

# Are generic topical prostanoids the way forward in the care of glaucoma patients? – Yes

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Latanoprost is the most widely prescribed topical antihypertensive in the United Kingdom. In 2011, over 3.5 million bottles were dispensed in England alone (ePACT data). At that time Xalatan, at £12.48, was the most costly multidose product in its class;<sup>1</sup> hence, the introduction of generic forms of this preparation in January 2012 was a milestone in glaucoma treatment as far as the cost was concerned.

## Equivalence

The frequently quoted '80–125% bioavailability' rule applied to generic versions of systemic drugs does not apply to eye drops. Topically applied medication is subject to different guidelines. Bioavailability and efficacy studies are required only if there is a change in the following:

- active ingredient(s) \with regard to specification of the physical properties;
- inactive ingredient(s); and
- application with regard to application device (eg, inhalation chamber).<sup>2</sup>

Such studies were required, for example, when Alcon, Hemel Hempstead, changed the preservative in Travatan in 2010. Although publications have reported problems with generic eye drops, these occur when the formulation differs from the branded product,<sup>3–6</sup> something not permitted in Europe without supporting data. Manufacturers of generic latanoprost, not wishing to undertake bioavailability and efficacy studies, will maintain the formulation of the branded product. Thus, versions of generic latanoprost have a formulation that is identical/comparable

to the original formulation of Xalatan; pH and osmolality ranges are also similar.<sup>7</sup>

## Efficacy and safety

Generic products have been available in markets outside the United Kingdom for some time (generic latanoprosts were licensed in the United States of America in March 2011) and several studies have compared the efficacy and safety of generic versions of latanoprost and Xalatan. A study from Slovakia showed the similarity between Unilat and Xalatan in terms of efficacy and tolerability.<sup>8</sup> Another study from India showed a significant difference in intraocular pressure between Latoprost and Xalatan at week 12 but none at week 24.<sup>9</sup> A larger 12-week study in Italy confirmed the non-inferiority of generic latanoprost.<sup>10</sup> With regard to adverse events, Japanese authors have described the development of a corneal epithelial disorder following administration of Laparoprost eye drops. This was thought to be due to the inclusion of a surfactant not present in Xalatan/generic latanoprosts available in the United Kingdom.<sup>11</sup> In the 8 months following the launch of generic latanoprost, the MHRA received two adverse drug reaction reports classified as 'drug ineffective', but one such report had already been received during the previous financial year when only Xalatan was available.

## Problems in use

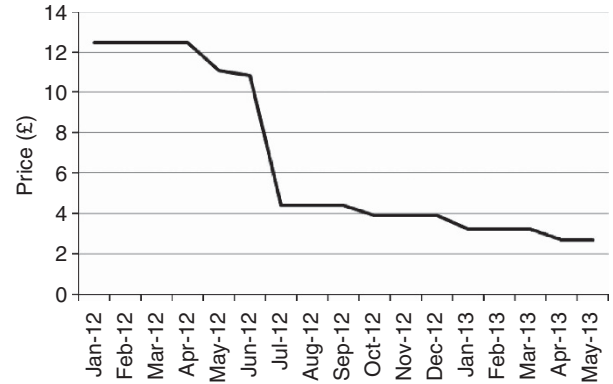
During the same post-launch period, the MHRA received seven adverse drug reaction reports classified as 'drug substitution issue' (personal communication). Patients are dispensed medication in a variety of presentations, and the packaging and appearance of generic drugs can change from month to month. Patients are accustomed to these changes in relation to

systemic medication. For eye drops, although the contents of the bottle are comparable, the delivery systems, that is, the eye drop bottles, differ in appearance and possibly in ease of use for some patients. For example, patients who have been using Xalatan with a Xal-ease compliance aid may find that their new bottle is not compatible with the device. Those not previously reliant on a compliance aid to help administer the drops may find the new bottle composed of a more rigid plastic and administration more problematic. Manufacturers of the Teva version of eye drops had originally instructed patients to store the drops in the refrigerator, even after opening. These problems can be overcome. Teva has re-examined this advice and, from January 2013, Teva latanoprost storage instructions have come into line with other generics (personal communication). The provision of an alternative compliance aid may make the use of the new presentation of eye drops as straightforward as before. The prescribable Opticare device is compatible with all of the ten generics available in the United Kingdom.

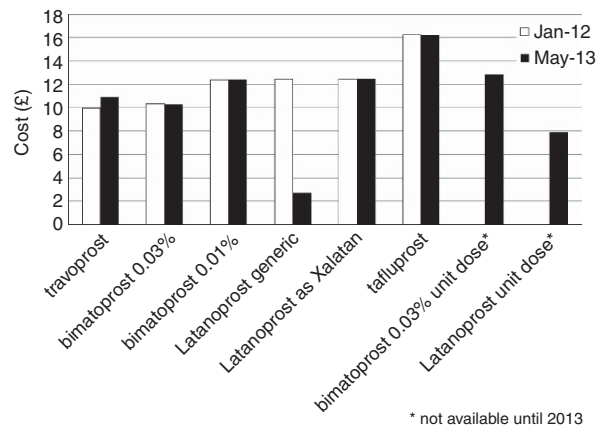
**Is it worth pursuing the adoption of generic eye drops?**

Do the pros of changing from branded to generic latanoprost outweigh the cons? Although there will always be a small minority of patients for whom nothing but a Pfizer product is acceptable, the acquisition cost savings from the use of generic products are considerable. The price at which latanoprost is reimbursed when dispensed on the NHS has decreased from £12.48 in April 2012 to £2.71 in May 2013<sup>1</sup> (Figure 1). The 28-day costs of bimatoprost 0.01% and 0.03% and tafluprost have remained steady at £12.43, £10.30, and £16.25 (£17.41 for 30 SDUs), respectively. Travoprost's price increased from £9.98 to £10.95 in September 2012. Thus, the cost of treatment with a multidose prostanoid based on May 2013 prices varies by a factor of 4.6 (Figure 2). Even before the loss of the patent, the vast majority of prescriptions for latanoprost were written generically. This figure has increased from 80.7% in July 2011 to 84.8% in July 12, because GPs as well as ophthalmologists are under considerable pressure to generate savings in the NHS. The cost of approximately 294 000 bottles of Xalatan in July 11 was £3.7 million; the cost of approximately 298 000 bottles of latanoprost (84.8%) plus Xalatan in July 12 was £1.7 million. Savings in excess of £32 million per annum will be generated as the price of generic latanoprost decreases further and the rate of generic prescribing increases.

While conceding that some patients may experience difficulties on switching to a generic version of latanoprost, I propose that these difficulties can be



**Figure 1** Drug tariff price of generic latanoprost from January 2012 to May 2013.



**Figure 2** Comparison of costs of 28-day treatment with topical prostanoids in January 2012 and May 2013.

overcome in the majority of patients with support from secondary- and primary-care prescribers and pharmacists. Boycotting the adoption of changes that can save the NHS millions is not only a waste of resources but also a short-term fix. Travatan and Lumigan eye drops were launched in 2001/2; it will not be long before ophthalmologists who have settled upon alternative drugs as a result of a boycott of generic latanoprost will have to address the generic 'problem' again.

**Conflict of interest**

The author declares no conflict of interest.

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