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### Commentary

Even well-controlled psoriasis patients have unmet treatment needs regardless of disease severity

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## **Abstract**

**Background:** Though psoriasis is chronic and recurring, current options can help many patients achieve good disease control. New treatments could provide greater improvement in objective disease, but it is not clear that there is room for improving subjective outcomes, particularly for patients who are already "well-controlled."

**Objective:** To analyze treatment satisfaction of well-controlled patients with psoriasis in two patient populations of very different disease severity.

**Methods:** Patients with well-controlled psoriasis on topicals (mild psoriasis) only or on biologics (moderate-to-severe psoriasis) were queried by telephone about perceptions of disease control, improvement level, overall treatment satisfaction, and consideration for trying new treatments. Satisfaction scores and feedback were analyzed to assess treatment type and satisfaction level associations.

**Results:** The majority of patients, regardless of disease severity, would consider trying new treatments for psoriasis, though patients with mild psoriasis were less satisfied with their disease control, level of improvement, and overall treatment. Patient feedback revealed widespread treatment dissatisfaction, non-adherence, and inconvenience.

**Limitations:** The patient population was from one university setting.

**Conclusion:** 16% of patients with psoriasis meet study definition for "well-controlled" disease. Less than 20% of these well-controlled patients with psoriasis are satisfied with their current level of control and clearance and would not consider trying new treatments, suggesting the majority of well-controlled patients, regardless of disease severity, still have unmet needs. Stronger

patient-physician communication may contribute to patient-based, comprehensive care in concordance with a health system that is headed towards financial incentives for better patient satisfaction.

#### Keywords: disease control; improvement level; stable regimens; unmet treatment needs

## Introduction

Psoriasis is a chronic disease in which patient satisfaction is often poor [1]. Although there is no cure, there are several treatments that can temporarily relieve or eliminate symptoms of the disease. Treatments may change over the course of the disease. The majority of patients with psoriasis express dissatisfaction with their treatment [1]. Long-term psoriasis control requires the continued use of medications during both remission and flare-up periods; this concept of maintenance treatment is often not internalized by patients [2]. Low treatment adherence and ineffective communication may contribute to these low satisfaction rates [1]. Long-term psoriasis control also requires effective physician-patient communication to discuss possible disease courses, treatment options, realistic expectations, and patient goals.

Though psoriasis is chronic and recurring, some patients may gain good control of their disease, and their physician may consider them to be well-controlled. When patients express adequate satisfaction with their control, they can be maintained on a stable treatment regimen. New treatments are becoming available that could provide greater clearing and better disease control, but it is not clear whether patients who are well-controlled already would see any benefit from such developments. This study aims to assess treatment satisfaction of patients with well-controlled psoriasis. We examine patients on purely topical treatment regimens and those on treatment regimens involving a biologic medication in order to gain information on two quite diverse psoriasis patient populations (those with mild versus those with moderate-to-severe psoriasis). These data could yield important insights into appropriate treatment goals for psoriasis management and how much value might be added by more aggressive efforts to clear psoriasis and new, more effective treatments.

## **Methods**

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Adult patients diagnosed with psoriasis (ICD-9: 696.1) diagnosed by a provider at the Wake Forest Baptist Medical Center Department of Dermatology and considered well-controlled were included in the study. "Well-controlled" was defined as the patient having two or more recent visits with an unchanged treatment regimen. Patients who were not proficient in English or did not have an active phone number were excluded.

Following approval from the Wake Forest University School of Medicine Institutional Review Board, a randomized list of patients with psoriasis was reviewed to identify patients who met inclusion criteria. Data on age, gender, type of treatment, and treatment stability were gathered and eligible patients were contacted. If patients were unable to be contacted after 3 phone call attempts or denied participation, the next patient on the list was contacted.

Disease severity categories were defined as mild psoriasis and moderate-to-severe psoriasis. Patients in the 'mild' category were defined by treatment with topical medications only (topicals) and patients in 'moderate-to-severe' category were defined by treatment with biologics with or without additional topical or other systemic medications (biologics). Patient satisfaction ratings were tabulated to compare patient perception of degree of disease control, level of improvement, willingness to try a new medication, and overall satisfaction between the two groups (Table I). Patients were asked to provide ratings from 1 to 5 correlating to: 1- not at all satisfied, 2- slightly satisfied, 3- moderately satisfied, 4- very satisfied, and 5- extremely satisfied. For data interpretation, "satisfied" was defined as rating the given question a 5, correlating to "extremely satisfied." Patients also provided feedback regarding overall satisfaction and consideration for trying new treatments. Microsoft Excel was used for data entry and analysis.

Table 1. Telephone questionnaire administered to patients with psoriasis on stable treatment regimens to assess perceptions of degree of control, level of improvement, overall satisfaction, and consideration for trying new treatments.

1	What is your current treatment regimen?
2	How would you rate your current level of disease control?
3	How would you rate your current level of improvement from when you first started treatment?
4	How would you rate your overall satisfaction with this treatment regimen? Would you like to

	provide any feedback on why you feel this way?
5	Would you be interested in trying new psoriasis medications on the market, yes or no? Why or why not?

<sup>\*</sup>Satisfaction ratings were represented by the following: 1, not at all satisfied; 2, slightly satisfied; 3, moderately satisfied; 4, to very satisfied; 5, extremely satisfied.

# **Results**

625 charts of patients with psoriasis were reviewed, and 99 (16%) met our criteria for well-controlled disease. Of these patients, 74 patients with well-controlled psoriasis on topicals (mild psoriasis) only or on biologics (moderate-to-severe psoriasis) were identified. 33 (45%) of these patients were enrolled in this study (mild psoriasis (topicals) n=16; moderate-to-severe psoriasis (biologics) n=17. The remaining 41 declined to participate, did not answer after 3 telephone call attempts, or had invalid telephone numbers (Figure I). The demographics of the patients that were not enrolled (mean age 55.8 years, SD  $\pm$  17.0, range 24-89) were similar to those enrolled (mean age 57 years, SD  $\pm$  15.3, and range 23-84).

Table II. Demographic information of participants and non-participants.

	Participants	Non-Participants	Total
	n (%)	n (%)	n (%)
N=	33 (45)	41 (55)	74 (100)
Gender			
Female	19 (58)	23 (56)	42 (57)
Male	14 (42)	18 (44)	32 (43)
Disease Severity			
Mild	16 (48)	28 (68)	44 (60)
Moderate-to-Severe	17 (52)	13 (32)	30 (40)
Age			
18-29	1 (3)	3 (7)	4 (5)
30-39	5 (15)	3 (7)	8 (11)
40-49	8 (24)	11 (27)	19 (26)
50-59	4 (12)	8 (20)	12 (16)
60-69	10 (30)	7 (17)	16 (22)
70-79	3 (9)	6 (15)	9 (12)
80+	2 (6)	3 (7)	5 (7)
Average, ± SD	57.0 ± 15.3	55.8 ± 17.0	$56.3 \pm 16.2$

9 (27)	9 (22)	18 (24)
22 (67)	26 (63)	48 (65)
2 (6)	3 (7)	5 (7)
0 (0)	3 (7)	3 (4)
8 (24)	16 (39)	24 (32)
17 (52)	16 (39)	33 (45)
8 (24)	9 (22)	17 (23)
30 (91)	34 (83)	64 (86)
3 (9)	4 (10)	7 (9)
0 (0)	1 (2)	1 (1)
0 (0)	1 (2)	1 (1)
0 (0)	1 (2)	1 (1)
15 (45)	17 (42)	32 (43)
	22 (67) 2 (6) 0 (0)  8 (24) 17 (52) 8 (24)  30 (91) 3 (9) 0 (0) 0 (0) 0 (0)	22 (67)       26 (63)         2 (6)       3 (7)         0 (0)       3 (7)         8 (24)       16 (39)         17 (52)       16 (39)         8 (24)       9 (22)         30 (91)       34 (83)         3 (9)       4 (10)         0 (0)       1 (2)         0 (0)       1 (2)         0 (0)       1 (2)

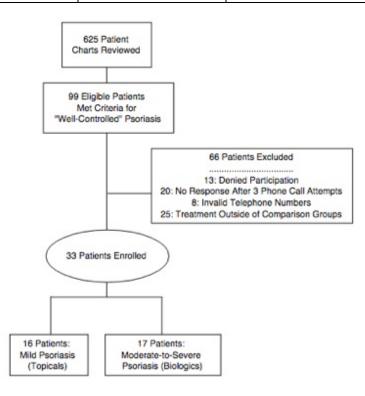


Figure 1. Consort diagram showing the disposition of study patients.

Compared to patients with moderate-to-severe psoriasis, patients with mild psoriasis were less satisfied with their disease control, level of improvement, and overall treatment (Table III). Of the 16 patients with well-controlled mild psoriasis treated with topicals, 4 (25%) were males and 12 (75%) were females. Their mean age was 58 years (SD  $\pm$  13.7, range 35-88). Of these well-controlled patients, only 4 (25%) were satisfied with their current disease control, 4 (25%) were satisfied with their level of improvement, and 5 (31%) were satisfied with their overall treatment. 18% (n=3) of patients in this category were extremely satisfied with all 3 outcome measures. 69% of patients (n=11) with well-controlled mild psoriasis would consider trying new psoriasis medications (Table IV). 3 of the 5 patients (60%) who were satisfied on their stable topical regimen for mild psoriasis would still consider trying new medications. The majority of well-controlled patients on a stable regimen for mild psoriasis who want to try a new medication cite better control and clearance as their reason (Table IV). Of the well-controlled patients on a stable regimen for mild psoriasis, 19% (n=3) were satisfied with their current level of control and clearance and would not consider trying new treatments (Table III).

Table III. Average response ratings tabulated according to disease severity.

Severity Category	Disease Control	Improvement	Overall Treatment
Mild	3.8	3.5	3.7
Moderate-to-Severe	4.1	4.1	4.1

<sup>\*</sup>Satisfaction ratings were represented by the following: 1, not at all satisfied; 2, slightly satisfied; 3, moderately satisfied; 4, to very satisfied; 5, extremely satisfied.

Of the 17 patients with well-controlled moderate-to-severe psoriasis on biologic treatments, 8 (47%) were males and 9 (53%) were females. Their mean age was 54 years (SD  $\pm$  13.9, range 23-73). Of these patients, 7 (41%) were satisfied with current disease control, 7 (41%) were satisfied with level of improvement, and 8 (47%) were satisfied with overall treatment. 41% (n=7) of patients in this category were 'extremely satisfied' with all measures of treatment satisfaction. 77% of patients (n=13) on a stable treatment regimen for moderate-to-severe psoriasis would consider trying new psoriasis medications (Table V). 6 of the 8 patients (75%) who were satisfied on their stable regimen for moderate-to-severe psoriasis would still consider trying new medications. Patients in this category cite better control and clearance, if their current regimen stopped working, and a more convenient medication as reasons for wanting to try a new medication for psoriasis (Table V). 12% (n=2) of well-controlled patients with moderate-to-severe psoriasis are satisfied with their current level of control and clearance and would not consider trying new treatments (Table V).

Table IV. Reasons cited by patients with moderate-to-severe psoriasis for why they would or would not consider trying a new medication.

Patients with Mild Psoriasis			
Consider Trying New Medication	Responses % (n)	Examples	
Better control and clearance	57 (9)	"My treatment definitely doesn't give me long term control." "It would be nice to have my psoriasis go away completely."	
More convenient administration	6 (1)	"Topicals are something you have to do on a very consistent basis, but when I stop using it for some reason, it comes right back."  "Topicals have to be kept up and that's difficult for me with work and grand kids."	

<sup>\*\*</sup> Patients were categorized by topical medications only (topicals) and biologic with or without topical or systemic medications (biologics).

If current medication stopped working	6 (1)	"I would consider trying a new medication if mine stopped working and after I talked to my physician."
NOT Consider Trying New Medication	Responses % (n)	Examples
Psoriasis currently controlled	12 (2)	"My psoriasis is fairly mild and I don't think I need something more."
Safety Concerns	12 (2)	"I'm already on so many medications, I don't think it's safe to take anything more." "I like being able to see my results using topicals and think they're much safer."

Table V. Reasons cited by patients with moderate-to-severe psoriasis for why they would or would not consider trying a new medication

Patients with Moderate-to-Severe Psoriasis			
Consider Trying New Medication	Responses % (n)	Examples	
Better control and clearance	35 (6)	"If I could achieve better control I would definitely try something new."  "I want my psoriasis to clear up much more."  "I don't have full clearance now and that's what I want."	
More convenient administration	18 (3)	"If a new medication could get me away from shots, I'd definitely take it. My shots are painful."  ".If would be nice to have something that doesn't require all these shots."	
If current medication stopped working	23 (4)	"I would try something new if I needed it but I'm very happy right now."	
NOT Consider Trying New Medication	Responses % (n)	Examples	
Psoriasis currently controlled	18 (3)	"I'm very satisfied with my results right now." "I'm very happy with my level of improvement so far."	

Safety Concerns	12 (2)	"I want to see how my treatment goes right
		now before I start any new treatments I don't
		know safety information for."
		"Lack of safety data concerns me. My
		psoriasis is a long-term battle but we're
		doing what we can right now."

During the open-ended questions, well-controlled patients with psoriasis provided feedback indicating their dissatisfaction with treatment. One respondent stated topical therapy for mild psoriasis was "definitely not something with long-term results"; a respondent on a stable biologic regimen for moderate-to-severe psoriasis stated she was at a "dead end for treatments." A greater percentage of patients with well-controlled mild psoriasis on topical treatment (44%, n=7) provided feedback indicating their treatment 'wasn't working' for them anymore compared to patients with well-controlled moderate-to-severe psoriasis on biologic treatments (0%). Patients also admitted to not using medications consistently; they often justified this with reasons such as being busy, forgetful, or fed up with medication. Patients with well-controlled mild psoriasis stated "topicals are something you have to do on a very consistent basis, but when I stop using it for some reason, it comes right back" and "I'd much rather have a pill and have [my psoriasis] completely go away. Topicals have to be kept up and that's difficult for me with work and grandkids" (Table V). Patients with well-controlled moderate-to-severe psoriasis on biologics also mentioned preference for medications in pill form (Table V).

### Discussion

Overall, patients with well-controlled moderate-to-severe psoriasis on biologic treatment are more satisfied than patients with mild psoriasis considered well controlled on topical treatment. These data support previous findings suggesting that patients with psoriasis on biologics have higher overall satisfaction scores compared to patients on topical treatments [3]. Conversations with patients with well-controlled psoriasis revealed the need for better control, clearance, and convenience from psoriasis treatments. Poor adherence may limit the effects of treatment in this group of patients. Efforts in advocacy and education are needed to ensure patients understand their treatment options and achieve adequate control.

Well-controlled patients, regardless of disease severity, would consider trying new medications. Patients' and physicians' perceptions of well-controlled psoriasis do not align, and may be a reason for different treatment goals between patients and physicians [2]. Patients often desire a faster and more complete clearing of disease, compared to physicians, who focus on relative improvement [2]. Patients with psoriasis want to be treated more aggressively [4].

Long-term maintenance is important for long-term treatment success. However, this concept is often not fully understood by patients with psoriasis [2]. Patients in both study groups expressed that their treatment was effective when used consistently, but still find achieving optimal adherence challenging. Less than 50% of patients are adherent to topical therapy regimens, which may contribute to low treatment satisfaction ratings among topical patients (and, vice versa, poor satisfaction may contribute to poor adherence) [5]. Patients with mild psoriasis considered adequately well-controlled on topicals believe they are not clear due to treatment inefficacy. However, patients with moderate-to-severe psoriasis considered well-controlled on biologic treatment did not express this concern. Though biologic medications can stop working due to antibody formation, poor treatment outcomes and tachyphylaxis with topical treatments are likely due to poor adherence [6,7]. Some strategies for addressing non-adherence include encouraging patient participation, defining treatment goals, and enhancing the patient-physician relationship [8].

Inconvenient methods of treatment can lead to poor adherence [9]. Patients in both groups who would consider trying new medications cite the need for more convenient treatment administration. Having to regularly apply a topical treatment to substantial areas of the body can be inconvenient and unappealing. Patients with well-controlled psoriasis on biologics expressed that injections were painful, and a pill form would be preferable. Patients are more likely to be adherent to a simple regimen. The development of safe and effective medications in oral form would likely appeal to both of these groups.

Of patients who would not consider trying new treatments, their reasons include safety concerns and satisfaction with current results. Safety is one of the most important factors contributing to patients' psoriasis care experience [10]. Topical treatments have a favorable safety profile [11]. However, if topical treatments are unable to reach patient treatment goals and disease symptoms may worsen, the risks and benefits of systemic treatments should be considered. Presenting risk in a format patients can understand can help them make informed treatment decisions. The minimal risk and potentially protective effects of more potent treatments may outweigh the consequences of undertreated or non-treated moderate-to-severe psoriasis [12]. The number needed to benefit/harm and the Lifetime Risk model are useful tools to conceptualize magnitude of risk [13].

Though this study assessed a small sample size, generalizability was addressed by use of randomized sample. Some patients who consider themselves well-controlled may not follow-up and therefore lack stable regimen documentation for study inclusion. In addition, selection bias may have occurred, because patients without active telephone numbers were excluded from the study.

Patients with well controlled psoriasis accounted for only a small percentage of the psoriasis population at our center. Thus, our study likely underestimates the unmet need for better psoriasis management. This study enrolled patients who are actively seeking care, and may represent a more intrinsically motivated and knowledgeable population regarding disease and treatment options compared to patients who are not actively seeking care. This potential bias may also underestimate the unmet need for better psoriasis management.

One patient stated, "Sometimes I wonder why we can't figure out what works best, I'm at a dead end to see what's going happen. I'm disappointed. I wish doctors would care more about my condition." Patients' self-experienced burden of psoriasis may be underappreciated by their providers, and in turn, may lead to under treatment and dissatisfaction [14]. With the evolving health care reimbursement system based on outcome measures, these data are concerning for both physicians and patients alike. Recent health care reform trends are placing a greater emphasis on economic incentives for measurable treatment outcomes. Such reforms may lead to greater efforts to understand and improve patients' perceptions of disease burden, management, and care.

Aligning expectations of treatment duration and goals before treatment initiation may decrease disappointments and dissatisfaction [2]. Building stronger physician-patient relationships may help foster better communication about patients' perceptions of their disease control. There may be a role for formal measures (such as the Koo-Menter Psoriasis Instrument) to identify patients who have unmet treatment needs requiring intensification of treatment [15,16]. A better understanding of patients' treatment perceptions and their burden of psoriasis can contribute to patient-based, comprehensive care in concordance with the reimbursement movement towards patient satisfaction.

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