

Disclaimer:

Our recommendations are based on current national guidelines and relevant evidence-base. This guideline helps inform clinicians clinical judgement. However, clinicians will consider the trade-off between the benefits and harms of an intervention before making a clinical decision.

The perioperative management of medicines in surgical patients

1.0 Procedure Statement (Purpose / Objectives of the Procedure)

To ensure safe management of surgical patients during the pre-operative, intra-operative and post-operative periods with a view to preventing patient harm caused by inappropriate medication management.

2.0 Accountabilities

All clinical staff in RWT must be signposted to this guidance.

The Clinical Directors and Matrons of surgical directorates and Critical Care Services are responsible for ensuring dissemination of the contents of this document to all clinical staff within their area of clinical responsibility. Staff must be signposted to this guideline during their local induction where it is relevant for their clinical practice.

3.0 Procedure/Guidelines Detail / Actions

The following guideline is derived from the United Kingdom Clinical Pharmacy Association (UKCPA) perioperative handbook. This is well-respected evidence-based national resource.

This is intended to be used as guidance and does NOT replace clinical acumen. Anaesthetists, surgeons and other clinicians may deviate from this guideline where it is deemed clinically appropriate to do so but must document in the patient record the reasons for doing so.

How to use these guidelines

1. Identify the therapeutic area of the medicine of interest.
2. Click on the corresponding hyperlink in column 3 of table 1.
3. Some medicines will be listed individually. Other medicines can be found by clicking on the relevant drug class. Examples of each drug class are provided to assist with the use of this guideline.
4. Click on the required medicine to review the detailed information.

DID YOU KNOW?

- You can search for individual medicines on the 'The UKCPA perioperative handbook' website directly at [The Handbook of Perioperative Medicines \(ukcpa-periophandbook.co.uk\)](http://The Handbook of Perioperative Medicines (ukcpa-periophandbook.co.uk)).
- The UKCPA perioperative handbook can be saved as a shortcut on your mobile phone.

What to do if deviating from the guideline

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Deviations may occur based on patient-specific factors. Where this does occur, clinical rationale should be written in the surgical records or medical notes.

Therapeutic area	Brief summary	Link to corresponding monographs
Analgesia	Includes buprenorphine, methadone, opioids, NSAIDs and COX-2 inhibitors.	The Handbook of Perioperative Medicines (ANALGESIA)
Anticoagulants	Includes LMWH, DOACs and warfarin.	<p>Please refer to the <i>'Guideline for the Management of Anticoagulation and Antiplatelet Therapy prior to Invasive Procedures'</i> which is available on the intranet.</p> <p>If required, further information can be obtained at: The Handbook of Perioperative Medicines (ANTICOAGULANTS)</p>
Antiplatelets	Includes aspirin, clopidogrel, dipyridamole and DAPT	<p>Please refer to the <i>'Guideline for the Management of Anticoagulation and Antiplatelet Therapy prior to Invasive Procedures'</i> which is available on the intranet.</p> <p>If required, further information can be obtained at: The Handbook of Perioperative Medicines (ANTIPLATELETS)</p>
Antidepressants	<p>Includes:</p> <p>Irreversible monoamine oxidase inhibitors (MAOI) (isocarboxazid, phenelzine and tranylcypromine).</p> <p>Reversible MAOI (moclobemide).</p> <p>Serotonin noradrenaline reuptake inhibitors (SNRI's) (duloxetine and venlafaxine).</p> <p>Selective serotonin reuptake inhibitors (SSRI's) (citalopram, dapoxetine, escitalopram, fluoxetine, fluvoxamine, paroxetine and sertraline).</p> <p>Tetracyclic antidepressants (mianserin and mirtazapine).</p> <p>- Tricyclic antidepressants (TCA's) (amitriptyline, clomipramine, dosulepin,</p>	The Handbook of Perioperative Medicines (ANTIDEPRESSANTS)

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	<p>doxepin, imipramine, lofepramine, nortriptyline and trimipramine).</p> <p>Trazodone</p> <p>Noradrenaline reuptake inhibitors (reboxetine).</p> <p>Melatonin receptor agonists (agomelatine).</p> <p>Vortioxetine.</p>	
Antiepileptics	<p>Barbituates, benzodiazepines & benzodiazepine-like drugs, brivaracetam, carbamazepine, eslicarbazepine, excarbazepine, ethosuximie, gabapentin, lacosamide, lamotrigine, levetiracetam, perampanel, phenytoin, pregabalin, rufinamide, tiagabine, vigabatrin, topiramate, valproate and, zonisamide.</p>	<p>The Handbook of Perioperative Medicines (ANTIEPILEPTICS)</p>
Antihistamines	<p>Betahistine, cinnarizine, non-sedating antihistamines and pizotifen.</p>	<p>The Handbook of Perioperative Medicines (ANTIHISTAMINES)</p>
Antipsychotics	<p>Atypical antipsychotics (amisulpride, aripiprazole, asenapine, cariprazine, lurasidone, paliperidone, olanzapine, quetiapine and risperidone), clozapine and lithium.</p>	<p>The Handbook of Perioperative Medicines (ANTIPSYCHOTICS)</p>
Bisphosphonates	<p>Alendronic acid (alendronate), ibandronic acid (ibandronate), risedronate disodium and sodium clodronate.</p>	<p>The Handbook of Perioperative Medicines (BISPHOSPHONATES)</p>
Cardiovascular	<p>Angiotensin-converting enzyme inhibitors (ACEI) (captopril, enalapril, fosinopril, imidapril, lisinopril, perindopril, quinapril, ramipril andtrandolapril).</p> <p>Angiotensin II receptor antagonists (azilsartan, candesartan, eprosartan, irbesartan, losartan, olmesartan, telmisartan and valsartan)</p> <p>Alpha-adrenoceptor agonists (alfuzosin, doxazosin, indoramin, prazosin, tamsulosin* and terazosin)</p> <p>Class III antiarrhythmics (amiodarone and dronedarone)</p> <p>Beta-blockers (acebutolol, atenolol, betaxolol, bisoprolol, carvedilol, celiprolol, labetalol, levobunolol,</p>	<p>The Handbook of Perioperative Medicines (CARDIOVASCULAR)</p>

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	<p>metoprolol, nadolol, nebivolol, pindolol, propranolol, sotalol and timolol).</p> <p>Calcium channel blockers (dihydropyridines: amlodipine, felodipine, lacidipine, lercanidipine, nicardipine, nifedipine, nimodipine diltiazem and verapamil).</p> <p>Loop diuretics (bumetanide, furosemide and torasemide)</p> <p>Potassium sparing diuretics – (amiloride, eplerenone, spironolactone and triamterene).</p> <p>Thiazide & related diuretics – (bendroflumethiazide, chlortalidone, hydrochlorothiazide, indapamide, metolozone, and xipamide)</p> <p>Ezetimibe, ivabradine, nicorandil, ranolazine and digoxin.</p> <p>Nitrates (GTN, ISMN and isosorbide dinitrate).</p> <p>Statins.</p> <p>Vasodilator antihypertensives (hydralazine and minoxidil)</p> <p>*N.B. – prescribed usually for benign prostatic hypertrophy.</p>	
Chemotherapy	The patient's oncologist / haematologist should be involved in the planning for surgery for these patients.	The Handbook of Perioperative Medicines (CHEMOTHERAPY)
Corticosteroids (Systemic)	Betamethasone, budesonide, deflazacort, dexamethasone, fludrocortisone, hydrocortisone, methylprednisolone, prednisolone and triamcinolone.	<p>Please refer to the <i><u>'Guidelines for Perioperative Glucocorticoid Administration for Patients on Long-term Steroid Therapy'</u></i> which is available on the intranet.</p> <p>If required, further information can be obtained at Corticosteroids (Systemic) - UKCPA (CORTICOSTEROIDS)</p>
Dementia	<ul style="list-style-type: none"> - Centrally-acting anticholinesterases (galantamine and rivastigmine). - Donepezil and memantine. 	The Handbook of Perioperative Medicines (DEMENTIA)
Diabetes	<p>Insulin.</p> <p>Gliptins (alogliptin, linagliptin, saxagliptin, sitagliptin and vildagliptin).</p>	Please refer to the <i><u>'Guidelines for pre-operative management of diabetes'</u></i> which is available on the intranet.

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	<p>Glucagon-like peptide 1 (GLP1) receptor agonists (dulaglutide, exenatide, liraglutide, lixisenatide and semaglutide).</p> <p>Meglitinides (nateglinide and repaglinide).</p> <p>Sodium-glucose co-transporter-2 (SGLT-2) inhibitors (canagliflozin, dapagliflozin, empagliflozin and ertugliflozin).</p> <p>Sulfonylureas (glibenclamide, gliclazide, glimepiride, glipizide and tolbutamide)</p> <p>Acarbose, metformin and pioglitazone.</p>	<p>If required, further information can be obtained at The Handbook of Perioperative Medicines (DIABETES)</p>
<p>Disease-modifying anti-rheumatic drugs (DMARDs) & immunosuppressants</p>	<p>Azathioprine, ciclosporin, methotrexate, sulfasalazine, mercaptopurine, leflunomide, hydroxychloroquine, transplant anti-rejection medicine (tacrolimus, sirolimus, mycophenolate), cytokine modulators (such as abatacept)</p>	<p>The Handbook of Perioperative Medicines (IMMUNOSUPPRESSANTS)</p>
<p>Gastrointestinal</p>	<p>Prucalopride, linaclotide, pancreatin, orlistat and loperamide.</p> <p>Antacids</p> <p>Antispasmodics: antimuscarinics (hyoscine butylbromide and propantheline) and relaxants (alverine citrate, dicycloverine, mebeverine and peppermint oil).</p> <p>Proton pump inhibitors (PPIs) (esomeprazole, lansoprazole, omeprazole, pantoprazole and rabeprazole).</p> <p>Histamine 2 (H2)-receptor antagonists (cimetidine, famotidine, nizatidine, and ranitidine).</p> <p>Bile acid sequestrants (colesevelam hydrochloride, colestipol hydrochloride and colestyramine).</p>	<p>The Handbook of Perioperative Medicines (GASTROINTESTINAL)</p>
<p>Genito-urinary</p>	<p>Progesterone-only contraceptives</p> <p>Combined oral contraceptives</p> <p>Hormone replacement therapy (HRT)</p>	<p>The Handbook of Perioperative Medicines (GENITO-URINARY)</p>

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	<p>5-alpha reductase inhibitors (dutasteride and finasteride)</p> <p>Alpha-adrenoceptor blockers (alfuzosin, doxazosin, indoramin, prazosin, tamsulosin and terazosin).</p> <p>Antimuscarinics (darifenacin, fesoterodine, flavoxate, oxybutynin, propiverine, solifenacin, tolterodine and trospium)</p> <p>Mirabegron and norethisterone</p> <p>Raloxifene and tibolone</p>	
Herbal remedies		The Handbook of Perioperative Medicines (HERBAL REMEDIES)
Hypnotics & anxiolytics	Alprazolam, clobazam, chlordiazepoxide, zopiclone, clonazepam, diazepam, flurazepam, loprazolam, lorazepam, lormetazepam, nitrazepam, oxazepam, temazepam and zolpidem.	Benzodiazepines & Benzodiazepine-Like Drugs - UKCPA (HYPNOTICS-ANXIOLYTICS)
Methylphenidate		Methylphenidate - UKCPA (METHYLPHENIDATE)
Neuromuscular disorders	Neostigmine and pyridostigmine.	Anticholinesterases for Myasthenia Gravis - UKCPA (ukcpa-periophandbook.co.uk)
Ophthalmology	<ul style="list-style-type: none"> - Alpha-2 adrenoceptor agonists (apraclonidine, and brimonidine). - Carbonic anhydrase inhibitors (brinzolamide and dorzolamide). - Ocular lubricants. - Prostaglandin analogue (bimatoprost, latanoprost, trafluprost and travoprost). 	The Handbook of Perioperative Medicines (OPHTHALMOLOGY)
Parkinson's disease	<p>Amantadine, apomorphine, catechol-o-methyl transferase (COMT) inhibitors (entacapone), and levodopa with dopamine decarboxylase inhibitor (co-beneldopa and co-careldopa).</p> <p>Monoamine oxidase B (MAO-B) inhibitors (rasagiline and selegiline)</p> <p>Non-ergot dopamine receptor agonists (pramipexole, ropinirole and rotigotine).</p>	The Handbook of Perioperative Medicines (PARKINSONS DISEASE)
Respiratory disorders	Antimuscarinics, carbocysteine,	

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	corticosteroids, long-acting beta-2 adrenoreceptor agonists, short-acting beta-2 adrenoreceptor agonists (salbutamol and terbutaline), montelukast and xanthines (aminophylline and theophylline).	The Handbook of Perioperative Medicines (RESPIRATORY DISORDERS)
Thyroid disorders	- Antithyroid agents (carbimazole and propylthiouracil) - Thyroid hormone (levothyroxine, liothyronine)	The Handbook of Perioperative Medicines (THYROID DISORDERS)
Substance misuse	Acamprosate, buprenorphine, methadone and disulfiram.	The Handbook of Perioperative Medicines (SUBSTANCE MISUSE)

4.0 Equipment Required

Access to the internet is required to access hyperlinked content within the guideline.

5.0 Training

This guideline will be available on the intranet. This will be included in Trust induction.

6.0 Financial Risk Assessment

1	Does the implementation of this document require any additional Capital resources	No
2	Does the implementation of this document require additional revenue resources	No
3	Does the implementation of this document require additional manpower	No
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	

7.0 Equality Impact Assessment

An initial equality analysis has been carried out and it indicates that there is no likely adverse impact in relation to Personal Protected Characteristics as defined by the Equality Act 2010.

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8.0 Maintenance

The responsibility for review of this guideline lies with General Surgery Governance Lead Consultant, to ensure it will be kept up to date and reviewed. Any recommended changes or amendments will be informed by the various specialties using the guideline.

9.0 Communication and Training

This guideline will be available on the trust intranet within the adult surgical guideline section. Information about this guideline will be communicated via an email cascade to surgeons, consultants, doctors, matrons, sisters, nurses and other relevant staff. Where appropriate, targeted teaching sessions will be provided to staff involved in their use.

10.0 Audit Process

Criterion	Lead	Monitoring method	Frequency	Evaluation
Reduced number of incidents	Chair of each directorate governance group	Review of Datix reports	Datix are reviewed monthly	Each directorate governance group
Reduced number of missed medication doses	Principal pharmacist for surgical services	Review of missed doses report produced by the pharmacy informatic team	Bi-monthly	Information provided to the relevant governance group

11.0 References - Legal, professional or national guidelines must underpin policies and be referenced here. Where appropriate cross references must be made to other policies.

- UKCPA (2022) *The Handbook of Perioperative Medicines*. Available at: [The Handbook of Perioperative Medicines \(ukcpa-periophandbook.co.uk\)](https://ukcpa-periophandbook.co.uk) (Accessed 15th January 2022)

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Part A - Document Control

Procedure/ Guidelines number and version V1.0	Title of Procedure /Guidelines The perioperative management of medicines in a surgical patient	Status: Final		Author: Principal pharmacist for surgical services Surgical directorate governance chairperson Chief Officer Sponsor: Chief Medical Officer (BMc)
Version / Amendment History	Version	Date	Author	Reason
	V1.0	July 2022	Principal Pharmacist for Surgical Services	Implementation of Guideline
Intended Recipients: Doctors, surgeons, anesthetists, nurses, pharmacists or any appropriately trained member of staff involved in the care of surgical patients.				
Consultation Group / Role Titles and Date: Surgical Governance group – Feb 2022				
Name and date of group where reviewed		Surgical governance group: Feb 2022 Division 1 governance group; 1 st April 2022 Division 2 governance group: 27 th April 2022 Preassessment/critical care governance group: 3 rd May 2022 Medicine Management Group: 7 th June 2022 Trust policy group: 1 st July 2022		
Name and date of final approval committee (if trust-wide document)/ Directorate or other locally approved committee (if local document)		Trust Management Committee – July 2022		
Date of Procedure/Guidelines issue		July 2022		
Review Date and Frequency (standard review frequency is 3 yearly unless otherwise indicated – see section 3.8.1 of Attachment 1)		July 2025 (every 3 years)		

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Training and Dissemination: The guideline will be available on the trust intranet. Staff will receive training during their local induction.	
Publishing Requirements: Can this document be published on the Trust's public page: Yes If yes you must ensure that you have read and have fully considered it meets the requirements outlined in sections 1.9, 3.7 and 3.9 of OP01, Governance of Trust-wide Strategy/Policy/Procedure/Guidelines and Local Procedure and Guidelines , as well as considering any redactions that will be required prior to publication.	
To be read in conjunction with:	
Initial Equality Impact Assessment: Completed Yes Full Equality Impact assessment (as required): Completed: N/A If you require this document in an alternative format e.g., larger print please contact Policy Administrator 85887 for Trust- wide documents or your line manager or Divisional Management office for Local documents.	
Contact for Review	Mr Gavin Bohan Ms Nazzia Mirza
Monitoring arrangements	Directorate governance groups to monitor Datix trends
Document summary/key issues covered. To provide staff with guidance on the appropriate management of medication within the surgical patient population	
Key words for intranet searching purposes	preoperative, pre-operative, perioperative, surgery, medicine, postoperative, post operative, procedural, procedure

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(Part B) Ratification Assurance Statement

Name of document:

Name of author:

Job Title:

I, _____ the above named author confirm that:

- The Strategy/Policy/Procedure/Guidelines (please delete) presented for ratification meet all legislative, best practice and other guidance issued and known to me at the time of development of the said document.
- I am not aware of any omissions to the said document, and I will bring to the attention of the Executive Director any information which may affect the validity of the document presented as soon as this becomes known.
- The document meets the requirements as outlined in the document entitled Governance of Trust- wide Strategy/Policy/Procedure/Guidelines and Local Procedure and Guidelines(OP01).
- The document meets the requirements of the NHSLA Risk Management Standards to achieve as a minimum level 2 compliance, where applicable.
- I have undertaken appropriate and thorough consultation on this document and I have detailed the names of those individuals who responded as part of the consultation within the document. I have also fed back to responders to the consultation on the changes made to the document following consultation.
- I will send the document and signed ratification checklist to the Policy Administrator for publication at my earliest opportunity following ratification.
- I will keep this document under review and ensure that it is reviewed prior to the review date.

Signature of Author:

Date:

Name of Person Ratifying this document (Chief Officer or Nominee):

Job Title:

Signature:

- I, the named Chief Officer (or their nominee) am responsible for the overall good governance and management of this document including its timely review and updates and confirming a new author should the current post-holder/author change.

To the person approving this document:

Please ensure this page has been completed correctly, then print, sign and email this page only to:
The Policy Administrator

IMPLEMENTATION PLAN

To be completed when submitted to the appropriate committee for consideration/approval

Procedure/Guidelines number and version	Title of Procedure/Guidelines	
Reviewing Group		Date reviewed:
Implementation lead: Print name and contact details		
Implementation Issue to be considered (add additional issues where necessary)	Action Summary	Action lead / s (Timescale for completion)
Strategy; Consider (if appropriate) Development of a pocket guide of strategy aims for staff Include responsibilities of staff in relation to strategy in pocket guide.	N/A	N/A
Training; Consider Mandatory training approval process Completion of mandatory training form	N/A	N/A
Development of Forms, leaflets etc.; Consider Any forms developed for use and retention within the clinical record MUST be approved by Health Records Group prior to roll out. Type, quantity required, where they will be kept / accessed/stored when completed	N/A	N/A
Procedure/Guidelines communication; Consider Key communication messages from the policy / procedure, who to and how?	Notify staff group of new guidelines Staff to receive training on the guideline at point of induction	Cascade email to consultants and matrons within 2 weeks of guideline approval Ongoing
Financial cost implementation Consider Business case development	N/A	N/A
Other specific issues / actions as required e.g. Risks of failure to implement, gaps or barriers to implementation		