

Psoriatic Disease Response Index:

Western Pacific Region

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Preface



One of the strongest assets each country has is human capital. When countries invest in the health of their population, they move towards economic growth and improved living conditions, equality, and financial security for all. The key to ensure health in the population is universal health coverage, an investment that has shown to be vital for a country's prosperity. Universal health coverage means that everyone, irrespective of their age, sex, financial situation, or living standards, can access the health services they need, without experiencing financial hardship.

Psoriatic disease is a systemic condition affecting multiple body sites, predominately the skin, the joints, or both. In addition to skin and joint symptoms, psoriatic disease is characterized by increased risk of developing related non-communicable diseases. Common comorbidities of psoriatic disease, such as cardiovascular disease and diabetes, are life-threatening. Moreover, psoriatic disease has a major impact on mental health and quality of life. The prevalence of psoriatic disease in the continents of Asia and Australia/Oceania varies between 0.11 and 1.58. Furthermore, families of people living with psoriatic disease are indirectly impacted by their relative's disease, as psoriatic disease has repercussions on family life and life planning. The number of people affected and the risk of developing life-threatening comorbidities calls for urgent action. But despite the numbers, psoriatic disease is not a priority for health systems.

In 2014, World Health Organization (WHO) member states approved Resolution on Psoriasis (WHA 67.9). This Resolution officially recognizes psoriatic disease as a serious noncommunicable disease that can lead to immense, needless suffering due to insufficient access to healthcare. Two years later, recommendations were laid out in the WHO Global Report on Psoriasis, and empowered policy-makers with practical solutions to improve the health care and social inclusion of people living with psoriatic disease.

The Psoriatic Disease Response Index is an effort to comprehensively survey, quantify, and analyse health systems' responses to psoriatic disease on an international scale. It is an instrument to follow-up on the recommendations laid out in the WHO Global Report on Psoriasis and show the progress towards achieving good health for people with psoriatic disease.

This edition of the Psoriatic Disease Response Index shows that almost ten years after the Resolution on Psoriasis, progress for people living with the disease in five countries in the continents of Asia and Australia/Oceania (Australia, China, Japan, the Philippines, and Singapore) are uneven. Too many are still struggling with limited access to care and medications, stigma, and poor quality of life.

While progress is slow, people living with the disease and their families are affected. If countries want to achieve universal health coverage and strive towards health for the whole population, it is time to act and implement the recommendations from the WHO Global Report on Psoriasis.

Executive summary

Psoriatic disease is a chronic disease that affects the skin (psoriasis), joints (psoriatic arthritis), and sometimes other organs of the body (1). The Western Pacific Region (WPR), defined by the WHO, consists of approximately 1.9 billion people across 27 countries. Estimates of Psoriasis in the Asia-Pacific region range from 0.11% (95% CI: 0.04% - 0.30%) in east Asia to 1.58% (95% CI: 0.50% - 5.73%) in Australasia (2). Individuals living with psoriatic disease often experience significant economic and quality-of-life (QoL) burden throughout their lifetimes.

In 2016, the World Health Organization (WHO) published the Global Report on Psoriasis (3), intended to “empower policy-makers with practical solutions to improve the health care and social inclusion of people living with psoriasis in their populations.” Based on their recommendations, IFPA developed an index report for Europe in 2020 to measure health systems’ responses to psoriatic disease on an international scale in five countries. In concert with the European report, an index report for the Western Pacific Region has been developed to measure the progress of psoriatic disease care in the following five countries: Australia, China, Japan, the Philippines and Singapore.

“There is wide variance in the availability of tools and support for patients’ medication adherence across the chosen countries.”

Methods

A literature review and a series of interviews in each country were conducted to collect evidence for a set of 10 index indicators related to the recommendations listed in the WHO Global Report on Psoriasis. The literature review included published records, grey literature and local materials provided by IFPA member organizations in each of the chosen countries. The interviewers followed a discussion guide to keep data collection consistent across interviews. Criteria for each indicator were developed during the protocol phase, using a pragmatic scale of 1, 2 or 3.

Results

The existence of public awareness campaigns were used as an indicator of the level of awareness in the general public. All five countries had evidence of current outreach campaigns, organized by private and/or public organizations, which were designed to both educate the general public and foster a community for people living with psoriatic disease. Some of the campaigns were diverse and involved different avenues of outreach. Unfortunately, perceived stigma and discrimination were reportedly still an issue for some affected individuals in the chosen countries. Stakeholders in two countries described instances of direct discrimination, such as difficulties getting a job, finding a partner, or accessing public resources.

Table 1: Summary of indicator scores

Indicators	Australia	China	Japan	Philippines	Singapore
Awareness campaigns	3	3	3	3	3
Perceived discrimination	2	1	2	1	2
Training for GPs	3	2	NA*	3	3
Treatment Guidelines	3	3	3	2	3
Support for adherence	3	1	3	1	1
Wellbeing assessments	2	2	3	3	3
Time to diagnosis	1	2	1	1	2
Access to medicines	3	2	2	1	3
Specialist care access	2	2	3	2	2
Economic costs	3	1	3	1	2

*As Japanese patients typically visit a specialist directly, a score for psoriatic disease training in GPs in Japan was determined not to be relevant.

Records and interviews indicated that trainings and resources for GPs to diagnose, treat and/or refer psoriatic disease patients were available in most of the countries. In some countries, referral systems were reportedly not fully functional or irrelevant to that healthcare structure. Despite these trainings, there are still issues with misdiagnosis and delayed diagnoses for patients. Current and regularly updated treatment guidelines for psoriasis and psoriatic arthritis are used by all five countries. Clinicians in some countries have country-specific guidelines while others adapt international or foreign guidelines for their specific contexts, with some applicability issues.

There is wide variance in the availability of tools and support for patients' medication adherence across the chosen countries. According to stakeholders, medication support in certain countries is disease-specific and designed to encourage patients' adherence, while in others there is minimal formal support. Evaluations of patient's well-being, in the form of DLQI assessments and checks for mental and physical health are reportedly conducted in the majority of the countries. However, there are still struggles on both the patient and clinician sides to address the mental health aspects of the disease.

The time between when symptoms first appear and diagnosis of psoriatic disease is far too long in all of the chosen countries, which can impact disease progression, morbidity and long-term health in affected individuals. Psoriatic arthritis diagnoses are particularly delayed on average and reportedly misdiagnosed at times, due to lack of information. Access to medicines varies widely by country. Most or all commonly-used treatments are available in all countries for sale, but the barriers to access in some countries include costs (particularly in countries with minimal public subsidies for relevant treatments), regional availability of supplies or specialists to prescribe the treatment, long wait times and treatment hesitancy on the part of the patient. The availability of specialists varies by country, and also within countries. Many stakeholders reported disparities



in access to specialist care between urban and rural areas. There are also some issues with longer wait times, higher costs for, or hesitancy to, mental healthcare services.

Finally, the economic costs of psoriatic disease vary widely by country. Data on system-wide spending were only available for two countries, highlighting a lack of literature assessing the economic burden of psoriatic disease in most of the countries. Thus, the identified evidence mainly focused on the economic impact for people living with the disease. In countries where public healthcare systems with robust subsidies exist, the impact is minimal. In countries with less robust public healthcare systems, the upfront cost for patients can be very high.

Conclusions

The findings of this report lead to the following prioritized recommendations:

- ➔ Pursue reductions in psoriatic disease stigma in the general public, partly through targeted public awareness campaigns
- ➔ Reduce the stigma associated with mental health care from the perspectives of both patients and care providers
- ➔ Promote accessibility and equality of care for those who live in remote areas
- ➔ Reduce patients' cost burden, in part by advancing universal health coverage
- ➔ Reduce waiting times for specialists

Rationale & objectives

Psoriatic Disease

Psoriatic disease (PD) is a chronic autoimmune disease that affects the skin (psoriasis), joints (psoriatic arthritis), and sometimes other organs of the body. Skin psoriasis is typically characterized by scaly, red, and itchy plaques, while psoriatic arthritis consists of joint pain, swelling, and stiffness. The exact cause of PD is not yet fully understood, but it is believed to be a combination of genetic and environmental factors leading to a dysregulated immune response, resulting in signs and symptoms of chronic inflammation that manifest primarily in the skin and joints. Due to the systemic nature of PD, affected individuals often also suffer from comorbidities, such as cardiovascular disease, metabolic syndrome, obesity, inflammatory bowel disease, and psychiatric illness (1-4).

Psoriatic disease has a global prevalence of around 2-3% of the world's population (5), and an estimated prevalence in the Asia-Pacific region ranging from 0.11% (95% CI: 0.04% - 0.30%) in east Asia to 1.58% (95% CI: 0.50% - 5.73%) in Australasia (6). While the prevalence rate in these regions is lower than other parts of the world, the population size is substantial resulting in many affected patients.

“ Due to the systemic nature of PD, affected individuals often also suffer from comorbidities, such as cardiovascular disease, metabolic syndrome, obesity, inflammatory bowel disease and psychiatric illness

Individuals living with PD often experience significant economic and quality-of-life (QoL) burden throughout their lifetimes. A 2017 systematic review of the QoL and economic burden for psoriasis patients across the Asia-Pacific region found that annual direct costs per patient ranged between \$365 - \$2289 (2022 USD) (7). The same study estimated high to very high impairment of QoL in Asian-Pacific countries, as measured by the Dermatology Life Quality Index (DLQI score 6-30). It has also been found that psoriasis patients in the Asia-Pacific region suffer from challenges relating to social life, regular activities, lower productivity, anxiety, stress, and depression (8).

Addressing the needless suffering of people living with psoriatic disease

In 2014, efforts from the international patient community led to the adoption of the Resolution on Psoriasis by the World Health Assembly (WHA 67.9) (10). The Resolution underscores that “too many people in the world suffer needlessly from psoriasis” and mandates the publication of a report on the public health impact of psoriasis.” In 2016, the World Health Organization (WHO) published the Global Report on Psoriasis (3), intended to “empower policy-makers with practical solutions to improve the health care and social inclusion of people living with psoriasis in their populations.” The report compiled a variety of recommendations for different types of stakeholders including governments and policy-makers, health systems and health professionals, and patients’ organizations and civil society.

Western Pacific Region Index Report

The Western Pacific Region (WPR), defined by the WHO, consists of approximately 1.9 billion people across 27 countries. This geography consists of a diverse mix of socioeconomic, cultural, geographic and environmental conditions that are evolving over time and influence how health systems respond to different health challenges (11). As a consequence, the wellbeing of many individuals with psoriatic disease depends on the WPR’s progress towards implementing the recommendations listed in the WHO Global Report on Psoriasis.

The Psoriatic Disease Response Index – Western Pacific Region (“WPR Index Report”) aims to measure health system responsiveness to the recommendations detailed in the WHO Global Report on Psoriasis. Thus, indicators were developed with the goal of measuring progress towards implementing the recommendations listed in the WHO Global Report on Psoriasis. Ten indicators across five categories - public awareness, provider awareness, patient engagement, health systems, and enabling environment – were selected for assessing the progress of psoriatic disease care in the WPR. They were chosen for this report based on relevance for people living with psoriatic disease, the likelihood of identifying data and the ease with which the associated recommendations can be implemented.

“ The WPR Index Report aims to measure health system responsiveness to the recommendations detailed in the WHO Global Report on Psoriasis.





This WPR Index Report included a sample of countries including Australia, China, Japan, Philippines and Singapore, based on the presence of a local IFPA member associations and diversity in geography, culture, and economics. The evidence base of this report was collected from a mix of published literature and interviews with local stakeholders. In line with the European Index Report published in 2020 (12), the WPR Index Report includes data and stories from people with psoriasis or psoriasis and psoriatic arthritis.

Western pacific countries included in study



The purpose of the WPR Index Report was to provide a summary of the WPR's progress towards implementing the recommendations listed in the WHO Global Report on Psoriasis and encourage further measures to support patient wellbeing in this region.

10 indicators of interest

-  — Public awareness campaigns
-  — Discrimination and stigmatization
-  — Training for general practitioners
-  — Treatment guidelines
-  — Support for medication adherence
-  — Patient-centric investigation of wellbeing
-  — Time to diagnosis
-  — Access to medicines
-  — Access to specialist
-  — Direct and indirect costs to the economy

Methods

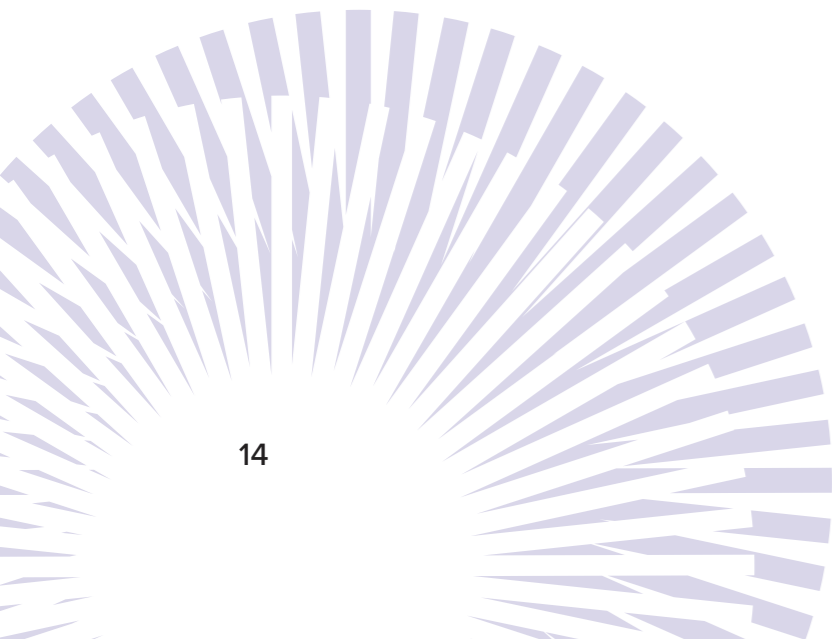
In order to collect data for the index scores, a targeted literature review and a series of stakeholder interviews were conducted. The details including scope and approach for each review method were pre-specified in a study protocol that was followed throughout the course of the work.

The literature review collected records that met the eligibility criteria from bibliographic databases, ad-hoc google searches for grey literature and materials sent in by local IFPA member organizations. Those records were then screened in two steps for relevancy to one or more of the chosen indicators, and then included for extraction. Relevant data for each indicator was then extracted into a grid for the data synthesis process.

In tandem with the literature review, a series of stakeholder interviews were conducted to provide context and a variety of perspectives in the chosen countries. Six interviews were planned in each of the five countries, including the following stakeholders: dermatologists, rheumatologists, academic researchers, general practitioners, nurses and people living with psoriatic disease. The interviews followed a discussion guide, responses were recorded and collected in a grid for the data synthesis process

Index scoring followed a simple scoring approach of 1, 2 or 3, based on a set of pre-defined criteria to represent progress towards the recommendations from the WHO Global Report on Psoriasis.

The methods and scoring criteria are described in more detail in Appendix B.





Public Awareness Campaigns



There is a lack of awareness for psoriatic disease in the general population, which varies between countries (14, 15). Public awareness of a disease – its existence, characteristics, and associated burden – shapes societies’ perceptions of the people living with it. This has direct consequences for the lived experiences in addition to the prioritization of societal resources, availability of government programs, access to care, and more.

Across the WPR (as in other parts of the world), there are ongoing efforts and events organized by local psoriatic disease patient and healthcare organizations to spread awareness to other people living with the disease and care providers, as well as the general public. The largest of these campaigns seek to connect different organizations both within and across borders, to allow for coordinated patient-advocacy efforts. A prominent example is IFPA’s World Psoriasis Day (October 29th), which is promoted in countries around the world, helping to raise public awareness and calls for action to support those living with psoriatic disease.

“Public awareness of a disease – its existence, characteristics, and associated burden – shapes societies’ perceptions of patients”



Country progress



Australia 3

In Australia, healthcare providers and patient organizations, with support from pharmaceutical companies, have annual campaigns associated with specific dates, weeks or months for promoting psoriatic disease awareness. The IFPA member organization, Psoriasis Australia, takes part in the World Psoriasis Day campaign, an international awareness campaign during which different themes related to the burden and care of psoriatic disease are highlighted. People living with the disease, as well as experts and celebrities, are asked to share their knowledge or experience about living with psoriasis.

China 3

A number of awareness campaigns are ongoing in China that are managed by various organizations. The local IFPA member organization Mutual Assistance of Psoriasis Patients hosts a campaign for World Psoriasis Day. Certain clinics and hospitals organize monthly outreach campaigns to the general public and provide seminars online and offline to raise awareness and support for those with psoriatic disease. Clinicians highlighted that there are also other sporadic seminars hosted by healthcare providers.

Japan 3

There are a number of recent and ongoing public awareness campaigns in Japan. Some are sponsored by the pharmaceutical industry, such as the FACT



FASHION campaign (15), to create psoriasis-friendly clothing that raises awareness for the general public. IFPA member organization, Inspire Japan, and a pharmaceutical company recently collaborated with a popular musical artist named Hareyuku Michi to write a song about psoriasis for raising public awareness (16). Inspire Japan also participates in World Psoriasis Day events.

Philippines

1

Numerous public awareness campaigns are being hosted by different psoriasis organizations around the Philippines. The Psoriasis Foundation of the Philippines Inc. and Psoriasis Philippines (PsorPhil) have both developed campaigns tied to World Psoriasis Day, using the “PsorWalk” and “Hug Me” events (17). A photograph campaign was organized by PsorPhil in collaboration with the Philippine Dermatological Society, Philippine Rheumatological Society, and a pharmaceutical company in the private sector in order to promote public awareness. There are also social media outreach campaigns, TV interviews with clinicians, interviews with celebrities who have psoriatic disease and patient groups that organize events together.

“ Before, when you explain that it’s psoriasis, people would often say ‘what’s that?’ Now, when you say psoriasis, they may understand, and they know that it’s not contagious.

Person living with psoriatic disease, Philippines

Singapore

2

In Singapore, associations, care providers and industry sponsors organize public awareness campaigns. The Psoriasis Association of Singapore recently collaborated with the pharmaceutical company Novartis to organize a social experiment highlighting the social stigma faced by affected individuals (18). Some clinics organize ad-hoc awareness campaigns, handing out flyers and promoting awareness on social media. The Psoriasis Association of Singapore also organizes events annually around World Psoriasis Day.



Recommendations for best practice from the WHO Global Report on Psoriasis

- 1 Patients’ organizations must continue advocating for the rights of individuals suffering from psoriasis. They should be involved in raising awareness of psoriasis among the population in collaboration with governments and policy-makers.
- 2 Society, not psoriasis, causes the exclusion and discrimination faced by people with this disease. This situation can change through campaigns to raise awareness of psoriasis among the population and by condemning discrimination of patients who suffer from it.
- 3 Patients’ organizations have a responsibility to encourage the formation of patients’ associations where currently none exists.

Source: WHO 2016 Global report on psoriasis (3)



Discrimination & Stigmatization



Stigmatization refers to negative attitudes towards someone living with psoriatic disease, while discrimination describes an unfair action taken against that person, potentially stemming from stigma. Both have onerous consequences for people subjected to them. There are many people with psoriatic disease who experience stigmatization or discrimination in some form due to their disease. For those with skin symptoms of psoriatic disease, this is usually derived from the characteristic skin lesions, while those with joint symptoms may present with joint deformities. People who don't know enough about psoriatic disease might see the visible manifestations of the disease and express negative feelings or concern, sometimes assuming it is contagious. This can lead to situations where affected individuals have a harder time getting or retaining work, particularly in customer service, as well as difficulties in social or romantic contexts (19, 20).

It is important to recognize the psychological and socioeconomic burden that comes from stigmatization of psoriatic disease. Raising the general public's awareness about psoriatic disease through education and experience-sharing can help to minimize discrimination against affected individuals.

“ There are many people with psoriatic disease who experience stigmatization or discrimination in some form due to their disease ”



Country progress



Australia

2

Stigma towards people living with psoriatic disease is present in Australia. A survey from 2013 found that 73% of people with the disease reported hiding their condition from colleagues, friends, and even family members (21). Experiences differ based on their personal circumstances and visibility of their lesions; some affected individuals experience little to no stigmatization, while others struggle with psychological burden. For some, the stigma may also contribute to difficulties receiving care, including reported instances where affected individuals have avoided consultation with a healthcare provider who could have provided them with treatment to manage their disease earlier (22). However, no systemic discrimination is considered to be present, and those interviewed felt that stigmatic experiences were circumstantial and there was little discrimination.

China

1

There is limited evidence around stigmatization and discrimination of people living with psoriatic disease in China. A study on the impact on quality of life in 22 Chinese individuals living with the disease explained that participants were

“ Some people are afraid of psoriasis because of how the lesions look. It may be difficult for them to find a boyfriend or girlfriend, or difficult to find a job... But it's getting better. ”

Person living with psoriatic disease, China



likely to avoid public places, avoid meeting friends and worry about how others react to their visible symptoms, suggesting that the stigma is common (23). This causes significant mental and economic distress for affected individuals (24). Based on the interviews conducted, some individuals with psoriatic disease can experience difficulties finding a romantic partner or a getting job due to visible disease. All interviewees agreed that the stigma has diminished over time due to an increase in public awareness, but that significant improvement is still needed.

Japan

2

Based on interviews, some people in Japan experience stigmatization because of their visible symptoms. This is complicated by the fact that spoken word for psoriasis in Japan (“Kansen”) sounds the same as the word for infection. As a result, some people living with psoriatic disease feel the need to hide their symptoms with clothing or hairstyles. No interviewees reported significant difficulties with finding a partner or getting a job, but some have anecdotally reported instances where they were made uncomfortable by strangers in public staring at them or asking about their lesions.

Philippines

3

Numerous public awareness campaigns are being hosted by different psoriasis organizations around the Philippines. The Psoriasis Foundation of the Philippines Inc. and Psoriasis Philippines (PsorPhil) have both developed campaigns tied to World Psoriasis Day, using the “PsorWalk” and “Hug Me” events. A photograph campaign was organized by PsorPhil in collaboration with the Philippine Dermatological Society, Philippine Rheumatological Society, and Novartis in order to promote public awareness. There are also social media outreach campaigns, TV interviews with clinicians, interviews with celebrities who have psoriatic disease and patient groups that organize events together.

Singapore

3

In Singapore, associations, care providers and industry sponsors organize public awareness campaigns. The Psoriasis Association of Singapore recently collaborated with the pharmaceutical company Novartis to organize a social experiment highlighting the social stigma faced by affected individuals (17). Some clinics organize ad-hoc awareness campaigns, handing out flyers and promoting awareness on social media. The Psoriasis Association of Singapore also organizes events annually around World Psoriasis Day.



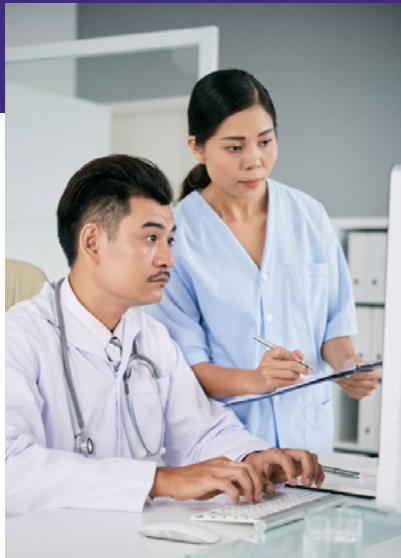
Recommendations for best practice from the WHO Global Report on Psoriasis

- 1 Governments have a key role in reducing stigma and discrimination.
- 2 Active steps by Member States include anti-discrimination legislation and enforcement of existing legislation.
- 3 Patients’ organizations have a key role in providing support to people suffering from psoriasis and in creating networks to foster mutual support and exchange of experiences.
- 4 Patients’ organizations and civil society have a key role in holding governments and policy-makers to account on global commitments, and in fighting discrimination of people with psoriasis.

Source: WHO 2016 Global report on psoriasis (3)



Training for general practitioners



In many countries, when people first present with symptoms of psoriatic disease, they often go to a primary care facility to consult a GP about those symptoms. GPs therefore often form the front-line of psoriatic disease care provision and in those settings are integral to ensuring a timely diagnosis, helping to control milder forms of the disease, and referring patients with moderate to severe symptoms to the appropriate specialists, where available.

However, different healthcare systems have different access to psoriatic disease-related resources and training for GPs (26-28), resulting in varying degrees of knowledge about psoriatic disease. Where there is a lack of knowledge, patients can be mis-diagnosed, receive ineffective therapy, remain on an ineffective therapy for too long resulting, and experience a failure to recognize the link between psoriatic disease and comorbidities. There is a call in the international community for increased awareness about psoriatic disease at the primary care level (3, 29).

“ Different health-care systems have different access to psoriatic disease-related resources and training for GPs



Country progress



Australia

3

In Australia, resources and trainings related to psoriatic disease care are available for GPs through multiple channels. Interviewees explained that training programs for GPs are provided by the Royal Australian College of General Practitioners (RACGP). Further trainings for healthcare professionals in various roles are provided by the Australasian College of Dermatologists, the Australian Rheumatology Association (ARA), and the Skin Health Institute. These trainings contain elements of disease identification and management, with content that is presented in person and/or available online. In some cases, a small fee is associated with certain resources.

China

2

In China, the healthcare system is structured so that patients with specific symptoms are able to seek care from specialists without a referral, reducing the importance of providing diagnostic and management training for GPs. However, some affected individuals may still present to GPs with their symptoms (particularly in the case of psoriatic arthritis symptoms). In addition, there are two tiers of skin specialists with variation in qualifications, clinic quality, and treatment availability: skin doctors operate in smaller municipal facilities while dermatology specialists can be visited in hospitals. It is therefore important that GPs have some knowledge and that skin doctors in local clinics have the training and resources needed for either treating or referring patients that are beyond their capabilities to treat.



Resources for training GPs are reportedly limited, especially in rural areas. According to interviewees, patients with skin problems will usually make an appointment with the skin doctor (differentiated from a hospital-based dermatology specialist) at a given clinic (if available), who will refer more difficult cases to dermatology specialist at larger hospitals. General practitioners can diagnose and treat psoriatic disease, but it is not standard practice, and the referral system was described as incomplete. A recently published study that assessed the practices of family doctors in China described that the two-way referral system implemented to further optimize care of patients as imperfect, further citing poor referral work on the part of clinicians and difficulties with coordination (30).

“ For those living in Beijing, there’s no problem seeking professional help, but for those living in remote areas it’s a very big help to provide trainings for GPs

Researcher, China

Japan

In the Japanese healthcare system, patients access specialist care from dermatologists and rheumatologists directly without a referral or visiting a GP. If GPs are interested, information is available which focuses on treatments and referrals. However, due to the structure of the Japanese healthcare system where patients typically visit a specialist directly, a score for psoriatic disease training to GPs in Japan was determined to be not relevant.

Philippines

Based on the interviews conducted and records collected, there are annual programs hosted by different institutions, such as the Philippine Dermatological Society and PsorPhil, to educate non-specialists in the Philippines. There are also Continuing Medical Education activities for GPs and family medicine providers. These programs teach GPs about diagnosis, clinical presentation, differential diagnosis, severity, basic treatments, and how to refer patients for moderate and severe cases. These programs are available even though patients can seek care from specialists without a referral.



Singapore

3

Psoriatic disease training and resources are available for GPs in Singapore. Certain hospitals provide general dermatological training for recognizing and treating mild psoriasis in primary care, as well as when to refer to a specialist. An interviewed clinician indicated that the National Skin Center has provided courses for GPs on diagnostics and referrals, and some clinicians in rheumatology have conducted training sessions for primary healthcare providers to understand how to recognize and refer patients for psoriatic arthritis.

Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** Specialist dermatologists are unavailable for the majority of people living with psoriasis, especially in low- and middle-income countries. The umbrella organizations of health-care providers should take the initiative to conduct education and training for physicians and other health-care providers such as nurses and community health workers.
- 2** Governments and nongovernmental organizations should provide education on common chronic skin conditions to health-care professionals, including undergraduate medical and nursing curricula and in service training for physicians in primary care. There is a great need to raise awareness and knowledge about psoriasis among general practitioners to increase early diagnosis and prevent disability.

>>



3 All health professionals, especially clinicians working in primary health care, should be aware of psoriasis, its management and its co-morbidities. Health care professionals' associations should provide training, for example, via the Internet for physicians from low- and middle-income countries, regarding prompt diagnosis and effective treatment of psoriasis. Patients with psoriasis need access to primary health care that responds to their individual needs and coordinates with any additional specialist care.

4 The primary care provider, based on consultation with the patient, would seamlessly coordinate the inputs from various specialists, including dermatologists, rheumatologists, cardiologists and psychologists. Furthermore, if a dermatologist is not available, a general practitioner should monitor the progress of treatment, and in the case of relapse refer the patient to the appropriate specialists.”
The primary care provider, based on consultation with the patient, would seamlessly coordinate the inputs from various specialists, including dermatologists, rheumatologists, cardiologists and psychologists. Furthermore, if a dermatologist is not available, a general practitioner should monitor the progress of treatment, and in the case of relapse refer the patient to the appropriate specialists.

Source: WHO 2016 Global report on psoriasis (3)





Treatment Guidelines



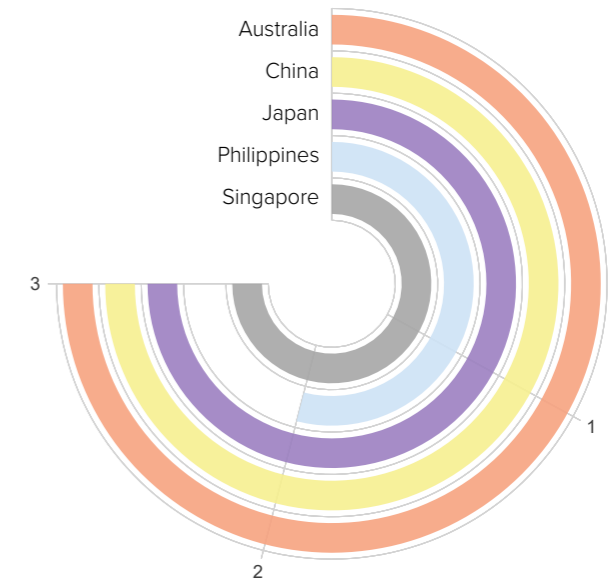
Clinical guidelines for GPs and specialists are a necessary resource for ensuring timely diagnosis of psoriatic disease, helping patients receive the right treatments to meet their needs, and spreading knowledge about the multi-faceted nature of the disease so that care providers can recognize the links to comorbidities. Unfortunately, even in countries that have guidelines for psoriatic disease, previous literature has shown that there can be poor uptake of those guidelines in some cases (29).

“ Previous evidence has indicated that when guidelines are implemented in clinical practice by care providers, the quality of care increases. ”

It's therefore important that state or regional institutions responsible for clinical guidelines develop, adapt and/or promote the existence of psoriatic disease guidelines to healthcare professionals who have contact with psoriatic disease patients to improve care practices. Previous evidence has indicated that when guidelines are implemented in clinical practice by care providers, the quality of care increases (31, 32).



Country progress



Australia

3

There are current treatment guidelines used for both psoriasis and psoriatic arthritis in Australia, which are updated regularly, authored by the Australian College of Dermatologists (33-35). However, as no official, Australia-specific guidelines have yet been developed for psoriatic arthritis, the internationally-used GRAPPA guidelines are in use (36, 37). Treatment decisions are made according to disease severity, location, the consideration of comorbidities. Interviews with specialists indicate that for the most part, these guidelines meet the needs of healthcare professionals in Australia. However, there are calls for more flexibility regarding treatment decisions, and the GRAPPA guidelines might recommend certain treatments that might not be easily available in Australia. The guidelines for both psoriasis and psoriatic arthritis are in the process of being updated, which allows for improvement of clinical practice as the treatment landscape changes.

China

3

In China, there are current and recently-updated treatment guidelines for both psoriasis and psoriatic arthritis (38-41). Both international guidelines and China-specific guidelines are implemented in clinical practice (40). The guidelines base treatment decisions on severity (e.g., PASI score), location and comorbidities. Interviews with clinicians suggest that the guidelines meet the needs of healthcare professionals.



Japan

3

Current, regularly-updated guidelines for psoriasis and psoriatic arthritis are used in Japan. The Japanese guidelines for psoriatic arthritis were recently published in 2019 (42). There are no Japan-specific guidelines for psoriasis that have been published yet; instead, other prominent guidelines (GRAPPA, American, British, German) (36, 37, 43-45) are used and adapted for the Japanese context.

The implemented guidelines make treatment decisions based on severity, location and consider comorbidities. Doctors have some discretion to choose treatments for patients based on context. Clinicians feel that these guidelines mostly meet the needs of healthcare professionals in Japan, but also look forward to the publishing of Japan-specific skin psoriasis guidelines.

“ Usually in Japan, employees get an annual medical check-up through their company. Doctors sometimes ask them to bring the results of the check-up as part of the comorbidity assessment.

Nurse, Japan

Philippines

2

There are no locally-authored treatment guidelines published in the Philippines. Instead, clinicians adopt and adapt guidelines from NICE in the UK, Malaysia, the American Academy of Dermatology, EULAR, GRAPPA and others (36, 37, 43, 45-47). However, the adopted guidelines do not fully apply because of differences in resource availability and healthcare structure, so clinicians must use their discretion about which elements to adopt from external guidelines to match the needs of patients and medication availability in the Philippines. Using the adopted elements, clinicians make treatment decisions based on severity and location, and consider comorbidities as well.

Currently, clinicians and patient organizations are trying to advocate to the government to include biologics in the formulary. Part of this process requires the development of Philippines-specific guidelines for psoriasis, which would include the importance of this treatment option for moderate to severe patients.

Singapore

3

Recent clinical guidelines for primary care (48) and psoriatic arthritis were recently published (49, 50). According to interviews, there are also clinical guide-



lines for psoriasis that are used by specialists. Reportedly, these guidelines implement treatment decisions according to severity, location and consider comorbidities. Healthcare professionals in Singapore feel that these guidelines generally meet their needs, with some updates needed regarding the latest treatments available.

Recommendations for best practice from the WHO Global Report on Psoriasis

- 1 There is evidence that when healthcare providers are aware of guidelines and implement them in daily practice, the quality of care for psoriasis patients is increased.
- 2 Guidelines on the treatment of psoriasis are required, including clinical protocols that can be implemented realistically in resource-poor primary care settings.
- 3 There is a great need to develop guidelines regarding the diagnosis of psoriasis and its treatment. Furthermore, certain standards relating to medical care such as adequate assessment of progress of therapy, using uniform tools to assess the severity of the disease and patient QoL should be implemented. Doctors should establish objectives of care and plan therapy in collaboration with their patients.

Source: WHO 2016 Global report on psoriasis (3)



Support for medication adherence



Patients' adherence to their prescribed medication is integral to ensuring treatment effectiveness. As psoriatic disease is a chronic condition, it is inevitable that some patients may discontinue their treatment for one reason or another. Previous studies have shown that treatment adherence is generally low in people with psoriatic disease (51-53). Some common reasons cited for discontinuation can include loss of efficacy, affordability of the treatment, worries about side effects, lack of information about the treatment, and more.

To increase treatment adherence, it is integral that patients receive disease-specific tools and support.

“As psoriatic disease is a chronic condition, it is inevitable that some patients may discontinue their treatment for one reason or another.”



Country progress



Australia 3

There are multiple forms of support for medication adherence in Australia, based on both the identified records and those interviewed. The national prescriber service currently has an app (MedicineWise) to promote medication adherence in general. Certain pharmacy groups also have apps to help patients keep track of their dosing and refills. The pharmaceutical industry has also set up services through nurses and mobile texting, to remind patients about treatments, which also serves as a portal for receiving feedback for those companies. In addition, some psoriatic disease associations provide treatment-specific support to people living with psoriatic disease in the form of information pamphlets.

China 1

Recent studies have reported low treatment adherence (54) and low doctors-visit adherence (55), despite reported improvements in patient contact by interviewees, such as the introduction of a mobile phone app for clinicians contact patients. Support for medication adherence in China seems to be inconsistent, dependent on clinicians' willingness to engage with patients, and current efforts have had mixed results. One complicating factor for affected individuals in China is the competition between Western and Chinese medicines. As psoriatic disease is a chronic disease, patients may lose confidence in their current treatment (40), causing some to turn to Chinese medicine.



There are some ongoing efforts by healthcare providers to increase adherence. There is an app for dermatologists that helps to track patients and send requests for them to return for a visit and/or treatment, although it is not known

“ In China there is Western medicine and traditional Chinese medicine. Some patients turn back to traditional Chinese medicine because a lot of patients think that western medicine won’t help them to eradicate the disease, and some are afraid of experiencing strong side effects.

GP / Skin doctor, China

to what extent this app is used. Nurses in certain clinics are involved in social media groups (WeChat, WhatsApp) for patients to provide treatment-specific guidance. The situation is improving, but a more organized effort to educate patients is needed in order to see improvements in medication adherence.

Japan

3

Clinicians and pharmaceutical companies both provide tools and support for medication adherence in Japan. Based on interviews and collected literature, patients receive medication-specific pamphlets with instructions on how to take the treatments and schedule books for when to return for treatment, which are developed by clinicians and/or clinics. Pharmaceutical companies have special programs to connect with people living with psoriatic disease, including tools like an instructional CD (compact disk), describing daily life with treatments and providing contact information for any issues.

Philippines

1

Minimal published evidence was identified regarding support for medication adherence in the Philippines. According to interviewees, the only forms of support identified for patients to maintain their medication adherence were voluntarily provided by clinicians from the patients’ clinics. Treating physicians often describe the importance of adhering to the dose and timing of patients’ treatments. Doctors and other care providers will often develop a relationship with the patient to encourage their adherence, but no other treatment-specific tools are reportedly implemented in this support.



Singapore

1

Based on the collected information, tools and support for medication adherence in Singapore are currently lacking. There is some treatment-specific information provided by clinicians and more general support provided by pharmacists, as well as information printed by pharmaceutical companies. However, interviewees believe that adherence is relatively low. A recent consensus statement by a working group of dermatologists in Asian countries concluded that increasing patients’ knowledge and participation in decision making through the use of support services, booklets, education programs would improve adherence and response rates (53).

Recommendations for best practice from the WHO Global Report on Psoriasis

- 1 Low adherence is partly due to insufficient communication regarding instructions on how to use the drug, misperception of possible adverse events and mistaken expectations about the speed and degree of improvement.
- 2 Clinicians must inform patients about the possible consequences of the disease and collaborate with them to identify barriers to adherence and help address these barriers to achieve optimal management.

Source: WHO 2016 Global report on psoriasis (3)



Patient-centric investigation of wellbeing



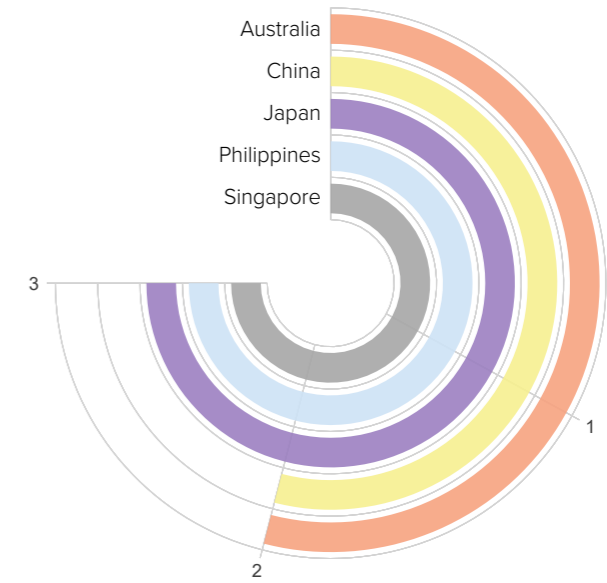
Quality of life is the ultimate health outcome, and the one which ultimately matters most to patients themselves. In addition, impact to QoL is not disease-specific, allowing researchers and policy makers to compare QoL impact across diseases, in order to contextualize and allocate resources effectively. There are many elements in a patient's care that impact their quality of life. To ensure that patients' treatment is tailored to their needs and preferences, clinicians should conduct a thorough investigation of

their wellbeing, using pragmatic and effective methods to assess both physical and mental wellness. Modern, international guidelines recommend that patients are screened for both somatic and psychological comorbidities commonly associated with psoriatic disease, and that patient-reported outcome assessments, such as the DLQI, are conducted.

“ To ensure that patients' treatment is tailored to their needs and preferences, clinicians should conduct a thorough investigation of their wellbeing, using pragmatic and effective methods to assess both physical and mental wellness. ”



Country progress



Australia

2

In Australia, the physical wellbeing of patients is regularly assessed. According to literature and interview sources, PRO measures are used in clinical practice, including the DLQI. Patients are asked about their well-being every few months during follow-up visits, and possibly more often depending on which treatment the patient is prescribed. In addition, patients are typically screened for key somatic comorbidities (arthritis, metabolic syndrome, cardiovascular disease), in order to identify any issues as soon as possible.

Guidelines used in Australia recommend screening for mental health conditions. However, it is reportedly inconsistent how often patients are asked about their mental health, and it is not uncommon that this does not occur at all, according to interviews. It is clear that the associations between psoriatic disease and mental health are understood by clinicians, but the amount of time available to clinicians for patient consultations is limited due to healthcare resource constraints, which appears to sometimes hinder this type of psychological screening in favor of other focuses. As mental health is an important aspect of psoriatic disease patients' wellbeing, there is progress to be made in this aspect of holistic assessment of health.



China

2

According to interviews, Chinese patients' physical wellbeing is regularly assessed in the clinic. Use of DLQI is recommended in the Chinese guidelines, and the questionnaire is reported to be used in clinical practice in some clinics. Both dermatologists and rheumatologists will regularly screen for somatic comorbidities (e.g., hypertension, diabetes, liver function), particularly at teaching hospitals in larger cities, but even in more rural areas.

Chinese guidelines also recommend that clinicians assess the mental health of their patients. However, reports of mental health assessment in clinical practice are rarer. Some clinicians suggest that the high volume of patients, coupled with their limited numbers, reduces the amount of time clinicians have with the patient and hinders their ability to assess patients' mental health. Also, according to Chinese clinicians, the stigma associated with mental illness in China means that patients are often more reluctant to discuss their mental health with their care provider, making this aspect more difficult to assess. Furthermore, according to the interviewed clinicians, psychiatric and psychological care is not currently reimbursed, creating a cost hurdle for patients.

Japan

3

Assessments of psoriatic disease patients' physical wellbeing are reportedly always made during visits to Japanese care providers. The DLQI is commonly used in clinics for collecting patient-reported outcomes. However, some clinicians have raised concerns about the time it takes to administer the DLQI. Most employers in Japan provide annual check-ups for their employees that cover a wide array of disease areas. psoriatic disease specialists ask their patients to bring the results of these check-ups with them as a method of screening for somatic comorbidities. Mental health is recommended in the current guidelines and assessed in some clinics but may vary by provider and the willingness of patients to address their mental health.

Philippines

3

Patients' physical and mental wellbeing are both assessed by clinicians in the Philippines. According to interviews, clinicians frequently ask how patients are feeling physically at check-ups, and reportedly assess how they are feeling mentally as well. The current guidelines used in the Philippines recommend assessment of patients' mental health. Patient associations like PsorPhil may assist people living with psoriatic disease with seeking mental health services,



depending on how they feel. A recent article assessed patient preferences on the types of treatment that minimize their burden, providing guidance to dermatologists on what patients prefer (56). They determined that 'duration of benefit' was the most important outcome attribute, and that 'frequency of treatment' was the most important process attribute for a given treatment. PRO assessments like the DLQI are reportedly used in clinical practice as well.

Singapore

3

In Singaporean clinics, patients' physical and mental wellbeing are reportedly regularly assessed. Clinicians screen for somatic comorbidities like CVD, depression, metabolic syndrome, and the doctor will refer the patient as needed

“It would be difficult for a patient to voluntarily bring up psychological or psychiatric symptoms if the doctor does not ask. And even after the symptoms are discovered, there is a long waiting time for care.”

Dermatologist, Singapore

to a specialist. The DLQI is used in some clinics for routine check-ups, in order to assist in clinical consultations and decision-making. Patients will often begin with monthly visits, which will reduce to once every 2 to 3 months, changing as needed during the course of care. Current care guidelines recognize the importance of addressing stress and psychological issues. As there is a social stigma surrounding mental health, some patients or doctors have expressed that it

can feel difficult to address the mental health aspects of the patient's condition, though clinicians generally recognize the link to psoriatic disease and reportedly make mental health assessments.



Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** Optimum treatment of psoriasis, and its comorbidities, require shifting to a model of people-centered and integrated health services. All people with psoriasis should have access to health services that are provided in a way that responds to their preferences, are coordinated around their needs and are safe, effective, timely, efficient and of an acceptable quality.
- 2** For research outcomes that are more reliable, the currently used clinical outcome parameters, including PASI and patient-reported outcomes such as DLQI, need to be improved.
- 3** Health services research needs to be better used in identifying specific needs of health care, unmet patient needs and barriers of guideline-compliant treatment. Health services research should monitor and provide feedback on the actions taken to improve quality of care and investigate efficiency of care. Psoriasis care could thus become a model for the management of other chronic (skin) diseases.

Source: WHO 2016 Global report on psoriasis (3)





Time to diagnosis

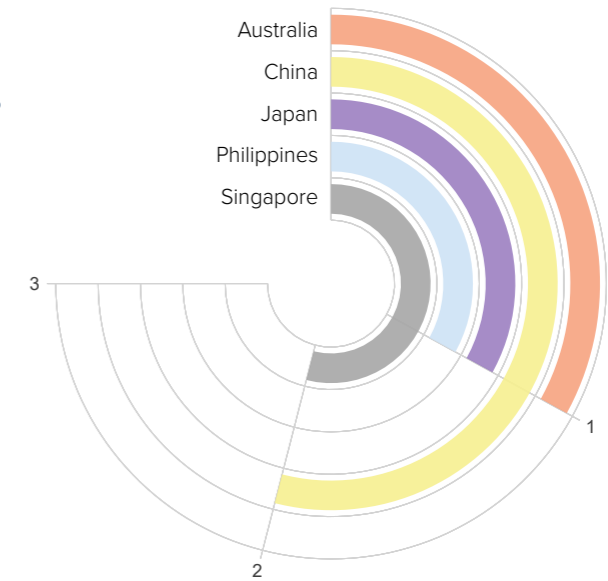


The time it takes for people to receive a psoriasis or psoriatic arthritis diagnosis can greatly impact disease severity, and delays can ultimately lead to a worsening of long-term outcomes (57, 58). The period between when a person develops the first symptoms and when they are diagnosed by a clinician can vary widely by healthcare system, due to a variety of factors: healthcare-provider awareness and ability to refer patients, the referral process, the availability of specialists who can diagnose the psoriatic disease, patients' willingness or ability to seek care, the severity of symptoms and speed of onset, and others. It is important for health systems to reduce diagnostic delays to improve patient outcomes and minimize disease burden.

“The period between when a person develops the first symptoms and when they are diagnosed by a clinician can vary widely by healthcare system”



Country progress



Australia

1

Time to diagnosis in Australia is impacted in part by structural issues related to the referral system, where GPs act in part as a filter to secondary care. As patients are not able to book appointments with specialists directly, a first consultation with a GP about their symptoms is required. GPs therefore should have knowledge about both skin and joint symptoms of psoriatic disease in order to refer patients to the right specialist. There are also limited specialists available, particularly in rural areas, resulting in a referral process that can take months to years.

Based on information from interviews, some GPs are able to diagnose psoriasis cases, but there are issues with misdiagnosis. The referral process is often longer for psoriatic arthritis due to some clinicians' lack of knowledge of the link between psoriasis and psoriatic arthritis. For some rheumatology practices in Australia, a tiered system of severity is therefore applied in order to assess patients with the greatest need due to the limited availability of specialists. Once an individual has seen a specialist, the diagnosis is typically set quickly, but the long wait times are an issue for both clinicians and especially patients. The estimates in interviews ranged between a few months to 5 years for psoriasis and as much as 6 years for a psoriatic arthritis diagnosis.

China

2

Limited published evidence was available for diagnostic timeframes in China. A recent study explored the challenges faced by rheumatologists in diagnosing



psoriatic arthritis in China (59), but did not provide details about how these challenges impact time to diagnosis. Another large-scale study of psoriasis patients in China estimated that only 1.3% of patients had received a psoriatic arthritis diagnosis, while joint damage was observed in 6.2% of the sample (60), suggesting that psoriatic arthritis is underdiagnosed.

Based on all the interviews conducted with Chinese stakeholders, the diagnostic process is relatively rapid (a matter of weeks) for psoriasis and varied from 1 month to as much as two years for psoriatic arthritis. These shorter times may in part be due to the ability for patients to seek help from specialists and skin doctors without a referral from a GP, but it is likely that some of the estimates received did not consider the time from symptom onset to when people seek care. Therefore, it is not clear how long it takes for individuals to present to healthcare with their symptoms. A Chinese news article from 2021 summarized findings from an epidemiological survey, which reported that only 20% of people presenting skin symptoms of psoriatic disease choose to go to the hospital for treatment, citing a lack of understanding about the disease in the general population as the reason (61). This statistic implies that there are many people who may not present to a care provider that could diagnose the disease.

Japan

1

Estimates of time to diagnosis in Japanese patients vary. Those given by interviewees ranged from 1 to 60 months for psoriasis and 12-60 months for psoriatic arthritis. Internal data retrieved by the Japan Psoriasis Association estimated the time to diagnosis to be 33.6 months for psoriasis and 41.2 months for psoriatic arthritis. Published estimates for diagnostic delay in psoriatic arthritis

“ I didn’t know that psoriasis had symptoms of arthritis. So I didn’t go to see a doctor for a while. When my pain got worse, I went to see an orthopaedist. But he didn’t know so much about PsA, so my diagnosis was delayed, and my toes were deformed.

Person living with psoriatic disease, Japan

ranged between 12 months and 70 months (62, 63). These considerable wait times can partly be explained by a lack of knowledge on both the patient and provider sides about the linkages between psoriasis and arthritic symptoms, which is unfortunate given the fact that patients can book appointments with specialists without a referral.



Philippines

1

In the Philippines, the estimates given by interviewees for time to diagnosis varied, but were generally long, in spite of patients’ ability to seek care from specialists directly. For a psoriasis diagnosis, estimates ranged from 6 to 24 months. For psoriatic arthritis, the estimates ranged from 18 to 60 months. Clinicians find these estimates unacceptable and recognize that early diagnosis and treatment is important to limit patient morbidity. Some of the reported reasons for the delays include patients inability to visit healthcare professionals (due to cost concerns or stigma) and patients attempting to self-medicate with over-the-counter drugs. Other issues include the limited numbers of specialists in certain regions and misdiagnosis of joint pain.

Singapore

2

Estimates for the time it takes for a Singaporean individual with symptoms to receive a psoriasis diagnosis ranged from 1-12 months according to those interviewed. The diagnostic delay for people with psoriatic arthritis symptoms was considered to be somewhat longer, with responses ranging from 3-24 months. No published estimates were identified in the literature review. The current time to diagnosis time frames in Singapore were viewed by the interviewed clinicians as acceptable but with room for improvement. Specialist care is accessed through a referral system, but patients could also receive a diagnosis from a GP.



Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** It is essential that psoriasis is diagnosed as early as possible. Early diagnosis and appropriate therapy give the best chance to prevent patients from unnecessary suffering, uncontrolled disease, irreversible deformities of the joints and disability.
- 2** Patients with psoriasis should be screened for the presence of early joint symptoms and if diagnosed with psoriatic arthritis should start appropriate treatment to prevent disease progression and joint destruction.
- 3** The development of solutions such as tele-dermatology also can contribute to faster dermatological diagnosis in countries where there is a lack of skin care specialists.
- 4** There is a great need to raise awareness and knowledge about psoriasis among general practitioners to increase early diagnosis and prevent disability.

Source: WHO 2016 Global report on psoriasis (3)





Access to medicines



As psoriatic disease is a chronic disease, treatment can be expensive over a person's lifetime, particularly for those with moderate to severe symptoms. In settings where people bear sizeable healthcare costs, household budgets are often greatly impacted (64) and they are more likely to avoid care, resulting in an uncontrolled disease and worse outcomes (65). Additionally, if symptoms worsen, people with psoriatic disease are more likely to exhibit lost productivity or absenteeism, thus further impacting their families and access to care (66). The WHO global health expenditure atlas estimates that more than half a billion people are pushed into poverty due to medical debt (67). Therefore, it is imperative that the right treatments are affordable for people living with psoriatic disease, regardless of location or socioeconomic status.

The cost of treatment is variable and closely related to the severity of the disease. Mild skin symptoms can typically be managed with inexpensive topical treatments. Some people with moderate to severe symptoms may receive more costly conventional systemic therapies, such as methotrexate,

“ It is imperative that the right treatments are affordable for people living with psoriatic disease, regardless of location or socioeconomic status. ”



or phototherapy, while others are treated with biologics or JAK inhibitors. These biologic and JAK inhibitor treatments are safe and effective but expensive, and can represent a significant cost burden (68-70). Simultaneously, as branded biologic patents begin to expire, it is hoped that the introduction of biosimilars will make treatments accessible to more patients and societies. Costs for treatment fall on societal payers or patients to varying degrees based on the healthcare system. Where patients must bear significant treatment-related costs, there is a high risk of under-treatment resulting in avoidable patient burden.

Other barriers to medication access can include regulatory or payer hurdles. The latter is often related to cost while regulatory differences relate to local assessments of efficacy and safety. A further barrier to access is clinician experience and familiarity with newer treatments, where there may be concerns about tolerability (71), although this sentiment is diminishing over time. Finally, indicator 7, time to diagnosis, also represents a temporal barrier to treatment access.

These barriers manifest in different forms across the globe, resulting in varying access to the optimal treatment for people living with psoriatic disease.

Country progress





Australia

3

In Australia, the vast majority of topical and conventional systemic therapies for treating psoriatic disease are available, along with most biologics (see Table 2 below). Australian healthcare is provided through a hybrid of public and private systems, with the public system funded by the state and the private system

Table 2: Treatments available for Australia

Treatment	Available?	State subsidized?			
Topical therapies					
Vitamin D analogues	x	x			
Corticosteroids (e.g., betamethasone and hydrocortisone)	x	x			
Anthralin / dithranol	x	x			
Topical retinoids	x	x			
Phototherapy					
UV-light therapy	x	x			
Conventional systemic therapies					
Methotrexate	x	x			
Ciclosporin	x	x			
Acitretin	x	x			
Oral small molecules (e.g., apremilast, deucravacitinib)	x	x			
Biologics					
Generic name	Target	Approved for:	Available?	State subsidized?	
Remicade	Infliximab	TNF	PsO & PsA	x	x
Enbrel	Etanercept	TNF	PsO & PsA	x	x
Humira	Adalimumab	TNF	PsO & PsA	x	x
Raptiva	Efalizumab	CD11a	PsO		
Stelara	Ustekinumab	IL-12/23	PsO & PsA	x	x
Cimzia	Certolizumab pegol	TNF	PsA		
Simponi	Golimumab	TNF	PsA		
Cosentyx	Secukinumab	IL-17A	PsO & PsA	x	x
Taltz	Ixekizumab	IL-17A	PsO & PsA	x	x
Xeljanz	Tofacitinib	JAK	PsA		
Siliq / Kyntheum	Brodalumab	IL-17A	PsO		
Tremfya	Guselkumab	IL-23	PsO & PsA	x	x
Illumya	Tildrakizumab	IL-23	PsO	x	x
Skyrizi	Risankizumab	IL-23	PsO & PsA	x	x
Rinvoq	Upadacitinib	JAK	PsA		
Bimzelx	Bimekizumab	IL-17A/17F/17AF	PsO & PsA	x	



funded by a mix of government and private insurers (e.g., private health insurance). Under the public system, patients pay a relatively small copayment for their medicines, meaning that even biologic treatments are relatively affordable for the average person with psoriatic disease.

A stepped approach to medication is used in Australia. However, there are some more structural barriers to treatment access. As discussed in conjunction with indicator 7, wait-times for specialist appointments can impact the speed with which patients have access to treatment. Additionally, in order to qualify for reimbursement by the pharmaceutical benefits scheme, a patient must have failed treatment with two of five conventional systemic therapies and have a sufficiently high PASI score to qualify for biologic eligibility (69).

Some clinicians have expressed concern that these requirements are not flexible enough, meaning that on rare occasions there are patients who would greatly benefit from biologic treatment but don't yet meet the requirements, and therefore need to jump through unnecessary hoops. An anecdotal example in an interview was provided of a patient who had to forgo their conventional systemic therapy in order for their symptoms to worsen sufficiently to qualify for biologic treatment, placing unnecessary burden on the patient. Furthermore, it may result in extra spending for healthcare systems when the patient should be directly prescribed a biologic instead of incrementally progressing through the treatment steps. Discussion amongst specialists about this problem has prompted the Australian College of Dermatologists to consider updating the requirements in the guidelines to be more flexible. However, in the vast majority of cases, access to medicines is considered to be good and clinicians think the system works well.

China

2

Most commonly used treatments for psoriasis are available in China, including many biologics (see Table 3). However, there are some barriers that can delay or prevent access to those treatments. Treatment availability is imbalanced between urban and rural areas and depends on the socioeconomic conditions of the patient. Public subsidy for treatment is different depending on whether the patient lives in a larger city or in the countryside, or if they work full time, impacting the privately-paid costs. In addition, doctors can be hesitant to prescribe certain treatments, and patients can be hesitant to take Western medicines. Patients can have a favorable perception of traditional Chinese medicine, forgoing the evidence-based treatment approach.



Table 3: Treatments available in China

Treatment	Available?	State subsidized?			
Topical therapies					
Vitamin D analogues	x	x			
Corticosteroids (e.g., betamethasone and hydrocortisone)	x	x			
Anthralin / dithranol	x				
Topical retinoids	x	x			
Phototherapy					
UV-light therapy	x	x			
Conventional systemic therapies					
Methotrexate	x	x			
Ciclosporin	x	x			
Acitretin	x	x			
Oral small molecules (e.g., apemilast, deucravacitinib)	x	x			
Biologics					
Generic name	Target	Approved for:	Available?	State subsidized?	
Remicade	Infliximab	TNF	PsO & PsA	x	x
Enbrel	Etanercept	TNF	PsO & PsA	x	x
Humira	Adalimumab	TNF	PsO & PsA	x	x
Raptiva	Efalizumab	CD11a	PsO		
Stelara	Ustekinumab	IL-12/23	PsO & PsA	x	x
Cimzia	Certolizumab pegol	TNF	PsA		
Simponi	Golimumab	TNF	PsA	x	x
Cosentyx	Secukinumab	IL-17A	PsO & PsA	x	x
Taltz	Ixekizumab	IL-17A	PsO & PsA	x	x
Xeljanz	Tofacitinib	JAK	PsA	x	x
Siliq / Kyntheum	Brodalumab	IL-17A	PsO		x
Tremfya	Guselkumab	IL-23	PsO & PsA	x	x
Illumya	Tildrakizumab	IL-23	PsO		
Skyrizi	Risankizumab	IL-23	PsO & PsA		
Rinvoq	Upadacitinib	JAK	PsA	x	x
Bimzelx	Bimekizumab	IL-17A/17F/17AF	PsO & PsA		

Other topical drugs are commonly used for clinical treatment

Medication	Generic name	Target	Approved for:	Available?	State subsidized?
恩博克		IL-8	PsO	x	x
本维莫德			PsO	x	x
他克莫司	钙调磷酸酶抑制剂	Calcineurin inhibitors	PsO	x	x



Other commonly used in clinical treatment drugs (Traditional Chinese medicine)

Medication	Generic name	Target	Approved for:	Available?	State subsidized?
Thunder god vine	Tripterygium wilfordii		PsO & PSA	x	x
Licorice licks	Glycyrrhiza glabra		PsO & PSA	x	x
Kunmingshanhaitang	Tripterygium hypoglaucum hutch		PsO & PSA	x	x

However, many safe and effective treatments are available and a reimbursement system for treatments reduces the burden on the patient. Specialist clinicians also reportedly use a stepped approach to prescribing treatments.

Japan

2

Access to the right medicines depends on a patient's location in Japan; most or all therapies are technically available to patients (see Table 4) but biologics are only prescribed in some clinics with board-certified specialists. Therefore, in more rural areas, it is more difficult for people with moderate or severe psoriatic disease to access the right treatment, and they might continue to receive sub-optimal treatment for too long.

“ I have to go to the university hospital every 3 months to obtain my medications. It takes about 40 minutes by car from my house. I have to take time off work because I can only see the doctor on certain days of the week. In addition, biologics are very expensive, so it's not easy to obtain the medicines. ”

Person with psoriatic disease, Japan

The national insurance system, combined with employer-based insurance, covers most of a typical patient's treatment costs. The amount covered increases for older patients, and there is a ceiling for privately-paid medical costs, determined by income level. Despite this system, there can still be challenges for people with moderate to severe symptoms to manage co-payments for expensive therapies. According to interviews, clinicians use a stepped approach to prescribing medication.



Table 4: Treatments available in Japan

Treatment	Available?	State subsidized?			
Topical therapies					
Vitamin D analogues	x	x			
Corticosteroids (e.g., betamethasone and hydrocortisone)	x	x			
Anthralin / dithranol	x	x			
Topical retinoids	x	x			
Phototherapy					
UV-light therapy	x	x			
Conventional systemic therapies					
Methotrexate	x	x			
Ciclosporin	x	x			
Acitretin	x	x			
Oral small molecules (e.g., apermilast, deucravacitinib)	x	x			
Biologics					
Generic name	Target	Approved for:	Available?	State subsidized?	
Remicade	Infliximab	TNF	PsO & PsA	x	x
Enbrel	Etanercept	TNF	PsO & PsA		
Humira	Adalimumab	TNF	PsO & PsA	x	x
Raptiva	Efalizumab	CD11a	PsO		
Stelara	Ustekinumab	IL-12/23	PsO & PsA	x	x
Cimzia	Certolizumab pegol	TNF	PsA	x	x
Simponi	Golimumab	TNF	PsA		
Cosentyx	Secukinumab	IL-17A	PsO & PsA	x	x
Taltz	Ixekizumab	IL-17A	PsO & PsA	x	x
Xeljanz	Tofacitinib	JAK	PsA		
Siliq / Kyntheum	Brodalumab	IL-17A	PsO	x	x
Tremfya	Guselkumab	IL-23	PsO & PsA	x	x
Illumya	Tildrakizumab	IL-23	PsO	x	x
Skyrizi	Risankizumab	IL-23	PsO & PsA	x	x
Rinvoq	Upadacitinib	JAK	PsA	x	x
Bimzelx	Bimekizumab	IL-17A/17F/17AF	PsO & PsA	x	x



Philippines

1

Most treatments for psoriatic disease are available in the Philippines (see Table 5: Available treatments in the Philippines), and a stepped approach to prescribing medication is reportedly used by clinicians. However there are a number of barriers to treatment access for affected individuals. Certain treatments, particularly for people living with moderate to severe psoriatic disease, are more difficult to get from a provider and distribution perspective in certain parts of the Philippines. As the country is spread over an archipelago, access to care and pharmaceuticals can be more restricted in certain regions.

“A lot of patients need biologic treatment but not a lot will be able to afford it. So that’s why accessibility is difficult for a lot of patients.”

Dermatologist, Philippines

Table 5: Treatments available in Philippines

Treatment	Available?	State subsidized?			
Topical therapies					
Vitamin D analogues	x				
Corticosteroids (e.g., betamethasone and hydrocortisone)	x	x			
Anthralin / dithranol	x				
Topical retinoids	x				
Phototherapy					
UV-light therapy	x	x			
Conventional systemic therapies					
Methotrexate	x				
Ciclosporin	x				
Acitretin					
Oral small molecules (e.g., apermilast, deucravacitinib)	x				
Biologics					
Generic name	Target	Approved for:	Available?	State subsidized?	
Remicade	Infliximab	TNF	PsO & PsA	x	
Enbrel	Etanercept	TNF	PsO & PsA	x	
Humira	Adalimumab	TNF	PsO & PsA	x	
Raptiva	Efalizumab	CD11a	PsO		
Stelara	Ustekinumab	IL-12/23	PsO & PsA	x	



Biologics	Generic name	Target	Approved for:	Available?	State subsidized?
Cimzia	Certolizumab pegol	TNF	PsA		
Simponi	Golimumab	TNF	PsA	X	
Cosentyx	Secukinumab	IL-17A	PsO & PsA	X	
Taltz	Ixekizumab	IL-17A	PsO & PsA	X	
Xeljanz	Tofacitinib	JAK	PsA	X	
Siliq / Kyntheum	Brodalumab	IL-17A	PsO		
Tremfya	Guselkumab	IL-23	PsO & PsA	X	
Illumya	Tildrakizumab	IL-23	PsO		
Skyrizi	Risankizumab	IL-23	PsO & PsA		
Rinvoq	Upadacitinib	JAK	PsA		
Bimzelx	Bimekizumab	IL-17A/17F/17AF	PsO & PsA		

However, the biggest barrier for people living with psoriatic disease to accessing biologic treatments in the Philippines is cost. At the time of writing, biologics are not part of the publicly-subsidized formularies in the Philippines. This means that patients often have to pay out-of-pocket for the most expensive class of psoriatic disease treatments on the market. Therefore, treatment costs can place a great burden on patients, particularly those without the means to afford these treatments. Additionally, there are reportedly some issues with treatment hesitancy from both providers and patients, particularly for biologic treatments, in part due to availability and cost, but also because of a lack of information about the drugs themselves including safety.

Singapore

3

Patients in Singapore have access to almost all common treatments for psoriatic disease (see Table 6). As the country is densely populated, there are minimal issues with regional inequality for access. Clinicians are reported to use a stepped approach in prescribing medication. Certain biologic treatments are not directly sold in the Singaporean market due to its small size. Though certain absent treatments would be better included in the standard formulary, they can still technically be acquired through a third-party distributor but at a higher cost.

Table 6: Treatments available in Singapore

Treatment	Available?	State subsidized?			
Topical therapies					
Vitamin D analogues					
Corticosteroids (e.g., betamethasone and hydrocortisone)					
Anthralin / dithranol					
Topical retinoids					
Phototherapy					
UV-light therapy					
Conventional systemic therapies					
Methotrexate					
Ciclosporin					
Acitretin					
Oral small molecules (e.g., apremilast, deucravacitinib)					
Biologics	Generic name	Target	Approved for:	Available?	State subsidized?
Remicade	Infliximab	TNF	PsO & PsA	X	X
Enbrel	Etanercept	TNF	PsO & PsA	X	X
Humira	Adalimumab	TNF	PsO & PsA	X	X
Raptiva	Efalizumab	CD11a	PsO		
Stelara	Ustekinumab	IL-12/23	PsO & PsA	X	
Cimzia	Certolizumab pegol	TNF	PsA		
Simponi	Golimumab	TNF	PsA	X	X
Cosentyx	Secukinumab	IL-17A	PsO & PsA	X	X
Taltz	Ixekizumab	IL-17A	PsO & PsA	X	X
Xeljanz	Tofacitinib	JAK	PsA	X	X
Siliq / Kyntheum	Brodalumab	IL-17A	PsO		
Tremfya	Guselkumab	IL-23	PsO & PsA	X	
Illumya	Tildrakizumab	IL-23	PsO		
Skyrizi	Risankizumab	IL-23	PsO & PsA	X	
Rinvoq	Upadacitinib	JAK	PsA	X	
Bimzelx	Bimekizumab	IL-17A/17F/17AF	PsO & PsA		

Singapore runs a tiered healthcare system including a socially funded public system and a second tier funded through private insurance. This approach to subsidization means that some patients may have higher cost barriers for medication. Use of the public system means that treatment is subsidized but acquir-



ing a prescription will take longer. The private system is faster and has access to wider range of biologics through imports but is more expensive, limiting the number of patients who can participate in this system. Despite the two-tiered system, most patients can access a suitable treatment, without substantial economic burden. According to interviews, clinicians are comfortable with prescribing biologics, though there can be some hesitancy from patients about receiving stronger medications when their current treatment is insufficient.

Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** Patients suffering from psoriasis should have access to comprehensive, individually adapted treatment. At a minimum, public and private facilities should provide the drugs included on the WHO Model List of Essential Medicines, including systemic therapies.
- 2** For newer biological therapies, more needs to be done to reduce the price of these medicines, if they are to present a sustainable and affordable treatment option for patients with psoriasis. The development of biosimilars may help in this regard.
- 3** Researchers should investigate the etiology of psoriasis and therapies to prevent as well as to manage the symptoms of the disease. It is vital to create low-cost effective treatment options that can be made widely available.
- 4** New treatments need to be affordable, effective and safe in the long term, stable in hot and humid climates and require minimal monitoring.

Source: WHO 2016 Global report on psoriasis (3)





Access to specialist care



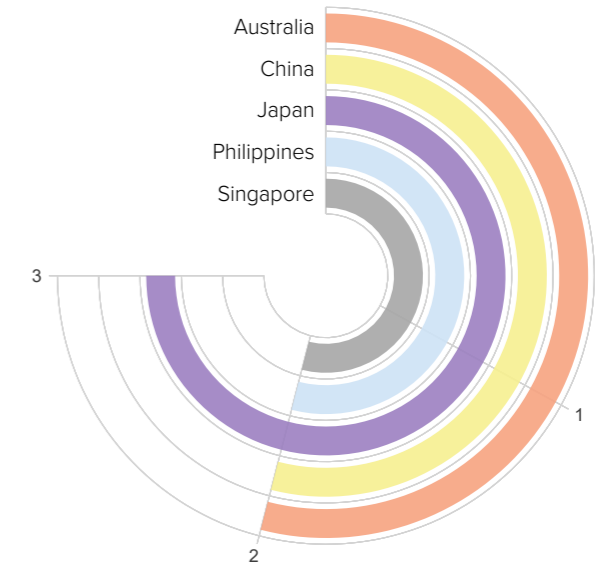
In many systems around the world, skin symptoms of psoriatic disease are often diagnosed and managed by dermatologists, while joint symptoms are often the domain of rheumatologists. Together, these specialists are responsible for managing the physical aspects of psoriatic disease. However, availability of these specialists for people living with psoriatic disease varies across countries, sometimes making it difficult to seek care, get the right diagnosis in a timely fashion and receive the right treatment, which can result in uncontrolled progression of the disease and disability.

As psoriatic disease is multi-faceted, it is also important that care providers recognize and address the associated comorbidities that often impact health outcomes for people living with the disease. One major element of the disease that is often overlooked are dimensions of mental health. People with psoriatic disease are more likely to express symptoms of anxiety, depression, suicidal ideation and even schizophrenia (72, 73). Therefore, access to psychological and psychiatric specialists is also an important facet of holistic psoriatic disease care. In optimal care settings, treating physicians would investigate patients' psychological wellbeing and patients would be comfortable proactively sharing any challenges they experience.

“Availability of these specialists for people living with psoriatic disease varies across countries



Country progress



Australia

2

The availability of specialist care varies between urban and rural parts of Australia. Theoretically, all patients have the ability to see a specialist after a referral, with little to no cost. However, there are many reports of patient frustration with the wait times for accessing specialist care, in part due to high demand and limited number of specialists. There are far fewer rheumatologists than dermatologists, resulting in particular difficulties in making appointments for those living with psoriatic arthritis.

“If you live in a very rural area, then it’s going to be incredibly challenging to see a specialist, because most specialists are localized in the major cities.

Rheumatologist, Australia

For mental health practitioners in the public system, access is very difficult, unless hospitalization is required. Private mental health-care is more accessible, but incurs more cost to the patient, either through out-of-pocket expenses or insurance premiums.

China

2

Specialist care for psoriatic disease is relatively accessible in China, although quality of care is dependent on location. The health system generally allows people to seek care directly from specialist practitioners. However, the higher quality hospital dermatology specialists are relatively difficult to book appoint-



ments with, in comparison to more locally available skin doctors, and may be far away from the patient's home.

Mobile phone apps can allow patients to easily book appointments, and follow-up visits can sometimes be drop-in appointments. Although the literature review did not identify published evidence for how accessible specialists are in different parts of China, there is evidence pointing to shortages in specialists care in other disease areas. A study of healthcare availability in 2015 detailed the large difference in availability of health professionals between urban and rural parts of China (74). In an effort to combat this, the state began an initiative to offer free medical education in exchange for mandatory rural service. A cardiology study from 2022 found that rural hospitals have a shortage of both skilled staff and specialists, resulting in worse outcomes for patients and higher mortality rates (75). It is likely that these same shortages in health professionals are present for psoriatic disease care.

Access to psychological or psychiatric care is also technically accessible for patients, especially in urban areas. Two major issues exist for psoriatic disease patients seeking mental healthcare: patients' willingness to seek care due to social stigma, and the privately paid cost to the patient, which is partially dependent on the location.

Japan

3

Specialist care is very accessible in most parts of Japan. Patients book appointments with specialists directly, without requiring a referral, due to the structure of the healthcare system. More rural parts of Japan may require that the person travels a longer distance for their appointments. There are fewer rheumatologists than dermatologists across the country, but the accessibility is reported to be good even in rheumatology. It may be a bit more difficult for a person to receive care from a board-certified dermatology specialist, who is able to prescribe biologics. Mental health specialists are also easy to access for people in need, but similarly to other countries included in this report, there is a stigma against mental healthcare in Japan, making some people reluctant to seek it. Clinicians who are aware of the psychological components of psoriatic disease will recommend and refer patients who they think should receive mental healthcare. The stigma is reportedly diminishing in recent years, which is a positive development.



Philippines

2

Access to specialist care depends upon a patient's location and economic means in the Philippines. The archipelago can isolate people living in rural areas from easier access to specialist care. But as with other countries in the sample, larger cities provide people with access to more resources, making it relatively easy to get appointments in these locations. Also, individuals can seek care from specialists without a referral, in both the public and private systems.

There are reportedly about 1,000 dermatologists in the Philippines providing care across 110 million people, and even fewer rheumatologists and mental health specialists. Furthermore, the availability of specialist care differs depending on the patient's use of publicly-funded healthcare or private healthcare. For those that can afford private care, appointments with specialists can be made within a few days. The wait times are a bit longer for people who access public care, particularly for psychological or psychiatric care, which is very limited across government hospitals.

“Unfortunately, a lot of patients won't visit healthcare professionals immediately because of the stigma associated with psoriasis. More often than not, patients self-medicate.

Researcher, Philippines

One way that psoriatic disease care providers are reducing the regional differences in access is through the “hub-and-spoke” model, where a main hospital (hub) is supported by a number of satellite clinics (spoke), which offer basic primary care and some urgent care, but refer patients to the main hospital for more advanced cases.

Singapore

2

Rheumatologists, dermatologists and psychiatrists are all available to Singaporean patients via a referral process. As a result, people going through the public healthcare system can experience some waiting times. There are relatively few rheumatology and mental health resources available for individuals, making it more difficult to access those types of care. Additionally, the social stigma against mental healthcare makes it difficult for clinicians to assess when patients need help and also to bring up the subject of mental health with them. As mentioned previously, those that can afford private care have better and quicker access to specialist care.



Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** Lack of a sufficient number of health professionals to some extent also contributes to low public awareness of psoriasis and the exclusion and discrimination of patients diagnosed with the disease.
- 2** In settings with adequate resources, health-care professionals and health systems must strive to provide patients with comprehensive care from multidisciplinary teams of specialists, including dermatologists, rheumatologists, psychologists, psychiatrists, pediatricians, cardiologists and others.
- 3** Associations of medical specialists have a role in seeking consensus on the classification of psoriasis and standardization of the collection of epidemiological data using a unified methodology.

Source: WHO 2016 Global report on psoriasis (3)





Direct and indirect costs to the economy



Two major aspects of the societal burden of psoriatic disease are the direct and indirect costs for care. Direct costs represent the medical and non-medical expenditures patients and other payors pay for care, including treatment, hospital visit fees, transportation to and from the clinic, and more. Indirect costs involve other economic impacts to people with a disease and their close relations, such as the time family members take in order to care for people living with psoriatic disease, or the time affected individuals miss from work due to the disease.

A higher total expenditure by the state is typically an indication that the public system is investing more in the care of people living with psoriatic disease, whereas higher expenditure made by patients is an indication that the economic burden is placed directly on those living with psoriatic disease, which can be detrimental to both their health outcomes and their household budgets.

“ A higher total expenditure by the state is typically an indication that the public system is investing more in the care of people living with psoriatic disease ”



Country progress



Australia 3

In Australia, about 0.17% of GDP in 2020 was spent on psoriasis healthcare (76). The government-subsidized healthcare system reduces out-of-pocket expenses to patients. Those that choose to avoid the long waiting times or bureaucracy of the public system may choose private care, at greater expense to themselves. A study of healthcare expenditure from 2002 before the introduction of biologics, estimated that out-of-pocket expenses for medical products amounted to \$250 AUD in 2002 (equivalent to \$414 AUD or \$275 USD now) (77). The introduction of biologics, though more costly for the public or private payor, only amounts to a small copayment for Australian patients. One interviewee shared that the copay for two vials of ustekinumab costed the equivalent of about \$26 USD.

China 1

No published estimates of overall healthcare expenditure for psoriatic disease were found for China, although studies investigating the economic burden for people living with it were available. Recent estimates of the direct costs associated with psoriatic disease for people with the disease ranged between 20% and 30% of annual income, representing a considerable burden (24, 78). Average annual sick leave for psoriatic disease was 46 days and unemployment due to psoriasis was estimated to be 37% (24). Therefore, despite a public reimbursement system in place, some affected individuals still experience substantial economic burden due to psoriatic disease.



Japan

3

In 2019, about 608 billion JPY (\$4.5 billion USD in 2022) was spent on skin diseases (79), about 3.7% of which was allocated to treating psoriasis (80), representing approximately 0.44% of Japanese GDP in 2019. A study from 2022 compared the difference in annual direct healthcare costs for patients before they took biologics (about \$6,600 USD in 2022) to the direct costs after (about \$14,200 USD in 2022), noting an average increase in costs of 215% (81). However, the average monthly out-of-pocket healthcare expenses for people living with equated to about \$108 USD in 2022 (82), which indicates that the majority of the economic burden is not borne by the individuals.

Philippines

1

No information about total healthcare spending for psoriasis was identified for the Philippines. However, evidence about the economic impact for patients was identified, which found that patients with moderate to severe disease experience high costs for care due to minimal coverage under the government health insurance scheme. According to one interview, only 3 out of 100 people living with psoriatic disease receive subsidized care from the government. An economic evaluation of biologic treatments in the Philippines estimated that the annual per-capita cost for ustekinumab was equivalent to \$47,400 USD 2022 (83). However, biologic treatments are not currently in the government formularies, thus creating high out-of-pocket expenses for patients, especially in the context of the average annual income in 2020 for a person in the Philippines of \$11,600 USD in 2022(84).

“Some patients don’t go to the doctor because they are worried about the costs, and some don’t even have the means for transportation.

Person with psoriatic disease Philippines

A small cross-sectional study of Filipino patients in a tertiary hospital showed that 53% of participants had a monthly household income of \$157 USD in 2022, and 27% were unemployed. For that hospital, the mean 6-month direct cost for psoriasis treatment was \$445 USD, and when reviewing the sources of funding for direct healthcare costs, 77% of funding came from out-of-pocket expenses (85). This suggests that many Filipino patients experience substantial econom-



ic burden by paying high out-of-pocket expenses. Furthermore, individuals living with psoriatic disease who cannot access treatment are more likely to miss work, thus relying on family members for support, and if their symptoms worsen, more expensive treatments will be needed, which compounds the burden.

Singapore

2

The review did not identify any literature calculating healthcare expenditure in Singapore for psoriatic disease overall nor for people living with it. An interviewed clinician explained that an aggregated economic assessment is not easily done in an unbiased manner as estimating the direct costs requires the assessors to manually collect the information from health records. This is not done on a regular basis as it is time-consuming.

The healthcare system in Singapore is a hybrid of government, insurance and private payers. Public subsidies are means-tested, meaning that the poorest patients may be fully subsidized, while patients with more means might need to make a copayment towards their care. The payments are capped, but reportedly don’t always cover biologics. Those who can afford private care pay a premium for better access to care and treatments, as well as shorter waiting times.





Recommendations for best practice from the WHO Global Report on Psoriasis

- 1** Having access to affordable basic health care, having their psoriasis diagnosed and receiving early and appropriate treatment as well as affordable long-term supply of medicines and treatments would significantly reduce the unnecessary burden of psoriasis.
- 2** Optimum therapy also reduces mental health and societal costs of the disease.
- 3** At a minimum, public and private facilities should provide the drugs included on the WHO Model List of Essential Medicines, including systemic therapies. Universal health coverage schemes should cover the costs of these treatments.
- 4** Governments should take cost-effectiveness of treatment options into account when developing national guidelines.
- 5** The most important step is to implement global commitments to achieve universal health coverage.

Source: WHO 2016 Global report on psoriasis (3)

Limitations

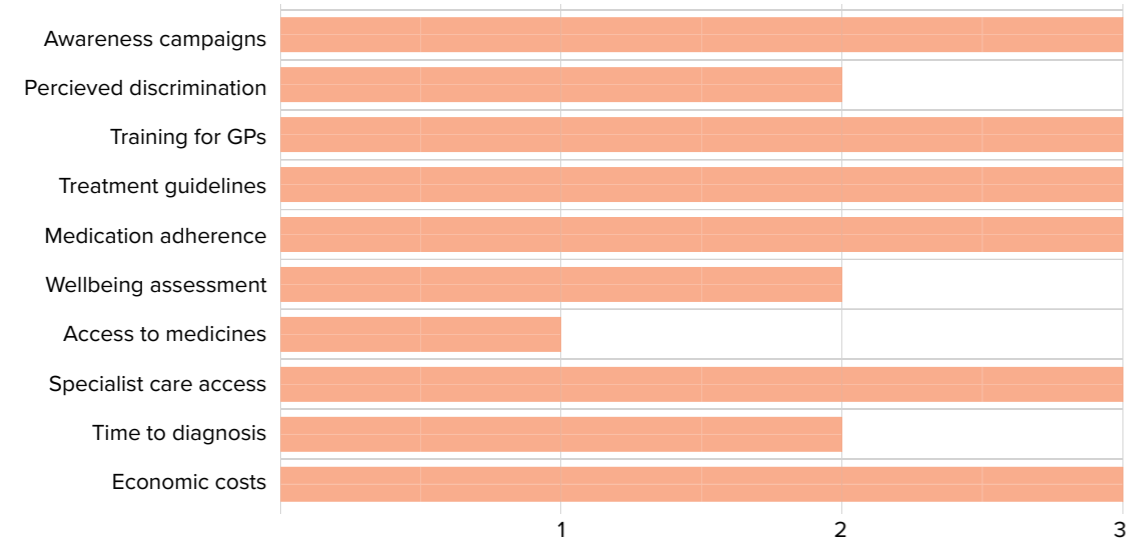
The WPR is a large region, and it is therefore not feasible to conduct interviews with a large proportion of relevant stakeholders. This report represents a first assessment of the region's progress towards implementing the recommendations laid out in the WHO Global Report on Psoriasis and provides a basis for future work, which should aim to engage with more stakeholders and diversify the respondents along dimensions such as urban vs rural, high vs low income, private vs public practices, and others. It is likely that those interviewed for this report have relatively high socioeconomic status and the realities for less privileged individuals with psoriatic disease are harsher.

The literature review performed revealed an inadequate amount of peer-reviewed research relevant to many of the indicators assessed. More research is needed in all five countries studied in order to create a more robust evidence base, which would increase both the accuracy and weight of the conclusions. This recommendation is supported by the WHO Global Report on Psoriasis, that calls for more health services research identifying barriers and actions that improve quality of care. The interviews provided a mitigation to this challenge as well as providing context to the literature that was identified. Future research should consider the inclusion of local language publications in systematic searches, where more information may be found. An important consequence of sparse information may be that the geography appears relatively favorable for the indicator of interest, as it is harder to see the realities and challenges that exist.

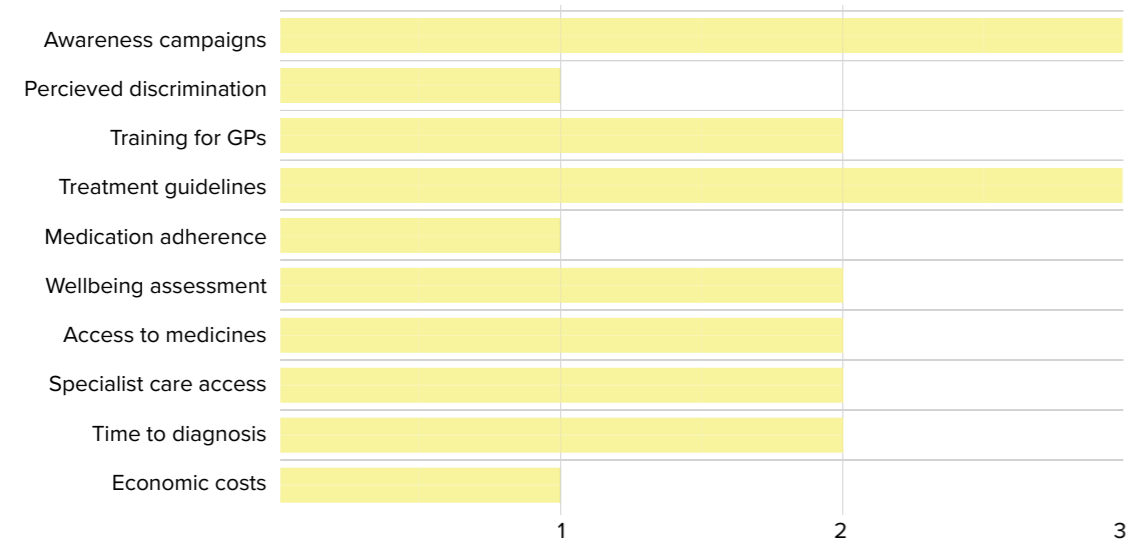
The indicators selected for this report provide a multifaceted overview of the recommendations from the WHO Global Report on Psoriasis. Other relevant indicators would also be valuable to study in future work. Coordinated collection of the same information, assessed at the same time, would be valuable in making comparable assessments in the region. Further, the rating scale of 1-3 used in this report is subject to interpretation. Regardless, it should be clear that a rating of 3 does not mean the assessed country has fully progressed towards the goal, but that they have achieved the criteria set out in this report.

Index scores by country

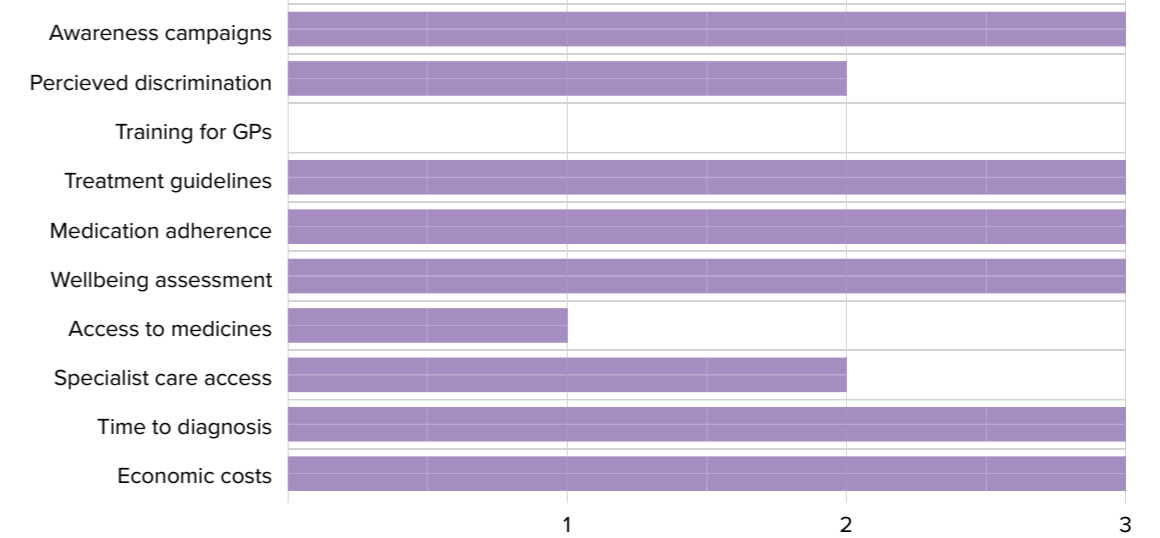
Australia



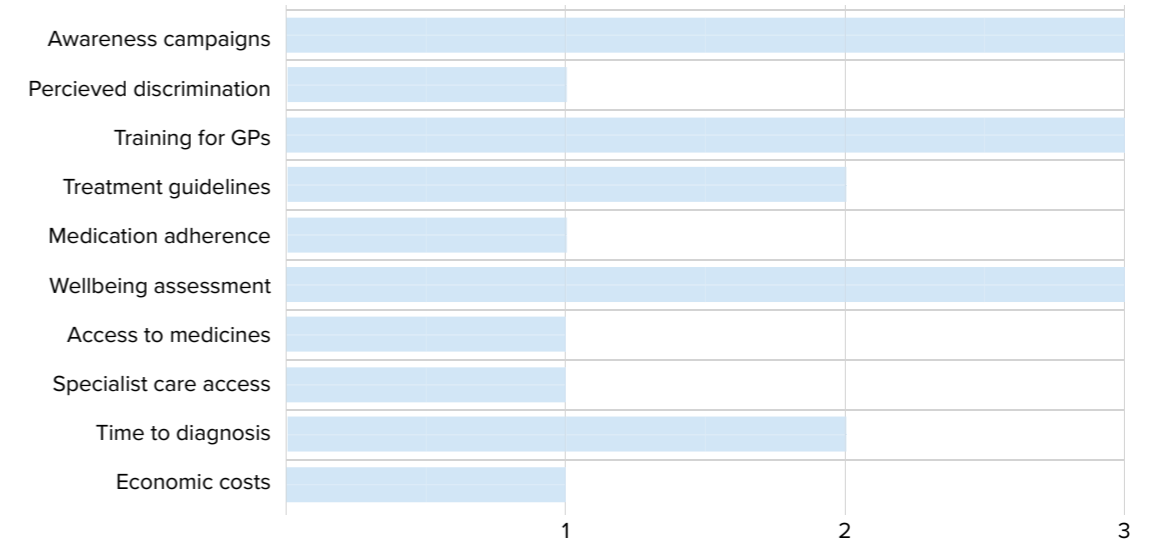
China



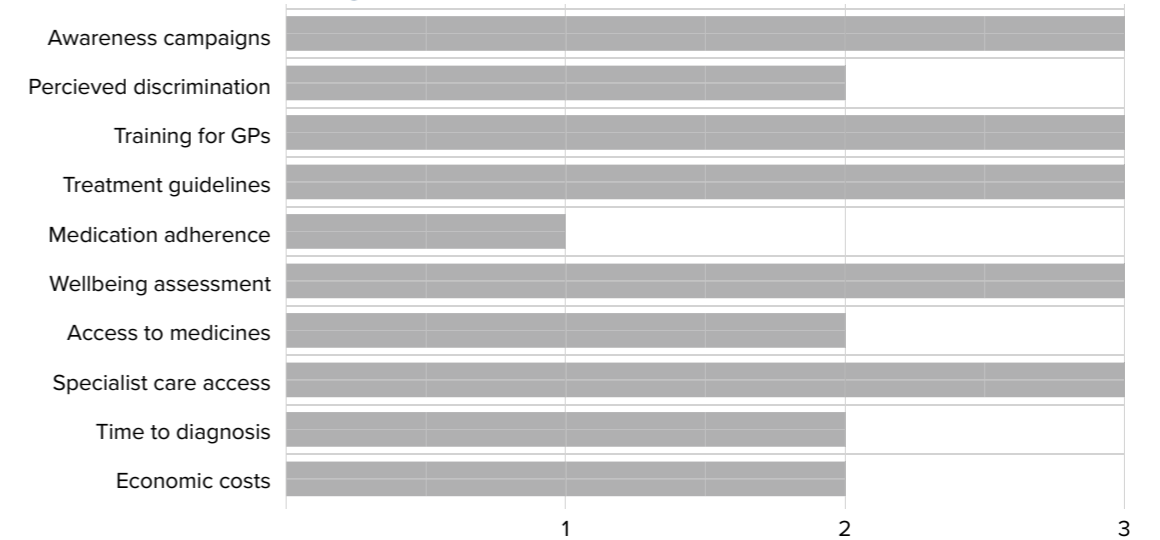
Japan



Philippines



Singapore



Conclusions

This report is the first of its kind in the Western Pacific Region, providing actionable insights for a large population of people living with psoriatic disease. These results complement previous analyses conducted in Europe, adding to the global assessment of progress towards implementing the recommendations outlined in the WHO Global Report on Psoriasis. The findings enable psoriatic disease stakeholders to make informed decisions about activity prioritization, policy focus, and resource allocation to support people's health and well-being, which in turn enables them to live a life free from stigma, preventable disability and comorbidity. The evidence underlying the report is a combination of literature reviews and a series of psoriatic disease stakeholder interviews to provide a thorough assessment of ten key indicators.

Based on the sample of countries assessed for this report, the WPR appears to be broadly progressing in the implementation of certain recommendations from the WHO Global Report on Psoriasis, especially in the implementation of awareness campaigns, use of treatment guidelines, training for general practitioners, and access to specialist care. However, there is significant work to be done in other dimensions.

Despite improvements in public awareness, stigmatization of people living with psoriatic disease is still prevalent in all countries, and evidence of discrimination

“ Stigmatization of people living with psoriatic disease is still prevalent in all countries, and evidence of discrimination was found for some of them.

was found for some of them. Local decision makers, in collaboration with patient organizations, should work to educate the general public about facts and lived experiences of people with psoriatic disease. They should also further educate current and future patients about where and how affected individuals can seek care.

The ability to seek and receive care for the signs and symptoms of psoriatic disease in a timely manner is a prerequisite for well-being. Many individuals begin their clinical journey in primary care, where there appear to be a variety of resources available to general practitioners. Although these resources exist,

many must be actively sought out, implying a risk of misdiagnosis or delayed referral to specialist care. Japan is an outlier where patients seek care directly from specialists.

“ There is a general shortage of specialists available to meet patient needs resulting in unacceptably long and harmful wait times

While the ability to access specialist care in the WPR from the perspectives of the referral system and universal health coverage is relatively good in most of the studied countries, there is a general shortage of specialists available to meet patient needs resulting in unacceptably long and harmful wait times in some health systems. This was found to be most acute for people presenting joint symptoms of psoriatic disease. Delayed time to diagnosis has obvious direct

consequence on timely access to medication, especially for people with moderate-to-severe disease, a group of individuals who can often only receive a suitable prescription from a specialist, resulting in detriments to quality of life.

There was also significant variation within and between countries in terms of access to specialists based on geography. Those living in more remote locations, including rural areas and archipelagos, have more difficulty visiting healthcare professionals. This is compounded by the economic and time costs of travel.

During the provision of clinical care, the somatic symptoms of psoriatic disease including comorbidities seem to be investigated and assessed regularly in clinical practice. However, there is a stigma around seeking psychological support, preventing individuals from receiving adequate mental healthcare even when it is available. This is a serious problem which must be addressed by care providers and society at large. This need is amplified by the experiences of people living with psoriatic disease in the WPR, supported by clinicians' perceptions, of stigmatization and discrimination relating to patients' psoriatic disease symptoms. While many agree that this is improving, there remains a substantial burden. Beyond the stigma associated with mental health services, those same services are only partially subsidized, and in some instances, excluded from public health insurance. The need for psychological care must be recognized in the provision of universal health coverage for people with psoriatic disease.

“ There is a stigma around seeking psychological support, preventing individuals from receiving adequate mental healthcare even when it is available

For patients that reach the right care provider and receive a diagnosis, many clinicians felt that there were suitable guidelines available to make informed, evidence-based treatment decisions, even if the country did not have their

“ The primary treatment-related challenge facing clinicians and patients is economic

own local guidelines. The primary treatment-related challenge facing clinicians and patients is economic. Although there is a version of universal health coverage available in the countries studied, there are challenges for people with the disease in terms of accessing the right

treatment, many relating directly or indirectly to cost. The balance of payments for psoriatic disease care varied between the countries studied, where the nations of Australia and Japan shouldered a significant proportion of costs. In contrast, people in China, the Philippines, and Singapore are at risk of potentially unsustainable economic burden to receive the necessary care for psoriatic disease. For those receiving a psoriatic disease prescription, there is geographic variation in the availability of medication adherence support. Australia and Japan have good resources available while China, Philippines and Singapore are lacking.

The findings of this report should be put in the context of each country's economic development, especially when compared with other economic areas. There is a correlation between GDP per capita and certain aspects of care such as the direct cost burden on patients and provision of treatments available in publicly-funded formularies. Broad economic development is likely to indirectly result in improved patient well-being.

Recommendations

The findings of this report lead to the following prioritized recommendations to enable further progress towards the implementation of the recommendations from the WHO Global Report on Psoriasis and patient wellbeing in the WPR:

- 1 Pursue reductions in psoriatic disease stigma in the general public, partly through targeted public awareness campaigns
- 2 Reduce the stigma associated with mental health care from the perspectives of both patients and care providers
- 3 Promote accessibility and equality of care for those who live in remote areas
- 4 Reduce patients' cost burden, in part by advancing universal health coverage
- 5 Reduce waiting times for specialists

Collaboration between various stakeholders including patients and their representatives, care givers, and decision-makers is necessary to ensure that these recommendations are implemented effectively for the wellbeing of people living with psoriatic disease in the WPR region.

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Appendix A:

Additional information

Table 7: Eligibility criteria for included records from the literature review

Category	Inclusion criteria	Exclusion criteria
Population	People with psoriatic disease	
Outcomes	<ul style="list-style-type: none"> • Evidence of a public awareness campaign • Information on psoriatic disease training programs for primary-care practitioners (PCPs) or general practitioners (GPs) • Existence of treatment guidelines for psoriatic disease • Evidence of tools or support for psoriatic disease medication adherence • Evidence of patient reported outcome (PRO) use in clinical setting • Estimates for time between presentation to health care and a PD diagnosis • Measures of access to medicines • Measures of access to specialist care • Estimates of direct and indirect costs of psoriatic disease care to the economy • Estimates of health system spending on psoriatic disease care 	
Study design	<ul style="list-style-type: none"> • Published literature: books and documents, classical article, evaluation study, government publication, guideline, news, observational study, patient education handout, periodical index, practice guideline, review, systematic review, validation study • Grey literature: reports, guidelines, campaign literature, official publications 	Interventional studies
Language	Any*	
Countries	Australia, China, Japan, Philippines, Singapore	
Time limit	Since January 1st 2017	
Text limit	Available in full text	

**Note that the primary literature search included only English records. IFPA member associations provided additional records in languages other than English which were either translated by the local IFPA member organizations or through Google Translate.*

Table 8: Outcomes of interest for data extraction in the literature review

Category	
Metadata	<ul style="list-style-type: none"> • QID (unique record identifier) • Title • Authors • Publication year • Journal / publishing institution
Study characteristics	<ul style="list-style-type: none"> • Study design • Location setting • Study objectives (description)/ Aim of the study • Comparator information
Involved indicators	<ul style="list-style-type: none"> • Binary variable for information on Public Awareness indicator • Binary variable for information on Provider Awareness indicators • Binary variable for information on Patient Engagement indicators • Binary variable for information on Health Systems indicators • Binary variable for information on Enabling Environment indicators
Public Awareness	<ul style="list-style-type: none"> • Evidence of previous public awareness campaign (yes/blank) • Name, promoter, and description of the campaign(s) • Evidence of current public awareness campaign (yes/blank) • Name, promoter, and description of the campaign(s)
Provider Awareness	<ul style="list-style-type: none"> • Evidence of organization providing resources and training for PCPs on psoriasis management (yes/blank) • Evidence of core, professional-curriculum training available for PCPs on psoriasis management (yes/blank) • Evidence of treatment guidelines incorporating topicals (yes//blank) • Evidence of treatment guidelines incorporating conventional systemics (yes//blank) • Evidence of treatment guidelines incorporating biologics (yes//blank) • Evidence of treatment guidelines incorporating severity (yes//blank) • Evidence of treatment guidelines incorporating features beyond severity (e.g. location) (yes/ /blank) • Evidence of treatment guidelines incorporating a stepped approach to therapy (yes/ /blank)
Patient Engagement	<ul style="list-style-type: none"> • Evidence of support for medication adherence in people with psoriasis (yes/blank) • Evidence that patients' physical well-being (e.g. comorbidity) is / should be investigated in clinic (yes/blank) • Evidence that patients' mental well-being is / should be investigated in clinic (yes/blank) • Evidence of use of PROs in clinical settings (yes/blank)

Category	
Health Systems	<ul style="list-style-type: none"> • Estimated time to diagnosis (months) • Proportion of the WHO Model List of Essential Medicines indicated for psoriasis or psoriatic arthritis available • Proportion of biologic medicines available in formularies (reimbursed or insurance) compared to what was approved by the local regulatory body • Estimate for access to medicines, defined as those available in formularies (reimbursed or insurance) compared to what was approved by the local regulatory body • Proportion of patients who visit a dermatology specialist • Proportion of patients who visit a rheumatology specialist Proportion of patients who visit a psychology or psychiatry specialist
Enabling Environment	<ul style="list-style-type: none"> • Direct costs used in estimate of economic burden (e.g. healthcare contacts, prescribed medication, OTC medication) • Estimate of direct costs to the economy (USD) • Indirect costs used in estimate of economic burden (e.g. work loss, transportation, etc.) • Estimate of indirect costs to the economy (USD) • Proportion of GDP spent on psoriasis healthcare (% direct) • Proportion of GDP spent on psoriasis healthcare (% indirect)

Appendix B

Methods (details)

Literature reviews

A targeted literature review identified academically published literature and grey literature (defined as information not formally published in scholarly journals, such as guidelines or reports) to identify relevant evidence. Records were collected from the following sources for each country:

- A structured search of academic literature in PubMed
- Complementary Google searches to identify grey literature for each indicator category
- Grey literature material provided by local IFPA member associations

The review of academic literature utilized a set of Medline search facets based on a set of eligibility criteria specified beforehand in the study protocol (see appendix A, Table 7 for details).

The searches were implemented, all records were collected, and duplicates were removed before starting the review process. A reviewer screened each record's title and abstract (or equivalent summary text) for relevance. Relevant records were retained, and their full text reviewed. Information relevant to the indicators was extracted from each article into a data grid to facilitate the data synthesis process. The outcomes of interest for the extraction were specified in the study protocol (see appendix A, Table 8 for details).

The complementary Google searches utilized a set of 25 key-word searches based on the eligibility criteria, one for each of the five indicators in each of the five countries (5x5).

Stakeholder interviews

In addition to the literature review, a series of interviews were conducted to collect evidence about the progress towards implementing the recommendations listed in the WHO Global Report on Psoriasis for each indicator across each of the five countries. To provide a comprehensive perspective on each indicator,

six types of stakeholders were identified for recruitment including people living with psoriatic disease, dermatologists with a clinical practice, rheumatologists with a clinical practice, nurse practitioners, academic researchers, and general practitioners (GPs).

Each country's local IFPA member organization recruited stakeholders for an interview in each of the five countries (a total of 30 planned interviews). In total, 22 interviews were conducted distributed as five patients (100% of target), five academic researchers, four dermatologists, four researchers, three nurses and one GP.

A discussion guide was developed as part of the protocol, including standardized questions, tailored to each stakeholder type, which were asked to each stakeholder. The guide was used for each one-hour interview and subsequently used to validate the answers provided. Similar to the literature review, the stakeholders' interview responses were collected in a data grid for use in the data synthesis.



Index scoring

The scores applied in the index utilized a pragmatic 1 (lowest rating) to 3 (highest rating) scale to assess progress for each indicators. Table 9 provides the criteria for each of the indicators, which were applied to the evidence for each country in order to generate an index score.

Table 9: Criteria for index scores

#	Indicator title	Index scores
Public awareness		
1	Existence of a public awareness campaign	<ol style="list-style-type: none"> 1. A public awareness campaign does not exist 2. There has been a campaign, but not in the past 12 months 3. There is a public awareness campaign that is currently active, or has been active in the past 12 months
2	Discrimination	<ol style="list-style-type: none"> 1. Patients perceive significant amounts of discrimination of those with psoriatic disease leading to emotional and/or economic harm 2. Patients experience some discrimination, but it is not pervasive in their life or causing significant emotional or economic harm 3. Patients experience little to no discrimination
Provider awareness		
3	Availability of diagnostic and management training for PCPs (primary care professionals) on psoriatic disease	<ol style="list-style-type: none"> 1. There is no training available for PCPs on psoriasis 2. An organization (e.g. patient society) provides resources and training for PCPs on psoriasis available that must be sought out 3. There is training for PCPs on psoriasis as part of the core professional curriculum or as part of continuing medical education
4	Availability of treatment guidelines	<ol style="list-style-type: none"> 1. No treatment guidelines available 2. Treatment guidelines exist but do not include considerations beyond physician-rated severity 3. Treatment guidelines include topicals, conventional systemics and biologics. They are suitable for the treatments available in the country and include decision criteria beyond severity (e.g. location)
Patient engagement		
5	Tools or support for medication adherence	<ol style="list-style-type: none"> 1. No support for medication adherence exists 2. Support for medication adherence exists, but it's not specific to psoriatic disease 3. There is support specifically for medication adherence for people with psoriatic disease

#	Indicator title	Index scores
6	Patient-centric investigation of well-being	<ol style="list-style-type: none"> 1. Patient well-being is not investigated in clinics 2. Certain dimensions of patient well-being are assessed (e.g. screening for PSA but not mental health), possibly through the administration of PROs 3. Patient well-being is assessed through conversation with the patient including physical and mental dimensions, possibly through the administration of PROs
Health systems		
7	Time to diagnosis	<p>Time estimates and average ratings from physicians and patients, combined with estimates from the literature</p> <ol style="list-style-type: none"> 1. There are significant barriers to patients' access to medicines, including any of the following: a portion of essential treatments not approved or available for sale, high out-of-pocket costs, prescriber hesitation, long wait times for meeting a prescriber 2. There are some barriers to patients' access to medicines (e.g., higher costs, prescriber hesitation, long-wait times, missing treatments), but the majority of patients can access the desired treatments. 3. There are minimal barriers to patients' access to medicines. Though some complications exist (e.g., distance, supply issues, some costs), almost all patients can access the appropriate treatments for their disease.
8	Access to medicines	<ol style="list-style-type: none"> 1. There are significant barriers for patients to access specialist care, including: high costs, lack of available specialists, long wait times 2. There are some barriers for patients to access specialist care (e.g., costs, personnel shortages, long waits) but the majority of patients don't have issues 3. Patients can access dermatologists, rheumatologists, psychiatrists and/or psychologists with minimal barriers
9	Access to specialist care	<ol style="list-style-type: none"> 1. There are significant barriers for patients to access specialist care, including: high costs, lack of available specialists, long wait times 2. There are some barriers for patients to access specialist care (e.g., costs, personnel shortages, long waits) but the majority of patients don't have issues 3. Patients can access dermatologists, rheumatologists, psychiatrists and/or psychologists with minimal barriers
Enabling environment		
10	Direct and indirect costs for patients and the system	<ol style="list-style-type: none"> 1. Low system-wide spending for psoriatic disease care and/or high economic burden for patients 2. Medium system-wide spending for psoriatic disease care and/or some economic burden for patients 3. High system-wide spending for psoriatic disease care and/or low economic burden for patients

