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ORIGINAL RESEARCH

Perspectives of Healthcare Professionals on the Treatment Landscape of Ocular Redness

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Background: Ocular redness (OR) is a common clinical presentation that can significantly impact patients' health-related quality of life (HRQoL), yet treatment options have historically been limited by side effects and efficacy concerns. Brimonidine tartrate 0.025% represents a newer therapeutic option, but real-world perspectives from healthcare professionals (HCPs) on its clinical utility remain understudied.

Methods: A cross-sectional exploratory qualitative interview study was conducted with 18 ophthalmologists purposively recruited from a sponsor-acquired list. Participants had experience prescribing or recommending brimonidine tartrate 0.025% and were interviewed across Spain, Portugal, Poland, the United States, and Greece. Semi-structured interviews explored current treatment landscapes, unmet needs, and experiences with brimonidine tartrate 0.025%. Transcripts were analysed using qualitative content analysis.

Results: Participants reported OR as highly prevalent in their practice, with dry eye disease being the most commonly cited underlying cause. HCPs described significant HRQoL impact on patients, including social embarrassment, workplace concerns, and emotional distress. Prior to brimonidine tartrate 0.025%, treatment options were limited, with traditional vasoconstrictors avoided due to rebound redness and tachyphylaxis. All participants reported brimonidine tartrate 0.025% as effective, with rapid onset and good tolerability. Key advantages included lack of rebound redness and suitability for various patient types.

Conclusion: This study with brimonidine tartrate 0.025% prescribers found it addresses a significant unmet need in OR management, providing effective relief with improved safety profile compared to traditional options. However, emphasis on proper diagnosis and use remains crucial.

Keywords: ocular redness, conjunctival hyperaemia, brimonidine tartrate, healthcare professionals, qualitative research, treatment satisfaction

Introduction

Ocular redness (OR), or conjunctival hyperaemia, is a common clinical presentation caused by vasodilation of the conjunctival blood vessels.[1,2] Although it is a common presentation, there is limited published evidence on the prevalence of OR. OR results from a variety of aetiologies, including allergic conjunctivitis, dry eye disease (DED), environmental or lifestyle irritants, and adverse effects of ocular medications such as prostaglandin analogs used in glaucoma treatment.[1–5] OR can be an acute complaint, for example, if caused by environmental irritants or conjunctivitis, however for others it is a chronic persistent issue. While often benign and temporary, OR is frequently associated with ocular discomfort, inflammation, and underlying pathology, making it a primary reason for ophthalmologic consultations.[6]

Beyond its physiological manifestations, OR can significantly impact patients' health-related quality of life (HRQoL). Studies suggest that visible OR may contribute to social stigma, reduced self-esteem, and perceived reductions in health and attractiveness.[7–9] In children with allergic conjunctivitis, OR has been identified as a risk factor for diminished HRQoL for both patients and caregivers.[10] Furthermore, ocular rosacea, which presents with persistent redness and

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discomfort, has been linked to avoidance of social interactions and psychological distress.[11] Despite these findings, there remains a limited understanding of the broader HRQoL burden associated with OR, particularly from the perspective of healthcare professionals (HCPs) managing the condition.

Current treatment options for OR primarily include ocular vasoconstrictors, which act on α-adrenergic receptors to reduce conjunctival vessel dilation.[12] Traditional vasoconstrictors, including α_1/α_2-adrenergic receptor agonists, effectively reduce redness in the short term but may cause tachyphylaxis and rebound hyperaemia with prolonged use.[13] Topical antihistamines and corticosteroids may also alleviate OR but are limited by short durations of action, side effects, or restrictions on long-term use.[14]

Brimonidine tartrate 0.025% is a selective α_2-adrenergic receptor agonist designed to reduce OR with minimal α_1-receptor activity, lowering the risk of rebound redness.[15,16] The medication has been available over the counter (OTC) in the United States (Lumify®) since 2018[17] and has received national marketing authorization in Europe (Lumobry®) as a prescription-only treatment.[18] Recent EMA guidance, aimed at streamlining lifecycle management, may facilitate post-authorisation changes that, while not constituting an OTC switch in itself, could broaden accessibility in select EU markets.[19] Given its current and evolving accessibility, it is essential to evaluate its real-world positioning within the current treatment landscape and to understand the perspective of HCPs regarding its efficacy, safety, and clinical utility.

This study aimed to explore the experiences and perspectives of HCPs who have had access to brimonidine tartrate 0.025% for some time in the US, as well as early adopters in Europe, in prescribing and recommending the treatment for OR. Through qualitative interviews, the study investigated the current treatment landscape, perceived unmet needs, and the benefits and limitations of available therapies.

Methodology

Study Design

This study employed a cross-sectional qualitative interview design to explore the perspectives of HCPs with experience prescribing or recommending brimonidine tartrate 0.025%. A semi-structured interview guide was used to ensure consistency while enabling spontaneous insights into treatment practices and patient outcomes.

The final study protocol and materials were submitted to the Western Institutional Review Board – Copernicus Group (WCG IRB) for review and were granted an exemption from full ethical review (IRB Tracking Number: 20235800).

Participants and Recruitment

The target sample for this study was up to N=20 HCPs with experience prescribing or recommending brimonidine tartrate 0.025% across Spain, Portugal, Poland, the United States and Greece (targeting approximately four participants per country). The sample size was deemed sufficient to achieve data saturation whilst remaining pragmatic given the exploratory nature and scope of the study. Anticipated data saturation was informed by the focused study objectives, the relatively homogenous participant group, and the depth of the semi-structured interviews.

A purposive sampling approach using a sponsor-provided list was employed. Recruitment was conducted in stages and proceeded sequentially by country, aligned with the availability of brimonidine tartrate 0.025% in each market. During data collection, interviewers reviewed emerging themes iteratively and used professional judgement to assess whether additional interviews were likely to yield substantially new insights.

Countries were selected to capture a range of market contexts, including the US where brimonidine tartrate 0.025% has been available OTC for several years, and selected European markets representing more recent adoption under prescription only access.

A list of eligible HCPs was provided by the study sponsor. Researchers facilitated recruitment using this list by approaching potential participants via email, while ensuring that the study sponsor remained blinded to participants' identities to maintain research integrity. However, the sponsor provided assistance to facilitate contact with potential participants in two study countries (Greece, Poland) where recruitment challenges arose. Therefore, the identities of some participants in those countries were unblinded.

Participants were required to meet the following criteria: (i) licensed ophthalmologist with experience prescribing or recommending brimonidine tartrate 0.025%; (ii) resident and practicing in one of the study countries at the time of participation; (iii) greater than or equal to three years of experience managing patients with OR; (iv) treating three or more patients per month with brimonidine tartrate 0.025%; (v) sufficient proficiency in English to participate in an interview; and (vi) willing and able to provide written and verbal informed consent for a 60-minute audio-recorded interview, following receipt of study details, including its purpose, procedures, sponsorship, and relevant contact information. No exclusion criteria were applied.

Study Procedures

All interviews were conducted via teleconference (Zoom) in English by trained interviewers (KF, SS and KG); no additional individuals were present during the interviews. Each interview lasted up to 60 minutes and was audio-recorded, transcribed verbatim, and de-identified for analysis.

At the start of each interview, participants were asked to verbally reconfirm their consent before completing a brief background questionnaire. This questionnaire provided contextual information to facilitate discussion during the interview (Interview guide - supplementary material). The interviewer then proceeded with the main portion of the interview.

A semi-structured interview guide was developed based on a targeted literature review. The literature review focused on current treatments for OR and existing studies describing its impact.[16,20–30] The interview guide was designed to explore HCPs' experiences in treating OR, including common patient-reported concerns, perspectives on existing treatments, and experiences prescribing or recommending brimonidine tartrate 0.025%. Open-ended questions were included to encourage participants to share their experiences in detail. Clinicians were compensated for their participation in the 60-minute interview, in accordance with the sponsor's fair market value guidelines.

Analysis

Data from the background questionnaire were summarised using descriptive statistics. Interview transcripts were de-identified and transcribed verbatim for qualitative content analysis. The analysis aimed to summarise the current treatment landscape for OR and HCPs' experiences prescribing or recommending brimonidine tartrate 0.025%.

The analysis followed a structured approach. Initially, researchers read and reread the transcripts to develop a preliminary coding framework based on emergent themes. Each transcript was systematically coded using this initial framework, which was refined iteratively through team discussion.

Data analysis was supported by MAXQDA, a qualitative data management software, which facilitated organisation but did not automate any aspect of the analysis. Coding was conducted by experienced qualitative researchers, including those who conducted the interviews (KG, KF, SS). Records were maintained documenting which researchers conducted which interview and which researchers coded each transcript. To ensure consistency, two researchers (KF and SS) independently coded a subset of transcripts. A post-coding comparison and reconciliation process was undertaken to resolve any discrepancies. Once sufficient agreement was established, a single researcher (SS) coded the remaining transcripts. Memos were added in MAXQDA when coding queries arose or assumptions were made, which were discussed in coding meetings. A senior researcher conducted a final quality review (KG). A saturation matrix was used to monitor data saturation.

KG, KF and SS are researchers working for an independent company commissioned by the study sponsor. All three interviewers were female, hold MSc-level qualifications and have experience in qualitative data collection and analysis. The interviewers are not medical doctors or ophthalmology specialists. Reflexivity was considered throughout data collection and analysis to mitigate potential sponsor influence. Interviewers used a standardised semi-structured guide and encouraged participants to share both positive and negative experiences. Participants were informed of the sponsor's role, assured of confidentiality, and advised identifiable information would be removed prior to analysis and that findings would be reported to the sponsor only in aggregate form. Analytic interpretations were discussed within the research team to support reflexive consideration.

Results

Sample Characteristics

A total of N=18 HCPs took part in the qualitative interviews, with an equal number of participants recruited from Spain, Portugal, the US, and Greece (n=4) and n=2 from Poland. Participant sociodemographic and clinical characteristics are detailed in Table 1. On average, participants were 50 years old (range=31–70), with the majority being male (n=11; 61%). Participants had been treating OR for 19 years on average, with participants treating a large number of individuals with OR per month (mean=93). Participants had prescribed or recommended brimonidine tartrate 0.025% to an average of 20 patients in the previous month, which equates to over a quarter of patients they see with OR (28%). All participants previously had experience with corticosteroids for treating OR (100%). Primary area of specialty was most commonly cornea/ocular surface (55%).

Table 1 Participant Sociodemographic and OR Clinical Characteristics

Participant Demographics and Clinical Experience						
Characteristic	**Total (N=18)**	**Spain (n=4)**	**Portugal (n=4)**	**US (n=4)**	**Greece (n=4)**	**Poland (n=2)**
Age in years (mean, SD)	50 (12.8)	51 (13.5)	41 (17.9)	50 (5.8)	62 (2.1)	41 (3.5)
Years in clinical practice (mean, SD)	20.4 (10.6)	22.3 (12.0)	13.5 (14.5)	18.8 (5.6)	30.3 (4.6)	14.5 (3.5)
Year's experience treating OR (mean, SD)	19 (9.7)	22 (10.2)	13 (12.0)	20 (6.1)	25 (7.4)	10 (9.9)
Clinical volume and Brimonidine Tartrate 0.025% use						
Characteristic	**Total (N=18)**	**Spain (n=4)**	**Portugal (n=4)**	**US (n=4)**	**Greece (n=4)**	**Poland (n=2)**
Patients with OR seen per month (mean, SD)	93 (56.9)	113 (55.0)	54 (32.5)	123 (68.5)	99 (63.3)	60 (56.6)
Patients prescribed/recommended brimonidine tartrate 0.025% last month (mean, SD)	20 (16.5)	20 (10.3)	15 (7.5)	36 (26.3)	15 (12.5)	8 (3.5)
Proportion of patients prescribed/recommended brimonidine tartrate 0.025% per month (%)	28% (25.9)	19% (7.8)	36% (32.0)	33% (15.3)	32% (46.0)	18% (10.6)
Patients prescribed/recommended brimonidine tartrate 0.025% tot (mean, SD)	368 (692)	72 (10)	46 (39)	1325 (971)	84 (87)	110 (127)
Time since starting to prescribe/recommend brimonidine tartrate 0.025%, range[a]	2 months–7 years	2–4 months	3–9 months	3–7 years	4 months–1 year	1–2 years
Practice setting (multi-select)[b]						
Clinical setting	**Total (N=18) n (%)**	**Spain (n=4) n (%)**	**Portugal (n=4) n (%)**	**US (n=4) n (%)**	**Greece (n=4) n (%)**	**Poland (n=2) n (%)**
General public hospital	2 (11%)	0 (0%)	1 (25%)	0 (0%)	1 (25%)	0 (0%)
University or teaching hospital	9 (50%)	3 (75%)	3 (75%)	1 (25%)	2 (50%)	0 (0%)
Specialist eye hospital	1 (6%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Private centre	9 (50%)	3 (75%)	3 (75%)	0 (0%)	1 (25%)	2 (100%)
Private group practice	4 (22%)	2 (50%)	1 (25%)	1 (25%)	0 (0%)	0 (0%)
Private solo practice	6 (33%)	0 (0%)	1 (25%)	2 (50%)	2 (50%)	1 (50%)
Local/community health centre	1 (6%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (50%)

Notes: [a]Time since started: Reported as range (minimum-maximum) because the distribution spans months to years and may not be meaningfully summarised by mean. [b]Clinical Setting: Participants could select more than one clinical setting. Therefore, totals in this section may exceed N and percentages are calculated using column N as the denominator. Continuous variables are reported as mean (SD) unless otherwise stated. Categorical variables are reported as n (%).

Qualitative Results: Ocular Redness

The saturation matrix showed that 65% of codes were applied in the first four interviews and no new sub-codes were added for the final interview. The following sections summarise the qualitative findings.

Causes and Prevalence

HCPs identified multiple aetiologies for OR, including dry eye disease, ocular surface disease, conjunctivitis, adverse events from glaucoma medications, contact lens wear, allergies, and bacterial or viral infections. One participant also reported that some patients experience persistent OR after having COVID-19. Other causes reported included uveitis, blepharitis, corneal ulcers, chemical burns and post-operative inflammation. As one participant explained:

> The most common is just going to be dry eyes, ocular surface disease, but you can have conjunctivitis bacterial or viral, you can have pharmacy-related hyperaemia from glaucoma drops or other drops. Foreign chemicals, foreign bodies, trauma, post-surgical, those are typical. (US-001)

HCPs emphasized the importance of identifying the patient's underlying pathology to address the primary cause, with OR often presenting as a significant sign of a more complex, underlying issue. As one HCP noted:

> As many of my cases have another reason to have red eyes, the driver is the treatment of the basic pathology. This basic treatment is obviously the subject of follow-up, and I adjust the treatment according to the needs of the patient. (Sp-004)

The reported prevalence of OR varied considerably among participants' practices, ranging from "not very common" to "very common". Half the sample described OR as "very common" in their practice, with five participants reporting that approximately 20–33% of their patients experience OR. One participant estimated a particularly high prevalence:

> I'd say 80% of my patients have conjunctival hyperaemia. (US-003)

When asked about the frequency of OR presenting as a primary medical complaint, HCPs' responses ranged from infrequent to very frequent. Since OR is often a sign of an underlying condition, some HCPs considered the primary complaint to be the pathology causing OR, others viewed it as a combination of both the pathology and OR. It was explained by one HCP that patients often judge their eye health by the visual appearance of their ocular surface, resulting in OR being the patient's primary complaint even in cases of severe retinal diseases.

Life Impacts

HCPs reported persistent HRQoL impacts associated with OR, affecting patients' appearance, social interactions, work performance, and emotional wellbeing. The aesthetic impact was particularly prominent, with patients finding OR "visually displeasing". Participants shared their patients' experiences with the social stigma associated with OR, particularly in relation to drinking, drug use, looking like a sick person and looking tired.

Nearly half of the participants reported OR's impact on patients' work lives, particularly for those in public-facing roles. This was due to colleagues or customers commenting on their red eyes, making assumptions about their lifestyle (eg, late nights, alcohol use) and patients feeling embarrassed in front of colleagues or customers. The impact on patients' work also depends on the individual's profession, with those who work with the public, those in high-powered positions, or whose work is based on their appearance (such as actors) or business executives named as the most impacted. One participant noted:

> Their wellbeing is embarrassment, shame in their work, in their meeting with her friends. The shame of the redness because people think if they drink alcohol or cry or something wrong with his eyes, and even if it is only redness without any other symptoms, they have shame and they have discomfort. (Pol-001)

Half of the participants, including at least one from each study country, reported emotional impacts including embarrassment, shame, annoyance, irritation, depression, and stress. Some patients adjusted their behaviours, opting to avoid social situations or alter their daily routines in an attempt to mitigate the negative judgments or assumptions made by others. One participant observed:

> I think it can be for some patients, especially those that are in that kind of moderate to severe category, it can be very troubling for some patients, they might even use words like 'disability' or it causes social anxiety and stress. They might change how they interact with people, they might avoid for example, going to certain social functions. (US-004)

Treatment Landscape Prior to Brimonidine Tartrate 0.025%

Treatment Pathway

Prior to brimonidine tartrate 0.025% availability, HCPs described a treatment paradigm focused primarily on addressing underlying aetiologies. For almost all HCPs, the treatment pathway began with determining the aetiology of the OR, and prioritizing treatment of the underlying cause. If treating the underlying cause did not reduce OR, or if the underlying cause could not be treated, they would resort to treating the OR independently or concurrently. As one participant explained:

> I think we have to think about other pathologies, and we have to combine not only to try to do vasoconstriction but also to treat the real cause. Sometimes the real cause doesn't diminish, doesn't decrease the redness so my feeling is that we have to pay attention to the main cause and if it is mild, we may try just a vasoconstrictor, if not we have to treat the background cause and help to whiteness the eye using a vasoconstrictor. (Port-001)

There were many key considerations HCPs made when developing a treatment plan for OR, including costs to the patients, compliance to medication, speed of efficacy and long-term effectiveness of treatments. One participant also reported that some patients prefer avoiding certain types of treatment, such as not wanting antibiotics or wanting something natural rather than chemical eye drops.

Common Treatments and Unmet Treatment Needs

Common treatments differed between the different aetiologies of OR as HCPs aimed to treat the underlying cause of OR before treating the sign itself. When specifically targeting OR, treatments could include vasoconstrictors or steroids, or complementary treatments, such as lid hygiene or warm compresses. Only three participants reported advantages to prescribing traditional ophthalmic decongestants (α1-AR agonists/α1/α2-AR agonists). More than half of those who discussed these treatments reported significant disadvantages, including rebound redness and pupil dilation. One participant stated:

> And these are a group of patients who, on their own, use other vasoconstrictors, perhaps from the pharmacy, perhaps from other doctor, which I have to state clearly that I hate all the previous ones, naphazoline and all that, for the sole reason that they induce dryness on top of perfectly well treating the redness. (Gr-002)

When discussing steroid treatments, such as dexamethasone or hydrocortisone, the advantages noted were their efficacy and speed of action. Participants highlighted several disadvantages to anti-inflammatory treatments, particularly relating to the safety issues, such as the potential for increased intraocular pressure and development of cataracts or glaucoma if used long-term. The other main concern was the likelihood of patients experiencing rebound redness when the medication was stopped.

The few HCPs that discussed antihistamines for treating OR noted they were effective for patients experiencing allergies but were slow acting. Ocular lubricants were discussed by HCPs from Greece and Portugal, and although effective in some patients, there was concern that the treatment did not treat the underlying cause of OR.

Participants were asked if there were types of patients who experience OR for whom there were limited appropriate treatments, prior to brimonidine tartrate 0.025%. Participants discussed patients whose OR was not responsive to common treatments, those where steroids work but cannot be used long-term, those who have severe OR due to conditions such as scleritis, those where OR is a side effect of medication such as glaucoma medicine, where OR is caused by smoking, or where the cause of OR cannot be determined.

Brimonidine Tartrate 0.025%

Reasons for Adopting and Key Considerations

HCPs adopted brimonidine tartrate 0.025% primarily to address the gap in available treatments. Having an option to treat OR in addition to treating the cause was seen as a key advantage and an initial reason to adopt brimonidine tartrate 0.025% into treatment practices. As one participant explained:

> I never see it really as an alternative, so I still keep on doing a more targeted approach to red eye. Basically it has not replaced anything for me. It's just an additional tool that I have at my disposal. (Port-003)

As participants reported that brimonidine tartrate 0.025% provides quick effective relief from redness, the most prominent consideration when prescribing or recommending brimonidine tartrate 0.025% was ensuring the identification and treatment of the underlying cause and not masking the signs and symptoms such as OR with brimonidine tartrate 0.025%.

> If there is a problem, especially dryness or inflammation, the first sign is redness, so Lumobry is covering this redness and is more difficult to diagnose that. So even though I think it's safer than the [other] vasoconstrictors, I think that it has to be used with caution. (Sp-003)

Another key consideration was ensuring that patients understood how to use the product properly to prevent overuse, while also educating them that it is not a cure for their OR.

Treatment Advantages, Disadvantages and Comparison

Participants identified perceived clinical benefits that included rapid onset of action, duration of action up to 8 hours, absence of tachyphylaxis, and reduced risk of rebound redness. The majority of participants also mentioned that brimonidine tartrate 0.025% is well-tolerated.

Patient-centric benefits discussed by HCPs include an increase in patient empowerment, especially considering ease of accessibility in the US, and general patient happiness, as well as increased satisfaction with the service provided by the HCP. Additionally, HCPs suggest brimonidine tartrate 0.025% could increase compliance with other treatments, which may cause OR, such as glaucoma medication.

However, whilst discussed as a benefit, efficacy also contributed to the disadvantages of brimonidine tartrate 0.025% for two reasons. One being that participants felt that the effectiveness of the drug meant that some patients overused it despite being instructed otherwise. The second is that the effectiveness masked the underlying cause of the OR, and HCPs felt nervous that patients would not care about the pathology and overall health of the eye.

Although reported to be tolerated well by the majority of patients, two HCPs noted that the preservative in brimonidine tartrate 0.025% could cause irritation and dryness of the eye, especially in cases where the ocular surface is already damaged.

When comparing brimonidine tartrate 0.025% to previous treatment options, participants consistently described earlier treatment for OR as too aggressive and caused rebound redness, leading many HCPs to avoid their use. While treatments for underlying pathology remain important for comprehensive management and addressing other signs and symptoms, brimonidine tartrate 0.025% was viewed as providing immediate, specific relief for OR. For many participants, it had become their primary treatment choice for addressing OR, though always in conjunction with appropriate management of underlying conditions.

The reported quality of life improvements were primarily attributed to aesthetic enhancements from OR reduction. HCPs noted that patients demonstrated increased comfort and confidence in their appearance after using brimonidine tartrate 0.025%, leading to a lessened effect of OR on social perceptions in both personal and professional settings.

Availability Differences

In the US, brimonidine tartrate 0.025% is available OTC, whereas, at the time of interview, in Europe it was only available by prescription. The OTC availability of the treatment increases accessibility for US patients, particularly as its associated costs are relatively low and do not require insurance involvement. However, it was noted that being OTC, some patients may overuse or misuse the drug without their ophthalmologist being aware.

In comparison, one HCP explained the requirement for a prescription in Europe allows HCPs to monitor the underlying disease or condition, even if brimonidine tartrate 0.025% masks OR as a sign of the condition. However, this approach has its disadvantages, including the cost of the prescription, which can deter HCPs from recommending and patients from accessing the treatment.

Discussion

This qualitative study provides insights into HCPs' perspectives on OR management and their experiences with brimonidine tartrate 0.025%. The findings highlight OR as a common condition that can significantly affect patients' HRQoL, particularly in social and professional contexts.

The study confirms that OR has implications for patient wellbeing beyond its physiological manifestations. HCPs' observations align with existing literature suggesting that visible ocular changes contribute to negative social perceptions and reduced attractiveness.[7–9] The reported impacts on professional life, particularly for individuals in public-facing roles or executive positions, underscore the broader implications of OR beyond simple aesthetic concerns. The finding that patients may avoid social situations or experience workplace embarrassment due to OR highlights an important burden of this condition. These observations support the need for effective treatments that address not only the physiological aspects of OR but also its psychosocial impacts.

Prior to brimonidine tartrate 0.025%, the treatment landscape for OR was characterized by limited options with significant limitations. Traditional vasoconstrictors were largely avoided by HCPs due to rebound hyperaemia and tachyphylaxis, while anti-inflammatory treatments were limited by safety concerns or delayed onset. This created a therapeutic gap, particularly for patients with persistent OR despite treatment of underlying conditions. HCPs perceived the introduction of brimonidine tartrate 0.025% as addressing this unmet need by providing rapid, effective relief without the major limitations of traditional vasoconstrictors. The mechanism of selective α2-receptor agonism with minimal α1-receptor activity likely accounts for the reduced risk of rebound redness reported by clinical study participants.[15]

HCPs positioned brimonidine tartrate 0.025% as a complementary therapy rather than a replacement for treating underlying causes. This approach reflects appropriate clinical practice, emphasizing the importance of proper diagnosis and management of underlying pathology while providing symptomatic relief. The primary concern expressed by HCPs regarding the potential masking of underlying conditions highlights the importance of proper patient education and clinical monitoring. This is particularly relevant given the different availability models between the US (OTC) and Europe (prescription only at the time of interviews), each presenting distinct advantages and challenges.

The availability differences between regions raise important considerations for optimal patient care. While OTC access in the US provides patient empowerment and convenience, prescription requirements in Europe allow for better clinical oversight to date. The EMA's 2024 framework for variations opens pathways for potential OTC expansions of products like Lumobry in EU markets such as Spain but would require enhanced education to mitigate risks like self-diagnosis or overuse, as raised by HCPs. These differing regulatory approaches may also have implications for patients' long-term outcomes, particularly in respect to sustained symptoms management, appropriate use over time, adherence to follow-up care, and timely identification and treatment of underlying pathology. The ideal approach may involve balanced strategies that maximize accessibility while ensuring appropriate clinical monitoring. The concerns expressed by European HCPs about patients potentially avoiding follow-up care when signs and symptoms are effectively managed underscore the complexity of balancing patient autonomy with appropriate medical supervision.

Several limitations should be acknowledged. First, the study sample – consisting of both HCPs in the US who have had brimonidine tartrate 0.025% available for some time, as well as early adopters in the EU – was identified by the sponsor, potentially introducing selection bias. Accordingly, these findings should be interpreted considering the purposive, sponsor-led sampling strategy, which may have contributed to predominantly positive perceptions and an underrepresentation of more sceptical perspectives. Second, eligibility criteria requiring English proficiency may have further shaped the sample, potentially favouring internationally engaged clinicians, and limiting representation of broader regional perspectives. Third, although sponsor involvement was limited to facilitating contact where required, this involvement may have been perceived by some participants as implicit encouragement to participate, potentially influencing response patterns among participants, even if unintentionally. Fourth, the qualitative nature limits generalizability, and patient perspectives were

inferred through HCP observations rather than direct patient reporting. Finally, the study's focus on experienced HCPs with established brimonidine tartrate 0.025% use may not represent the perspectives of the broader ophthalmology community. Future research should include direct patient-reported outcomes and experiences from a more diverse range of HCPs.

The findings suggest that HCPs perceive brimonidine tartrate 0.025% as addressing a clinical need in OR management citing it as an effective, well-tolerated treatment with an improved safety profile compared to traditional options. However, the importance of proper patient education, clinical monitoring, and continued attention to underlying pathology cannot be overstated. Participating HCPs considered brimonidine tartrate 0.025% as a valuable addition to their therapeutic options, while maintaining focus on comprehensive eye care and appropriate patient education regarding proper use and the importance of addressing underlying conditions. The reported improvements in patient satisfaction, combined with the lack of significant adverse effects, suggest that brimonidine tartrate 0.025% represents a meaningful advancement in OR management when used appropriately within comprehensive ophthalmic care.

Conclusion

This study demonstrates that participating HCPs view brimonidine tartrate 0.025% as addressing a significant unmet need in OR management. Participants reported effective symptomatic relief with an improved safety profile compared to traditional vasoconstrictors, while the reported HRQoL improvements justify its therapeutic value beyond simple OR control. However, the findings emphasize the critical importance of proper clinical oversight, patient education, and continued focus on diagnosing and treating underlying pathology. The different availability models between regions present both opportunities and challenges that should inform future regulatory and clinical practice decisions, particularly in relation to their potential impact on long-term patient outcomes.

Ethical Considerations

This study was granted an exemption from full ethical review by the Western Institutional Review Board – Copernicus Group (WCG IRB) under 45 CFR § 46.104(d)(2), because it involved only interview procedures and any disclosure of participants' responses would not reasonably place them at risk of criminal or civil liability or be damaging to their financial standing, employability, educational advancement or reputation.

Consent to Participate

All study participants provided their consent to participate, including publication of anonymised responses or direct quotes.

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Disclosure

MMT is a consultant for Bausch & Lomb. KF, SS and KG are employees of Acaster Lloyd Consulting Ltd., which were commissioned by Bausch & Lomb to undertake this study. RR, MD, EA, KK, SA are employees of Bausch and Lomb. KB reports personal fees from Thea, Santen, Bausch and Lomb and Alpha Intes, outside of the submitted work. The authors report no other conflicts of interest in this work.

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