Apremilast Adherence in Psoriasis and Psoriatic Arthritis Patients in the Telehealth Setting versus the In-person Setting During the COVID-19 Pandemic

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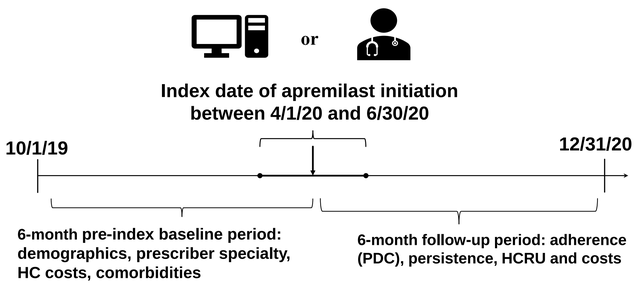
Background & Objective

- Limited access to healthcare providers and services during the COVID-19 pandemic prompted psoriasis (PsO) and psoriatic arthritis (PsA) patients to seek care virtually using telehealth.
- The objective of this study was to assess if treatment patterns differed for PsO and PsA patients who initiated apremilast after a telehealth visit versus an in-person visit in a real-world setting.

Study Design & Methods

- **Design:** Retrospective cohort study conducted in patients with commercial health insurance in the IBM© MarketScan© Commercial and Supplemental Medicare Databases from 10/1/19 through 12/31/20.

- **Population:** Adult US patients with PsO or PsA who newly initiated apremilast between 4/1/20 and 6/30/20 were eligible for the study. New initiation was defined by a six-month washout period. Baseline characteristics were defined during the six months prior to the index date. Patients were categorized by the type of visit in which apremilast was first prescribed (the index visit) as telehealth or in-person.



- **Methods:** Adherence was defined as proportion of days covered (PDC) during the 6-month follow-up period. Full adherence was defined as PDC ≥ 0.80. Persistence was defined as not having a 60-day period without apremilast available during the follow-up period. Adherence (PDC ≥ 0.80) and persistence at six months were investigated using logistic and Cox regression models, respectively. Covariates used in the models included age, gender, region, physician specialty that was associated with index visit, diagnosis of index visit (PsA vs. PsO), any systemic non-biologic use in the baseline, and any systemic biologic use in the baseline. Factors associated with the type of index visit were identified using logistic regression. In addition to the covariates above, any baseline telehealth visit, excluding the index visit, was also included in this model.

Key Takeaways

PsO and PsA patients initiating apremilast in telehealth and in-person settings during the COVID-19 pandemic had similar medication adherence and persistence during the six-month follow-up period.

Older age was associated with higher adherence and PsA diagnosis at index was associated with lower adherence during the six-month follow-up period.

Figure 1: Apremilast Adherence and Persistence at 6 Months by type of visit, April 2020 – Dec 2020

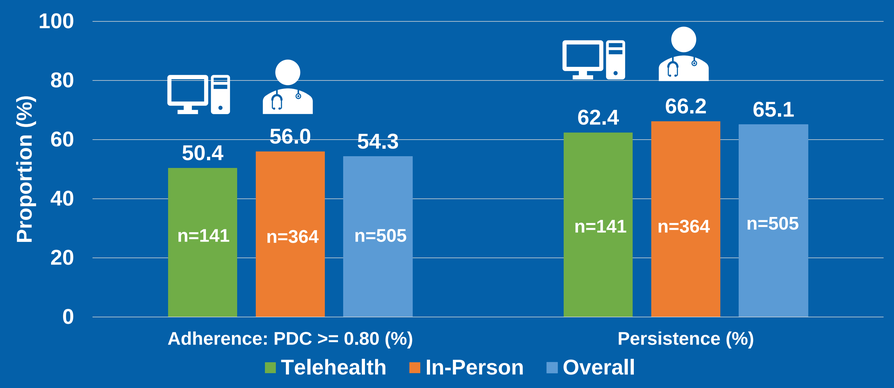


Table 3: Factors associated with adherence (odds ratios) and persistence (hazard ratios) after multivariable adjustment*

	Full Adherence (PDC≥80%) Logistic Regression		Risk of Discontinuation Cox Regression	
	OR (95% CI)	P Value	HR (95% CI)	P Value
Age, per year	**1.03 (1.01 - 1.04)**	**<.001**	1.00 (0.99 - 1.01)	0.343
Female vs Male	1.01 (0.69 - 1.47)	0.971	0.95 (0.76 - 1.19)	0.675
Geographic region (Ref: Unknown)				
Midwest	1.06 (0.60 - 1.88)	0.839	0.97 (0.69 - 1.35)	0.839
Northeast	1.14 (0.60 - 2.17)	0.695	0.96 (0.66 - 1.39)	0.817
South	0.77 (0.46 - 1.27)	0.303	1.05 (0.78 - 1.42)	0.735
West	1.60 (0.72 - 3.55)	0.246	1.01 (0.64 - 1.58)	0.976
Provider specialty associated with index visit (Ref: Dermatologist)				
All other	1.08 (0.70 - 1.66)	0.736	0.93 (0.72 - 1.20)	0.579
Rheumatologist	0.99 (0.50 - 1.96)	0.977	1.03 (0.69 - 1.55)	0.876
Diagnosis of index visit: PsA vs PsO	**0.51 (0.29 - 0.91)**	**0.022**	1.09 (0.76 - 1.55)	0.647
Any baseline systemic non-biologic use: yes vs no	1.65 (0.89 - 3.06)	0.109	0.88 (0.62 - 1.25)	0.462
Any baseline systemic biologic use: yes vs no	0.77 (0.47 - 1.28)	0.317	1.15 (0.84 - 1.59)	0.384
Index visit: Telehealth vs In-Person	0.80 (0.52 - 1.21)	0.288	1.02 (0.79 - 1.32)	0.875

*Adjusted for age, gender, region, physician specialty that is associated with index visit, diagnosis of index visit (PsA vs. PsO), any systemic non-biologic use in the baseline period, and any systemic biologic use in the baseline period,

Disclosures & Funding Statement

This study was funded by Amgen, Inc. KO and MC are employees and own stock in Amgen. AD, MB, EC and CP are employees of PHAR, and were under contract by Amgen to conduct this study.

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Results

Table 1: Baseline Patient Characteristics

Baseline Characteristics	Telehealth (N = 141)	In-person (N = 364)	Total (N=505)	P-value
Age, y; Mean (SD)	46.8 (11.4)	48 (12)	47.6 (11.9)	0.304
Female, n (%)	87 (61.7)	205 (56.3)	292 (57.8)	0.272
Diagnosis of index visit				**0.012**
PsA	39 (27.7)	64 (17.6)	103 (20.4)	
PsO	102 (72.3)	300 (82.4)	402 (79.6)	
Provider specialty of index visit				**< 0.001**
Dermatologist	71 (50.4)	206 (56.6)	277 (54.9)	
Rheumatologist	40 (28.4)	44 (12.1)	84 (16.6)	
Primary care/PA/NP	10 (7.1)	22 (6)	32 (6.3)	
Other specialty	15 (10.6)	32 (8.8)	47 (9.3)	
Unknown	5 (3.5)	60 (16.5)	65 (12.9)	
Baseline comorbidities				
Charlson Comorbidity Index, mean (SD)	0.4 (1)	0.5 (1.2)	0.5 (1.1)	0.340
Cardiovascular disease, n (%)	10 (7.1)	24 (6.6)	34 (6.7)	0.841
Diabetes, n (%)	15 (10.6)	44 (12.1)	59 (11.7)	0.649
Obesity, n (%)	18 (12.8)	67 (18.4)	85 (16.8)	0.129
Anxiety, n (%)	27 (19.1)	51 (14)	78 (15.4)	0.152
Depression, n (%)	17 (12.1)	36 (9.9)	53 (10.5)	0.476
Non-alcoholic fatty liver disease, n (%)	3 (2.1)	14 (3.8)	17 (3.4)	0.42
Chronic kidney disease, n (%)	1 (0.7)	8 (2.2)	9 (1.8)	0.456
Cancer, n (%)	2 (1.4)	10 (2.7)	12 (2.4)	0.524
Baseline Treatments				
Systemic Treatment naïve, n (%)	**90 (63.8)**	**283 (77.7)**	**373 (73.9)**	**0.001**
Systemic therapy, n (%)	**51 (36.2)**	**81 (22.3)**	**132 (26.1)**	**0.001**
Systemic non-biologic, n (%)	**26 (18.4)**	**38 (10.4)**	**64 (12.7)**	**0.015**
Systemic biologic therapy, n (%)	**32 (22.7)**	**49 (13.5)**	**81 (16)**	**0.011**
Topical therapy, n (%)	79 (56)	224 (61.5)	303 (60)	0.257
No topical or systemic therapy n (%)	31 (22)	98 (26.9)	129 (25.5)	0.254

Table 2: Factors associated with type of index visit *

	Telehealth vs In-Person Logistic Regression	
	OR (95% CI)	P Value
Age, per year	**0.98 (0.96 - 1.00)**	**0.025**
Female vs Male	1.39 (0.90 - 2.15)	0.140
Geographic region (Ref: Unknown)		
Midwest	1.32 (0.67 - 2.60)	0.417
Northeast	**3.31 (1.63 - 6.71)**	**<.001**
South	1.15 (0.62 - 2.12)	0.665
West	**2.52 (1.07 - 5.93)**	**0.034**
Provider specialty associated with index visit (Ref: Dermatologist)		
All Other	0.67 (0.40 - 1.13)	0.132
Rheumatologist	**2.27 (1.10 - 4.68)**	**0.027**
Diagnosis of index visit: PsA vs PsO	0.99 (0.52 - 1.88)	0.986
Any baseline systemic non-biologic use: yes vs no	1.34 (0.71 - 2.54)	0.364
Any baseline systemic biologic use: yes vs no	1.68 (0.98 - 2.90)	0.061
Any baseline telehealth visit (excluding index): yes vs no	**1.91 (1.20 - 3.04)**	**0.007**

* In-person visit is the referent group. Adjusted for age, gender, region, physician specialty that is associated with index visit, diagnosis of index visit (PsA vs. PsO), any systemic non-biologic use in the baseline period, any systemic biologic use in the baseline period, and any baseline telehealth visit except the index visit.

Conclusions and Discussion

- **Apremilast initiators with a telehealth index visit were younger, more likely to be in the Northeast and West, to have seen a rheumatologist at the index visit, and to have had another telehealth visit during baseline.**
- **Patients initiating apremilast via a telehealth visit had similar adherence and persistence to those initiating via an in-person visit.**
- **Coupled with oral dosing, no pre-screening, and no lab monitoring requirements, these data suggest apremilast initiation can be effectively managed with telehealth visits.**