

Factors Impacting New Drug Adoption in the Clinical Setting: A Survey of Dermatologists

Danny Zakria MD MBA, Hassan Hamade MD, Darrell Rigel MD MS

Icahn School of Medicine at Mount Sinai, Department of Dermatology, New York, NY

INTRODUCTION

Dermatology has seen a significant influx of new Food and Drug Administration (FDA) medication approvals in recent years. In the last decade alone, 39 new drugs for dermatologic indications have been approved.¹ The advent of biologics and Janus kinase inhibitors has dramatically improved the management of several chronic and often difficult to treat conditions, including psoriasis, atopic dermatitis, alopecia areata, and vitiligo.² Despite some of these new therapies demonstrating clinical superiority over existing treatments, the majority of practicing dermatologists still do not prescribe them.³ Limited studies in other specialties have analyzed new drug adoption parameters.^{4,5} To our knowledge this is the first study to quantitate the factors influencing a dermatologist's decision to adopt new medications.

This study was granted IRB exempt status. An anonymous online survey that included 10 considerations when starting a new drug was distributed to dermatologists at a national conference in October 2022. Each factor was scored by respondents using a scale from 0 (not at all important) to 100 (extremely important). The mean scores for each factor and subgroup analyses based on practice setting and years in practice were calculated using SPSS version 28.0.1.1.

Three hundred and fifty seven dermatologists responded to the survey (71% response rate). The top five factors influencing new

drug adoption were reported efficacy (92.6), insurance coverage (87.1), reported side effects (86.1), the difficulty of treating the disease targeted by the drug (84.5), and data-driven publications in peer-reviewed journals (80.8). The bottom five factors were drug price (78.9), podium presentations (70.4), colleagues adopting drug usage (59.2), presentations by pharmaceutical reps (50.7), and poster presentations (45.8) (Table 1).

The subgroup analyses demonstrated that dermatologists practicing for at least 21 years placed a significantly greater value on pharmaceutical rep presentations than those in practice for 0 to 5 years or 11 to 20 years (57.1 vs 41.7, $P=0.004$ and 57.1 vs 47.7, $P=0.04$). Dermatologists in solo private practices also placed greater value on pharmaceutical rep presentations than those at academic centers (60.0 vs 37.7, $P<0.001$).

The top three factors that dermatologists considered for new drug adoption were efficacy, insurance coverage, and side effect profile. Even if a drug is efficacious and safe, it likely will not be readily adopted by dermatologists if their patients cannot afford it. This highlights the importance of accessibility for new drugs to be integrated into practice. Additionally, for conditions such as atopic dermatitis and psoriasis, many insurance companies require that a patient trial older medications that are typically less effective before covering a newer therapy. This can delay treatment success and lead to significant morbidity.

TABLE 1.

Factors Impacting Drug Adoption. Relative importance of each factor for dermatologists adopting usage of a new drug in the clinical setting on a scale from 0 (not at all important) to 100 (extremely important).

Factor	Score
The reported efficacy of the drug	92.6
Whether the drug is covered by insurance	87.1
The reported side effects of the drug	86.1
The difficulty of treating the specific disease state with current medications	84.5
Publications in peer-reviewed journals presenting the drug's data	80.8
The price of the drug	78.9
Podium presentations of the drug's data at regional and national Dermatologic conferences	70.4
Colleagues in the community adopting drug usage	59.2
Pharmaceutical reps presenting the drug's data to you in your clinical setting	50.7
Posters at regional and national conferences presenting the results of clinical trials using the drug	45.8

The direct correlation noted between practice years and greater value assigned to pharmaceutical rep presentations may be explained by more experienced clinicians building relationships and trust with their reps over time. Recent graduates may not have had as much exposure to these presentations due to the COVID-19 pandemic. Furthermore, the finding that dermatologists working in private practices assigned greater value to pharmaceutical rep interactions than those at academic centers could be due to significantly greater access to reps in those practice settings.

Limitations of this study include potential selection bias as respondents were limited to conference attendees. However, demographic data showed that the survey participants included dermatologists in a variety of practice settings and stages of their career. Another limitation is that the factors analyzed may not have been all-inclusive. In addition, each individual drug could have specific considerations that hinder usage, such as black box warnings⁶ or prescribing overhead.

With the recent approval of several dermatologic therapies (some of which are more effective than prior options) and more coming, it is important to understand why dermatologists may or may not choose to integrate these drugs into practice. This study identified the relative impact that factors associated with drug adoption have and demonstrated that dermatologists with varying years of experience and across different practice settings are relatively consistent. Future studies will be helpful to further elucidate the challenges associated with clinical integration of new drugs.

DISCLOSURES

The authors have no conflicts of interest to disclose.

REFERENCES

- Center for Drug Evaluation and Research. (n.d.). CDER's new molecular entities and New Therapeutic Biological Products. U.S. Food and Drug Administration. Available at: <https://www.fda.gov/drugs/development-approval-process-drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products>. Accessed February 14, 2023.
- Damsky W, King BA. JAK inhibitors in dermatology: The promise of a new drug class. *J Am Acad Dermatol*. 2017;76(4):736-744. doi:10.1016/j.jaad.2016.12.005.
- Practical Dermatology. Why are dermatologists not writing biologics? Available at: <https://practicaldermatology.com/articles/2021-jan/why-are-dermatologists-not-writing-biologics>. Accessed February 14, 2023.
- Mascarenhas D, Singh BK, Singh AH, et al. Early adoption of new drug treatments: the role of continuing medical education and physician adaptivity. *Crit Pathw Cardiol*. 2007;6(1):30-40. doi:10.1097/01.hpc.0000257844.53130.d0.
- Metes ID, Xue L, Chang CH, et al. Association between physician adoption of a new oral anti-diabetic medication and Medicare and Medicaid drug spending. *BMC Health Serv Res*. 2019;19(1):703. doi:10.1186/s12913-019-4520-4.
- Elmariah SB, Smith JS, Merola JF. JAK in the [black] box: a dermatology perspective on systemic jak inhibitor safety. *Am J Clin Dermatol*. 2022;23(4):427-431. doi:10.1007/s40257-022-00701-3

AUTHOR CORRESPONDENCE

Danny Zakria MD MBA

E-mail:..... dzakria13@gmail.com