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BARRIER-ORIENTED SKIN CARE DURING TOPICAL ACNE THERAPY: A NARRATIVE REVIEW FOR ESTHETICIANS

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Abstrak

Akne tetap menjadi salah satu kondisi kulit inflamasi kronis yang paling umum, dan protokol pengobatan standar — retinoid, benzoil peroksida, dan eksfolian berbasis asam — secara tradisional berfokus pada penekanan inflamasi dan seborrhea, sehingga sering mengabaikan kondisi sawar kulit. Bukti yang terus berkembang menunjukkan bahwa disfungsi sawar kulit bukan sekadar efek samping terapi, melainkan faktor aktif dalam patofisiologi akne, ditandai dengan perubahan komposisi lipid epidermis dan peningkatan kehilangan air transepidermal (TEWL) yang dilaporkan pada kulit rentan akne sebelum terapi dimulai. Gangguan sawar kulit selama terapi akne yang agresif turut berkontribusi pada komplikasi pasca-inflamasi, termasuk hiperpigmentasi, eritema, reaktivitas kronis, dan penurunan kepatuhan terhadap pengobatan. Tinjauan naratif ini merangkum bukti ilmiah terkini yang telah ditelaah sejawat mengenai hubungan antara disfungsi sawar kulit dan perjalanan penyakit akne, dengan merujuk pada uji klinis, tinjauan sistematis, dan studi mekanistik yang sebagian besar diterbitkan dalam satu dekade terakhir. Tinjauan ini mengkaji bagaimana agen topikal konvensional mengganggu integritas sawar kulit, mengevaluasi bukti klinis untuk terapi pendukung sawar kulit seperti pelembap berbahan seramid dan pembersih dengan pH seimbang, serta merangkum strategi praktis bagi ahli estetika dan profesional perawatan kulit yang bekerja pada titik temu antara kosmetologi dan dermatologi. Temuan menunjukkan bahwa penerapan langkah-langkah pendukung sawar kulit bersamaan dengan terapi akne standar dapat mengurangi iritasi dan meningkatkan kepatuhan tanpa mengorbankan efikasi terapeutik. Berdasarkan bukti tersebut, tinjauan ini juga memperkenalkan kerangka kerja praktis berorientasi sawar kulit bagi profesional perawatan kulit non-dokter yang mendampingi klien yang menjalani perawatan akne aktif.

Kata Kunci: akne, kehilangan air transepidermal (TEWL), perawatan kulit estetika, sawar epidermis, terapi topikal.

Abstract

Topical acne regimens — retinoids, benzoyl peroxide, acid-based exfoliants — are built primarily around suppressing inflammation and sebum output, with the skin barrier rarely treated as a primary target of that strategy. A growing body of evidence points the other direction: barrier dysfunction is not simply a downstream side effect of therapy but an active contributor to the disease process itself. Even before any topical agent is applied, acne-prone skin already shows altered epidermal lipid composition and elevated transepidermal water loss (TEWL). Once aggressive therapy is layered onto that baseline vulnerability, the resulting barrier impairment feeds into post-inflammatory hyperpigmentation, persistent erythema, chronic reactivity, and, in practical terms, reduced adherence to the prescribed regimen. This narrative review draws together peer-reviewed clinical trials, systematic reviews, and mechanistic studies, most published within the past decade, to map the relationship between barrier status and acne course. It traces how commonly used topical agents affect barrier integrity, weighs the clinical evidence behind barrier-supportive adjuncts such as ceramide-containing moisturizers and pH-balanced cleansers, and translates that evidence into practical guidance for estheticians and skin care professionals working alongside dermatologic care. The evidence reviewed here suggests that layering barrier support onto standard acne therapy lowers irritation and improves adherence without blunting treatment efficacy — a conclusion the review builds into a practical, barrier-oriented framework intended for non-physician skin care professionals supporting clients through active acne treatment.

Keywords: acne, epidermal barrier, esthetic skin care, topical therapy, transepidermal water loss (TEWL)

INTRODUCTION

An estimated 9.4% of the global population lives with acne at any given time, and its impact reaches well past the visible lesions themselves — patients' psychoemotional wellbeing and quality of life are measurably affected (Chen et al., 2022). Global epidemiological modeling attributes millions of disability-adjusted life years (DALYs) to the condition each year, a burden that has continued climbing over the past three decades (Chen et al., 2022). Yet the therapeutic options available for managing it come with

a familiar tradeoff: alongside patients who see insufficient improvement, a substantial share experience cutaneous adverse reactions that erode adherence and lead many to discontinue treatment before it has had a chance to work.

Acne pathogenesis is conventionally explained through four mechanisms — follicular hyperkeratinization, excess sebum production, colonization by Cutibacterium acnes, and inflammation — and treatment has largely been built around interrupting them. Evidence accumulated in recent years complicates that picture: the condition of the epidermal barrier appears to be an independent factor shaping both disease course and tolerability of topical therapy (Deng et al., 2024).

Skin barrier dysfunction may already be present in acne patients prior to treatment initiation and can be further aggravated by topical retinoids, benzoyl peroxide, and other potentially irritating active ingredients (Sukanjanapong et al., 2024). Clinically, this manifests as dryness, burning sensation, erythema, desquamation, and increased skin sensitivity. Such symptoms are frequently perceived by patients as signs of treatment "intolerance," leading to self-initiated reduction in application frequency or complete discontinuation of therapy.

Taken together, these findings support a reframing: epidermal barrier integrity may itself shape how well acne therapy is tolerated and sustained over time — a premise substantial enough to warrant the comprehensive narrative review undertaken here.

A particularly important role in this process belongs to estheticians and skin care professionals. They typically accompany the patient throughout the course of treatment, help select supportive home-care regimens, assess tolerability of active ingredients, and adjust recommendations promptly at the first signs of irritation — serving as a link between the physician's prescribed therapy and its successful practical implementation.

Accordingly, this review consolidates the current evidence on the epidermal barrier's role in acne pathogenesis and treatment, examines how the most widely used topical agents affect barrier function, and distills that evidence into practical, barrier-preserving guidance for estheticians and skin care professionals.

Unlike previous reviews that summarize epidermal barrier physiology in isolation or address adjunctive skin care as a general recommendation, this review integrates current evidence on barrier physiology, agent-specific barrier effects, and barrier-support strategies into a single, structured clinical framework intended specifically for estheticians and skin care professionals supporting clients undergoing topical acne therapy. The novelty of this contribution lies not in new experimental data but in the integration itself: existing guidelines address barrier support as a general adjunct recommendation, whereas this review translates that guidance into a staged, reassessment-linked protocol (Figure 2; Table 4) suited to the recurring, hands-on role estheticians occupy between physician visits — a synthesis that, to our knowledge, has not previously been formalized for this specific professional audience.

In addition to summarizing current evidence, this review addresses a practical gap between dermatology guidelines and esthetic practice. Physicians prescribe and periodically review acne therapy, but estheticians and skin care professionals more often supervise day-to-day skin care and monitor tolerability between those visits. A structured barrier-oriented framework may therefore improve the consistency of the supportive care clients receive during this interval, without altering the physician-directed treatment plan itself.

METHODS

This paper presents a narrative review of the current scientific literature addressing the role of the epidermal barrier in acne pathogenesis, the impact of topical therapy on skin barrier function, and current strategies for barrier preservation during treatment. A narrative approach, rather than a systematic review with meta-analysis, was chosen because the aim was to synthesize evidence across mechanistically distinct domains — cutaneous physiology, pharmacology of individual topical agents, and practice-level care strategies — into a coherent clinical picture, rather than to pool quantitative effect sizes from a homogeneous set of studies. Reporting of the review's rationale, search strategy, and selection criteria was informed by the SANRA (Scale for the Assessment of Narrative Review Articles) recommendations for narrative reviews (Baethge et al., 2019).

Search strategy. Literature searches were conducted iteratively during July 2026 in PubMed, Google Scholar, and Scopus, selected for their combined coverage of biomedical, dermatology, and cosmetic science literature. Searches used combinations of the following keywords: acne vulgaris, skin barrier, epidermal barrier, transepidermal water loss, TEWL, topical retinoids, benzoyl peroxide, moisturizers, barrier repair, adherence, sensitive skin, and acne treatment. More than twenty targeted queries were run addressing specific subtopics within the review's scope — barrier physiology, the effects of individual topical agents, and barrier-support strategies — with candidate records screened by title and abstract against the inclusion and exclusion criteria below. Priority was given to publications from 2015 to 2026; priority was further given, within this window, to systematic reviews, meta-analyses, international clinical guidelines, and high-quality original clinical studies, while earlier studies were included only where they were of foundational importance for understanding the physiology of the epidermal barrier or the mechanisms of action of topical therapy. This iterative, targeted approach is consistent with SANRA guidance for narrative reviews (Baethge et al., 2019), which does not require the exhaustive, reproducible search protocol of a systematic review.

Inclusion criteria. The review included original research articles, systematic reviews, meta-analyses, and international clinical guidelines and consensus documents published in English in peer-reviewed sources, addressing: (1) the physiology and dysfunction of the epidermal barrier in acne, (2) the impact of topical anti-acne agents on epidermal barrier status, or (3)

barrier-support strategies and their effect on treatment tolerability.

Exclusion criteria. Promotional materials, non-peer-reviewed publications, conference abstracts without full text, and sources with insufficient evidentiary support were excluded from the review.

Data analysis. Selected publications underwent qualitative analysis with subsequent thematic classification and comparative evaluation of the reported findings. Information was organized under the following themes: physiology of the epidermal barrier; features of barrier dysfunction in acne; effects of major topical agents on epidermal barrier function; current strategies for barrier preservation and repair; and practical recommendations for estheticians and skin care professionals.

Source prioritization. Consistent with a hierarchy-of-evidence approach, original research articles (randomized and observational clinical trials, cross-sectional and cohort studies, and mechanistic in vivo studies) were prioritized as the primary evidentiary basis for specific claims regarding barrier parameters, agent-specific effects, and intervention outcomes. Review articles, clinical guidelines, and consensus statements were included selectively and for a narrower purpose: to establish physiological and mechanistic context, to summarize guideline-level consensus positions against which the proposed framework could be compared (Section "Comparison with Existing Barrier-Oriented Strategies"), and to represent domains (for example, acne microbiome ecology) where synthesis across many primary studies was more informative than any single original study. Of the sources cited in this review, original research articles constitute the majority; secondary sources (reviews, guidelines, and the methodological reference for narrative-review reporting) were retained only where they served one of these specific synthesis functions rather than substituting for primary evidence on a specific empirical claim.

RESULTS AND DISCUSSION

The Skin Barrier in Acne Pathophysiology

Clinicians treating acne have traditionally focused on four targets: follicular blockage, sebum output, Cutibacterium acnes colonization, and inflammation. A growing body of evidence argues that a fifth factor deserves comparable attention — the physical integrity of the epidermal barrier itself. Rather than being collateral damage from treatment, this barrier appears to actively participate in both how acne develops and how skin responds once therapy begins (Deng et al., 2024).

Barrier function is anchored in the stratum corneum, the skin's outermost layer, where corneocytes sit embedded within a lipid-rich matrix built chiefly from ceramides, cholesterol, and free fatty acids — a structure commonly likened to bricks set in mortar. It is this lipid "mortar," more than the corneocytes themselves, that determines how effectively the skin retains water and excludes irritants and pathogens (Deng et al., 2024).

Quantifying barrier status in practice typically means measuring transepidermal water loss (TEWL), the most thoroughly validated of the available markers (Fluhr et al., 2006). Hydration, ceramide content, surface pH, and lipid profile round out a fuller assessment, captured in research settings with vapometers, corneometers, and sebumeters. Few esthetic practices have this instrumentation on hand, so visual inspection combined with client-reported sensitivity typically substitutes — an imperfect but workable proxy. Clinically, a rising TEWL reading signals more than water escaping the skin; it also marks greater permeability to irritants and allergens, a shift that helps entrench inflammation and foreshadows the tolerability problems examined later in this review.

This is not merely a theoretical concern. In a cross-sectional study of 316 participants, acne patients showed significantly higher TEWL and sebum production than matched healthy controls even before treatment effects were considered, with active therapy further impairing barrier parameters (Sukanjanapong et al., 2024). The sebum itself differs in composition as well: lipidomic profiling comparing acne-affected and unaffected skin found elevated squalene alongside a relative deficit in linoleic acid in acne-prone sebum — a combination that favors follicular hyperkeratosis and compounds barrier impairment (Okoro et al., 2021; Deng et al., 2024).

Two further variables complete the picture. Surface pH needs to remain mildly acidic, roughly 4.7–5.5, because the enzymes responsible for ceramide synthesis and corneocyte shedding operate best within that range; aggressive cleansing pushes pH toward alkalinity and blunts both processes. The resident microbiome matters as well: when diversity among Cutibacterium acnes phylotypes narrows, cutaneous inflammation tends to follow, feeding back into barrier dysfunction in a self-reinforcing loop (Dréno et al., 2024; Deng et al., 2024). Sebum composition, surface pH, and microbial balance are not independent levers — disturbing any one tends to destabilize the rest, since together they constitute a single interdependent system.

The practical upshot is that barrier dysfunction in acne can precede treatment as readily as it can follow from it, functioning as an independent cofactor rather than a mere side effect. This carries a direct consequence for how care is sequenced: if the barrier is already compromised at a client's first visit, withholding support until irritation appears means intervening too late for a meaningful share of patients.

A structural nuance is also worth flagging. Having the right lipids present is necessary but not sufficient — those lipids must also be organized into ordered lamellar bilayers between corneocytes, and desquamation enzymes must properly regulate corneodesmosome breakdown at the surface. Either mechanism can fail independently, through skewed lipid ratios, pH disruption, or exfoliation that outpaces repair, and barrier function suffers even when the stratum corneum appears structurally intact on visual inspection. This matters clinically because interventions that alter surface pH or desquamation rate — cleansers and topical acids, discussed in the following section ("Barrier Damage During Conventional Acne Therapy") — do not affect the barrier uniformly; their impact hinges on

concentration, vehicle, and frequency of use rather than being a fixed property of the ingredient class.

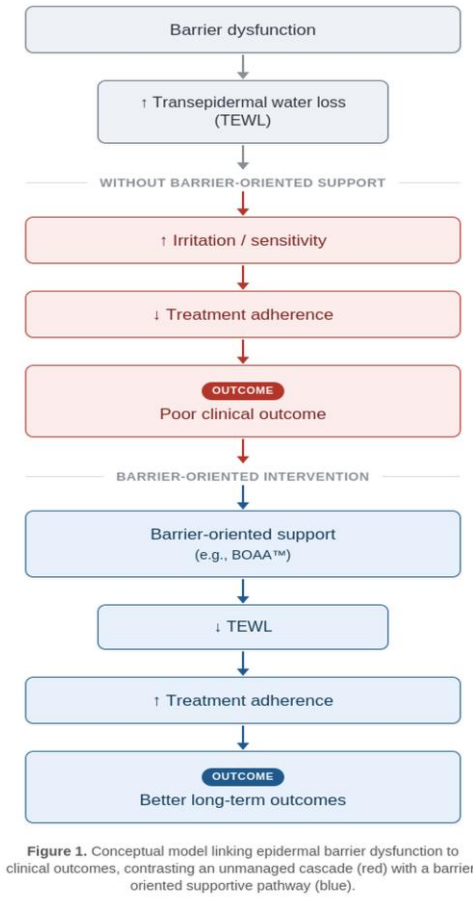

Figure 1. Conceptual Model Linking Barrier Dysfunction to Clinical Outcomes

Note. The upper (red) pathway depicts the untreated consequences of barrier dysfunction; the lower (blue) pathway depicts the hypothesized effect of structured barrier-oriented support.

Table 1. Barrier Changes in Acne

Parameter	Healthy Skin	Acne-Affected Skin
TEWL	Lower (~10.6 g/m²/h)*	Higher (~13.2 g/m²/h)*
Sebum production	Lower	Higher
Stratum corneum hydration	Baseline	Altered
Surface pH	~4.7–5.5	Shifted toward alkaline

**TEWL values are example figures reported in the specific cohort studied by Sukanjanapong et al. (2024) and should not be interpreted as universal population reference values, as absolute TEWL varies by measurement device, climate, and cohort. Table adapted from findings reported by Sukanjanapong et al. (2024), Fluhr et al. (2006), Okoro et al. (2021), and Deng et al. (2024).*

Barrier Damage During Conventional Acne Therapy

None of the agents that make up standard acne therapy were designed with barrier preservation as a goal. Their efficacy comes from mechanisms that, as a secondary and largely predictable consequence, also place stress on the barrier they leave behind.

Retinoids illustrate this clearly: by accelerating keratinocyte turnover and shedding, they reliably push TEWL upward and hydration downward over roughly the first two to six weeks of use, producing the familiar picture of retinoid dermatitis — dryness, flaking, erythema (Suh et al., 2025). Benzoyl peroxide follows a comparable trajectory. Dryness, erythema, and desquamation cluster early in treatment, and this is not merely a subjective impression: a study tracking TEWL before and after treatment documented a statistically significant increase that paralleled these visible signs (Zhou et al., 2022).

Not every agent behaves the same way, however. Azelaic acid tends to be gentler — a randomized, double-blind, placebo-controlled trial of 15% azelaic acid gel over 12 weeks found only mild, transient irritation, with TEWL and hydration holding steady, although clients with an already-compromised barrier can still notice some stinging (Shucheng et al., 2024). AHA/BHA acids work mainly by loosening corneodesmosomes rather than by attacking the lipid matrix directly; at well-formulated concentrations, a combination glycolic acid/salicylic acid gel was shown to improve, rather than worsen, TEWL and hydration over short-term use in acne patients (Liu et al., 2025). Push the concentration or application frequency too far, though, and cumulative over-exfoliation will thin the stratum corneum faster than it can rebuild — arriving at the same endpoint of heightened sensitivity and barrier compromise by a different route.

Combining agents compounds the problem in a way that is not simply additive. Pairing a retinoid with benzoyl peroxide, for instance, stresses two distinct aspects of the barrier at once — accelerated turnover from one agent, oxidative lipid damage from the other — such that the combination can trigger irritant contact dermatitis even in patients who would tolerate either agent individually.

None of this should be read as a sign that treatment has failed or that a patient is intolerant. The irritation described here is the expected, predictable output of each agent's mechanism of action, and it follows a fairly consistent time course and dose-response relationship across drug classes. That predictability is precisely what makes anticipatory barrier support more useful than waiting to react once problems have already appeared.

Table 2. Typical Barrier-Related Effects of Topical Agents

Agent	Barrier Effect	Typical Barrier-Related Effects
Retinoids	↑ TEWL, ↓ hydration (weeks 2–6)	Dryness, flaking, erythema ("retinoid dermatitis")
Benzoyl peroxide	Oxidative damage to lipid matrix, ↑ TEWL	Dryness, erythema, desquamation
Azelaic acid	Generally mild barrier impact	Transient stinging
AHA / BHA	Accelerated desquamation if overused	Increased sensitivity, stratum corneum thinning
Combination therapy	Cumulative barrier stress	Irritant contact dermatitis

Note. Compiled from Suh et al. (2025), Zhou et al. (2022), Liu et al. (2025), and Deng et al. (2024).

Strategies for Preserving the Skin Barrier

Countering this barrier stress does not require sacrificing therapeutic efficacy. Several concrete strategies described in the literature reduce the burden on the barrier while active treatment continues:

- Ceramide-containing moisturizers, layered alongside — rather than instead of — active therapy, are associated with statistically significant reductions in both TEWL and irritation severity (Draelos et al., 2023; Suh et al., 2025; Schachner et al., 2023).
- Timing and dosing adjustments help as well: introducing active ingredients gradually, at lower concentrations or reduced frequency initially and escalating only as the skin adapts, follows the "start low, go slow" principle reflected in current guidelines; simply spacing applications further apart (every second or third day) during the first weeks accomplishes much the same goal without discontinuing the agent (Reynolds et al., 2024).
- A more specific technique, the "moisturizer sandwich," applies moisturizer both before and after the active ingredient to buffer direct contact with the stratum corneum. Preliminary ex vivo data, so far reported only as a conference abstract, suggest the details matter: an "open sandwich" — moisturizer on just one side of the retinoid — preserved more retinoid bioactivity than a "full sandwich" applied on both sides, possibly because the full version dilutes and slows penetration (Parsa et al., 2025). As this evidence has not yet passed full peer review, the open sandwich is reasonably treated as the more conservative default for now, with the full sandwich reserved for the initial acclimation period in especially reactive skin.
- Cleansing routines matter too, and not always in the direction assumed: alkaline surfactants strip skin lipids and degrade barrier properties during washing, which is the rationale for favoring mild syndets closer to physiological pH (Stringer et al., 2018).

The cumulative case for these measures is not merely theoretical. A multicenter observational study spanning five countries and 2,061 acne patients found that layering a compensating dermocosmetic routine onto standard treatment produced high patient-reported comfort and tolerability, along with visible improvement in barrier-related signs such as erythema, desquamation, and dryness (Odeimi et al., 2025). Across this literature, the pattern holds: barrier-supportive measures track with lower TEWL, fewer adverse reactions, and improved treatment adherence.

Practical Barrier-Oriented Framework for Estheticians

The evidence summarized in this review may be translated into structured, barrier-oriented practice rather than remaining at the level of general principle. One example is the author's proposed Barrier-Oriented Acne Approach (BOAA™), which brings together the evidence-based principles discussed above into a structured sequence of actions for estheticians and skin care professionals. The proposed framework should not be interpreted as a new therapeutic intervention or as an alternative to prescribed acne treatment; rather, it is an evidence-informed clinical implementation model that organizes existing, guideline-concordant barrier-support recommendations into a reproducible sequence suited to esthetic practice. Its contribution is organizational and practical rather than mechanistic: it does not claim to alter the biology of barrier repair described in the preceding sections, but to make that biology actionable within a specific scope of practice.

The approach includes: a baseline assessment of barrier status before initiating support; staged introduction of active ingredients in parallel with foundational restorative care, rather than as a reaction to irritation that has already occurred; dedicated barrier-recovery intervals within the home-care protocol; patient education on distinguishing expected skin reactions from true intolerance; and ongoing tolerability monitoring with protocol adjustment as barrier function stabilizes.

In practical terms, the baseline assessment can be performed using simple, non-invasive tools available in an esthetic setting — visual and tactile evaluation of dryness, sensitivity questionnaires, and where available, instrumental measurement of TEWL or hydration — rather than requiring laboratory infrastructure. Staged introduction typically means beginning with reduced frequency (e.g., every second or third night) and a lower-strength formulation of the active ingredient before advancing to standard dosing as tolerance develops, mirroring the gradual approach recommended in clinical guidelines (Reynolds et al., 2024). Dedicated barrier-recovery intervals may take the form of scheduled "rest nights" without active ingredients, during which only barrier-supportive products are applied, allowing cumulative irritation to resolve before the next active application. Patient education focuses on setting expectations early: explaining that transient dryness or mild flaking during the first weeks of treatment reflects the expected mechanism of action rather than a reason to discontinue, while distinguishing this from signs that warrant reducing frequency or consulting the

prescribing physician, such as persistent burning, weeping, or spreading erythema.

As with any practice-derived model, the proposed framework requires prospective clinical validation in future studies before its comparative effectiveness relative to standard care can be established.

Comparison with Existing Barrier-Oriented Strategies

The principles underlying BOAA™ are based on published clinical guidelines from professional societies, including the American Academy of Dermatology's guidelines of care for acne vulgaris (Reynolds et al., 2024). It was proposed as a practical integration of these guidelines into a unified working algorithm for estheticians.

Table 3. Comparison of Barrier-Oriented Principles Across Guidelines and BOAA™

Principle	AAD Guidelines (Reynolds et al., 2024)	Dermocosmetic Consensus (Schachner et al., 2023)	BOAA™ (this review)
Moisturization / barrier support	Recommended as adjunct to reduce retinoid- and benzoyl peroxide-related dryness	Ceramide-containing moisturizers explicitly endorsed to restore barrier function and improve adherence	Incorporated as routine supportive care at every visit, not an optional adjunct
Gradual dose titration	Gradual initiation or frequency adjustment may be used to improve tolerability	Not addressed as a formal titration schedule	Formalized into a staged-introduction schedule with defined reassessment intervals
Tolerability monitoring	General recommendation to monitor for irritation	Addressed through patient-reported sensitivity outcomes	Structured assessment at every visit using standardized criteria (Figure 2)
Sequential, protocolized structure	Not specified as a sequential protocol	Not specified as a sequential protocol	Core organizing feature: assessment → staged introduction → recovery interval → monitoring, in fixed sequence

Note. AAD = American Academy of Dermatology. Cell entries summarize how each source addresses the stated principle, based on the sources cited in the column heading; absence of a formal recommendation is noted explicitly rather than implied by a blank cell.

As shown in Table 3, the proposed framework does not claim superiority over existing guidelines but consolidates already-recognized principles into a single structured protocol tailored to the specifics of esthetician practice — a professional who, unlike a physician, sees the patient more frequently and can adapt supportive care more flexibly in real time. This positioning matters for how the framework should be interpreted: it is not proposed as a replacement for dermatologic guidelines or physician-directed treatment plans, but as an operational layer that translates existing, evidence-based principles into a repeatable sequence of actions suited to the recurring, hands-on contact that estheticians have with patients between physician visits. This positioning also carries a practical benefit for interprofessional trust: dermatologists and physicians are more likely to endorse or refer patients to an esthetician's supportive protocol when it is explicitly framed as an operationalization of guideline-concordant care rather than a competing or alternative system, which in turn supports continuity of care between medical and cosmetology settings.

Clinical Implications

The preceding sections synthesize the evidentiary basis for barrier-oriented care. In daily practice, this evidence maps onto a small, recurring set of clinical situations that estheticians encounter during active acne therapy. These recommendations are intended to complement, not replace, physician-directed management. Table 4 summarizes the recommended action and reassessment interval for each situation, corresponding directly to the decision sequence shown in Figure 2.

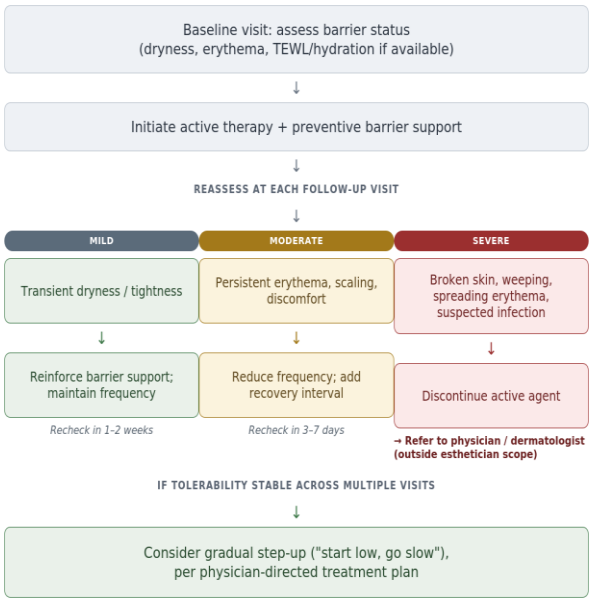

Figure 2. Barrier-Oriented Clinical Decision Algorithm

Note. Severity is assessed at each follow-up visit. Mild and moderate presentations are managed within the esthetician's scope using the reassessment intervals shown; severe presentations exit the algorithm for physician or dermatologist referral. This algorithm corresponds directly to the actions summarized in Table 4.

Table 4. Clinical Decision Points and Recommended Actions

Clinical Situation	Recommended Action	Reassessment
Baseline visit; no signs of barrier compromise	Initiate active therapy alongside preventive barrier support (ceramide moisturizer, gentle pH-balanced cleanser)	Next scheduled visit
Mild signs (transient dryness/tightness)	Reinforce barrier support; maintain application frequency; reinforce patient education on expected reactions	1–2 weeks
Moderate signs (persistent erythema, scaling, discomfort)	Reduce application frequency (e.g., every 2nd–3rd night); add a dedicated barrier-recovery interval	3–7 days
Severe signs (broken skin, weeping, spreading erythema, suspected infection)	Discontinue active agent; refer to prescribing physician / dermatologist	Outside esthetician scope — do not manage independently
Stable tolerability sustained over multiple visits	Consider gradual step-up of active therapy following the "start low, go slow" principle	Per physician-directed treatment plan

Note. This table condenses the decision logic presented in Figure 2 into a quick-reference format for use during patient visits.

Limitations of the Review

Several constraints shape how the conclusions above should be read. Because this is a narrative rather than a systematic review, source selection followed the targeted, iterative process described in the Methods section rather than a fully reproducible search protocol, which leaves room for selection bias in the literature considered. This framework itself carries a distinct limitation: it has not been tested in prospective comparative trials, so what is offered here is a practice-derived synthesis of existing evidence rather than a validated intervention. Establishing whether it performs as intended across different patient populations and treatment settings remains a task for future research. Given this absence of prospective validation, the proposed framework should be interpreted as a hypothesis-generating clinical model rather than a confirmed intervention.

CONCLUSION

Across the sources examined, one pattern holds consistently: barrier preservation works best when it is designed into acne care from the start, rather than reached for only after irritation has already taken hold. Weaving barrier-oriented strategies into estheticians' day-to-day work with clients appears capable of improving how well patients tolerate topical therapy, supporting adherence over the course of treatment, and contributing to steadier outcomes over the long term. Within their professional scope, this positions barrier-oriented support as a routine element of supportive acne care rather than something reserved for when problems have already emerged.

RECOMMENDATIONS

For educators and professional bodies in cosmetology, these findings suggest a practical implication: barrier physiology and the tolerability profile of common anti-acne agents warrant a more prominent place in esthetician training curricula, alongside the technical skills of product application. An esthetician who understands why a retinoid or benzoyl peroxide regimen causes transient dryness is better positioned to reassure a patient, adjust a home-care routine, and support adherence than one who treats every reaction as a signal to discontinue supportive care — coordinating with the prescribing clinician where modification of the prescribed therapy itself is required. Future prospective studies are warranted to evaluate structured barrier-oriented support protocols, such as the one outlined here, in patients receiving topical acne therapy, using objective barrier measurements (TEWL, hydration, sebum) alongside patient-reported adherence and satisfaction outcomes, and, where feasible, comparing structured barrier-oriented support against standard, unstructured skin care advice. Prospective validation of structured barrier-oriented care models of this kind will determine whether these organizational strategies translate into measurable improvements in treatment adherence, patient satisfaction, and clinical outcomes.

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