



Guide to Glaucoma Prescribing for Buckinghamshire GPs

Background

A complete Guide to Prescribing for Glaucoma, containing full product details, prices and prescribing data, has been drawn up in collaboration with Buckinghamshire Ophthalmologists. This document summarises the key messages to help for local prescribers to understand the reasons behind the choices made by specialists. Only drugs included in the joint [formulary](#) should be prescribed.

Glaucoma may present as open-angle or closed-angle and may be acute or, more commonly, chronic. Acute closed-angle glaucoma is symptomatic and is a medical emergency. If suspected, patients should be referred urgently to an Ophthalmologist.

Chronic closed-angle glaucoma is more insidious and causes a gradual rise in intra-ocular pressure.

Chronic open-angle glaucoma is the most common form. **Untreated and poorly controlled chronic open-angle glaucoma causes loss of vision.**

All patients with suspected glaucoma should be referred to The Practice Ophthalmology Clinic using the agreed process.

The drugs that reduce intra-ocular pressure act by different mechanisms and are selected on a patient-by-patient basis. Most receive treatment with a **prostaglandin analogue** or **beta-blocker** initially and treatment is adjusted according to response. The drugs have an additive effect and many patients need more than one type to lower their intra-ocular pressure to target. **It is recommended that compliance and technique are checked before treatment is changed in any way and patients using more than one eye drop should be advised to leave at least 5 minutes between applying each drug for maximum benefit.**

Preservative-free drops should only usually be used if the patient is known to be allergic to benzalkonium chloride (the preservative included in most eye drops), or is at increased risk of developing sensitivity. Risk of sensitivity is increased:

- when the eye surface is damaged and immediately following eye surgery - *preservative-free drops recommended until healed*
- when large numbers of drops containing benzalkonium chloride are being used (treatment protocols now discourage the use of 6 or more [benzalkonium chloride-containing] drops per eye) - *combination drops or preservative-free drops reduce the likelihood of sensitivity developing and may be used for this group.*

Drug therapy

1. Prostaglandin Analogues, Prostaglandins and Combinations

- **1st line: Generic latanoprost drops** GREEN
- **2nd line: Bimatoprost 300microgram/ml drops** AI (if allergy to latanoprost or latanoprost ineffective). Check compliance/technique before concluding lack of effect.
- **Combination drops should only be initiated if good evidence that outcomes will improve more than with single-ingredient drops**
- **Preservative-free drops only at request of Ophthalmologist for patients with proven sensitivity to benzalkonium chloride, or other good clinical reason when requested by an Ophthalmologist (see box above).**
 - **Latanoprost UD (Monopost) 1st choice** GREEN
 - **Bimatoprost 300microgram/ml UD (Lumigan UD) 2nd choice.** GREEN

Patients currently using branded latanoprost drops may be switched to generic unless this has already been tried and led to problems.

Other prostaglandin analogues are included in the [local formulary](#) but should only be prescribed at the request of an Ophthalmologist. Tafluprost (Safutan) drops are now non-formulary and should no longer be requested. Existing patients may be switched to suitable preservative-free alternatives e.g. latanoprost [Monopost] or bimatoprost UD [Lumigan UD]). This change may be made by their GP, ideally 2 months before the next clinic appointment, and the Ophthalmologist advised of the change. Alternatively, patients using tafluprost may be identified at practice level and the Ophthalmologist advised of the need to change the prescription in advance of the next scheduled appointment.

2. Beta-Blockers

- **1st line Beta-Blocker: generic timolol 0.25% GREEN**, alone or as add on therapy.
- **2nd line Beta-blocker: generic betaxolol 0.25% AR**
- **Preservative-free drops only at request of Ophthalmologist for patients with proven sensitivity to all preservatives, or other good clinical reason [see above].**
- **Prescribe combination drops only if there is good evidence that they will improve outcomes.**

Other beta-blockers (carteolol, levobunolol) are non-formulary and should not be requested. Timolol 0.5% has been removed from the formulary as it has no advantage over 0.25%. Patients being prescribed non-formulary drugs/strengths may be switched to formulary options in advance of a clinic appointment as above unless there is evidence of unsuitability for individual patients or where combination drops are in use.

3. Carbonic Anhydrase Inhibitors and Systemic drugs AI

Three drugs are included in this group: brinzolamide, dorzolamide and acetazolamide. They should only be used in resistant cases. Acetazolamide is an oral treatment that carries a high risk of side effects and, if used for more than 2 weeks, blood count and plasma electrolytes should be checked to detect bone marrow suppression and electrolyte disturbances. If abnormal results are seen GPs should consider stopping acetazolamide and should contact an Ophthalmologist for advice.

- **Only prescribe carbonic anhydrase inhibitors at request of an Ophthalmologist**
- **Prescribe generically**
- **Patients taking oral acetazolamide for a prolonged period should be reviewed and blood count and plasma electrolytes monitored**

4. Sympathomimetics AI

Sympathomimetics are usually reserved for use when other agents have not worked. Sensitivity to the agents is very common and they have a tendency to cause red eye. Apraclonidine (lopidine) carries a high risk of sensitivity reactions and is red-listed. All prescribing should be by secondary care.

- **Only prescribe sympathomimetic drops at request of Ophthalmologist**
- **Refer back requests to prescribe apraclonidine and review any patients currently prescribed it as courses are usually short (1% only for perioperative use, 0.5% for 1 month only)**
- **Prescribe generically**

5. Miotics AI

Pilocarpine is the only miotic available for prescribing, usually as 2% drops. It is used occasionally to treat acute angle-closure glaucoma and very occasionally for chronic angle-closure glaucoma. Patients on strengths other than 2% should be reviewed.

- **Only prescribe pilocarpine drops at request of Ophthalmologist**
- **Review patients using 4% with a view to switching to 2%**
- **10ml drops should be prescribed whenever possible.**

Developed by	Lynn Wallis, Prescribing Support Pharmacist, Aylesbury Vale & Chiltern CCGs. Updated by Breda Cronnolly, Medicines Optimisation Pharmacist September 2017
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