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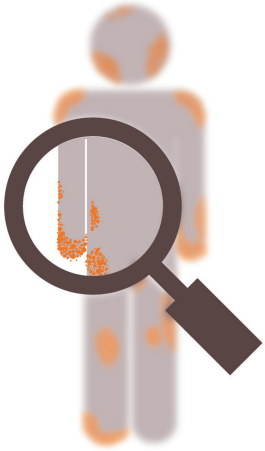

PUTTING THE FOCUS ON PSORIASIS AND PSORIATIC ARTHRITIS

UNDERSTANDING THE IMPACT OF COMPLEX CHRONIC DISEASES BEYOND DIABETES AND HYPERTENSION

WHAT ARE PSORIASIS AND PSORIATIC ARTHRITIS (PsA)?

PSORIASIS IS A CHRONIC INFLAMMATORY DISEASE THAT PREDOMINANTLY AFFECTS THE SKIN AND OTHER PARTS OF THE BODY[1,2]

- It is **noncontagious** and is most often characterized by **plaques**, or **red**, **scaly patches** on the skin that **itch** and can be **painful**[1,2]
- Psoriasis on the hands, feet, face, or genital regions **may interfere with activities** of daily living[3]

PsA IS A TYPE OF ARTHRITIS THAT CAN PRESENT IN PEOPLE WITH PSORIASIS[4,5]

- People with PsA have **skin symptoms** of psoriasis as well as **joint pain**, **swelling**, and **stiffness**
- The severity of the skin symptoms and the arthritis can be very different; some people may have very mild skin disease but **severe joint symptoms**, and vice versa

Untreated PsA can lead to inflammation, **progressive joint damage**, physical limitations, and **disability in severe cases**[5]

PsA ADVANCES TO EROSIVE AND DEFORMING ARTHRITIS IN 40%–60%

of PsA patients **AND** joint damage **MAY** start progressing within **ONE YEAR OF DIAGNOSIS**[5]

WHO GETS PSORIASIS AND PsA?

PSORIASIS IS THE MOST PREVALENT AUTOIMMUNE DISEASE IN THE UNITED STATES[6]

Psoriasis impacts substantially more US individuals than inflammatory bowel diseases, lupus, rheumatoid arthritis, and multiple sclerosis combined[1,7-10]

Prevalence of Selected Autoimmune Diseases

- **8 MILLION | PSORIASIS (2017)[1]**
  - **3 MILLION** | inflammatory bowel diseases (Crohn's disease and ulcerative colitis; 2015)[7]
  - **1.5 MILLION** | systemic lupus erythematosus (2013)[8]
  - **1.5 MILLION** | rheumatoid arthritis (2018)[9]
  - **1 MILLION** | multiple sclerosis (2018)[10]

3.2%
OF THE US POPULATION IS AFFECTED BY PSORIASIS (2010)[11]*

AN ESTIMATED 2.4 MILLION PEOPLE HAVE PsA[4]

ABOUT 1 in 3 PEOPLE
WITH **PSORIASIS DEVELOP PsA[4]**

AS MANY AS **3 IN 100** OF YOUR EMPLOYEES AND THEIR FAMILY MEMBERS MAY HAVE **PSORIASIS**, AND AS MANY AS **1 IN 100** MAY HAVE **PSORIATIC ARTHRITIS**[4,11]

*2010 data published 2014.[11]

WHAT ARE SOME HEALTH RISKS OF PSORIASIS AND PsA?

PSORIASIS AND PsA ARE MORE THAN JUST SKIN AND JOINT CONDITIONS*

- People with psoriasis and PsA are at higher risk of developing other serious conditions[12-16]

Study in the US

OTHER AUTOIMMUNE DISORDERS

50% INCREASE

in psoriasis and PsA compared with general population[12]

Studies in the United Kingdom

DEPRESSION

NEARLY 40% INCREASE

in risk of depression among patients with psoriasis compared with controls[13]

MYOCARDIAL INFARCTION

3x HIGHER

relative risk in severe psoriasis than in patients without psoriasis (in a 30-year-old patient)[14]

STROKE

44% INCREASED

risk in severe psoriasis compared with controls[15]

DIABETES

62% INCREASE

in severe psoriasis compared with general population[16]

HAVE YOU CONSIDERED THE EFFECT OF ADDITIONAL POTENTIAL HEALTH RISKS OF PSORIASIS AND PsA ON YOUR MEMBERS?

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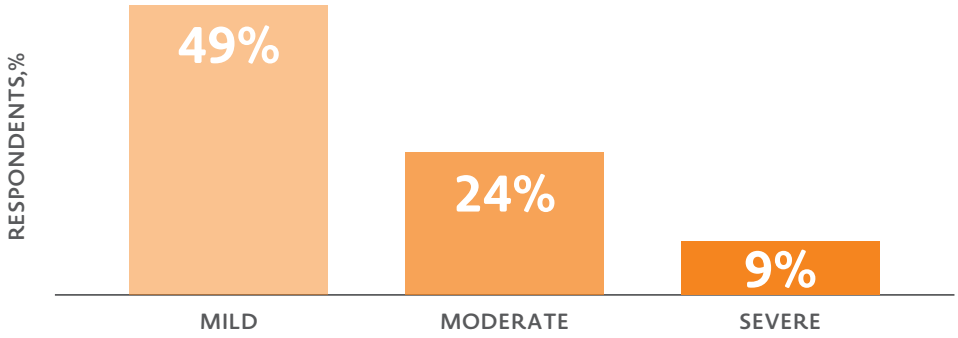
*__Other autoimmune disorders:__ Retrospective cohort study of members of Kaiser Permanente Southern California (2004-2011) including 22,653 patients with psoriasis, 2688 patients with psoriatic arthritis, and 126,705 controls from the general population.[12] **Depression:** Population-based cohort study using electronic medical records (1987-2002) including 146,042 patients with mild psoriasis, 3956 patients with severe psoriasis, and 766,950 patients without psoriasis treated in the United Kingdom.[13] **Myocardial infarction:** Prospective, population-based cohort study using electronic medical records (1987-2002), including patients aged 20 to 90 years with mild (n=127,139) or severe (n=3837) psoriasis and up to 5 matched controls (n=556,995) in the United Kingdom.[14] **Stroke:** Population-based cohort study (1987-2002) in patients with mild (n=129,143) or severe (n=3603) psoriasis and matched controls (n=496,666 and n=14,330, respectively) in the United Kingdom.[15] **Diabetes:** Population-based cohort study (1987-2002) in patients with mild (n=127,706) or severe (n=3854) psoriasis and up to 5 matched controls (n=465,252 and n=14,065, respectively) in the United Kingdom.[16]

WHAT PROPORTION OF PSORIASIS PATIENTS ARE UNTREATED?

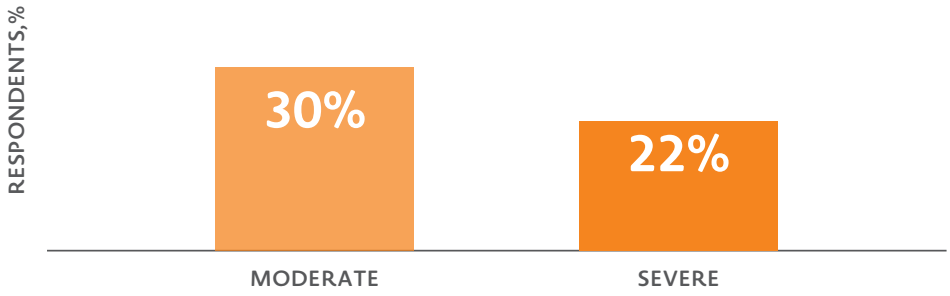
MANY PATIENTS DO NOT RECEIVE TREATMENT FOR PSORIASIS[17]*

Proportion of Patients Receiving No Treatment (2011)



PATIENTS WITH MODERATE TO SEVERE PSORIASIS WHO ARE RECEIVING TOPICAL MEDICATIONS ALONE[17]*

Proportion of Patients on Topical Agents Only (2011)



DO YOU KNOW HOW MANY OF YOUR MEMBERS
ARE BEING ADEQUATELY TREATED
FOR PSORIASIS?

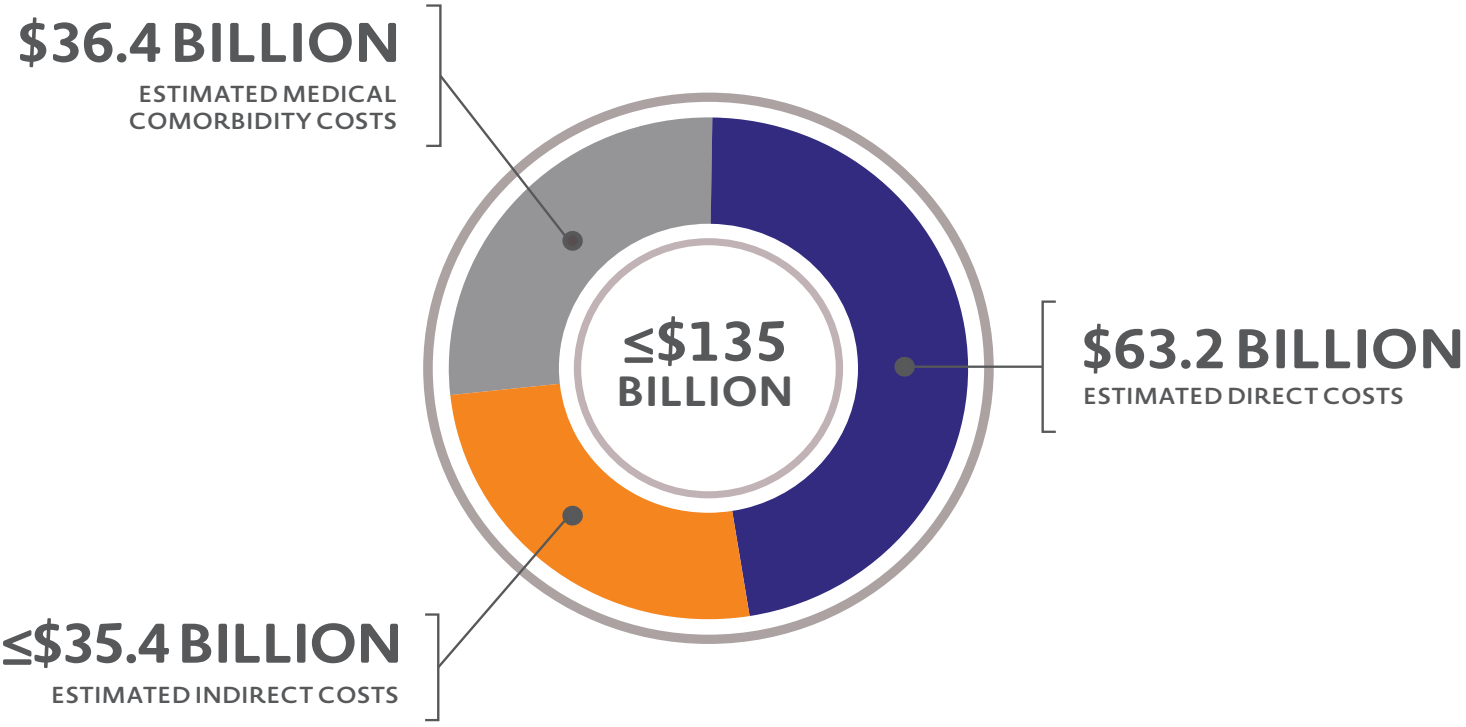
*Based on a review of data collected biannually by the National Psoriasis Foundation from January 1, 2003 through December 31, 2011. Survey data were collected from randomly sampled patients with psoriasis and PsA in the US population from a database of more than 76,000 patients with psoriatic disease. A total of 5604 patients with psoriasis or PsA completed the survey.[17]

WHAT ARE THE TOTAL COSTS ASSOCIATED WITH PSORIASIS?

US COSTS ARE AS HIGH AS $135 BILLION ANNUALLY FOR PSORIASIS[18]

- **26% of the total economic burden** of psoriasis, or an estimated $35 billion, is due to **indirect costs**, such as work loss

Estimated Total Annual Cost of Psoriasis in the United States (2013 dollars)[18]*



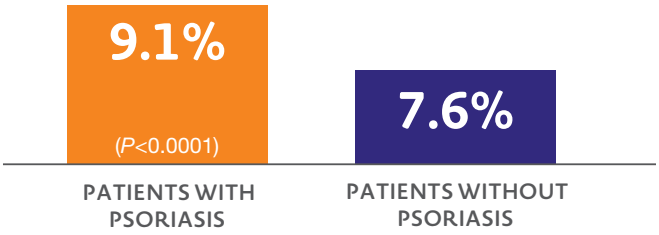
HAVE YOU MEASURED THE DIRECT AND INDIRECT HEALTHCARE COSTS OF PSORIASIS AND PsA TO YOUR ORGANIZATION?

*__Direct costs:__ medical costs related to 1) specialist medical evaluations; 2) hospitalization; 3) prescription medications; 4) phototherapy; 5) medication administration costs; 6) laboratory test and monitoring studies; and 7) over-the-counter medications and self-care products. __Indirect costs:__ work loss costs (sick days and other missed work time, loss of work productivity due to disease). __Comorbidity costs:__ medical evaluations, treatment, and laboratory monitoring for comorbid conditions related to psoriasis.[18]

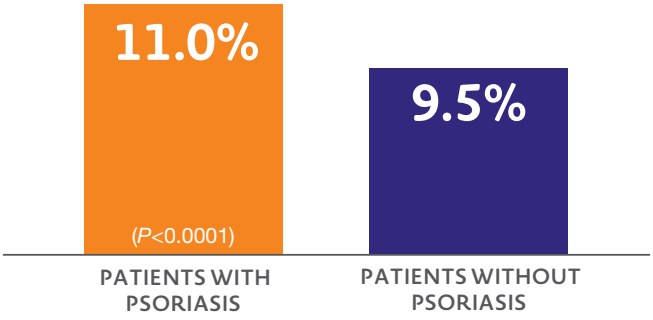
WHAT DRIVES THE DIRECT HEALTHCARE COSTS FOR AN EMPLOYER?

URGENT CARE UTILIZATION IS MORE COMMON IN PATIENTS WITH PSORIASIS[19]*

Annual Rates of Hospitalizations



Annual Rates of Emergency Department Visits



DO YOU KNOW THE **UTILIZATION** OF VARIOUS **HEALTHCARE SERVICES** FOR YOUR MEMBERS WITH PSORIASIS AND PsA?

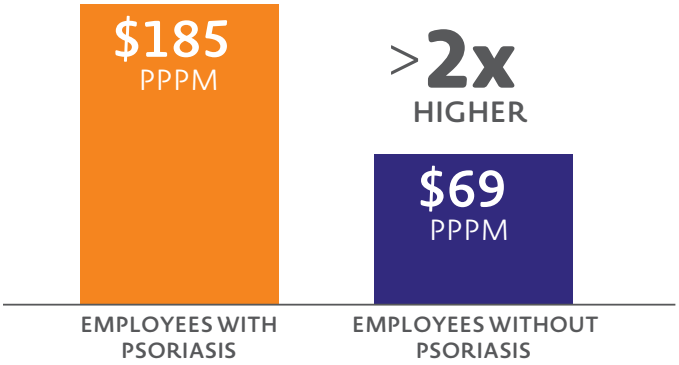
*2003 data from Thompson Medstat MarketScan Research database with combined claims of ~40 employers and several health plans, representing ~18 million covered lives. Twelve-month utilization data for 56,528 patients and 113,056 control patients matched using year of birth, gender, and geographic region.[19]

WHAT DRIVES THE INDIRECT COSTS OF PSORIASIS FOR AN EMPLOYER?

HIGH DISABILITY COSTS CAN BE ASSOCIATED WITH PSORIASIS[20]

- Disability costs were more than **two times higher** in employees with psoriasis vs employees without psoriasis

Disability Costs for Employees With and Without Psoriasis*

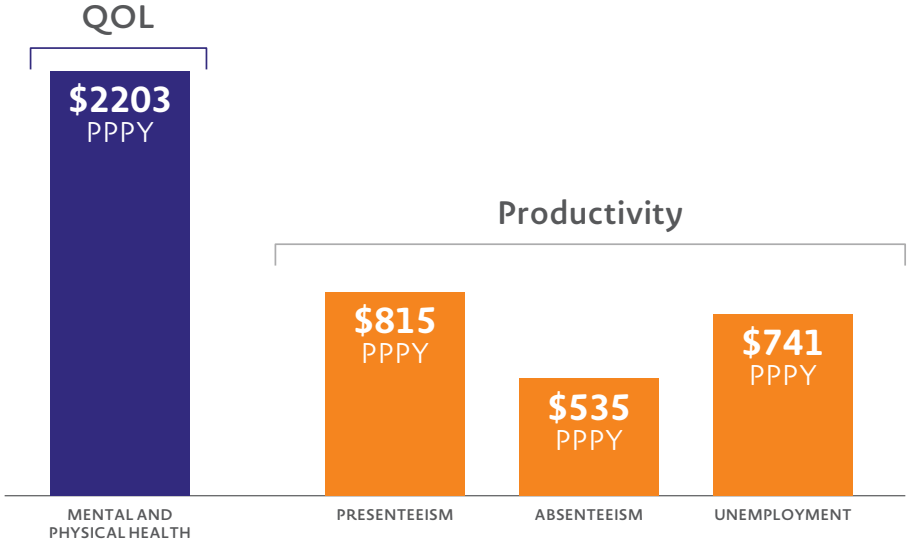


- The average cost associated with disability for employees with psoriasis over and above employees without psoriasis was $117 PPPM (2006 dollars)[20]

PSORIASIS IMPOSES HIGH COSTS RESULTING FROM LOST PRODUCTIVITY AND DIMINISHED QUALITY OF LIFE (QOL)[21]

- A larger proportion of the total cost of psoriasis is related to **reduced productivity** and **diminished QOL** than in patients with diabetes

Estimated QOL and Productivity Costs Among Patients (2013 dollars)†



PPPM=per patient per month; PPPY=per patient per year.

*Administrative claims data from January 1998 through January 2005, including 5.1 million employees and families from 31 large self-insured Fortune 500 US companies. Patients with ≥2 psoriasis claims (n=3097) were age- and sex-matched with employees with no psoriasis claims (n=8335).[20]

†Impact of psoriasis on health-related quality of life (HRQoL) extracted from 16 articles that measured HRQoL in psoriasis patients. Quality-adjusted life year (QALY) values used a conservative QALY value of $40,000 to estimate the reduction in HRQoL caused by psoriasis per patient annually compared with the control group. Estimated components of productivity cost included actual work productivity declined, percent workdays missed for medical reasons, average annual income, psoriasis prevalence 2013, US population 18-64 years of age in 2013, psoriasis unemployment rate, and unemployment rate due to psoriasis.[21]

WHAT DO MEMBERS WITH PSORIASIS AND PsA NEED TO DO?

MEMBERS WITH PSORIASIS OR PsA SHOULD SEEK APPROPRIATE CARE FROM A HEALTH CARE PROVIDER AND/OR SPECIALIST[1]

- **Many patients** with psoriasis, regardless of the severity of their disease, are **not under a physician's care**[22,23]

EVEN PATIENTS WITH MODERATE OR SEVERE DISEASE MAY NOT RECEIVE TREATMENT[22,24*]

37%-49%
MILD Psoriasis

24%-36%
MODERATE Psoriasis

9%-30%
SEVERE Psoriasis

- 43% of patients with psoriasis report they had not seen a healthcare provider in the previous 12 months[22,23†]
- More than 15% of people with psoriasis may be living with undiagnosed PsA, which can progress to irreversible joint damage[4,5]

MEMBERS NEED EDUCATION AND ACCESS TO CARE FROM SPECIALISTS WHO CAN HELP **DIAGNOSE AND MANAGE THEIR COMPLEX DISEASE**

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* Data collected from the National Psoriasis Foundation surveys from 2003-2011.[22]
† Based on data from the Multinational Assessment of Psoriasis and Psoriatic Arthritis (MAPP) survey that included 1005 US patients with psoriasis and PsA conducted between June and August 2012.[23]

WHAT SHOULD AN EMPLOYER DO?

BE SURE YOUR MEMBERS WITH PSORIASIS AND PsA HAVE ACCESS TO THE SUPPORT, EDUCATION, AND CARE THEY NEED

STEP 1:

Talk to your benefits partners about the **right plan design** to ensure access to appropriate care.

- Members with **psoriasis and/or PsA** may need care from a **team of healthcare providers** who specialize in **psoriasis/PsA** and their potential complications
  - For example, **dermatologists**, **rheumatologists**

- Ensure access to **laboratory services** for diagnosis, disease assessment, and monitoring, as well as screening for coexisting conditions
  - For example, blood tests, imaging tests

- **Medication**, including specialty medications, may be needed for the management of **psoriasis/PsA**

- Some members will require **medical procedures** such as surgery for badly damaged joints

- Additional **supportive care** may be needed

STEP 2:

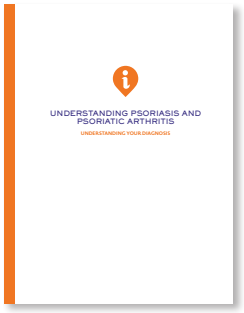
Provide your members with **appropriate educational resources**

- To help those who are undiagnosed to seek the care they need
- To help those diagnosed with psoriasis/PsA better manage their condition

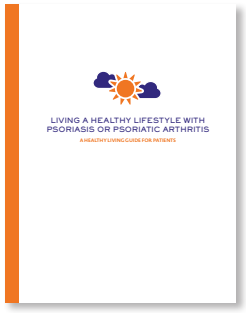
WHAT RESOURCES CAN YOU PROVIDE TO YOUR EMPLOYEES?

DISTRIBUTE EDUCATIONAL RESOURCES THAT SUPPORT AND EMPOWER MEMBERS WITH PSORIASIS AND PsA

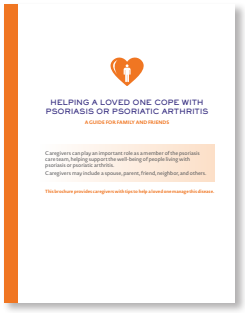
Brochures and video you can provide to your employees.



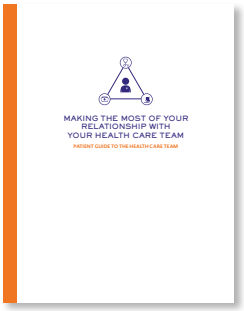
Understanding Psoriasis and Psoriatic Arthritis: Understanding Your Diagnosis



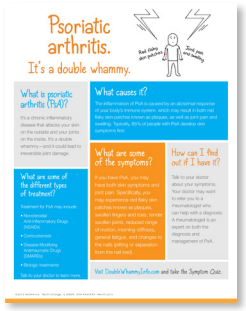
Living a Healthy Lifestyle With Psoriasis or Psoriatic Arthritis: A Healthy Living Guide for Patients



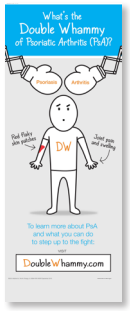
Helping a Loved One Cope With Psoriasis or Psoriatic Arthritis: A Guide for Family and Friends



Making the Most of Your Relationship With Your Health Care Team: Patient Guide to the Health Care Team



Psoriatic Arthritis Fact Sheet



What's the Double Whammy of Psoriatic Arthritis (PsA)? Disease Awareness Poster

The Inside Story of Psoriasis

PSORIASIS AND PSORIATIC ARTHRITIS ARE CHRONIC DISEASES THAT CAN BE DEBILITATING AND MAY BE AFFECTING EMPLOYEE PERFORMANCE IN YOUR ORGANIZATION

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