VI.2 Elements for a Public Summary

VI.2.1 Overview of disease epidemiology

Glaucoma, or raised pressure inside the eye, if not treated causes damage to the retina (the light-sensitive surface at the back of the eye) and to the optic nerve (the nerve that sends signals from the eye to the brain). This can result in serious loss of vision and even blindness. The most common forms of glaucoma are age-related, beginning in midlife and progressing slowly. However, it can also occur in children. Glaucoma can be roughly divided into two main categories, "open-angle" and "closed-angle" (or "angle closure") glaucoma. The angle refers to the area between the iris and cornea, through which fluid must flow. Glaucoma affects 2% of Europeans and up to 10 % of individuals of African origin who are older than 50 years. If detected early enough, disease progression can be slowed with drug and/or surgical treatment (Fan and Wiggs 2010).

VI.2.2 Summary of treatment benefits

Based on the available data from clinical studies and clinical experience of several years, brinzolamide represents an effective drug indicated to decrease elevated intraocular pressure (pressure inside the eye) in:

- ocular hypertension (when the pressure in the eye is higher than normal),
- open-angle glaucoma (a disease where the pressure in the eye rises because fluid cannot drain out of the eye).

Brinzolamide is used as an add-on to beta-blockers or prostaglandin analogues (other medicines used for these conditions), or on its own in patients who cannot take or do not respond to beta-blockers.

If administered as indicated in the Summary of Product Characteristics and taking into account the contra-indications, the warnings and precautions, brinzolamide can be considered effective in the approved indications and generally well tolerated.

VI.2.3 Unknowns relating to treatment benefits

Not applicable.

VI.2.4 Summary of safety concerns

Important identified risks

Risk	What is known	Preventability
Risk of corneal disorders (corneal decompensation)	Brinzolamide may affect corneal hydration and may cause corneal disorders. Careful monitoring is recommended when using brinzolamide eye drop suspension in patients with compromised corneas (transparent front part of the eye that covers the iris, pupil and anterior chamber), in patients with dry eyes and in patients wearing contact lenses (wearing contact lenses might increase the risk for the cornea).	Do not use brinzolamide eye drop suspension if you are allergic to brinzolamide or any of the other ingredients of this medicine. Talk to your doctor, pharmacist or nurse before using brinzolamide eye drop suspension if you have dry eyes or cornea problems. Contact with soft contact lenses should be avoided. If you wear contact lenses you should remove them prior to the application of brinzolamide and wait at least 15 minutes after instillation of the dose

Risk	What is known	Preventability
		before putting your lenses back in.
Risk of too much acid in body fluids (metabolic acidosis)	Acid-base disturbances (abnormality of the human body's normal balance of acids and bases that causes the plasma pH to deviate out of the normal range) have been reported with oral carbonic anhydrase inhibitors. Patients with significant renal abnormalities are at the risk of having too much acid in the body fluids. Since, brinzolamide and its main metabolite are excreted predominantly by the kidney it should not be used in patients with severe kidney disease or hyperchloraemic acidosis (excess acid in the blood caused by too much chloride).	Although brinzolamide ophthalmic suspension is administered topically, it is absorbed systemically (getting into the rest of the body). After using brinzolamide, press a finger to the corner of your eye, by the nose for at least 1 minute. This helps to stop brinzolamide getting into the rest of the body. If you are taking another carbonic anhydrase inhibitor (acetazolamide or dorzolamide), talk to your doctor. Do not use brinzolamide eye drops if you have severe kidney problems or if you have too much acidity in your blood (a condition called hyperchloraemic acidosis). Talk to your doctor, pharmacist or nurse if you have kidney or liver problems.
Interaction with ocular hypotensive agents (other agents which reduce fluid pressure inside the eye)	There is possibility of increased risk of ocular side effect due to concomitant treatment with other agents which reduce fluid pressure inside the eye.	Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines. If you are taking another carbonic anhydrase inhibitor (acetazolamide or dorzolamide), talk to your doctor. If you are using other eye drops, leave at least 5 minutes between putting in brinzolamide eye drop suspension and the other drops.

Important potential risks

Risk	What is known (Including reason why it is considered a potential risk)
Heart and blood vessels problems (cardiovascular disorders)	Although glaucoma itself is not limited to only middle-aged and elderly individuals, it is found to be more common in the aging population. Elderly patients often suffer from systemic diseases and the most common diseases include hypertension, cardiac disease or diabetes. Although brinzolamide ophthalmic suspension is administered topically, it is absorbed systemically (getting into the rest of the body). Since brinzolamide may affect cardiovascular system, extra care might be necessary in patients with such comorbid conditions.
Interaction with oral carbonic anhydrase inhibitors (other medicines which suppress the activity of	Although brinzolamide ophthalmic suspension is administered topically, it is absorbed systemically. Therefore, there is a potential for additive effect of the known systemic effects of carbonic anhydrase inhibition in patients receiving both oral and topical carbonic anhydrase inhibitors. The concomitant administration of brinzolamide ophthalmic suspension and oral

Risk	What is known (Including reason why it is considered a potential risk)
carbonic anhydrase taken by mouth)	carbonic anhydrase inhibitors is therefore not recommended. Nevertheless, proper handling technique helps reduce systemic absorption of brinzolamide administered via the ocular route.
Interaction with salicylates	In patients treated with oral carbonic anhydrase inhibitors, rare instances of acid-base alterations have occurred with high-dose salicylate therapy. Although brinzolamide ophthalmic suspension is administered topically, it is absorbed systemically. Therefore, the potential for such drug interactions should be considered in patients receiving brinzolamide ophthalmic suspension.
Long term use of preserved eye drops	Brinzolamide eye drop suspension contains preservative benzalkonium chloride (chemical substance which prevents the growth of microorganisms). However, it may cause eye irritation, and therefore care should be taken by people who have dry eyes, compromised corneas or by people who wear contact lenses. Benzalkonium chloride may discolour soft contact lenses, and therefore, care should be taken by people who wear soft contact lenses. Contact lenses should be removed prior to the application of brinzolamide eye drops and wait at least 15 minutes after instillation before putting them back in.

VI.2.5 Summary of risk minimisation measures by safety concern

No additional risk minimisation measures are proposed.

All medicines have a Summary of Product Characteristics (SmPC) which provides physicians, pharmacists and other health care professionals with details on how to use the medicine, the risks and recommendations for minimising them. An abbreviated version of this in lay language is provided in the form of the package leaflet (PL). The measures in these documents are known as routine risk minimisation measures.

VI.2.6 Planned post authorisation development plan

Not applicable.

VI.2.7 Summary of changes to the risk management plan over time

Not applicable.