Global Psoriasis Atlas Phase II

Annual Report

April 2020 - March 2021

Global Psoriasis Atlas

INTERNATIONAL FEDERATION OF PSORIASIS ASSOCIATIONS

ILDS

IPC INTERNATIONAL PSORIASIS COUNCIL

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Foreword

Our Annual Report for 2020-2021 is of course dominated by the incursions of the COVID-19 pandemic into our daily lives.

These have disrupted the day-to-day business of the Global Psoriasis Atlas (GPA) team and its ability to reach out to our coordinators, collaborators, partnering organisations and sponsors beyond electronic communication. Despite this, we have kept the show on the road and opened up new avenues of collaboration across the globe. In the face of adversity, it becomes more important than ever to highlight progress and celebrate success.

Colleagues in the UK have launched two linked international registries to capture de-identified data about people with COVID-19 infection and psoriasis; PsoProtect is a registry for healthcare professionals to report cases of COVID-19 in psoriasis patients (**psoprotect.org**) and PsoProtectMe is a survey for people with psoriasis to share how they have been affected by the pandemic (**psoprotectme.org**). The GPA is supporting both important registries, as are our partners.

The GPA has completed the first year of Phase II which is focused on addressing existing knowledge gaps in: epidemiology; improving early diagnosis; comorbid disease; and the economic impact of psoriasis. This report contains exciting updates on all four research areas.

Major accomplishments in 2020 were two research publications. The first, published in the British Medical Journal in May, is the largest systematic review of the prevalence of psoriasis worldwide and underlines that at least 60 million people have psoriasis globally. However, we only have robust data from one in five countries so excellent progress has been made but still a lot of work to be done. Ireny Iskandar led on a further review on the global incidence of psoriasis and published in the British Journal of Dermatology.

We had planned field surveys in Myanmar and Greenland in 2021. Due to COVID-mandated travel restrictions both have been delayed and distressingly the military coup in Myanmar may mean that any on the ground surveying may be delayed beyond 2022. Planning for both is continuing. Our Regional and National Coordinator workforce marshalled by Dr Julia-Tatjana Maul and Rebekah Swan is the peripheral nervous system of the GPA with connections into, and information received from, many countries around the world. We plan to roll-out the GPA Healthcare Survey, in April 2021.

Finally, we are delighted to announce an exciting new partnership with software consultancy company, Swiss4ward, and our plans for the development of the GPA website are included in this report. Please do take the time to visit the new website and tell us your thoughts.

I trust that you will enjoy reading about the accomplishments of the GPA over the last year and that you will gain new insights into our endeavours. I wish you and your families a peaceful and healthy year and I sincerely hope that 2021 marks the start of a return to normal life.

Chris

Professor Chris Griffiths OBE
Director, Global Psoriasis Atlas

Mission

The mission of the GPA is to ensure that people with psoriasis have access to the best available care, wherever they live in the world.

GPA
Global Psoriasis Atlas

Vision

The GPA will become the leading epidemiological resource on psoriasis globally, providing the common benchmark on the burden of psoriasis in all countries and regions throughout the world. The Atlas will seek to: drive continuous improvement in understanding the natural history of psoriasis, uncover how psoriasis affects the individual and society, improve healthcare for those living with the disease.

Values

Collaboration

Working together with respect and integrity.

Excellence

Delivering world class research.

Impact

Drive improvements in the understanding of the global burden of disease and access to care for psoriasis.

A Brief History of the GPA

The resolution passed by the World Health Assembly in 2014 highlighted that psoriasis should be viewed as a serious non-communicable disease. The resolution was aided by the 2012 systematic review from The University of Manchester reporting on the global epidemiology of psoriasis and the subsequent WHO report on psoriasis was published in 2016. These reports, and the call to action for further research into the epidemiology of psoriasis, catalysed the tripartite partnership between the International Federation of Psoriasis Associations (IFPA), the International League of Dermatological Societies (ILDS), and the, and the International Psoriasis Council (IPC) to take forward a GPA, which launched officially in 2016.

READ MORE

2017

Corporate operational and governance infrastructure.

The development of a network of enthusiastic Regional Coordinators

Establishment of GPA brand.

2018

Visited the Diabetes Atlas team headquarters in Brussels in June 2018. An opportunity for knowledge sharing with the Diabetes Atlas team and raising prospects for future collaboration.

Dr Julia-Tatjana Maul travels through 24 Latin American countries on behalf of the GPA to collect psoriasis healthcare data.

Awarded Global Challenges Research Fund grant to undertake a survey of skin disease with a particular emphasis on psoriasis in Tanzania.

Launched GPA Twitter account in October 2018.

Research collaboration with Israel on epidemiology of psoriasis.

2019

Appointment of Dr Julia-Tatjana Maul as GPA Medical Coordinator.

Submission of the GPA systematic review on global incidence and prevalence of psoriasis.

Publication on
incidence and prevalence of psoriasis in Israel

Implementation of an international e-Delphi exercise to develop diagnostic criteria for psoriasis in adults.

GPA quarterly newsletter first published
subscribe here

GPA team visit Tanzania to hold workshops and carry out pilot skin disease survey, July 2019.

Epidemiological research collaboration with Taiwan and Denmark.

GPA website launched on World Psoriasis Day, October 2019.

Publication of Alex Trafford's paper:
Association of Psoriasis With the Risk of Developing or Dying of Cancer: A Systematic Review and Meta-analysis (JAMA Dermatology, JAMA Network).
and
Psoriasis Tied to Increased Cancer Risk (The New York Times).

2020

Dr Maul revisits Latin America to continue obtaining psoriasis healthcare data.

Publication of
National, regional, and worldwide epidemiology of psoriasis: systematic analysis and modelling study (bmj.com).

Secured funding for Phase II from Lead Sponsor the LEO Foundation.

Appointment of 8 National Coordinators in Latin America.

2021

'Development of clinical diagnostic criteria for chronic plaque psoriasis: an international e-Delphi study', accepted for publication as a Research Letter in the British Journal of Dermatology.

Publication of
Systematic review examining changes over time and variation in the incidence and prevalence of psoriasis by age.

Updated GPA website by Swiss4ward goes live 31st March, 2021.

Planned rollout of GPA Healthcare Surveys .

Planned pilot study in Greenland in collaboration with the University of Copenhagen in August and September, 2021. The aim of the study is to investigate the prevalence, phenotype, genotype and specific risk factors tied to a number of skin diseases.

The GPA partners with the IRASPEN study.

Discussions underway regarding GPA research collaborations with colleagues in Qatar and Newfoundland.

GPA Research Focus Phase II

Epidemiology of Psoriasis

Implement regular updates to our large international dataset.

Collaborate with the dermatology workstream of the Global Burden of Disease.

Provide recommendations on the core data to be included in future epidemiological studies of psoriasis.

Conduct new epidemiological studies in selected countries.

Understand and Characterise the Economic Impact of Psoriasis

Conduct and publish an extensive systematic review on the economic burden of psoriasis.

Develop data collection tools to determine the economic impact of psoriasis.

Conduct new studies to identify, and then quantify, the use of healthcare resources, and associated costs to the healthcare system.

Recognising the Comorbid Disease Burden of Psoriasis

Conduct new studies to improve knowledge about the comorbid disease burden of psoriasis with a particular focus on cancer incidence and associated mortality.

Improving the Early Diagnosis of Psoriasis

Conduct a case-control study to examine the extent of misdiagnosis of psoriasis.

Conduct validation studies of our recently developed clinical diagnostic criteria.

Development and feasibility testing of a training tool for psoriasis diagnosis.

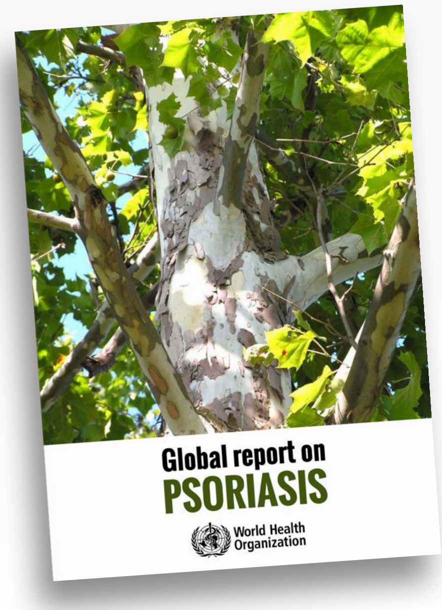
The GPA and the **World Health Organization**

The resolution passed by the World Health Assembly in 2014 highlighted that psoriasis should be viewed as a serious non-communicable disease and the subsequent WHO report on psoriasis[1], published in 2016, paved the way for the development of the GPA.

The resolution was aided by the 2012 systematic review from The University of Manchester reporting on the global epidemiology of psoriasis[2]. This highlighted marked variations in the reported prevalence and incidence of psoriasis, both within and between countries. Importantly it identified knowledge gaps in our understanding of the natural history and burden of psoriasis globally. Specifically:

- Few studies focused on the incidence (new cases) of psoriasis over time;
- Most studies contributing data on disease prevalence were conducted in Europe and the USA, with far fewer identified from Asia, Africa and South America.
- No studies simultaneously compared trends in incidence, prevalence and mortality longitudinally in patients with psoriasis to determine: (i) whether the prevalence of psoriasis is increasing over time; and (ii) if so, whether this is driven by increasing trends in incidence and/or whether patients are nowadays living much longer with psoriasis due to reductions in early mortality.

These data, coupled with the identification in 2012 by the **International League of Dermatological Societies** (ILDS) that psoriasis was one of its "Grand Challenges in Global Skin Health", catalysed the tripartite partnership between the **International Federation of Psoriasis Associations** (IFPA), the **International League of Dermatological Societies** (ILDS), and the **International Psoriasis Council** (IPC) to take forward a GPA.



Global report on
PSORIASIS
World Health Organization

> *Good epidemiological data are essential for disease control and appropriate healthcare planning... dermatology remains one of the most neglected fields of epidemiological study. There is a need for better quality data on incidence and prevalence of psoriasis to understand better the size and distribution of the problem.*
>
> **World Health Organization, 2016**

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[1] World Health Organization. (2016). Global report on psoriasis. World Health Organization. https://apps.who.int/iris/handle/10665/204417

[2] Parisi R, Symmons DPM, Griffiths CEM, Ashcroft DM. Global Epidemiology of Psoriasis: A Systematic Review of Incidence and Prevalence. *J Invest Dermatol* 2013;133:377-85.

The GPA:
A Strong Organisation Built to Collaborate

The GPA is a collaboration between three leading international organisations in world dermatology: International Federation of Psoriasis Associations (IFPA); International League of Dermatological Societies (ILDS); and International Psoriasis Council (IPC) and The University of Manchester (UoM) as the lead academic institution.

The collaborating organisations are the joint project owners of the GPA. Project success can be attributed to the integrated and synergistic interactions between the academic institution and the three partner international organisations. These organisations, represent psoriasis associations around the world, international dermatology societies and the education and empowerment of global key opinion leaders in psoriasis.

The **International Federation of Psoriasis Associations** is a non-profit organisation comprising psoriasis associations from around the world. Together, they campaign for improved medical care, greater public understanding and increased research to improve the lives of people who live with psoriasis and psoriatic arthritis.

The **International League of Dermatological Societies** has been promoting skin health around the world for over 80 years. The ILDS represents dermatology at the highest level with 195 Member organisations from more than 90 countries they represent over 200,000 dermatologists.

Finally, the **International Psoriasis Council** is a dermatology-led, voluntary, global, nonprofit organization with a network of more than 100 psoriasis experts, thought leaders, and professionals, dedicated to improving patient care around the globe.

> *Everything we achieve is thanks to our collaborating organisations, partners and passionate supporters. This global community is growing every year.*
>
> **Rebekah Swan, Programme Manager**

Global Psoriasis Atlas

INTERNATIONAL FEDERATION OF PSORIASIS ASSOCIATIONS

ILDS

IPC INTERNATIONAL PSORIASIS COUNCIL

MANCHESTER 1824 The University of Manchester

Our Team

Our team is comprised of world-leading, compassionate, hardworking people who are committed to **PUTTING THE FOCUS ON PSORIASIS.** This wide-ranging group of experts share a commitment to uncover the epidemiology of psoriasis and access to care and treatment for people living with the disease around the world.

Research Team

Professor Chris Griffiths
GPA Director
The University of Manchester

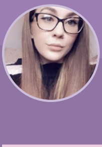
Professor Darren Ashcroft
GPA Research Director
The University of Manchester

Rebekah Swan
GPA Programme Manager
The University of Manchester

Dr Julia-Tatjana Maul
GPA Medical Coordinator
University Hospital Zurich

Dr Alison Wright
GPA Research Associate
The University of Manchester

Teng-Chou Chen
GPA Research Associate
The University of Manchester



Jade Kelly
GPA Administrator
The University of Manchester

PhD Students

Alex Trafford
The University of Manchester

Maha Abo-Tabik
The University of Manchester

Peslie Ng'ambi
The University of Manchester

Collaborating Organisations

Jo Groves
ILDS Executive Director

Caroline Bach
ILDS Project Manager

Christy Langan
IPC Chief Executive Officer

Frida Dunger Johnsson
IFPA Executive Director

Sicily Mburu
IFPA Scientific Officer

GPA Associates and Collaborators

Dr Sidra Khan
Dermatologist, UK

Dr Tina Tian
Dermatologist, UK

Dr Daudi Mavura
Director, Regional Dermatology Training Centre, Tanzania

Dr Daniela Armijo
Dermatologist, Chile

Dr Cristobal Lecaros
Doctor and Researcher, Chile

Dr Su Lwin
Dermatologist, UK

Professor Jacob P. Thyssen
Dermatologist, Copenhagen

Professor Claus Zachariae
Dermatologist, Copenhagen

Structure and **Governance**

Board of Governors

Dr Lars French
Chair of Board of Governors,
President of the International
League of Dermatological Societies

Dr Hoseah Waweru
President of the International
Federation of Psoriasis
Associations

Professor Jonathan Barker
President of the International
Psoriasis Council

The Board of Governors Membership includes: the Presidents of the three Collaborating Organisations and other non-voting members. The Board of Governors is chaired by the ILDS President.

Scientific Advisory Board

Membership includes: three individuals (including the Chair) with expertise in epidemiology; dermatology; health economics and global health.

Steering Committee

The GPA Steering Committee is chaired by the GPA Director and is composed of a lead from each of the Collaborating Organisations (IFPA, ILDS and IPC), along with the members of the Project Management Team comprising the GPA Research Director, GPA Medical Coordinator, GPA Programme Manager and GPA Administrator.

Regional Coordinators

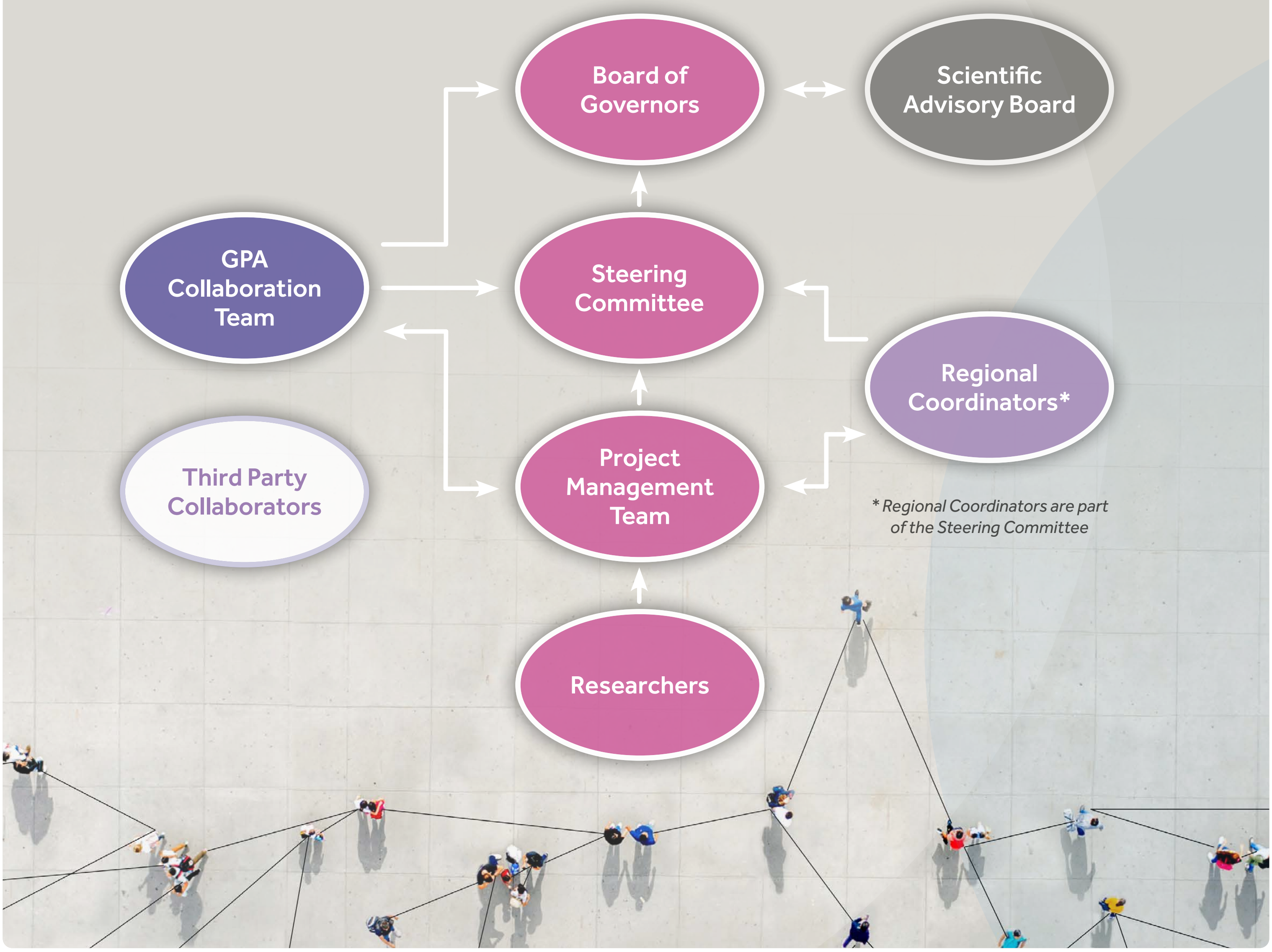
Part of the GPA Steering Committee.

Collaboration Team

Membership includes executives and members from the Collaborating Organisations and the GPA Programme Manager.

Researchers

Research Associates and PhD students.



** Regional Coordinators are part of the Steering Committee*

Psoriasis Epidemiology: What Have we Learnt?

19%

of countries have epidemiological data on psoriasis

The prevalence of psoriasis appears to vary depending on genetic background and geographic location. For example, our data indicates a prevalence estimate of

0.06% in Taiwan

compared to a prevalence estimate of

1.91% in Denmark

At least

60 million people

with psoriasis globally

Further research is required to determine the reasons driving the increase in psoriasis prevalence over time.

Studies worldwide suggested a stable or slightly decreasing trend in psoriasis incidence, while an increasing trend in psoriasis prevalence has been consistently reported.

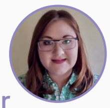
Data on the incidence and prevalence of psoriasis have increased in recent years. However, considerable gaps exist in the geographical areas that report this information, particularly from low and middle income countries.

81%

of the countries of the world lack information on the epidemiology of psoriasis.

GPA
Research Progress

Professor Darren Ashcroft
GPA Research Director
The University of Manchester



Dr Alison Wright
GPA Research Associate
The University of Manchester

Teng-Chou Chen
GPA Research Associate
The University of Manchester

It's been a challenging year and while we are thrilled to put 2020 behind us and move forward, we are also proud of what we accomplished during such a difficult time.

We have published several important papers reporting on our research findings and we have managed to initiate new studies to further extend our international research programme. We have collaborated on important COVID-19 related projects, and established new collaborations with the dermatology work stream of the Global Burden of Disease and the International Rare and Severe Psoriasis Expert Network (IRASPEN).

We published two extensive systematic reviews this year. The first was the largest ever review examining international data on the incidence and prevalence of psoriasis from population-based studies and this was published in the British Medical Journal in May 2020. This was followed in February 2021 with a more detailed examination of how psoriasis incidence and prevalence varies with age and between genders. These are important data resources that have underpinned the development of our Global Psoriasis Atlas.

We have continued to work closely with our GPA Regional Coordinators to identify electronic health record data sources, and taken forward several new studies examining the epidemiology of psoriasis on this basis. Specifically, we have recently completed studies in Chile and Taiwan, and we look forward to reporting on these new findings later this year. One of our major collaborative projects has focused on cancer incidence and cancer mortality in people with psoriasis, in which we are currently conducting population-based epidemiological studies in Denmark, Israel, Taiwan and the United Kingdom.

Thank you to all of our Regional and National Coordinators, public contributors and other stakeholder collaborators for their dedication and support over the course of the past year. 2020 has been a difficult year for us all, but I want to thank everyone for the time, effort and energy they have applied to the GPA work programme throughout this difficult year and I'm immensely proud of what has been achieved by working together on our shared vision.

Professor Darren Ashcroft

Psoriasis and Fertility and Pregnancy Outcomes

Psoriasis and psoriatic arthritis are chronic inflammatory disorders often diagnosed in women during their reproductive years. In addition to comorbidities and unhealthy lifestyle behaviours, there is a need for contraception in patients with psoriasis or psoriatic arthritis who are prescribed systemic medications. This can lead to poor fertility and pregnancy outcomes. We used electronic health records, Clinical Practice Research Datalink GOLD from the UK primary care and the official pregnancy register to follow rates of fertility and pregnancy outcomes for women with psoriasis and psoriatic arthritis. We compared the rates of fertility and pregnancy outcomes to general population at the same age. Overall, 64,929 psoriasis or psoriatic arthritis patients and 324,645 comparators with mean age of 29.3±8.8 were included. Compared to matched comparators, psoriasis or psoriatic arthritis patients had higher rate of pregnancy (IRR: 1.29, 95%CI: 1.27, 1.32) and early pregnancy loss (IRR: 1.30, 95%CI: 1.25, 1.34). These preliminary findings support further analysis on pregnancy and birth outcomes when considering other comorbidities and unhealthy lifestyle behaviours.

Psoriasis and Severe Infection

Despite being the most prevalent autoimmune disorder, the association between psoriasis and severe infection is still controversial in epidemiology studies. Although infection is one of the leading causes of death among psoriasis patients in Taiwan, the association between severe infections and psoriasis is still unclear. We will conduct a population-based cohort study by using the Taiwan National Health Insurance (NHI) claims database and death registration from 2000 to 2017 to evaluate the risk of incident severe infection and infection mortality in patients with psoriasis. The Taiwan NHI is a single-payer mandatory enrolment program that started in 1995, and hence more than 99.99% of the Taiwan population were enrolled. The NHI claims database provides anonymous longitudinal records from both outpatient visits and inpatient hospitalization in Taiwan. We will include adult psoriasis patients and their match comparators to follow the incident severe infection and infection mortality after considering other comorbidities. This study could highlight risk factors of severe infection in psoriasis patients and provide information for better clinical management.

Psoriasis and Multimorbidity

Psoriasis has profound effects on patient quality of life and psychological distress which is exacerbated by the simultaneous presence of other medical conditions. Psoriasis is associated with a wide range of other health problems including; cardiovascular disease, metabolic syndrome (excess body fat, abnormal blood cholesterol or lipid levels, high blood sugar levels and high blood pressure) and type 2 diabetes, cancer, liver conditions, chronic obstructive pulmonary disease (COPD), renal disease, intestinal disorders, autoimmune thyroid disease, connective tissue disease, osteoporosis, uveitis, erectile dysfunction, Parkinson's disease, dementia, sleep disorders, and mental health conditions. The impact of these conditions along with psoriasis poses an even greater burden on patients, potentially requiring the use of multiple medications and creating a further source of significant physical, emotional, and social stress and premature death.

Whilst multimorbidity patterns of psoriasis have not been well documented in the UK, a recent study conducted in Taiwan observed four distinct classes of psoriatic comorbidities:

1. **the "multi-comorbidity" group characterised by high probabilities of various chronic diseases including hypertension, dyslipidaemia, diabetes, coronary artery disease, cerebrovascular disease, chronic liver disease and cirrhosis, COPD, depression and anxiety;**
2. **the "metabolic syndrome" group which had relatively high probabilities of hypertension, dyslipidaemia, diabetes, chronic liver disease, cirrhosis, and hepatitis;**
3. **the "hypertension and COPD" group in which individuals had high probabilities of hypertension and COPD;**
4. **the "relatively healthy" group which was distinguished by a low probability of comorbidities.**

Due to variations in the UK and Taiwanese populations and prevalence of psoriasis and a number of these listed medical conditions, we anticipate differences in the comorbidity profiles of people from the UK with psoriasis.

Clinical guidelines tend to focus management considerations on a single comorbid disease, in the UK there is a particular focus on cardiovascular disease, type 2 diabetes and alcohol-use disorders; however, there is a complex relationship between multimorbidity and psoriasis and the interaction between medications. The specific combinations of conditions occurring together will dictate the needs for people with psoriasis and the treatment strategies. Some of the drugs used to treat psoriasis may aggravate certain health conditions and, in turn, drugs used to treat these co-existing conditions may affect psoriasis. Understanding the patterns of comorbidities will provide: (1.) insight into the burden of psoriasis and highlight where earlier and more targeted screening for specific medical conditions may be warranted and (2.) help identify appropriate management and treatment to delay or prevent the onset of these conditions and improve patient quality of life. The findings from this study may help inform psoriasis management guidelines for managing multiple comorbidities.

With this study commencing in January 2021, we are in the early phases of planning and developing the research protocol but we look forward to reporting on these new insights over the coming months. We plan to use data from the Clinical Practice Research Datalink (CPRD), an anonymised longitudinal primary care database of UK general practices, to identity individuals newly diagnosed with psoriasis. Presence of other medical conditions will be identified from the patients' GP records and from their linked hospital data. We will establish the prevalence of health conditions at the onset of psoriasis and throughout the patients' follow-up. By conducting cluster analyses, we will identify key groups of diseases present within the psoriasis population and groups of patients with distinct patterns of comorbid conditions. Progression or changes in disease patterns will be examined over time. We will consider patient parameters which are easily accessible by healthcare professionals and determine those which are predictive of these multimorbidity groupings; this can then be applied in a clinical setting to classify and re-classify people with psoriasis throughout their disease journey, providing an opportunity to continually assess patient/comorbidity classification and management priorities.

Expanding
Global Network

Regional Coordinators


April Armstrong
USA


Chris Baker
Australia


Arnon Cohen
Israel


Claudia De la Cruz
Chile


Ncoza Dlova
South Africa


Nejib Doss
Tunisia


Alexander Egeberg
Denmark


Mahira El Sayed
Egypt


Hazel Oon
Singapore


Yves Poulin
Canada


Asja Prohic
Bosnia and Herzegovina


Murlidhar Rajagopalan
India


Ricardo Romiti
Brazil


Jacek Szepietowski
Poland


Colin Theng
Singapore


Vermen Verallo Rowell
Philippines


Xuejun Zhang
China


Min Zheng
China

National Coordinators


Mario Amaya Guerra
Mexico


Andre Carvalho
Brazil


Cristina Echeverria
Argentina


Benjamin Hidalgo-Matlock
Costa Rica


Cesar Gonzalez
Colombia


Farah Novoa Boza
Peru


Enrique Rivas
Guatemala


Fernando Valenzuela
Chile

Welcome
to Our New Regional Coordinators

We would like to welcome Alexander Egeberg, April Armstrong, Nejib Doss, Min Zheng and Hazel Oon to the GPA team.

Alexander Egeberg

Dermatologist, Gentofte Hospital, Denmark

"Scandinavian countries have a long tradition of using administrative health-care data to generate real-world evidence. For psoriasis-research, this constitutes a potential gold mine and there are a number of important data gaps that can hopefully be answered through the efforts of the GPA. Understanding and improving the disease burden and the societal cost of psoriasis currently seems to be at the top of the list."

Dr Alexander Egeberg is a dermato-epidemiologist at the Department of Dermatology and Allergy at Gentofte Hospital, Copenhagen, Denmark, where he works in a split clinical and research position, supervising a number of researchers. He earned his MD from the University of Southern Denmark and his PhD in dermatology from the University of Copenhagen, and subsequently pursued his dermatology residency and a post-doctoral fellowship at Gentofte University Hospital, Copenhagen, Denmark. Dr Egeberg also holds a post-graduate degree in Economics from Copenhagen Business School, focused on health economics and public health.

April Armstrong

Professor of Dermatology, University of Southern California, USA

"The GPA enables us to fully appreciate the global impact of psoriasis and challenges us to study it with precision. The work of GPA will enable psoriasis patients in North America to more precisely understand the prevalence, incidence, and the burden of psoriasis. This serves as the foundation to inform us on the clinical, research, and policy directions in the near future."

Dr April Armstrong is Associate Dean of Clinical Research at the University of Southern California. Dr Armstrong obtained her medical degree from Harvard Medical School and completed dermatology residency at the Harvard Dermatology Residency Program. She also obtained a Master of Public Health degree from Harvard School of Public Health. Dr Armstrong believes that good clinical practice needs to be rooted in evidence-based medicine. Dr Armstrong's clinical expertise lies in psoriasis. She is dedicated to providing the highest quality of care for psoriasis patients and making available to them the latest treatment options. Dr Armstrong regularly receives referrals from colleagues for patients with severe psoriasis and enjoys caring for these patients.

Nejib Doss

Dermatologist, Military Hospital of Tunis, Tunisia

"In North Africa, we launched, a few years ago, a study to assess the prevalence of psoriasis in our area. It was the first study about prevalence. We were a little bit disappointed because the prevalence was very low when we compare it to our daily life, where psoriasis is a very common disease. I strongly believe that psoriasis is a very common disease in Tunisia and has many specific forms that need to investigated."

Dr Nejib Doss was the Head of the Department of Dermatology in the Military Hospital of Tunis, Tunisia, from 1985 to 2018. After completing medical school at the Faculté de Médecine de Tunis, he began his training in dermatology in Paris at the Hôpital Bégin. In 1985, he returned to Tunisia and continued to rise through academic positions until he became a Professor of Dermatology in 2002. He is Vice President of the International Society of Dermatology and one of the founders of the African Association of Dermatology and Venereology. His fields of interest include nails, psoriasis, and scabies.

>

Welcome to Our New Regional Coordinators

Min Zheng

Professor of Dermatology, Zhejiang University, China

"Further development of GPA will finally lead to earlier realisation of precision medicine in psoriasis. I look forward to working with the GPA team in Phase II."

After completing his medical degree at Zhejiang University, Dr Min Zheng received postgraduate training in the Department of Dermatology of the Christian-Abrecht University in Kiel, Germany. He has been professor and chairman of the Department of Dermatology at Zhejiang University School of Medicine since 1999. He is also Vice-President and Executive Committee member in the Chinese Society of Dermatology. Currently he is Scientific Committee member and Chinese National Coordinator in Psoriasis International Network (PIN). He is also a Chairman in the Chinese Society for Psoriasis Research. He is the Editorial Board member of Experimental Dermatology and the author of approximately 300 publications. His research interests include mechanisms of inflammation, chemokine biology and angiogenesis in inflammatory skin diseases and he is particularly interested in the study of pathogenesis and clinical trials of inflammatory skin disease and psoriasis.

Dr Hazel Oon

Dermatologist, National Skin Centre, Singapore

"In the day to day hustle and bustle of clinics, attending to patients, teaching duties and administration, there must be some time to take stock and reflect on where research in psoriasis is headed. The GPA has allowed me to articulate the gaps in psoriasis in my country – the challenge of understanding and managing pustular psoriasis, its subtypes, access to care, the unique concerns of women with psoriasis and setting up a solid foundation for a registry."

Dr Hazel Oon heads the Psoriasis Unit and Acne Clinic at the National Skin Centre, Singapore. Her research focus is on inflammatory and chronic disorders – psoriasis, hidradenitis suppurativa, acne and rosacea.

She has published on the genetics, metabolic and psychiatric comorbidities in psoriasis, guidelines in psoriasis, acne and rosacea and has organised the translation of the PEST questionnaire into several languages. She is actively involved in medical education as Core Clinical Faculty member of the National Residency Programme and Co-Clinical Dermatology Lead for the Lee Kong Chian School of Medicine.

As a new Regional Coordinator for South Asia, she hopes to increase awareness, access to care and research in psoriasis, particularly in women and underserved communities, and in areas with pressing gaps – pustular psoriasis and pragmatic management guidelines taking into account the unique features and constraints of the region.

Regional Coordinator Spotlight

Hazel Oon

Psoriasis and COVID-19 in Singapore

When there is an outbreak resulting in the spread of an infectious disease worldwide, Singapore puts in place prevention and response plans. As part of this plan, the 'Disease Outbreak Response System Condition' (DORSCON) is a colour-coded framework that shows the current disease situation.

Singapore turned DORSCON Orange on 7 February 2020 and it has been a hectic time since adapting to infection control measures, split teams, lockdown, tele-consulting and conferencing. Several of our research studies were put on hold, manpower was drastically reduced as colleagues were deployed to COVID duties. On the home front, there was a lot of anxiety as my three boys grappled with public transportation, home-based learning and my husband, an endocrinologist and internist, has been even busier in his frontline work.

I scrambled to assemble a hospital workflow for the vulnerable and psoriasis patients on immunosuppression. I also had to adapt the dermatology residency training programme to part live and part asynchronous 'own time, own target' book clubs and on-line quizzes to meet the schedule of residents scattered around different hospitals who were on-call for COVID and medical duties. The undergraduate medical education programme had to be radically revitalised to meet the demands of home-based interactive learning and still impart the necessary skills for clinical practice.

Through this difficult time, team-based care for our psoriasis patients has been my saviour. Our psoriasis nurses adjusted their phototherapy schedules, empowered patients to learn how to self-inject biologics and how to stay safe at home. Pharmacists arranged for home delivery of medication, recalled patients who stopped treatment and reviewed guidelines for new drugs. This significantly reduced our doctors' load.

There is still much work to do. COVID-19 vaccination programmes have recently rolled out to Singapore and our neighbours. There are increasing treatment options for our psoriasis patients – new biologics and biosimilars. Changes in national policies have meant that access to treatment is now more within reach for our patients.

I look forward to a happier and healthier 2021 for our psoriasis patients!

Mahira el Sayed

Psoriasis and COVID-19 in Egypt

COVID-19 has had a severe impact on psoriasis patients in Egypt with worsening of the disease and limited access to treatment. At the beginning of the pandemic, outpatient hospital services were all closed, including all the phototherapy units, so patients had no access to their regular monthly treatments nor their phototherapy sessions. This resulted in a deterioration of their skin disease.

Patients became depressed during the lockdown with some losing their jobs, so they put on weight, smoked more and their co-morbidities got worse. Patients on biologics missed their regular doses as a result of no government funding. At present, patients are suffering from more severe uncontrollable disease and worsening of their quality of life.

Throughout the pandemic we tried to serve our patients remotely though it was not always easy with some patients living in remote rural areas. In a lot of cases, we have had to change our management strategies due to lack of funding with a shift from biologics to other conventional systemic therapies and phototherapy.

The vaccination program is underway in Egypt and we are advising all our patients to get the vaccine as a lot of them are under the impression that it could be contraindicated in their condition. I managed to register a couple of patients in PsoProtect and I am hopeful to register more as soon as our outpatient clinics in the university hospitals are back in play within the coming month.

We are hoping that we will be able to get back to manage our psoriasis patients in the best possible way especially with introduction of mass vaccination.

The Latin America Story

Dr Julia-Tatjana Maul

Dr Claudia De la Cruz and Dr Maul with staff members at Dermacross Clinica Dermatologica.

Dr Maul with Dr Wagner Galvão in a psoriasis clinic at Hora-Cera Penha public hospital

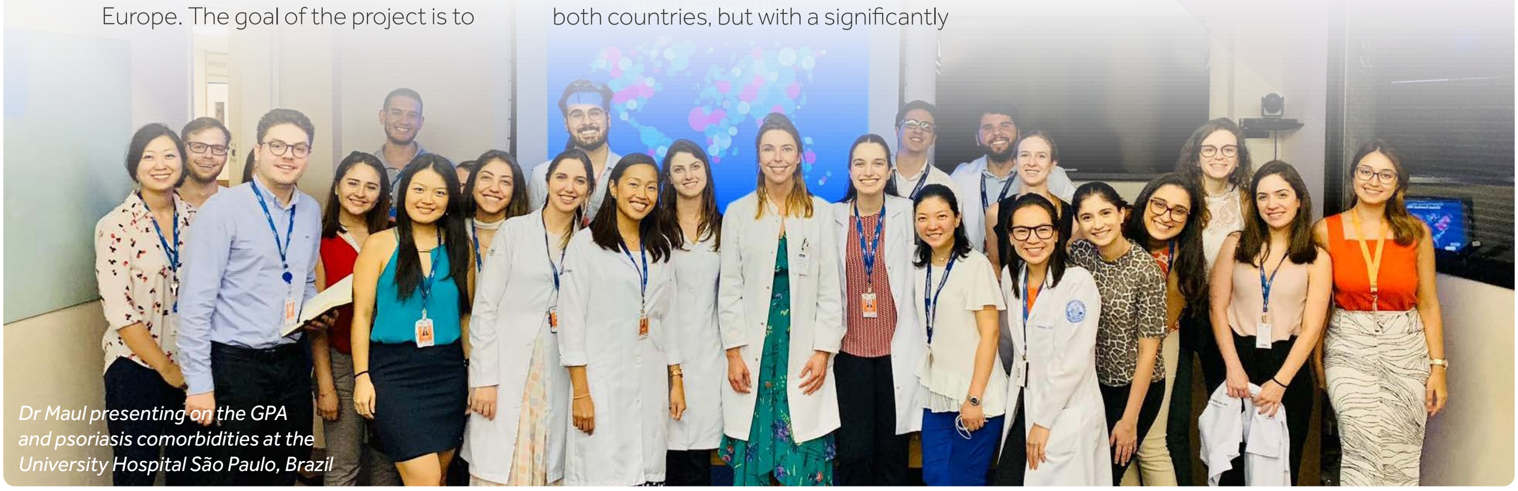
My project was focused on access to treatment in Latin America. It is well known that epidemiological data and treatment registries are limited or non-existent in most of the Latin American countries and that psoriasis patients lack access to systemic and biologic therapies.

During my time in Latin America, I implemented a pilot project to gain a better understanding of the common psoriasis characteristics in Latin America, including:

- **Severity**
- **Characteristics and frequency of comorbidities**
- **Available treatment options on an ethnical- and gender-based level**
- **Differences in quality of life**
- **Burden of disease**
- **Influence of the level of education on the treatment response**

The pilot project included a questionnaire based on the Swiss Dermatology Network of Targeted Therapies (SDNTT) and other European registers (such as BADBIR and PsoBest) in order to allow comparability of Latin America with Europe. The goal of the project is to put the findings of this survey into perspective with previous studies and compare them across regions and countries. The study conducted was a cross-sectional, multi-centre study in 43 centres (27 in Brazil, 16 in Chile) and took place from January to April 2020 (n=1431).

The study concluded that, more severe psoriasis was seen in dermatology centres in Chile compared to Brazil. We identified high needs for an improvement in access to psoriasis treatment with biologics in both countries, but with a significantly greater need in Chile. However, non-biologic systemic therapies available for the treatment of severe psoriasis were sufficiently available in both Latin American countries. Our results highlight the gap between treatment recommendations in international psoriasis guidelines of care and the real-world situation. Further studies are needed globally, which will facilitate shared decisions by physicians and patients in improving access to newer psoriasis treatments.



Dr Maul presenting on the GPA and psoriasis comorbidities at the University Hospital São Paulo, Brazil

The Latin America Story

GPA National Coordinators

Dr Mario Amaya Guerra

Dr Mario Amaya Guerra is a Professor of Dermatology at the University of Monterrey in Mexico. ***"I am very happy to collaborate with this fabulous project and share experiences with other dermatologists around the world."***

Mario Amaya Guerra lives in Monterrey, NL, Mexico, the second largest and most important city in Mexico. He is in charge of the dermatology department at the Northeast Medical Centre, which is a third-level reference and care centre spanning north-eastern Mexico.

The centre receives patients with severe dermatosis that are difficult to manage and control, for example: Pemphigus, skin lymphomas, autoimmune skin diseases of all kinds, in addition to a high-need psoriasis clinic. The clinic sees cases of severe erythrodermal, pustular and psoriatic arthritis and also has inpatient hospital beds available. Mexico has access to all systemic and biologic treatments for psoriasis. Dr Amaya Guerra has been working in the field of psoriasis for more than 35 years and is passionate about the care of his patients and offering them the best and newest treatments available.

Dr Benjamin Hidalgo-Matlock

Dr Benjamin Hidalgo-Matlock is a dermatologist at the National Children's Hospital and Universidada de Costa Rica. ***"I'm happy to join the GPA team and collaborate with researchers to develop a Costa Rican and World Health Status in psoriasis. With this new and more precise knowledge, we can help patients and our health systems in bettering their lives and more cost-efficient resource use."***

Dr Benjamin Hidalgo-Matlock graduated from the University of Costa Rica in 2004 and gained an interest in psoriasis after having a discussion with his dermatopathology teacher. He worked with immune-mediated disease patients at a phototherapy clinic for 14 years and was involved with the first use of biologics in Costa Rica. Dr Benjamin Hidalgo-Matlock now works at the National Children's Hospital in the Department of Dermatology, as well as participating in research, the Healthy Skin Initiative and global collaborations. He is also affiliated with the AAD, EADV, SID, SPD, Pedra, ISCL, ASDS and Grappa.

Dr Andre Carvalho

Dr Andre Carvalho is a dermatologist and clinical researcher at Moinhos de Vento Hospital in Brazil. He is also an IPC Councillor and joined the GPA team whilst working with GPA Medical Coordinator, Dr Tatjana Maul, during her trip to Brazil.

André Carvalho is a Brazilian SBD (Sociedade Brasileira de Dermatologia) certified dermatologist, MSc and a PhD in pathology. He is also an IPC councilor and is one of the editors of the Brazilian Psoriasis Consensus (2020). Dr Carvalho has an interest in psoriasis and immune mediated dermatological diseases, working for almost 20 years in the field, treating psoriasis patients, conducting clinical trials and being a teacher/preceptor at several hospitals. He currently works at Hospital Moinhos de Vento de Porto Alegre (Brazil). The collaboration with the GPA is crucial to understand the actual state of psoriasis care in the world, especially in Latin America. Hopefully, the data collected will help to close the gaps found in psoriasis care and teaching all over the world.

>

The Latin America Story

GPA National Coordinators

Dr Farah Novoa Boza

Dr Farah Novoa Boza is a dermatologist working in Peru, the Medical Director of Grupo Novaderm N&C, and Medical Advisor for APAPSO PERÚ (Psoriasis and Psoriatic Arthritis Association). ***"The knowledge about the epidemiology of disease is an important tool to learn about the disease's behaviour and treatments. I am glad to collaborate with the GPA to better understand psoriasis on a global scale."***

When Dr Novoa Boza started her training in dermatology, she was involved in monthly educational meetings of the psoriasis patients' group, which included her own patients as well as others. At the time there were no psoriasis patient associations in Peru but she learned about this kind of organization when she attended the Second Meeting of SOLAPSO (Latin American Society of Psoriasis) in Argentina. After attending this event, Dr Novoa Boza wanted to be part of a project connecting all psoriasis patients. A short while later the Peruvian Association of Psoriasis Patients was created and Dr Novoa Boza was invited to be their advisor. The association (now called APAPSO Peru) is growing year after year supported by an enthusiastic team of patients. Dr Novoa Boza has had the opportunity to participate in many events related to psoriasis; as a speaker in meetings and educational videos, in health campaigns, and as a representative of the Peruvian Society of Dermatology. Dr Novoa Boza is grateful for the opportunity to work with the GPA and gather global information on psoriasis in favour of medical knowledge and psoriasis patients' welfare.

Dr Cesar Gonzalez

Dr Cesar Gonzales is a dermatologist from Colombia who is an active member of the Colombian Association of Dermatology and Surgical Dermatology and the American Academy of Dermatology. Currently, he is recognized for his research in psoriasis and participates as a speaker at numerous international conferences in dermatology, rheumatology and internal medicine.

Dr Cesar Gonzales received his board certifications in dermatology in 2005 and found an interest in psoriasis during a time when biologic treatments were not yet available in Colombia. In 2010, Dr Gonzales and group of dermatologists and rheumatologists founded the Colombian Psoriasis Group (CoLPsor) and subsequently, Cesar became the editor of Evidence-based Guidelines for the Management of Psoriasis in Colombia. He has been a member of the International Psoriasis Council (IPC) since 2012 and is currently the president of the Latin American Society of Psoriasis (SOLAPSO) which allows him to share his work as a speaker at numerous international conferences in dermatology, rheumatology aesthetic medicine and internal medicine. Dr Cesar Gonzales uses the term "Psoriologist" to refer to the passion that his shares for psoriasis with his colleagues around the world.

Dr Fernando Valenzuela

Dr Fernando Valenzuela is an associate professor of dermatology at the University of Chile and Clinica Las Condes. ***"I joined the GPA team to try to help my psoriasis patients and colleagues understand the Chilean reality of the disease and how we can create and drive a better standard of care."***

Fernando Valenzuela is a dermatologist from Santiago, Chile. He has worked on psoriasis since his residency, when he was able to visit Dr. Kim Papp in Waterloo, Canada, to learn from him and his entire team the advocacy and passion in treating psoriasis patients. When he returned to Chile, he began to work more on psoriasis and to pass on his knowledge and understanding to his colleagues and patients. Dr Valenzuela now serves as Chilean GPA National Coordinator, working with Dr. Claudia De la Cruz and Dr. Tatjana Maul and Chilean dermatologists to better understand the disease and ultimately help educate physicians, patients and the entire population about this condition.

The Latin America Story

GPA National Coordinators

Dr Cristina Echeverria

Dr Cristina Echeverria is a dermatologist working in Argentina, the President of SOARPSO (Sociedad Argentina de Psoriasis), the Coordinator of ECHO Psoriasis Argentina and an International Psoriasis Council (IPC) Councillor. ***"I'm very grateful to be part of the GPA team and to have the opportunity to include Argentinian patients' reality in the Latin American and international framework."***

Dr Cristina Echeverría is a medical doctor at the Instituto de Rehabilitación Psicofísica in Buenos Aires, Argentina. She received a medical degree (Hon) at the University of Buenos Aires and three years later, completed her Internal Medicine Residency at the Centro de Educación Médica e Investigaciones Clínicas. She earned a degree in dermatology from the University of Buenos Aires where she currently serves as an assistant professor in dermatology. As well as working in the care of psoriasis patients, Dr Cristina Echeverria has been working in research and education for more than 15 years. She believes that being part of the GPA encourages her to continue to grow and help her patients from a global perspective.

Dr Enrique Rivas

Dr Enrique Rivas is a dermatologist and Head of Research at a research centre in DERMOS Guatemala. ***"I am very grateful for the opportunity to be part of the GPA team, helping with the integration of statistical data on psoriasis in the Central American area. It opens up the opportunity to understand the way in which psoriasis behaves in our region and improves our therapeutic approaches and education to our patients."***

Dr Enrique Rivas is a pediatric dermatologist from Guatemala and the Medical Investigative Director for DERMOS Research Center. Dr Rivas is certified as a medical and surgical dermatologist at Instituto de Dermatología y Cirugía de Piel de Guatemala – INDERMA and pediatric dermatologist at Instituto Nacional de Pediatría- INP at México. His investigative interest has been focused on psoriasis patients and teaching so in the IPC, Dr Rivas found a place to share both passions.

The Latin America Story

Exploring the Epidemiology of Psoriasis in Chile

Cristóbal Lecaros, Daniela Armijo and Claudia De la Cruz

The difficult year that has just passed has changed everyone's lives, challenging access to care for patients with psoriasis. As in other countries, Chile was no exception.

However, despite the difficulties, costs and lags in the management and study of chronic pathologies such as psoriasis, our team was fortunately able to find instances and continue developing the work we started in 2019 to gather epidemiological information relevant to Chile. At the end of 2020, we sent the paper "The incidence of psoriasis in Chile: an analysis of the national Waiting List Repository" for submission to Clinical and Experimental Dermatology, and it is currently under review. The article examines the referrals made by general practitioners requesting evaluation for new psoriasis cases in the country during 2016-2017.

Before the COVID-19 pandemic spread globally, we had the honour of having Professor Christopher Griffiths in Chile in January 2020, with whom we performed dermatological operations in psoriasis, as well as academic visits to the University of Chile (coordinated by Professors Fernando Valenzuela and Steffen Härtel), and at the Universidad del Desarrollo (in a seminar organized by Dr. Raul Cabrera).

As steps ahead for our coming activities, with Cristóbal Lecaros and Daniela Armijo, we have been developing some research protocols to continue studying psoriasis in Chile and Latin America. The first one is entitled "Clinical characterization of a cohort of patients with psoriasis in a Specialty Referral Center in Chile: 2011-2017 experience using biologics". Its objective is to describe the experience in the treatment of psoriasis patients in Clinica Dermacross, a national referral center in psoriasis. The second protocol is entitled "Psoriasis in Latin America: a scoping review and bibliometric analysis". This work aims to evaluate the state of knowledge of psoriasis in the region of Latin America using bibliometrics.

We hope that with the promising development of vaccines and the experience acquired by the health systems throughout these tough months, psoriasis patients' access to care will not be as impaired as during the previous year. Psoriasis in Latin America requires an important prioritization at the public health level to reduce its toll, and COVID-19 made this more problematic. Still, we hope that things will get better from this year forward.

Global Research **Collaborations**

Pilot Skin Disease Survey – Myanmar

The WHO highlighted in their 2016 report that "a key area of health-care research is the epidemiology of psoriasis and its incidence and prevalence on the global level". The Global Psoriasis Atlas (GPA) team are leading the response to the imperative of the WHO.

Dr Su Lwin

"Based on the unmet educational need of our Myanmar dermatology colleagues, the Burma Skincare Initiative (BSI) had originally planned to hold a psoriasis workshop in Yangon, Myanmar in February 2021 in conjunction with the GPA. This is now postponed to February 2022 due to the lockdown and travel restrictions as a result of the COVID-19 pandemic. At the workshop, the GPA members planned to conduct an information gathering exercise on management of psoriasis in Myanmar in addition to an opportunity for the GPA to participate in a pilot skin disease survey in Myanmar in 2022. The recent military coup that seized power by force and the rapidly evolving situation in Myanmar is of grave concern, and indeed now is the time that Myanmar needs our help more than ever."

Psoriasis can have a life-changing impact on the individual wherever they live in the world. Moreover, our researchers and clinicians recognise that there are likely to be additional, impactful effects on people living in countries that are recipients of official development assistance (ODA). Skin disease in developing countries can be associated with disfigurement, stigmatisation and increased socioeconomic burden. The World Health Organization (WHO) has recognised this impact, however, there are limited data on the prevalence of skin disease to support changes in policy and practice. In addition, we have limited understanding of its impact on affected individuals' quality of life and any barriers there may be to accessing care.

Our plan is for a small team from the GPA to visit Myanmar to run a workshop for dermatologists and to facilitate discussions on a future large scale skin disease survey in which the GPA would have a coordinating role.

Working with Dr Su Lwin, a Burmese born dermatologist from Kings College London and co-founder of the Burma Skincare Initiative, and Professor Khine Khine Zaw from University of Medicine 1, Yangon, we plan to use local knowledge and contacts to facilitate our work with dermatologists and patients to conduct healthcare surveys in the dermatology clinics. Despite the inevitable challenges, we are also keen to explore the lived experience of people with psoriasis in Myanmar and are working with the International Federation of Psoriasis Associations to explore the set-up of a patient association there.

> *"Our mission is to provide the common benchmark on the complete burden of psoriasis in all countries and regions around the world with the aim of ensuring that people with psoriasis can access the best available care wherever they live in the world."*

Professor Chris Griffiths (9th from left) and Dr Su Lwin (10th from left) with Professor Zaw Wai Soe (8th from left) – Rector (Dean) of University of Medicine (UM1) 1 Yangon, Professor Khine Khine Zaw (11th from left) – Dermatology Lead and her team at UM1, photograph taken outside the UM1 building in December 2018.

Cross-Sectional Study - Greenland

Professor Jacob P. Thyssen and Associate Professor Claus Zachariae

Psoriasis, pustulosis palmoplantaris, atopic dermatitis and chronic hand eczema in Greenland.

Greenland is the world's largest island and is a self-governing entity within the constitutional monarchy of Denmark. There are about 56,000 persons living in the country of which approximately 90% are of Inuit heritage[1].

There are currently no studies that have examined the prevalence of psoriasis among Inuits and their descendants. In collaboration with the GPA, we plan to perform a cross-sectional study of Greenlandic adults from the general population to determine the prevalence of frequent dermatological conditions, including psoriasis, pustulosis palmoplantaris, atopic dermatitis and chronic hand eczema. Furthermore, we will attempt to identify specific phenotypes, genotypes and specific risk factors tied to these diseases among Greenlanders.

We will include approximately 6500 persons from four different settlements on the Greenlandic east and west coasts. Each participant will be asked to complete a questionnaire and, in case report of skin symptoms, we will offer a clinical examination to determine the diagnosis, and sample DNA for genetic analysis.

Our study offers a unique opportunity to investigate psoriasis and other inflammatory skin diseases in a small and historically isolated population in a secluded environment. Moreover, we hope to bring one of the final pieces of the puzzle in the mapping of global psoriasis.

We are currently obtaining approvals for our study and hope to begin inclusion of participants in 2021 followed by a larger scale inclusion in 2022.

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[1] Moltke I, Fumagalli M, Korneliussen T, et al. Uncovering the Genetic History of the Present-Day Greenlandic Population. *Am J Hum Genet*. 2015;96(1):54-69. **doi:10.1016/j.ajhg.2014.11.012**.

The International Rare And Severe Psoriasis Expert Network (IRASPEN)

The IRASPEN-Registry is a global, prospective registry, investigating the genotype-phenotype correlation of pustular psoriasis (PP). IRASPEN comprises the prospective collection of data and biological material from multiple, global sites.

The sub-study IRASPEN-CS is a cross-sectional design comprising a one-time collection of data and photographs, based on the first visit of the IRASPEN main project.

Patients suffering from PP, regardless of the subtype, namely generalized pustular psoriasis (GPP), palmoplantar pustulosis (PPP), Acrodermatitis continua of Hallopeau (ACH) or a mixed phenotype, meeting the inclusion criteria such as primary sterile, macroscopically visible epidermal pustules (persistent over three months for PPP and ACH and relapsing or persistent over three months for GPP) will be invited to participate. At the timepoint of inclusion, active pustulation must be present. A minimum of 180 patients will be included (min. 140 PPP, 20 GPP, 20 ACH) in the main registry and an unlimited number of PP-patients for IRASPEN-CS.

Since we hypothesise that the majority of pustular psoriasis patients have at least one episode of increased (50%) activity per year and that the majority of these patients (> 50%) require active treatment, the main objective is to describe the natural course of this rare disease (frequency and severity of flares) in order to gain more detailed information about their phenotype. In addition, we aim to describe the response to already established treatments, to define the genetic background of PP as well as its transcriptional profiles.

The duration of the registry trial is five years and consists of 14 visits per patient (30 – 60 minutes). At each visit, the attending physician will characterise the clinical features (phenotypic description) and perform a lesion count. Several modified assessment scores such as the Physician Global Assessment (PGA) for palmoplantar pustulosis (PPP PGA), for generalized pustular psoriasis (GPP PGA) as well as an adapted Psoriasis Area and Severity Index Score (PASI), namely GPPASI and PPPASI, are used to quantify the extent of the various diseases. To objectify the subtype ACH, the GPPGA and the standardised Nail Psoriasis Severity Index (NAPSI) are going to be applied. Personal evaluation of the patient's quality of life, health, illness symptoms, work productivity and activity as well as pain and disease intensity are assessed via various questionnaires (DLQI, EuroQol EQ-5D, WPAI-GH, PSS, VAS scores for pain and disease activity).

IRASPEN
International Rare And
Severe Psoriasis Expert
Network

In total, we plan to collect two skin biopsies (4mm size) one at baseline and one at the follow up visit. In addition, three blood samples (3x30ml) will be taken; one baseline, one at a follow-up visit with inactive disease and one at a follow up with active disease. If relatives can be included, a single sample (1x 30ml) will be collected at one-time (baseline), without follow-up visits.

Professor Alexander Navarini is the Prinicipal Investigator (PI) of IRASPEN, GPA Medical Coordinator, Dr Maul, is Co-PI and Professor Griffiths and Professor Ashcroft are members of the IRASPEN Steering Committee. The GPA team is working in collaboration to assist with dissemination of information about the project to key stakeholders and across its social media platforms. It is important to understand the immunology and epidemiology of this disease in order to make a difference to the lives of people with PPP.

The GPA and **PsoProtect**

PsoProtect was established as an international registry for healthcare professionals to report outcomes of confirmed or suspected COVID-19 in people with psoriasis (psoprotect.org). The GPA is proud to be a partner organisation for PsoProtect.

It is hoped that all the information collected in PsoProtect will advance understanding of how factors such as psoriasis treatments and underlying health conditions affect outcomes in people with psoriasis who contract COVID-19.

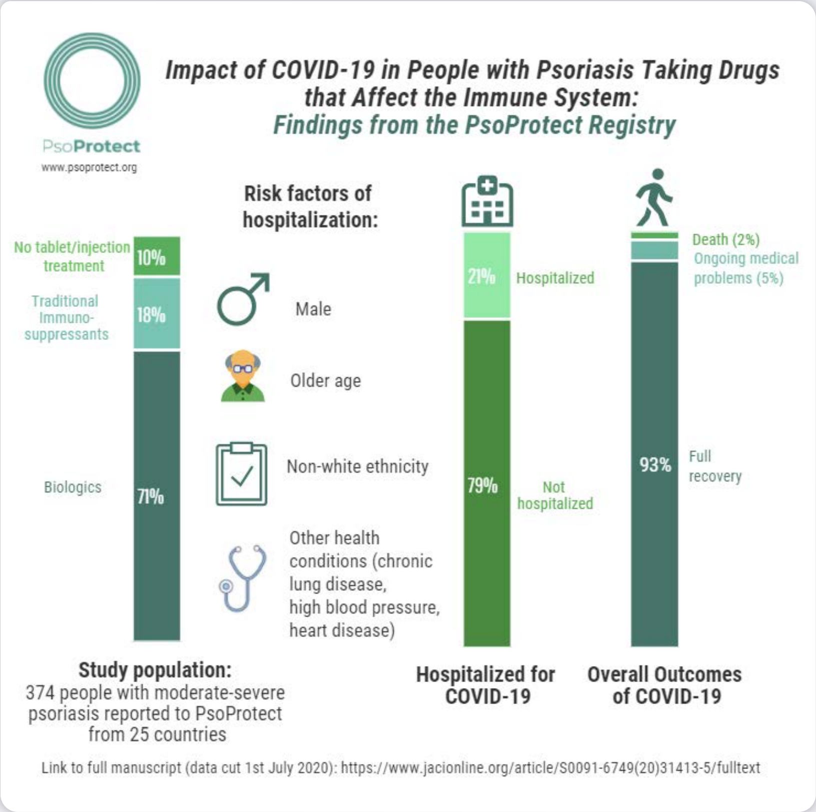
According to the first findings from the PsoProtect registry, people who take drugs that affect the immune system as a treatment for psoriasis have high rates of recovery from COVID-19 with 93% of participants making a full recovery. Additionally, people with psoriasis taking drugs that affect the immune system have relatively low rates of hospitalization with 21% of participants being admitted to hospital.

The PsoProtect team are committed to publishing and disseminating their findings to ensure that healthcare professionals and society as a whole can learn from this experience to enable them to help support people with psoriasis for the future.

The researchers found that the risk factors of hospitalisation for COVID-19 (an indicator of severe infection) reported to the registry were similar to the general population.

These findings have been published in the Journal of Allergy and Clinical Immunology[1].

psoprotect.org



Link to full manuscript (data cut 1st July 2020): https://www.jacionline.org/article/S0091-6749(20)31413-5/fulltext

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[1] Satveer K. Mahil, PhD, MRCP; Nick Dand, PhD et al. (on behalf of the PsoProtect study group) Factors associated with adverse COVID-19 outcomes in patients with psoriasis—insights from a global registry–based study. The Journal of Allergy and Clinical Immunology, 2021; 147 (1): 60-71, doi.org/10.1016/j.jaci.2020.10.007.

The GPA and PsoProtectMe

The PsoProtectMe survey, launched in May 2020, is a global patient survey designed to capture the impact of the COVID-19 pandemic on people with psoriasis.

The study was designed and led by a group of clinicians and scientists from King's College London and the University of Manchester. It is supported by the Psoriasis Association in the UK, as well as by an expert international scientific advisory board and multiple international professional and patient organisations, including the Global Psoriasis Atlas.

The PsoProtectMe survey (psoprotectme.org) is for anyone with psoriasis to complete, whether or not they have had COVID-19. The survey seeks to understand their experiences and behaviours during the pandemic. If they have had COVID-19, the survey also captures how this has affected them. It takes approximately 10 minutes to complete and is available in ten different languages.

Since its launch, more than 4000 people with psoriasis from all over the world have completed the PsoProtectMe survey, and the team behind the project have released a summary of some of the data gathered so far on their website (psoprotectme.org/current-data).

> 'The pandemic has affected my anxiety and my financial and professional stressors. Lockdown, coupled with the fear, anxiety and uncertainty of the future heightens my anxiety and feelings of losing control.'
>
> **Jodi**
> from South Africa

Out of the first 3787 people to complete the survey, approximately two thirds are female. 1499 people felt that their psoriasis had remained the same during the pandemic while 1527 people felt that their psoriasis severity had worsened. 9% of people have had suspected or confirmed COVID-19.

In combination with data from a patient survey for patients with rheumatic diseases, the study team found that more people receiving targeted therapies, such as biologic therapies, reported the most stringent risk-mitigating behaviour to protect themselves from COVID-19 when compared to people receiving standard tablet therapies or people on no systemic psoriasis treatment.

The study team are actively analysing the data as it comes in to try and understand differences between people in terms of how they have responded to the pandemic, and whether there are any factors that make them especially vulnerable. It is important that people continue to participate – the more data available, the more precise the conclusions will be. **Both registries remain open and active.** We thank you for your valuable contribution and support so far – please do help to spread the word via **@PsoProtect** on Twitter, Facebook and Instagram.

psoprotectme.org

World Psoriasis Day **Campaign**

OCT
2020

This World Psoriasis Day, we teamed up with PsoProtectMe and the International Federation of Psoriasis Associations (IFPA) to run a collaborative social media campaign.

PsoProtectMe

IFPA
INTERNATIONAL FEDERATION
OF PSORIASIS ASSOCIATIONS

G P A
Global Psoriasis Atlas

We reached out to 20 participants with psoriasis and asked them to record a video of themselves answering a series of questions relating to their experience of the pandemic. As the theme for World Psoriasis Day was "Be Informed", we felt it was important for people to be able to share their experience of living with psoriasis and raise awareness of the IFPA campaign and the GPA. Furthermore, we were able to use the opportunity to raise awareness of the PsoProtectMe survey amongst the psoriasis community online. Ten of the participants were members of IFPA's patient associations who had shared their psoriasis stories with us in 2019 prior to the launch of the GPA website. We were really grateful to be able to catch up with these participants once again and learn how their lives had changed during the pandemic. The remaining ten participants were volunteers recruited from social media, all of whom were psoriasis advocates and passionate about raising awareness of psoriasis.

Global Psoriasis Atlas
Antonio – One Year Update

YouTube

GPA Administrator, Jade Kelly, liaised directly with participants to obtain their stories. Using their stories and quotes she then created relevant content for use across our social media channels for the duration of the campaign.

"I am so thankful for the global psoriasis community - knowing that I am not alone in coping with both my condition and the pandemic. In trying times like these everyone needs a family - and here it is. The world may have shut its borders, but we have never been closer."

Barbra,
from Sweden

"PsoProtectMe is such a valuable forum and one that I regularly revisit to see the updated stats on how fellow psoriasis patients are dealing with COVID-19. I'm especially keen to understand the data that refers to specifically those using biologic treatments for their psoriasis – because that's me."

Julian,
from the UK

"The COVID-19 epidemic has indeed impacted on our psoriasis community in Singapore and worldwide! I have decided to participate in PsoProtectMe to motivate and inspire more worldwide psoriasis friends in staying active in their learning journey, despite of their busy work and treatment schedules.

Edmund,
from Singapore

"The pandemic has given me time to slow down and really take care of myself. Although I do miss my family and friends, I'm taking this time to prioritise my physical and mental health."

Reena,
from Canada

A Year's Progress with the GPA PhD Students:

Alex Trafford

> ***Understanding the true burden of psoriasis, both to the individual and to society, is a complicated undertaking. By connecting researchers and policymakers from different fields, the GPA improves our understanding of the condition through the sharing of expertise and resources. Furthermore, through contact with patient organisations and those living with the condition, the GPA is able to amplify the voices and experiences of those with the condition, providing context beyond just the numbers.***

Over the past year, the focus of my PhD work has been a primary investigation of the association between psoriasis and cancer using data from the UK. In order to most accurately understand this potential relationship, the exploration has been split into a number of steps.

Continuing on from the previous year, the first stage of this work was to assess how well cancer diagnoses are recorded across different healthcare settings, and to determine whether there are any discrepancies in recording between people with psoriasis and people without psoriasis. As part of our investigation as a whole, we are using data from the Clinical Practice Research Datalink (CPRD), a UK-based research service consisting of anonymised patient records from general practices (primary care) that can be linked to, amongst others, hospital records and mortality records. Understanding whether records for certain cancers are more likely to be missing from general practice data or hospital data, and whether this differs between people with and without psoriasis, is therefore crucial in supporting our use of this data in further work estimating cancer risk. In addition, the results of this work provide a potential new lens through which to view previous studies on the association where data from only primary care settings or hospital settings has been utilised. This work is now complete and is under review for publication.

Following the completion of work examining cancer recording across healthcare settings, the next step has been to estimate the risk of cancer occurrence and cancer mortality in people with psoriasis compared to people without psoriasis. As initially planned, this has been achieved through a cohort study using the CPRD, consisting of people with a record of psoriasis between 1998 and 2018, and matched comparison patients, with no psoriasis record, of the same age, sex and general practice. Individuals in the cohort were then followed over time, with cancer diagnoses determined using records from general practices and hospitals, and cancer deaths determined using Office for National Statistics mortality data. From this information, it has been possible to calculate not only the risk of cancer occurrence and mortality overall, but also the risk of site-specific cancer occurrence and mortality as well.

A key issue highlighted in our systematic review and meta-analysis of the association between psoriasis and cancer was heterogeneity in the estimates of risk provided by different studies. Whilst there were numerous potential causes of this heterogeneity, including variation in study design and study population, the singular effect was to diminish the strength of any potential conclusions. A notable development within the project this year may help to address this issue. Through the GPA, we have been able to collaborate with a number of international colleagues, enabling us to run studies in different countries with identical study protocols to that being carried out in the UK. Results from all countries have now been reported and their combination will hopefully bring a greater certainty to our understanding of cancer risk in psoriasis.

The final step in this project is to try to bring some clarity to the mechanisms that may underlie any differences in cancer risk for people with psoriasis. Whilst the condition itself may alter cancer risk, it is also plausible that lifestyle factors, such as smoking and alcohol consumption, may influence risk as well. Though significant previous work has considered cancer risk, there are a number of challenges in determining what mechanisms may explain any variations in risk, most notably the need to have the appropriate data recorded. Through ongoing work, information related to body mass index, smoking status and alcohol consumption in people with and without psoriasis in the CPRD has been ascertained and will be used to determine what roles these factors may play in cancer risk.

A Year's Progress with the GPA PhD Students:
Maha Abo-Tabik

> *At the Global Psoriasis Atlas, we are committed to producing high-quality data. We put in extra effort to ensure diversity and inclusion by working with experts worldwide to make certain that our findings apply to patients from diverse racial and ethnic backgrounds. It's a truly global effort to deliver a comprehensive understanding of the psoriasis burden around the world.*

In the final year of my PhD course, my work focuses on tackling the problem of missed or delayed diagnosis of psoriasis and subsequently, developing an educational tool to support accurate diagnosis of psoriasis by non-dermatologists.

My paper, **'Development of clinical diagnostic criteria for chronic plaque psoriasis: an international e-Delphi study'**, has been accepted for publication as a Research Letter in the British Journal of Dermatology.

I am currently working on two projects. The first one aims to identify missed opportunities for earlier diagnosis of psoriasis in primary care settings. For the purpose of this study, we used the clinical practice research data link (CPRD). CPRD collects patients' fully coded electronic health records (EHR) from GP practices using Vision® and EMIS® software systems for CPRD GOLD and CPRD AURUM respectively. Currently, CPRD GOLD has 405 contributing practices covering 4.74% of the UK general population compared to 1,350 practices contributing to CPRD AURUM covering 19.30% of the UK general population. CPRD participants are representative of the UK general population in terms of age, gender and ethnic background.

To our knowledge, this is the first study to track trends of health care activities for individuals with psoriasis retrospectively for several years before diagnosis and comparing findings to age and gender matched individuals without psoriasis diagnosis. Preliminary results suggest the need to further investigate whether possible missed events for diagnosis could be prevented by improving diagnostic skills for community-based healthcare professionals.

In the second project we aim to develop an educational resource for psoriasis in the form of an e-learning course to help non-dermatologist healthcare professionals better diagnose psoriasis. The training tool could also serve as a diagnostic guide for field studies examining the incidence and prevalence of psoriasis globally. In this research project we paid extra attention to helping non-dermatologists recognise psoriasis affecting individuals with skin of colour in an attempt to fill the knowledge gap highlighted by the Black Lives Matter campaign. This project builds on our previous e-Delphi study to develop clinical examination-based diagnostic criteria for chronic plaque psoriasis in adults (age 18 years and above).

The main challenge of this study is to recruit large numbers of community-based health care professionals such as general practitioners, community-based nurses and pharmacists. However, we will tackle this problem by recruiting participants through the clinical research network. The clinical research network helps to increase the opportunities for participants to take part in clinical research and ensure that studies are carried out efficiently. We aim to disseminate findings from these studies as widely as possible in high impact peer-reviewed journals and international conferences.

image © Michelle Nyasha

A Year's Progress with the GPA PhD Students:
Maha Abo-Tabik

Diagnostic Training Tool

Developing and Feasibility Testing of a Training Tool for Psoriasis Diagnosis

In their recent report on psoriasis in 2016, the World Health Organization (WHO) highlighted the need to tackle the problem of psoriasis missed or delayed diagnosis. Based on the findings from our recent international e-Delphi study to develop clinical examination-based diagnostic criteria for chronic plaque psoriasis in adults, we sought to develop an e-learning course to provide information about psoriasis diagnosis and to improve diagnostic abilities for psoriasis by non-dermatologists.

The training tool will serve as a guide to help users apply the consensus agreed diagnostic criteria whilst examining a case of suspected psoriasis.

Design of the training tool

Working with Swiss4ward, we aim to design a virtually delivered training tool for psoriasis. A specific website will be designed for the purpose of this study.

The training tool will be supported by illustrations and clinical images of psoriasis.

Illustration by Adriana @ Swiss4ward

Clinical Image

Intended users

1. Community-based healthcare professionals.
2. Research involved in field studies into the epidemiology of psoriasis.
3. The training tool could also serve as an educational package for medical students and doctors under training.

Challenges

The main challenge was to find good quality clinical images for psoriasis, especially in individuals darker skin, that are available to use for research and educational purposes.

A Year's Progress with the GPA PhD Students:

Peslie Ng'ambi

> *What I love about working with the GPA is the multidisciplinary team that endeavours to understand the impact of psoriasis to both the individual and population. Our projects range from clinical, epidemiology and economic impact studies which provides a holistic view of the psoriasis impact.*

The main highlight of my work during the past year has been obtaining ethics approval to conduct a study on understanding the impact of living with psoriasis.

The survey, which has just undergone pre-testing of the questionnaire, is designed to utilise validated questionnaires in health economics and dermatology to estimate the impact on health, wellbeing and disease severity. To capture these factors, we selected the EuroQol-five Dimension (EQ-5D), Capability and functionality using the Investigating Choice Experiments for Adults-CAPabilty (ICECAP-A), self-assessed Simplified Psoriasis Index (saSPI) respectively. After working on comments and suggestions from the pre-testing exercise the survey will now be deployed. The participants for the final study will be drawn from the members of the Psoriasis Association UK. This study will serve as a template to be replicated in other countries.

In addition, a quantitative study aimed at assessing and describing the factors predicting healthcare resource use in patients with psoriasis in the UK has been started. This study uses data obtained from the Clinical Practice Research Datalink (CPRD) linked to the Hospital Episode Statistics (HES) for adult patients with psoriasis. This is a retrospective matched cohort study. The study will include patients with psoriasis matched with those without psoriasis on age, sex and practice.

The matching is to ensure an accurate estimate of the differences that can be attributed to the disease. The patient characteristics being explored include age, Body Mass Index (BMI), index of multiple deprivation and presence of other long-term conditions in predicting healthcare resource.

Research has shown that failure to adequately control for comorbidities in cost of illness studies may lead to substantial upward bias in the estimated expenditure impact of that disease (Gunnarsson et al., 2012). Comorbidities explored in this study were selected based on the Cambridge Multimorbidity Score.

The Cambridge Multimorbidity Score includes 21 comorbidity conditions which are good predictors for annual GP consultations per person, emergency hospital admissions and mortality per 1,000 person-years (Payne et al., 2020). To enhance skills in analysing this data, I attended a data science course in identifying, combining and analysing health data sets offered by the University of Glasgow. My main interest in this course was on data manipulation and advanced methods of data analysis. In addition, this course offered me transferable skills that were relevant to my career progression and interests.

Online Atlas
Update

Global Psoriasis Atlas

swiss4ward
<software solutions/>

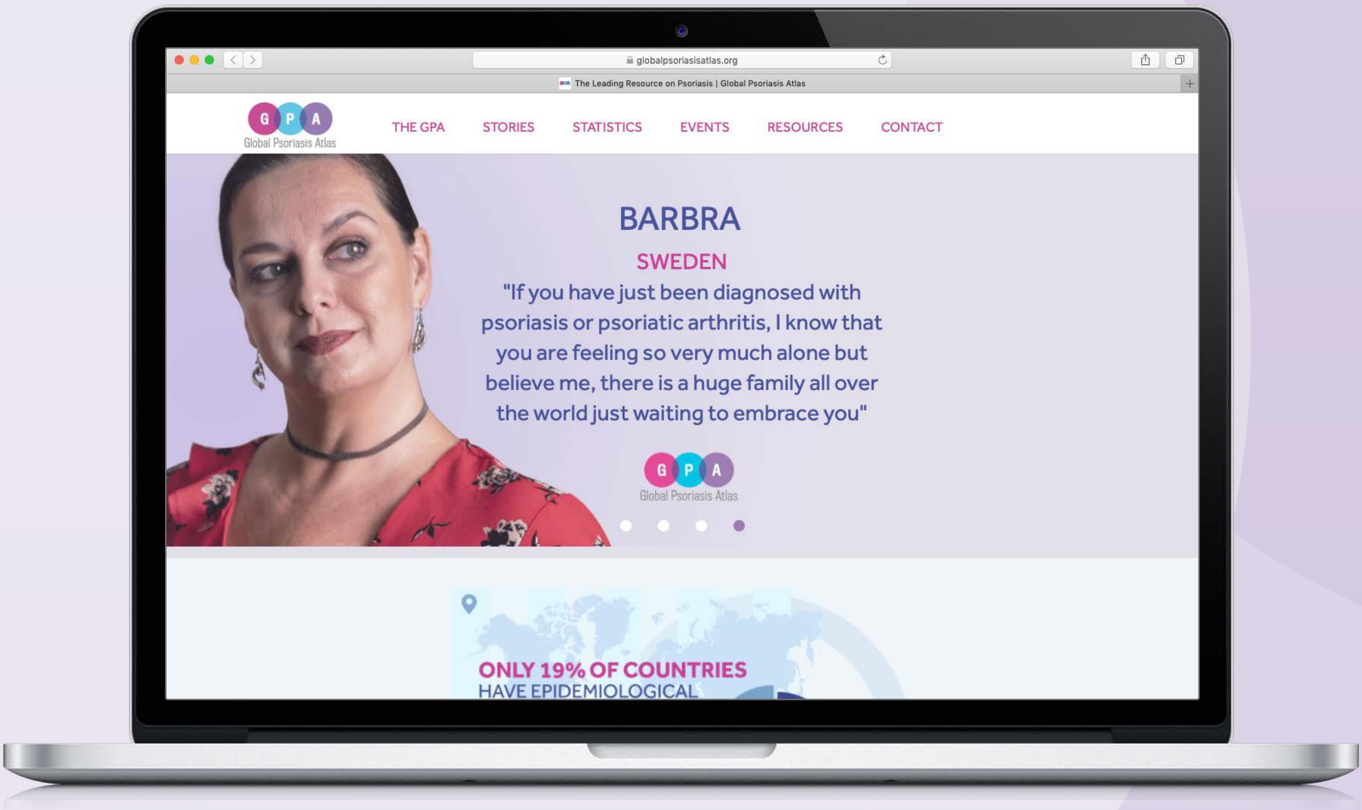
www.globalpsoriasisatlas.org

Since the launch of the Atlas in 2019 the GPA team have continued to gather feedback and review the performance of the GPA website.

We are delighted to announce an exciting new partnership with software consultancy company, Swiss4ward, and that our revamped website goes live in March 2021. Working with Swiss4ward, our aim has been to improve the accessibility of the site, ensure that navigation is straightforward and that our resources and publications can be accessed with ease.

Furthermore, we are working with Swiss4ward on a number of exciting projects, **including the development of a training tool for psoriasis diagnosis**, based on the recently established diagnostic criteria. We are also in the process of developing online psoriasis resources for patients (PsoWell®).


PsoWell® patient materials



BARBRA

SWEDEN

"If you have just been diagnosed with psoriasis or psoriatic arthritis, I know that you are feeling so very much alone but believe me, there is a huge family all over the world just waiting to embrace you"

ONLY 19% OF COUNTRIES
HAVE EPIDEMIOLOGICAL

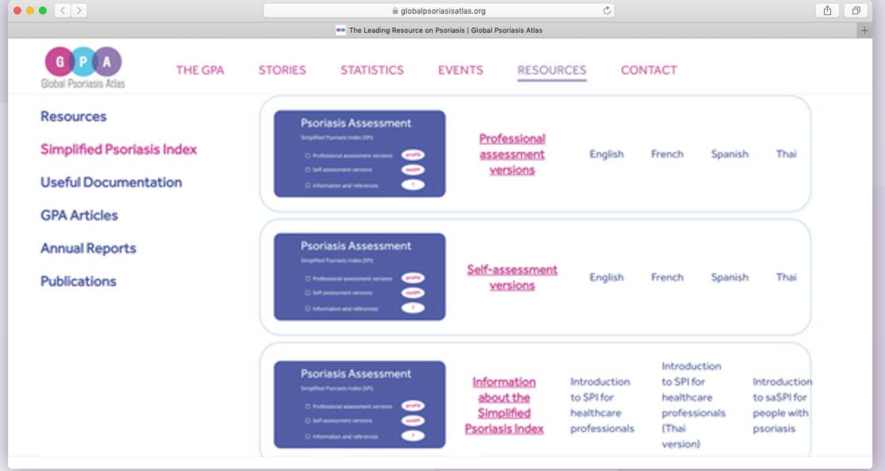
Online Atlas **Update**

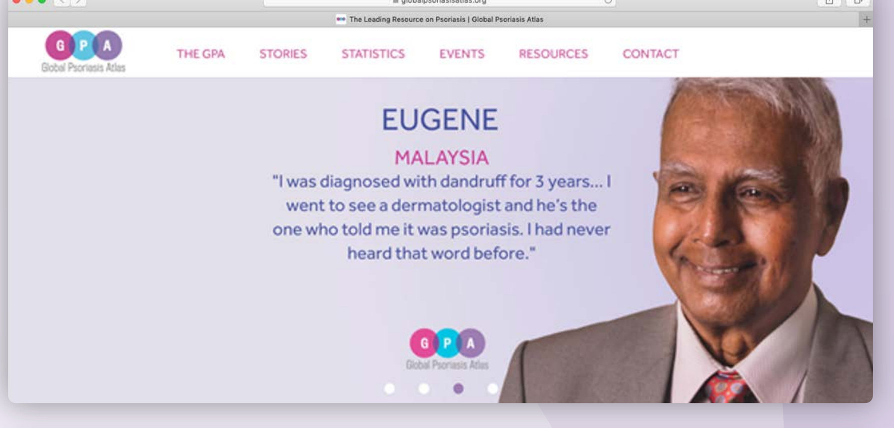
www.globalpsoriasisatlas.org

The Atlas contains the data from our systematic review and shares the powerful stories of people with psoriasis from around the world. The website also hosts the Simplified Psoriasis Index (SPI) which has been developed to enable either health care professionals or patients with psoriasis to make regular assessments of disease severity and its impact on wellbeing. It also incorporates a summary of past behaviour and treatment.

The SPI was developed by Dr Robert Chalmers at the Dermatology Centre, Salford, Greater Manchester, UK based on an earlier prototype, the Salford Psoriasis Index, but was simplified using a novel scoring system. Unlike the former tool, the Simplified Psoriasis Index is available in two complementary versions, one for use by health care professionals (proSPI) and one for self-assessment by people with psoriasis (saSPI).

Please do take the time to visit the new website and tell us your thoughts. @globalpsoriasisatlas





"I was diagnosed with dandruff for 3 years... I went to see a dermatologist and he's the one who told me it was psoriasis. I had never heard that word before."

"The prevalence of psoriasis appears to vary depending on genetic background and geographic location."

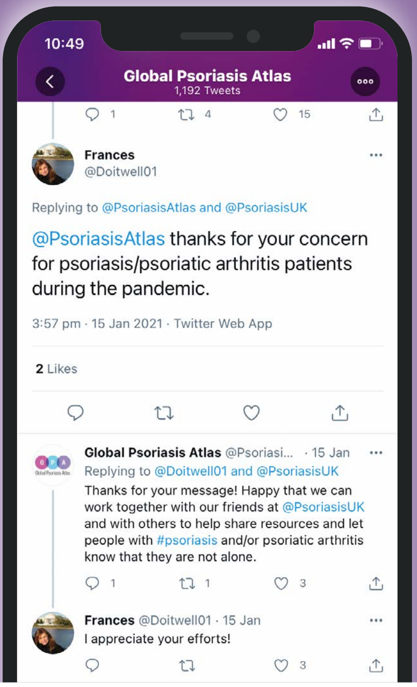
"Our data indicates a prevalence estimate of 0.06% in Taiwan compared to a prevalence estimate of 1.91% in Denmark."

Social Growth

The Global Psoriasis Atlas project has established itself as a recognised and respected brand and our intention is to continue to build on that foundation.

Social media plays an increasingly important part in how people learn about and engage with businesses, non-profit organisations and brands. It is a vehicle for communication, information sharing and an important way to build rapport and trust with followers. The GPA launched its Twitter account in October 2018, followed by Instagram, Facebook and YouTube in 2019. During that time, we have steadily increased the GPA presence online and are working to ensure that we post content consistently across all platforms.

The GPA team is in the process of developing a social media strategy with the aim of increasing brand awareness across our online platforms. This will enable us to dig deeper and examine our reach, engagement rates and mentions and to allow us to understand and quantify our influence.



Frances
@Doitwell01

Replying to @PsoriasisAtlas and @PsoriasisUK

@PsoriasisAtlas thanks for your concern for psoriasis/psoriatic arthritis patients during the pandemic.

3:57 pm · 15 Jan 2021 · Twitter Web App

2 Likes

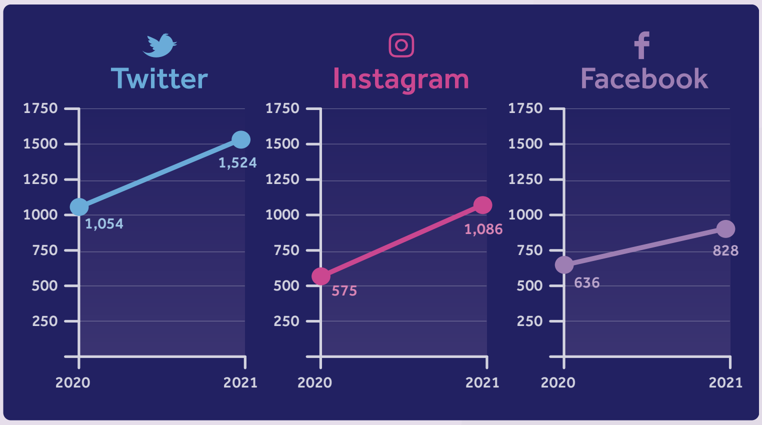
Global Psoriasis Atlas @Psoriasi... · 15 Jan
Replying to @Doitwell01 and @PsoriasisUK
Thanks for your message! Happy that we can work together with our friends at @PsoriasisUK and with others to help share resources and let people with #psoriasis and/or psoriatic arthritis know that they are not alone.

Frances @Doitwell01 · 15 Jan
I appreciate your efforts!

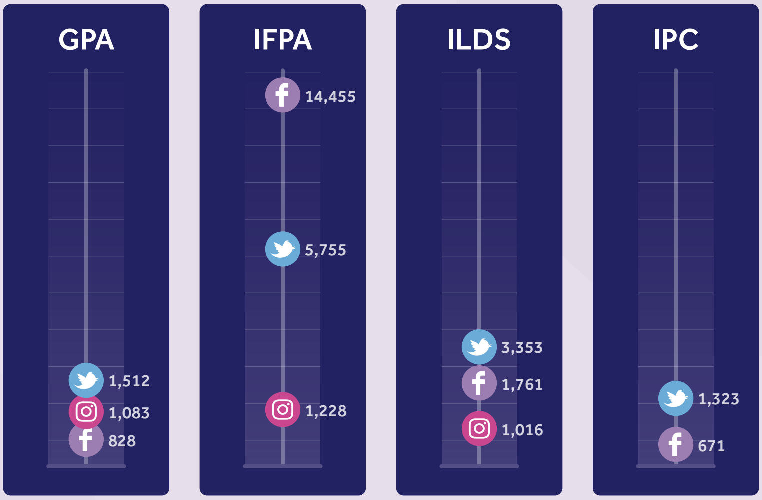
Analytics

@PsoriasisAtlas

GPA Social Media Followers (2020-2021)



Benchmarking for Success



Top ten countries visiting the website since launch in 2019

1	India
2	Nepal
3	United States
4	Ukraine
5	Mexico
6	Pakistan
7	United Kingdom
8	Myanmar (Burma)
9	Romania
10	Cambodia

Website users since launch in 2019

29,019

https://doi.org/10.1016/j.jaci.2020.10.007

News

Dr Maul with GPA Regional Coordinator, Professor Ricardo Romiti, and colleagues in São Paulo, Brazil

Pilot project success in Latin America

Following the success of our pilot project in Latin America, the data have now been analysed and show great promise.

Therefore, in collaboration with our Regional Coordinators, we plan to implement the GPA healthcare survey on a global scale. Rollout of the survey is planned to commence April 2021.

We are in the process of revising and finalising the GPA healthcare survey for dissemination to our Regional Coordinators at the beginning of April 2021. It is our goal to provide an adapted version that allows for easy and intuitive data collection and management via smart phone, tablet, or computer. In order to put the collected data into perspective and allow for better comparison, a new Unit Survey will be introduced. This survey will be conducted once for each participating centre and will also include a feedback loop in order to further optimise the data collection process.

We are grateful for the support and collaboration of our Regional Coordinators in our efforts to understand more about psoriasis care and treatment around the world.

The GPA is proud to be a partner organisation for PsoProtect and PsoProtectMe

PsoProtect was established as an international registry for healthcare professionals to report outcomes of confirmed or suspected COVID-19 in people with psoriasis (**psoprotect.org**). These findings have been published in the Journal of Allergy and Clinical Immunology.
READ THE PUBLICATION HERE

PsoProtectMe is a survey for people with psoriasis to report their experience of the pandemic, whether or not they have had COVID-19.
READ MORE HERE

OCT
2020

World Psoriasis Day campaign

This World Psoriasis Day, we teamed up with PsoProtectMe and the International Federation of Psoriasis Associations (IFPA) to run a collaborative social media campaign.
READ MORE ABOUT IT HERE

Publications

Systematic analysis and modelling study

National, regional, and worldwide epidemiology of psoriasis: systematic analysis and modelling study, May 2020. **READ THE STUDY HERE**
In the paper, we present findings from the most comprehensive systematic review ever undertaken to examine the global epidemiology of psoriasis. The methods presented in the paper underpin the data analysis that forms our Global Psoriasis Atlas. This has been a major milestone in developing the GPA and the paper has already received substantial attention. Specifically, the paper received an Altmetric High Attention Score; compared to all research outputs ever tracked by Altmetric, our paper has done particularly well and is in the 98th percentile based on the quality and quantity of online attention that it has already received.

Systematic review

Systematic review examining changes over time and variation in the incidence and prevalence of psoriasis by age and gender, May 2020.
READ THE REVIEW HERE

'Development of clinical diagnostic criteria for chronic plaque psoriasis: an international e-Delphi study', accepted for publication as a Research Letter in the British Journal of Dermatology in March 2021.

News

2022

Myanmar

We are working on plans for a small team from the GPA to visit Myanmar in early 2022 to run a workshop for local dermatologists and to facilitate discussions on a future large scale epidemiological skin disease survey in which the GPA would have a coordinating role. READ MORE

SEPT 2021

Greenland

Working in collaboration with Professors Thyssen and Zachariae, the GPA team are planning to conduct an epidemiological study of psoriasis in Greenland. The study will take place in four settlements on the Greenlandic East and West coasts. READ MORE

Thank you to Dr Ireny Iskandar

The GPA team would like to give a special thank you to Dr Ireny Iskandar for her hard work and dedication during her time on the team. She co-authored the largest ever systematic review on the prevalence of psoriasis[1] and published her own systematic review[2] examining changes over time and variation in the incidence and prevalence of psoriasis by age and gender in the British Journal of Dermatology. Ireny secured a promotion at The University of Manchester and we wish her every success in her new role.

IFPA @PsoriasisIFPA · Nov 30, 2020

Saturday's IFPA Africa Member Meeting grew inspiration and direction for further regional collaboration. Many thanks to @psoriasiskenya, South Africa Psoriasis Association, @PsoriasisAtlas, @PsoProtect, and the multiple IFPA Mentorship Program participants who attended!

NOV 2020

IFPA Africa Region Member Associations Meeting

GPA Regional Coordinator, Professor Ncoza Dlova, presented to individuals from psoriasis associations in the Africa region on the general goals of the GPA and how the data from the Atlas may benefit the region. She outlined the GPA pilot project in Tanzania and an overview of living with psoriasis, risk factors, comorbidities (including HIV) and advice to people living with psoriasis during the pandemic. Professor Dlova reiterated the importance of epidemiological data on psoriasis and shared stories. She also highlighted challenges in dermatology care in the African region, for example, a lack of dermatology specialists and understanding of the presentation of psoriasis on black skin.

IFPA @PsoriasisIFPA · Dec 3, 2020

We're at the third IFPA regional meeting. This week, we focus on Europe! Thank you, Dr. Szepietowski, for joining us to present the latest updates from @PsoriasisAtlas. We look forward to hearing from IFPA's European members in a few moments, then @PsoProtect!

DEC 2020

IFPA European Member Associations Meeting

Our Regional Coordinator, Professor Jacek Szepietowski, was invited to speak at IFPA's European member associations meeting. The meeting brought together psoriasis patient advocates from around 15 countries across Europe. Professor Szepietowski presented an update on the Global Psoriasis Atlas epidemiological data collected in this region. He focussed his presentation on the GPA development of diagnostic criteria for psoriasis and the potential significance of this tool for improving speed and accuracy of diagnosis.

Engagement

The work of the Global Psoriasis Atlas would not be possible without the financial support we receive from our Industry partners.

The LEO Foundation are the lead supporter of the Global Psoriasis Atlas and we are grateful for the core, key funding that they have provided throughout Phase I and II.

The Global Psoriasis Atlas has also been supported by grants and sponsorship from Abbvie, Amgen, Eli-Lilly and Company, Janssen and Novartis Pharma.

Partnership is a crucial step towards achieving the ambition of the GPA, to ensure that people around the world have access to the best available care and treatment for their psoriasis. We recognise that innovative and strategic partnerships with organisations are key to delivering our milestones and achieving the aims of the Atlas.

Lead supporter

LEO FOUNDATION

The GPA work in 2020-2021 has been made possible thanks to grants and sponsorship.

abbvie AMGEN Lilly janssen NOVARTIS

We always welcome new connections and partnerships!

Here are some of the ways you can get involved;

- **Provide financial support**
- **Collaborate with us**
- **Support the collection of data on the global burden of psoriasis**
- **Support our research**
- **Engage with us on social media**

Establishing a high quality GPA requires the support of industry, organisations with relevant data sets and collaboration across regions and countries.

The GPA Partnership Brochure provides details of the types and levels of financial support packages and highlights unique opportunities for involvement in the project.

For further information contact,
GPA Programme Manager, Rebekah Swan:
rebekah.swan@manchester.ac.uk

Would you like to learn more about the work of the GPA?

Visit our website
www.globalpsoriasisatlas.org

Follow us on Twitter, Instagram and Facebook
@PsoriasisAtlas

Visit Our Youtube Channel
YouTube

@ **Subscribe to our newsletter HERE**

Publications, Presentations and Abstracts

Publications

- Parisi R, Iskandar IYK, Kontopantelis E, Augustin M, Griffiths CEM, Ashcroft DM. National, regional, and worldwide epidemiology of psoriasis: systematic analysis and modelling study. BMJ 2020; 28;369:m1590
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- Clinical examination–based diagnostic criteria for chronic plaque psoriasis in adults: A Delphi consensus of international experts, Abo-Tabik M, Parisi R, Willis S, Griffiths CEM, Ashcroft DM, 100th Annual Meeting of the British Association of Dermatologists, Manchester, 2020
- Psoriasis and the risk of developing cancer: a systematic review and meta-analysis of observational studies, Trafford, AM; Parisi, R; Kontopantelis, E; Griffiths, CEM; Ashcroft, D, 99th Annual Meeting of the British Association of Dermatologists, Liverpool, 2019
- Psoriasis and Cancer Mortality: A systematic review and meta-analysis of observational studies, Trafford, AM; Parisi, R; Kontopantelis, E; Griffiths, CEM; Ashcroft, D, 27th European Academy of Dermatology and Venereology Congress Paris, 2018
- Global, regional and country-specific prevalence of psoriasis: a Bayesian meta-regression of population-based studies, Parisi R, Iskandar IY, Kontopantelis E, Augustin M, Griffiths CEM, Ashcroft DM, European Academy of Dermatology and Venereology Congress, Madrid, 2019
- Analysis of the Psoriasis Health care Survey in 16 Latin American countries (pilot study) – the Global Psoriasis Atlas, Trialonis-Suthakharan N, Maul JT, Gupta S, Griffiths CEM, Ashcroft DM, Augustin M, European Academy of Dermatology and Venereology Congress, Madrid, 2019
- Developing methodologies for field survey of psoriasis – the Global Psoriasis Atlas, Trialonis-Suthakharan N , Gupta S, Griffith CEM, Ashcroft DM, Augustin M, World Congress of Dermatology, Milan, 2019
- Global Burden of Disease: A systematic Literature Review on Disability Weights for Skin Diseases, Trialonis-Suthakharan N , Gupta S, Griffith CEM, Ashcroft DM, Augustin M, World Congress of Dermatology, Milan, 2019
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GPA Presentations

- The Global Psoriasis Atlas, Professor Chris Griffiths, IPC Middle-East and North Africa Psoriasis Masterclass, 2021
- "Real World Evidence", Professor Chris Griffiths, Columbian Congress of Dermatology, 2020
- The GPA update, Professor Chris Griffiths, IPC Think Tank, 2020
- Psoriasis and the Global Psoriasis Atlas, Professor Chris Griffiths, 1st International meeting of the Burma Skincare Initiative Yangon, Myanmar, 2020
- The Global Psoriasis Atlas, Professor Chris Griffiths, Department of Dermatology, Santiago, Chile, 2020
- The Global Psoriasis Atlas, Dr Julia-Tatjana Maul, Department of Dermatology, University of Santiago, Chile, 2020
- The Global Psoriasis Atlas, Dr Julia-Tatjana Maul, Department of Dermatology, Catholic University of Santiago, Chile, 2020
- The Global Psoriasis Atlas, Dr Julia-Tatjana Maul, Department of Dermatology, University of Sao Paulo, Brazil, 2020
- The Global Psoriasis Atlas, Dr Julia-Tatjana Maul, Department of Dermatology, University of Salvador Brazil, 2020
- The Global Psoriasis Atlas, Dr Julia-Tatjana Maul, Department of Dermatology, University of Florianopolis, Brazil, 2020
- Access to treatment in Latin America, Dr Julia-Tatjana Maul, IPC Think Tank, 2020
- GPA Phase II: "How could we use the Atlas as an advocacy tool?", Internal Board Members and Secretariat Team, 2020
- The Global Psoriasis Atlas, Professor Chris Griffiths, Department of Dermatology Chittagong University, Chittagong, Bangladesh, 2019
- The Global Psoriasis Atlas, Professor Lars French, The 45th Annual Meeting of Taiwanese Dermatological Association, 2019
- Global Psoriasis Atlas update, Professor Chris Griffiths and Professor Darren Ashcroft, IPC Think Tank, Lisbon, Portugal, 2019
- Global Psoriasis Atlas update, Professor Chris Griffiths, ILDS/WHO Meeting, 2019
- Global Psoriasis Atlas overview, Professor Jonathan Barker, AAD corporate breakfast, Washington, D.C, USA, 2019
- Global Psoriasis Atlas overview, Professor Jonathan Barker, EADV corporate breakfast, Madrid, Spain, 2019
- Global Psoriasis Atlas overview, Professor Peter van de Kerkhof, IPC Councillor meeting, Milan, Italy, 2019
- The Global Psoriasis Atlas, Professor Chris Griffiths, British Association of Dermatologists, Global Health Day, London, UK, 2019
- The Global Psoriasis Atlas, Professor Chris Griffiths, Regional Dermatology Training Centre, Moshi, Tanzania, 2019
- The Global Psoriasis Atlas, Professor Chris Griffiths, International Psoriasis Council Masterclass, Cairo Egypt, 2019
- The Global Psoriasis Atlas: Clinical experiences on a field trip through Latin America and its psoriasis disease burden, Dr Julia-Tatjana Maul, Swiss Psoriasis Day Basel, 2019
- GPA Invitational Talk, Dr Julia-Tatjana Maul, RADLA (Reunion Anual de Dermatologos Latinamericanos), Buenos Aires, Argentina, 2019
- Global Psoriasis Atlas overview, Dr Alexa Kimball, AAD corporate breakfast, San Diego, CA, 2018
- Global Psoriasis Atlas overview, Professor Jonathan Barker, EADV corporate breakfast, Paris, France, 2018

Publications, Presentations and Abstracts

- Health care for psoriasis worldwide: What do we know and how could we learn from each other?, Dr Julia-Tatjana Maul, IPC Symposium, Cancun, Mexico, 2018
- Global Psoriasis Atlas update, Professor Chris Griffiths, ILDS/WHO Meeting, 2018
- Health care for psoriasis worldwide: What do we know and how could we learn from each other?, Dr Julia-Tatjana Maul, IPC Latin America working group, Cancun, Mexico, 2018
- Global Psoriasis Atlas update, Professor Chris Griffiths, IPC Think Tank, Miami Beach, FL, 2018
- The Global Psoriasis Atlas, Professor Chris Griffiths, Annual Meeting of the Tunisian Dermatological Society, Tunis, Tunisia, 2018
- Getting to know the ILDS: What we do and why, Professor Chris Griffiths, 2nd ILDS World Skin Summit, Ho Chi Minh City, Vietnam, 2018
- Global Psoriasis Atlas update, Professor Chris Griffiths, 5th World Psoriasis and Psoriatic Arthritis Conference, Stockholm, Sweden, 2018
- Global Psoriasis Atlas overview, Dr Alexa Kimball, AAD corporate breakfast, Orlando, FL, 2017
- Global Psoriasis Atlas overview, Dr Alexa Kimball, EADV corporate breakfast, Geneva, Switzerland, 2017
- Global Psoriasis Atlas overview, Professor Chris Griffiths, IPC Think Tank, London, UK, 2017
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