



**Our Mission:** To drive efforts to cure psoriatic disease and improve the lives of those affected.

**Comorbidities associated with psoriatic disease. Linking diabetes and need for lowering out of pocket costs  
AB 2203- Insulin Cost-Sharing Cap  
California Health Benefits Review Program- March 2020**

On behalf of the more than 986,000 Californians living with psoriasis and psoriatic arthritis, the National Psoriasis Foundation (NPF) appreciates the opportunity to submit written comments on Assembly Bill 2203, "Insulin Cost-Sharing Cap." Patients with chronic conditions, such as psoriatic disease, face increasingly high out of pocket costs to manage their condition. This important legislation will address the rising cost-sharing burdens placed on patients living with diabetes by capping the price of insulin.

**Background on Psoriasis**

The National Psoriasis Foundation exists to find a cure for psoriasis and psoriatic arthritis and to eliminate the devastating effects of psoriatic disease by supporting research, advocacy and education. Psoriasis is an immune-mediated disease that affects approximately 3 percent of the adult U.S. population.<sup>i</sup> Up to 30 percent of individuals with psoriasis may also develop psoriatic arthritis, an inflammatory form of arthritis that can lead to irreversible joint damage if left untreated.<sup>ii</sup> Beyond the physical pain and discomfort of these diseases, individuals living with psoriatic disease also face higher incidence of comorbid health conditions including cardiovascular disease,<sup>iii</sup> diabetes<sup>iv</sup>, hypertension<sup>v</sup>, and stroke<sup>vi</sup>. A higher prevalence of atherosclerosis<sup>vii</sup>, Crohn's disease<sup>viii</sup>, cancer<sup>ix</sup>, metabolic syndrome<sup>x</sup>, obesity<sup>xi</sup> and liver disease<sup>xii</sup> are also found in people with psoriasis, as compared to the general population.

Due to the heterogeneous characteristics of this chronic immune-mediated disease, psoriatic disease requires sophisticated medical care. Treatments that work for one person may not work for others, and many patients cycle through numerous accepted treatment options.<sup>xiii</sup> Without the tools to control their symptoms, people with psoriatic disease cycle through periods of intense pain; fatigue; unbearable itch; whole-body inflammation; flaking and bleeding of large swaths of the skin; and joint degradation.

**Increased rates of Diabetes found in Psoriatic Disease**

Psoriatic disease has an excess risk of major medical morbidities, and even mortality.<sup>xiv</sup> It is well documented from studies that patients with psoriatic disease carry an increased risk of developing comorbidities related to the metabolic syndrome.<sup>xv</sup> One study showed metabolic syndrome was more frequently diagnosed in patients with psoriasis than individuals without psoriasis. In addition, comorbidities related to metabolic syndrome including arterial hypertension, hyperlipidemia, obesity, and diabetes mellitus were significantly more common among patients with psoriasis.<sup>xvi</sup>

People with psoriatic disease have an increased risk of type 2 diabetes, even if the patient does not have traditional diabetes risk factors, such as obesity. Both psoriasis and diabetes are diseases caused by chronic inflammation. One study that compared over 100,000 individuals with psoriasis to matched patients without psoriasis found that patients with mild psoriasis had an 11% increased risk of diabetes and patients with severe psoriasis had a 46% higher risk of diabetes. The study also looked at treatments used by those diagnosed with diabetes and found that the patients with both psoriasis and diabetes were more likely to require pharmacological treatment of diabetes, compared to diabetics without psoriasis.<sup>xvii</sup>

There is a significant risk factor for incidents of type 2 diabetes beyond age, sex, and BMI related to body surface area (BSA) in psoriatic disease. Another study found that, after accounting for diabetes risk factors, diabetes increased by 20% with every 10% increase in psoriasis body surface area. The same study estimated that a patient with psoriasis affecting 10% or more of their BSA has about a 60% higher risk per year of developing type 2 diabetes, which translates into an extra 25,000 new cases of diabetes annually worldwide attributed to severe psoriasis.<sup>xviii</sup>

### **Burden of cost-sharing impacts treatment**

Advancements in medicine have produced breakthrough treatments for psoriatic disease, including biologics, but these treatments can be out of reach for many patients due to high out-of-pocket costs. A 2019 study of data collected from NPF surveys found that about 1 in 5 patients with psoriatic disease who take a biologic medication report spending more than \$100 per month towards cost-sharing obligations. People with psoriasis have significantly higher healthcare resource utilization and costs than the general population. When facing high out-of-pocket costs, patients do not use their medications appropriately; skipping doses in order to save money or abandoning treatment altogether. According to several studies, prescription abandonment rates increase significantly when cost-sharing exceeds \$100.<sup>xix</sup> Non-treatment and under treatment of psoriatic disease remains a significant problem as health benefit plan's cost sharing leave many treatments unaffordable.

**Because of these inherent risks associated with high cost-sharing, the NPF supports AB 2203, "Insulin Cost-Sharing Cap."** Recognition of the comorbid disease burden associated with psoriatic disease is essential for comprehensive medical care for patients with this chronic skin disorder. Addressing issues related to barriers to care and lowering the cost burden associated with the disease is key in management of the disease.

It is critical that patients with psoriatic disease, diabetes, and other chronic conditions have the tools they need to effectively manage their disease. AB 2203 would help reduce patient costs by capping the monthly amount a patient would pay, thereby improving patient's ability to manage their disease or comorbidities. We appreciate your attention on this important matter. Should you have any questions regarding this issue please reach out to Brittany Duffy-Goche, State Government Relations Manager with the National Psoriasis Foundation at [bduffy-goche@psoriasis.org](mailto:bduffy-goche@psoriasis.org)

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<sup>i</sup> Helmick CG, Lee-Han H, Hirsch SC, Baird TL, Bartlett CL. Prevalence of Psoriasis Among Adults in the U.S: 2003–2006 and 2009–2010 National Health and Nutrition Examination Surveys. *American journal of preventive medicine*. 2014;47(1):37-45. doi:10.1016/j.amepre.2014.02.012.

<sup>ii</sup> Gladman DD, Antoni C, Mease P, et al. Psoriatic arthritis: epidemiology, clinical features, course, and outcome. *Ann Rheum Dis*. 2005;64(suppl 2):ii14–ii17. - See more at: <http://www.rheumatologynetwork.com/psoriatic-arthritis/classification-criteria-psoriatic-arthritis-caspar#sthash.Or6zBLgM.dpuf>

<sup>iii</sup> Neimann AL, Shin DB, Wang X, Margolis DJ, Troxel AB, Gelfand JM. Prevalence of cardiovascular risk factors in patients with psoriasis. *Journal of the American Academy of Dermatology*. 2006; 55(5):829-35. **And:** Prodanovich S, Kirsner RS, Kravetz JD, Ma F, Martinez L, Federman DG. Association of psoriasis with coronary artery, cerebrovascular, and peripheral vascular diseases and mortality. *Archives of Dermatology*. 2009 Jun; 145(6):700-3.

<sup>iv</sup> Armstrong AW, Harskamp CT, Armstrong EJ. Psoriasis and the risk of diabetes mellitus: a systematic review and meta-analysis. *JAMA Dermatology*. 2013 Jan; 149(1): 84-91. **And:** Neimann AL, Shin DB, Wang X, Margolis DJ, Troxel AB, Gelfand JM. Prevalence of cardiovascular risk factors in patients with psoriasis. *Journal of the American Academy of Dermatology*. 2006; 55(5):829-35.

<sup>v</sup> Robinson D Jr., Hackett M, Wong J, Kimball AB, Cohen R, Bala M; the IMID Study Group. Co-occurrence and comorbidities in patients with immune-mediated inflammatory disorders: an exploration using US healthcare claims data, 2001-2002. *Current medical research and opinion*. 2006; 22(5):989-1000. **And:** Armstrong AW, Harskamp CT, Armstrong EJ. The association between psoriasis and hypertension: a systematic review and meta-analysis of observational studies. *Journal of Hypertension*. 2012 Dec 15. [Epub ahead of print]

<sup>vi</sup> Gelfand JM, Dommasch ED, Shin DB, Azfar RS, Kurd SK, Wang X, Troxel AB. The Risk of Stroke in Patients with Psoriasis. *Journal of Investigative Dermatology*. 2009; 129, 2411–2418.

<sup>vii</sup> Prodanovich S, Kirsner RS, Kravetz JD, Ma F, Martinez L, Federman DG. Association of psoriasis with coronary artery, cerebrovascular, and peripheral vascular diseases and mortality. *Archives of Dermatology*. 2009 Jun; 145(6):700-3.

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- viii Najarian DJ, Gottlieb AB. Connections between psoriasis and Crohn's disease. *Journal of the American Academy of Dermatology* 2003; 48:805-21.
- ix Gelfand JM, Shin DB, Neimann AL, Wang X, Margolis DJ, Troxel AB. The risk of lymphoma in patients with psoriasis. *Journal of Investigative Dermatology*. 2006 Oct; 126(10):2194-201.
- x Azfar RS, Gelfand JM. Psoriasis and metabolic disease: epidemiology and pathophysiology. *Current Opinion in Rheumatology*. 2008; 20(4):416-22.
- And:** Armstrong AW, Harskamp CT, Armstrong EJ. Psoriasis and metabolic syndrome: A systematic review and meta-analysis of observational studies. *Journal of the American Academy of Dermatology*. 2013 Apr; 68(4):654-62.
- xi Ogden CL, Fryar CD, Carroll MD, Flegal KM. Mean body weight, height and body mass index, United States 1960-2002. *Advance Data* 2004; 347:1-17.
- xii Robinson D Jr., Hackett M, Wong J, Kimball AB, Cohen R, Bala M; the IMID Study Group. Co-occurrence and comorbidities in patients with immune-mediated inflammatory disorders: an exploration using US healthcare claims data, 2001-2002. *Current medical research and opinion*. 2006; 22(5):989-1000.
- xiii Stern RS, Nijsten T, Feldman SR, Margolis DJ, Rolstad T. Psoriasis is common, carries a substantial burden even when not extensive, and is associated with widespread treatment dissatisfaction. *Journal of Investigative Dermatology Symposium Proceedings*. 2004 Mar; 9(2):136-9
- xiv Wan, M.T, Shin, D.B, Hubbard, R.A, Noe, M.H, Mehta, N.N and Gelfand, J.M. Psoriasis and the risk of diabetes; a prospective population-based cohort study. *J Am Acad Dermatol*. 2018; 78; 315-322.e1
- xv Sterry W, Strober BE, Menter A; on behalf of the International Psoriasis Council. Obesity in psoriasis: the metabolic, clinical and therapeutic implications. Report of an interdisciplinary conference and review. *Br J Dermatol* 2007; 157: 649-655.
- xvi Augustin, M, Reich, K., Glaeske, G., Schaefer, I., and Radtke, M. Co-morbidity and age-related prevalence of psoriasis: analysis of health insurance data in Germany. *Acta Derm Venereol*, 2010; 90: 147-151.
- xvii Shin, D., Troxel, A., Margolis, D. Increased risk of diabetes mellitus and likelihood of receiving diabetes mellitus treatment in patients with psoriasis. *Archives of Dermatology*, 2012 Sep; 148(9): 995-1000
- xviii Wan, M.T, Shin, D.B, Hubbard, R.A, Noe, M.H, Mehta, N.N and Gelfand, J.M. Psoriasis and the risk of diabetes; a prospective population-based cohort study. *J Am Acad Dermatol*. 2018; 78; 315-322.e1
- xix Streeter, S.B., Schwartzberg, L., Husain, N., Johnsrud, M. (2011). Patient and Plan Characteristics Affecting Abandonment of Oral Oncolytic Prescriptions. *J Oncol Pract*. 2011 May; 7(3 Suppl): 46s-51s