Part 1 – Pharmacological Pathway for the Treatment and Management of Open Angle Glaucoma and Ocular Hypertension

Summary of Glaucoma Prescribing Guideline:

- Before offering medication any relevant comorbidities or potential drug interactions need to be checked carefully.
- A single drug should be started and its effectiveness at lowering intraocular pressure (IOP) and any side effects should be assessed usually upon follow-up. If there is no IOP response and the patient's adherence and eye drop instillation technique have been checked and deemed appropriate, the drug should be stopped and another tried from a different class. If there is a satisfactory IOP drop but insufficient to meet the target pressure then a second drug may be added.
- Medical therapy of more than three topical agents- one separate and one combination should trigger consideration for either laser or surgery. Maximal medical treatment would consist of all 4 classes of topical pressure lowering medications and possible oral acetazolamide.
- The guideline should be adhered to for all new patients. No change in treatment plan is recommended for patients already on different medications when there is satisfactory IOP response. Non-responders should be switched to a different class of drug.
- All patients must be prescribed generic drugs unless otherwise required for clinical reasons which must be identified on a case by case basis and appropriately communicated to GPs.

Step 1

1st line: Prostaglandin analogues Safer than ß-blockers and more effective at lowering IOP.
2nd line: β-blockers However, can be used as first line for unilateral glaucoma patients or as a result of adverse effects to prostaglandin analogues. Not to be prescribed if there is history of bronchospasm and should be stopped immediately if the patient develops any cardiac or respiratory related side effects.

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Step 2

USE prostaglandin analogue
PLUS β-blocker

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Step 3

When prostaglandin analogue and β-blocker are insufficient to achieve desired target IOP
ADD carbonic anhydrase inhibitor
AND/OR α-adrenergic agonist

* Use of Preservative Free Formulations:
Preservative free formulations are restricted to patients with true preservative allergy and/or people with clinically significant and symptomatic ocular surface disease (evidence of epithelial toxicity and/or severe dry eyes).

Full NICE Pathway for treating and management of Glaucoma found at:
https://pathways.nice.org.uk/pathways/glaucoma#path=view%3A/pathways/glaucoma/managing-glaucoma.xml&content=view-node%3Anodes-ocular-hypertension-treatment

Part 2 – Glaucoma Service Prescribing Guideline for Open Angle Glaucoma and Ocular Hypertension

Drug		With Preservative	Preservative Free
Prostaglandin analogues	1st Line	1st latanoprost 0.005% eye drops 2nd bimatoprost 0.01% eye drops 3rd travoprost 0.004% eye drops	1st latanoprost 0.005% single use eye drops* 2nd bimatoprost 0.03% single use eye drops*
β-blockers	2nd Line	1st timolol 0.25% eye drops 2nd timolol 0.25% eye gel (long acting)	1st timolol 0.1% eye gel*
Carbonic anhydrase inhibitors	3rd Line	1st brinzolamide 1% eye drops 2nd dorzolamide 2% eye drops	1st dorzolamide 2% single use eye drops*
α-adrenergic agonists	3rd Line	1st brimonidine 0.2% eye drops	

Combination Therapies: TO BE USED WHEN COMPLIANCE/COST ISSUES ARISE
Choice needs to be made according to patient's concurrent and/or previous therapy

Combination Therapies	With Preservative	Preservative Free
Prostaglandin analogue + β-blocker	latanopost/timolol bimatoprost/timolol travoprost/timolol	1st latanoprost/timolol* 2nd bimatoprost/timolol*
Carbonic anhydrase inhibitor + β-blocker	dorzolamide/timolol brinzolamide/timolol	dorzolamide/timolol*
α-adrenergic agonist + β-blocker	brimonidine/timolol	
Carbonic anhydrase inhibitor + α-adrenergic agonist	brinzolamide/ brimonidine	

ADD APRACLONIDINE 0.5% EYE DROP: used short term to delay laser treatment or surgery in patients with glaucoma not adequately controlled by other drugs, however, some patients may benefit from treatment with apraclonidine 0.5% for longer periods.

USE APRACLONIDINE PRESERVATIVE FREE 1% EYE DROP*: for patients who are on maximally tolerated therapy and have a preservative allergy/ocular surface disease/previous corneal surgery and are not suitable for surgery.

ADJUNCT THERAPY: Oral acetazolamide - for patients already on maximally tolerated topical treatment.

OTHER GLAUCOMA DRUGS ON MEH FORMULARY (FOR RESTRICTED USE ONLY)

- Betaxolol 0.25% MR and betaxolol 0.25% MR *(preservative free)** – for patients who require a cardioselective β-blocker, e.g. mild asthmatics who can tolerate therapy.
- Levobunolol 0.5% *(preservative free)**, timolol 0.5% (long acting) and pilocarpine various strengths – secondary, atypical and refractory glaucomas.

NON-FORMULARY

- Tafluprost 0.0015% *(preservative free)** – no longer initiated at Moorfields, but available for patients who have previously been initiated and are stable on this medicine.