symptoms worse).
- Refer urgently to SALT if any concerns about swallow
- At risk of constipation. Please monitor bowels. Prescribe laxatives as required. Encourage hydration, and early mobilisation. TWOC as soon as possible as per guidelines.
- At risk of falls. Please risk assess on admission and manage appropriately.

Post-polio syndrome (PPS)

Patients with PPS may have underlying autonomic dysfunction with increased risk of labile blood pressure, tachyarrhythmias and reflux.

Preoperatively

- Requires outpatient spirometry to assess vital capacity (ordered/ see handheld result)

Intraoperatively;

- Doses of non-depolarising muscle blockers should be halved (hypersensitive to muscle relaxants and at risk of overdose)
- Avoid succinylcholine due to the risk of muscle spasm
- Requires careful positioning during surgery to avoid pressure damage and nerve palsies

Postoperatively;

- Monitor carefully as can be more sensitive to sedative medications with delayed emergence from anaesthetic

Preoperative management of DOACs

- Anticoagulated for (indication)
- ***Cardiac/Thoracic Surgery team will provide instructions to you on pre-operative cessation of DOAC and post-operative restart schedule. (Delete if not cardiac surgery)***
- Stop drug name xxhrs pre-operatively
- Does/does not require bridging with therapeutic/prophylactic dalteparin
- **Once bleeding risk reduced, restart DOAC** 12-24 hours after last dose of dalteparin (determined by surgeon)
- **If renal function has deteriorated, please review dose of DOAC**

Preoperative management of Warfarin

- ***Cardiac/Thoracic Surgery team will provide instructions to you on pre-operative cessation of warfarin and post-operative restart schedule. (Delete if not cardiac surgery)***
- Stop warfarin 4 days prior to surgery
- Does/ does not require bridging with therapeutic/prophylactic dalteparin

Day	Date	Time	Warfarin	Dalteparin
- 4			Usual dose	Nil
- 3		09.00	Nil	
- 2		09.00	Nil	
- 1		09.00	Nil	
Surgery			Nil	Nil

Obstructive sleep apnoea

STOP BANG of _____ Bicarbonate level of *(<28 low risk, >28 high risk)*; Epworth sleepiness score of __; and baseline oxygen saturations of __%. To minimise postoperative risk;

- Patient advised to adhere to CPAP therapy for a minimum of one week prior to surgery
- Patient and family/carer advised to bring CPAP machine to ward and use during inpatient stay
- Target saturations x-x%
- Early mobilisation is promoted
- Level 2 bed has/has not been recommended postoperatively

Monoclonal antibody medications
- Immunosuppressed on ___. Most recent dose given ____
- Omit for at least 2 weeks prior to surgery. This means that the last dose should be given on: ___
- Restart usual dose postoperatively when surgical team satisfied with wound healing and there is no evidence of postoperative infection
- If postoperative infections develop/ poor wound healing may need omission for a longer period of time. Please discuss with the POPS/speciality team.

Sorafenib
- Stop 1 week prior to surgery
- Restart 2 weeks post-operatively as long as there are no infective complications

Trifascicular Block
Incidental finding of trifascicular block on ECG. Patient asymptomatic and does not require pacing prior to surgery. Please refer to the clinical GTi guideline Perioperative Cardiac Pacing Guidelines.

Antibodies in Blood
Atypical antibodies require advance notice for cross-matched blood.
Surgical/Admissions team have been notified and should contact the blood bank to determine the number of group and save samples required, and amount of advanced notice required for fully cross-matched blood products.

Myasthenia Gravis
At risk of postoperative pulmonary complications/respiratory failure.
- Level 2 bed required/not required
- Ensure the patient receives their usual medications. Steroids should be continued throughout.
- If taking ≥5mg prednisolone, hydrocortisone 100 mg by intravenous injection should be given at induction of anaesthesia followed by a continuous infusion of hydrocortisone at 200 mg/24 hours, until the patient can take double their usual oral glucocorticoid dose by mouth
- This should then be tapered back to the appropriate maintenance dose, in most cases within 48 hours, although for up to a week if surgery is more major/complicated clinical judgement should be used to guide this.
- This is according to the Guidelines for the management of glucocorticoids during the peri-operative period for patients with adrenal insufficiency (Anaesthesia, 2020)
- If NBM/ unable to take usual anticholinesterase inhibitors please convert to parenteral route of administration (IV/IM/ SC). Please contact pharmacy/ neurology for advice about dose adjustments
- Some drugs may cause MG symptoms to deteriorate. Before prescribing any new medications please consult the pharmacy team or https://www.myaware.org/drugs-to-avoid

Preoperative management of DMARDS (not biologics)
- DMARD therapy should not routinely be stopped in the perioperative period

- Please monitor renal function carefully during admission and adjust dose of DMARD according to creatinine clearance if needed
  OR
- Patient factors (age, frailty, multi-comorbidities, smoker) and surgical factors (surgical time >60 minutes, dirty procedures, Class 3 or 4 procedure) constitute significant perioperative infection risk
- Therefore stop DMARD 2 weeks prior to surgery and restart once wound healing satisfactory

Management of glucocorticoids in the peri-operative period when usual dose is ≥ 5mg

- Hydrocortisone 100 mg by intravenous injection should be given at induction of anaesthesia in adult patients with adrenal insufficiency from any cause
- Followed by a continuous infusion of hydrocortisone at 200 mg/24 hours, until the patient can take double their usual oral glucocorticoid dose by mouth
- This should then be tapered back to the appropriate maintenance dose, in most cases within 48 hours, although for up to a week if surgery is more major/complicated clinical judgement should be used to guide this.

This is according to the Guidelines for the management of glucocorticoids during the peri-operative period for patients with adrenal insufficiency (Anaesthesia, 2020)

Dementia

- Ensure 'This is me' document completed
- Do not stop acetylcholinesterase inhibition preoperatively (anaesthetist has been informed by email)
- Ward staff to allow flexible visiting as needed

Cirrhosis

At risk of decompensation of underlying liver disease.

- Avoid constipation in the postoperative period to reduce risk of hepatic encephalopathy
- Caution with opiate use, use low doses and longer intervals. Avoid NSAIDs.
- Monitor platelet count, avoid VTE prophylaxis in platelet count below 50

Learning disability

NOK/Advocate:
Care co-ordinator :

Prior to admission

1. Complete hospital passport
2. Use easy read to create letters, information booklets as indicated http://gti/clinical/trust-wide-projects/safeguarding/vulnerable_adults/learning-disabilities/learning-disabilities-home.aspx

On ward
EPR referral to safeguarding on admission or
Email : SafeguardingAdults@gstt.nhs.uk (Tel: 53293)
LD services Lam/South 0203 049 7518 Lew 0203 228 9620
Kerry-Anne Harwood LD CNS: **kerry-anne.harwood@gstt.nhs.uk**
Provide communication box at bed side
Reasonable adjustments – may include relaxed visiting hours

Pulmonary Hypertension

If Right Heart pressures are > 30mmhg or known pulmonary hypertension

- If possible please complete 6 min walk test in clinic

Refer to Pulmonary hypertension clinic
gst-tr.gsttrbhpulmonaryhypertensionanaesthesia@nhs.net
a follow up letter will be send with outcome

At risk of poor pain control / opiate withdrawal

- Using drug regularly at dose/frequency
- At risk of inadequate analgesia or opiate withdrawal if prescribed as PRN only
- Please ensure that this is prescribed as **drug/dose on the regular chart**, with **drug/dose qXh PRN** for breakthrough analgesia in the perioperative period
- Refer early to POPS or acute pain team if pain is not adequately controlled

Guy's and St Thomas' NHS
NHS Foundation Trust

MRSA Decolonisation Protocol – Out Patients

Only use this chart when treating to achieve negative screens e.g. pre-operatively.
Patients should not routinely have more than two courses of nasal Octenisan.
If the patient remains colonised with MRSA liaise with Surgical Team / Clinical Team and the Infection Prevention & Control Team regarding a plan for admission.

Treatment	Instructions	Date started	D1	D2	D3	D4	D5	D6	D7	Result 1	Result 2	Result 3
Nose: Nasal octenidine (Octenisan) Does not need to be prescribed	Apply a matchstick-head-sized amount of product into both nostrils twice a day for 5 days		8am 8pm	8am 8pm	8am 8pm	8am 8pm	8am 8pm	**STOP** nasal treatment and skin washes on days 6 & 7 then rescreen on day 8		If negative rescreen. If positive recommence protocol. A new chart will be required	If negative rescreen. If positive surgeons to discuss with IPC/infection doctors plan for surgery	If negative no further action. If positive surgeons to discuss with IPC/infection doctors plan for surgery
Skin: Octenidine wash lotion (Octenisan)	Wash: Use undiluted once a day for whole body washing including hair											
If any skin irritation occurs STOP using the skin wash and contact the IPC Nurse Team 0207 188 3153												
Oral Hygiene	Advise your patient/ carer/ parent that oral hygiene needs to be done at least twice a day. Patients with dentures – brush dentures to remove any bits of food and use denture cleaner if available, then brush with toothpaste and finally rinse. Remember that the patient's gums and tongue and any remaining teeth require brushing at least twice a day Patients with braces – ensure that the patient's teeth and braces are cleaned as per Dentist instructions.											

Key:
CrCL- creatinine clearance
VTE - venous thromboembolism
AF – Atrial fibrillation
DOAC – direct oral anticoagulant
CAD – Coronary artery disease
PAD – Peripheral artery disease

How to contact the Thrombosis StR: During routine hours - bleep 0122; Out of hours and at weekends - bleep 0294

Indication for DOAC - either prevention of stroke in non-valvular AF, VTE treatment or secondary prevention, CAD or PAD?

NO → **Discuss with Thrombosis StR any patient who has had a VTE within the past 6 weeks OR takes a DOAC for an indication other than AF, VTE, CAD or PAD**

YES ↓

If DOAC for VTE, did it occur more than 6 weeks ago

NO → **Discuss with Thrombosis StR any patient who has had a VTE within the past 6 weeks OR takes a DOAC for an indication other than AF, VTE, CAD or PAD**

YES ↓

Pre-operative: Is the procedure minor or major?

Minor: e.g. ophthalmological & dental procedures

- Determine renal function: Use the Cockcroft-Gault equation to calculate creatinine clearance

Timing of last DOAC dose pre procedure:		
Renal function (as calculated CrCl)	**Dabigatran (minimum)**	**Rivaroxaban / apixaban / edoxaban (minimum)**
CrCl >80ml/min	24 hours	24 hours
CrCl 50-80 ml/min	36 hours	24 hours
CrCl 30-50 ml/min	48 hours	36 hours

Major: e.g. cardiac, chest or abdominal surgery

- Determine renal function: Use the Cockcroft-Gault equation to calculate creatinine clearance

Timing of last DOAC dose pre procedure:		
Renal function (as calculated CrCl)	**Dabigatran (minimum)**	**Rivaroxaban / apixaban / edoxaban (minimum)**
CrCl > 80ml/min	48 hours	48 hours
CrCl 50-80 ml/min	72 hours	48 hours
CrCl 30-50 ml/min	96 hours	48 hours

Post-operatively: Assess patient's bleeding risk and risk of VTE

Haemostasis achieved & no further surgery planned:

Day 0: Restart pre-admission dose 6-8 hours post-wound closure (Adjust dose as per SPC if renal function has altered)

Ongoing bleeding risk postoperatively:

Day of procedure:

- Bridge with prophylactic dalteparin. Give first dose 6-12 hours post wound closure, if haemostasis achieved.
  If traumatic epidural catheter insertion- wait 24 hours after insertion before restarting dalteparin

Weight	Prophylactic dose if calculated CrCL≥ 30ml/minute	Prophylactic dose if calculated CrCL< 30ml/minute
≤39 kg	2500 units OD	2500 units OD *
40-49 kg	2500 units OD	2500 units OD
50-99 kg	5000 units OD	2500 units OD
100-139kg	7500 units OD	5000 units OD
140-179kg	5000 units BD	5000 units OD
≥180kg	Seek Haematology Advice	

- Once bleeding risk reduced, restart DOAC 12-24 hours after last dose of dalteparin (determined by surgeon)
- If renal function has deteriorated, please review dose of DOAC
- Ensure patient has not been started on any drugs that could potentially interact with DOAC e.g. cytochrome P-450 3A4 inhibitors and P-glycoprotein inhibitors - contact ward pharmacist / resident pharmacist for advice.

*** Anti-Xa level testing in renal failure & low body weight**
SEND SAMPLE ON ICE

- Dalteparin levels can accumulate in renal failure over time
- There are few data on the extent of accumulation of dalteparin in patients with low body weight

Consider peak and trough anti-Xa level testing for patients with low body weight or in any patient if concerned about bleeding/bruising, after patient has received 7 days of dalteparin

- Peak anti-Xa levels (4 hours post dose administration):
  Aim for <0.3 International units/mL
- Trough anti-Xa levels (pre-dose):
  Aim for <0.2 International units/mL

If peak anti-Xa level ≥ 0.3 International units/mL OR trough (pre-dose) anti-Xa level ≥ 0.2 International units/mL, contact Thrombosis StR (bleep 0122/0294 out of hours or via switchboard) for advice

DTC Reference: 190552s

Review By: May 2020