

# Treatment patterns in the management of vitiligo in a Colombian HMO during 2015-2023: a Real-World Data study

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## OBJECTIVE

- To identify treatment patterns in the management of vitiligo in a Colombian Health Maintenance Organization (HMO) between 2015 and 2023.

## METHODS

- A retrospective, descriptive cohort study of vitiligo patients from 2015 to 2023 was conducted. Patients with the ICD-10 code L80.X were included. The index date was defined as the date of the vitiligo diagnosis, and patients were followed until death, insurance discontinuation, 5-year follow-up, or December 31, 2023, whichever happened first.
- Demographics, treatment, and medical care were assessed at the index and during follow-up. Data were extracted from HMO administrative health records.
- Disease severity was generated for patients with pharmacological management, where systemic treatments denoted moderate to severe cases while classified as mild were topical treatments that can be used at any stage of the disease.
- Kaplan-Meier survival analysis was conducted to determine treatment persistence.

## RESULTS

- The study included a total of 21,457 patients. Approximately 43.4% of these patients were identified during the period following the post COVID pandemic (2021-2023). A higher proportion of these patients were women (56.3%) with a median age of 35.4 years (IQR 29.9).

**Table 1.** Demographical characteristics

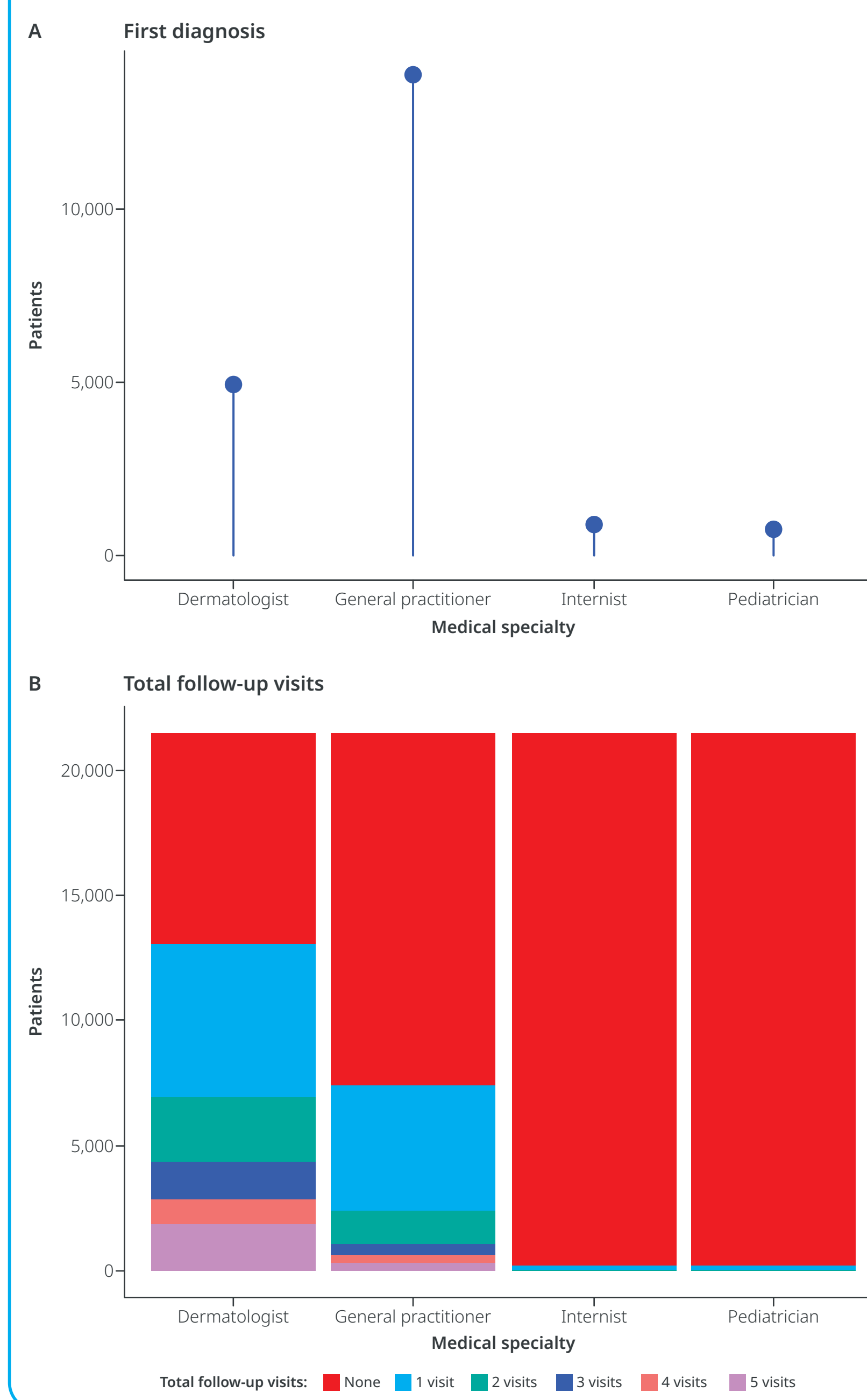
Vitiligo [n = 21,457]		
Age at diagnosis		
Median (IQR)	35.37 (29.87)	
Age group at diagnosis	n	%
0-17	4,435	20.67
18-44	9,406	43.84
45-65	6,017	28.04
>65 year	1,599	7.45
Sex		
Female	12,080	56.30
Male	9,377	43.70
Year of diagnosis		
2015	1,460	6.80
2016	1,616	7.53
2017	1,934	9.01
2018	2,456	11.45

## RESULTS (cont)

Year of diagnosis		
2019	2,981	13.89
2020	1,699	7.92
2021	2,763	12.88
2022	3,285	15.31
2023	3,263	15.21

- Most patients received their first vitiligo diagnosis from a general practitioner (64.6%), with only 22.7% diagnosed by a dermatologist. Follow-up consultations were higher with dermatologists (61.1%) compared to general practitioners (34.6%), on a similar note, 1,873 patients (8.7%) consulted 5 or more times to the dermatologist during this period, and only 290 patients (1.4%) received 5 or more GP visits (Figure 1). The median number of consultations with dermatologist was 2, with other practitioners this median was 1.

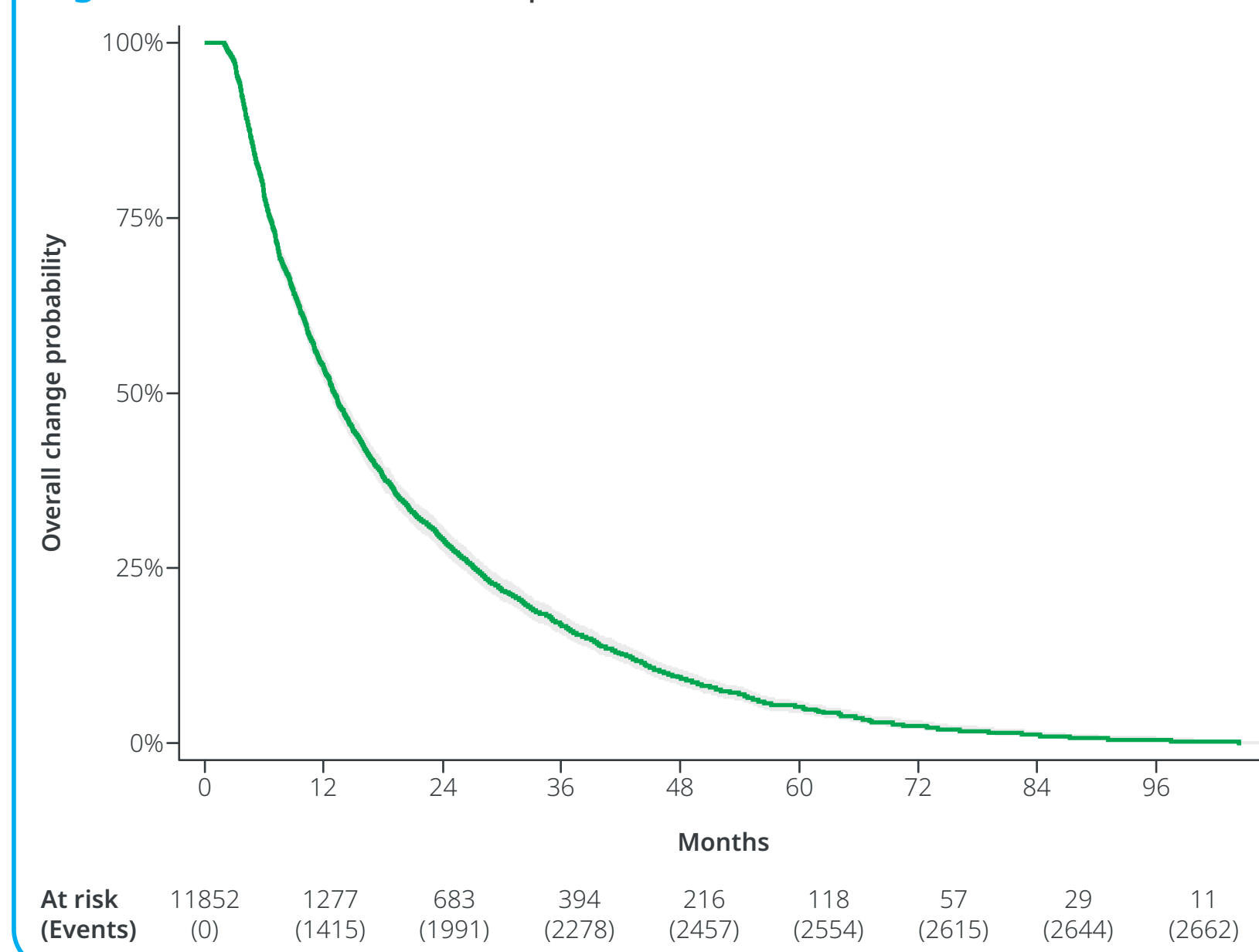
**Figure 1.** Diagnosis (A) and follow-up consultations (B) by medical specialties



## RESULTS (cont)

- Most frequent laboratories administered at least once during the study period were related to complete blood count (4,787 patients, 22.3%), blood glucose test (4,617 patients, 21.5%) and antinuclear antibody test (2,178 patients, 10.2%). Only 4 patients presented at least one record of phototherapy.
- Only 7,908 patients (36.9%) received pharmacological treatment, most patients didn't receive more than two medications. From 11,852 pharmacological claims, most of these denoted a mild disease (86.7) and 13.2% as moderate to severe. Topical betamethasone (45.5%), hydrocortisone (21.8%) and tacrolimus (10.8%) were the most common strategies.
- In addition, the median duration of any of the received treatment was 13 months (Figure 2).

**Figure 2.** Overall treatment persistence.



- By disease severity mild and moderate to severe presented a similar median duration, both of them were 13 months. Azathioprine, prednisone and topical betamethasone presented the longest median duration, with 36, 17 and 16 months, respectively.
- By age group the median duration was higher at the right tail, those between 45 and 65 years old presented a median of 15 months, and those over 65 years a median of 13 months (Table 2).

**Table 2.** Treatment persistence by age group

Characteristic	N	Event N	Median	p-value <sup>1</sup>
Age group	11,852	2,672		<0.001
0-17 years			12, (10, 13)	
18-44 years			12, (11, 13)	
45-65 years			15, (14, 16)	
>65 years			13, (11, 16)	

<sup>1</sup>Log-rank test

- Those treated after the COVID-19 pandemic had a lower median than those treated before the pandemic, the median treatment duration oscillated between 15 and 24 months at the pre-pandemic period while during 2021 and 2022 it did not exceed the 8.5 months (Table 3).

## RESULTS (cont)

**Table 3.** Treatment persistence by year of diagnosis

Characteristic	N	Event N	Median Survival	p-value <sup>1</sup>
Year	11,852	2,672		<0.001
2015			24, (20, 28)	
2016			18, (14, 22)	
2017			16, (13, 18)	
2018			15, (13, 17)	
2019			16, (14, 18)	
2020			13, (12, 15)	
2021			8.5, (7.7, 9.3)	
2022			7.3, (6.5, 8.5)	
2023			5.2, (4.7, 6.2)	

<sup>1</sup>Log-rank test

## CONCLUSION

- The observed vitiligo patients were mostly female middle-aged adults, who have been diagnosed by a general practitioner.
- Healthcare resource use was conservative, less than 25% of patients used laboratories and less than 40% of patients were given pharmacological treatment. The median number of follow-up visits did not exceed 2, regardless of specialty.
- The management of the patients studied was dominated by topical corticosteroids, the most frequent treatment was topical betamethasone. Although few claims were related to azathioprine, it presented the longest median duration.
- Substantial decreases in the median treatment duration were observed in the post-pandemic periods.

## DISCUSSION

- This study presents different limitations, for example, details on disease severity derived from pharmacological treatment and not clinical measurements (e.g. symptoms, signs, scales, etc.), therefore the distribution of patients by severity might differ. In addition, activity level, and subtypes of vitiligo are not available due to lack of ICD-10 codes for certain vitiligo subtypes.
- This study does not capture over-the-counter medicines that might change the observed treatment patterns. Our results indicate that more than half of the patients were not prescribed with any pharmacological treatment.