

# Availability of Multilingual Patient Education Materials in United States-Based Dermatology Resources: A Cross-Sectional Analysis

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## Introduction

A significant portion of the U.S. population speaks languages other than English, with the top languages being **Spanish/Spanish Creole, Chinese, Tagalog, Vietnamese, and Arabic**.<sup>1</sup> However, access to linguistically appropriate healthcare information remains **limited**, despite the crucial role dermatological patient education materials (PEMs) play in managing and understanding acute and chronic skin conditions.<sup>2</sup>

It has been demonstrated that machine translation tools such as Google Translate are **inferior** to professionally translated materials.<sup>3,4</sup> Nationally-accredited dermatologic organizations house critical health information for patients on their websites, but **little is known about the extent to which these organizations provide PEMs in languages other than English**.

The study performed a **cross-sectional analysis** to quantify the availability of translated PEMs on prominent United States-based dermatology homepages, with a focus on the **five most widely spoken languages** in the country.

## Methods

A list of **twenty United States-based dermatology societies** was compiled based on those investigated in a recent JAMA article.<sup>2</sup> Each resource was systematically reviewed by 2 authors and data was collected on whether the website included PEMS, whether non-automated translations were provided, and which of the top five languages spoken in the United States were represented in these translations.

## Results

**Table 1.** Availability of PEMs and Translations

Organization	PEMs Available?	Free or Paid?	English	Spanish	Chinese/Mandarin	Tagalog	Vietnamese	Arabic
American Academy of Dermatology	Yes	Free	Yes	Yes	No	No	No	No
American Board of Dermatology American Osteopathic College of Dermatology	Yes	Free	Yes	No	No	No	No	No
American Skin Association	Yes	Free	Yes	No	No	No	No	No
American Society for Dermatologic Surgery	Yes	Free	Yes	No	No	No	No	No
American Society for Mohs Surgery	Yes	Free	Yes	No	No	No	No	No
Cicatricial (Scarring) Alopecia Research Foundation	Yes	Free	Yes	No	No	No	No	No
Cutaneous Lymphoma Foundation	Yes	Free	Yes	No	No	No	No	No
Foundation for Ichthyosis and Related Skin Types	Yes	Free	Yes	Yes	No	No	No	Yes
Georgia Society of Dermatology and Dermatologic Surgery	Yes	Free	Yes	No	No	No	No	No
Mastocytosis (Mast Cell Disease) Society	Yes	Free	Yes	No	No	No	No	No
Melanoma Research Foundation	Yes	Free	Yes	No	No	No	No	No
National Alopecia Areata Foundation	Yes	Free	Yes	No	No	No	No	No
National Eczema Association	Yes	Free	Yes	No	No	No	No	No
National Foundation for Ectodermal Dysplasia	Yes	Free	Yes	No	No	No	No	No
National Psoriasis Foundation	Yes	Free	Yes	No	No	No	No	No
National Psoriasis Foundation	Yes	Free	Yes	No	No	No	No	No
Skin Care Foundation	Yes	Free	Yes	No	No	No	No	No
Society for Pediatric Dermatology	Yes	Free	Yes	Yes	Yes	No	No	Yes
Sturge-Weber Foundation	Yes	Free	Yes	Yes	No	No	No	No
Xeroderma Pigmentosa Family Support Group	Yes	Free	Yes	No	No	No	No	No

Of the 20 homepages analyzed, **16 homepages (80%) provided patient education materials exclusively in English**. Only four (20%) provided translated versions of PEMs. Of these four homepages, two offered translations in Spanish only, one offered translations in Spanish and Arabic, and one offered translations in Spanish, Mandarin, and Arabic.

## Conclusions

There is a **clear gap in the availability of multilingual PEMs** for dermatologic conditions. While some resources were available in languages like Spanish and Arabic, **most dermatology homepages analyzed provided materials exclusively in English**. This lack of linguistic diversity can create barriers for non-English speaking patients in understanding and managing their skin conditions, which may contribute to health disparities. Efforts must be made to **increase the availability of professionally-translated PEMs** in multiple languages to meet the needs of the diverse patient population in the United States.

## Future Directions

Despite the demonstrated need for quality translations, access to professional interpreters may be limited by financial constraints. **AI-based tools** should be investigated for their potential use in multilingual medical contexts. Additionally, **investigate more dermatology organizations to increase study power**.

## References

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