

Global Burden of Skin Disease



Robert Dellavalle, MD, PhD, MSPH
Associate Professor of Dermatology and Public Health
University of Colorado School of Medicine
Colorado School of Public Health

Declarations:

In the past year I have been reimbursed for expenses
for work at:

W.H.O.

MD Anderson

Hamilton University Skin of Color Symposium

Chicago Dermatology Society

What does a \$100 million public health data revolution look like?



<http://www.tedmed.com/talks/show?id=17751>

GBD Project

- U. Washington
- Bill & Melinda
- AAD
- >500 scientists
- Open access
- 1990-2010
- www.healthmetricsandevaluation.org

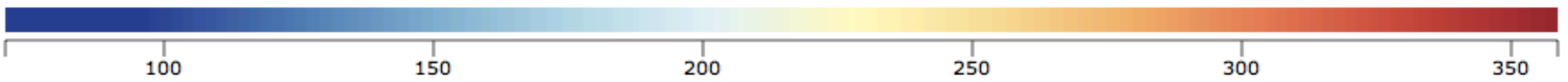
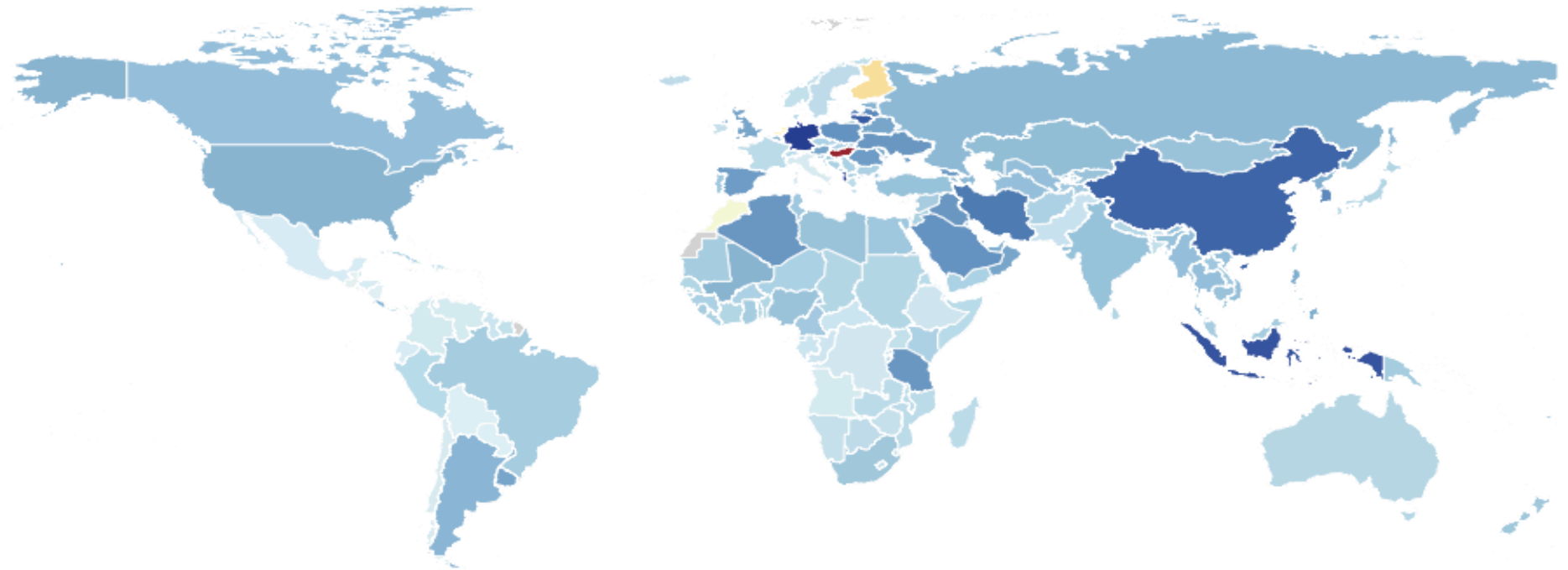
Methods

- ICD-9&10 disease definitions
- Systematically extract data
- Billion data points
- Incidence
- Severity
- No double counting

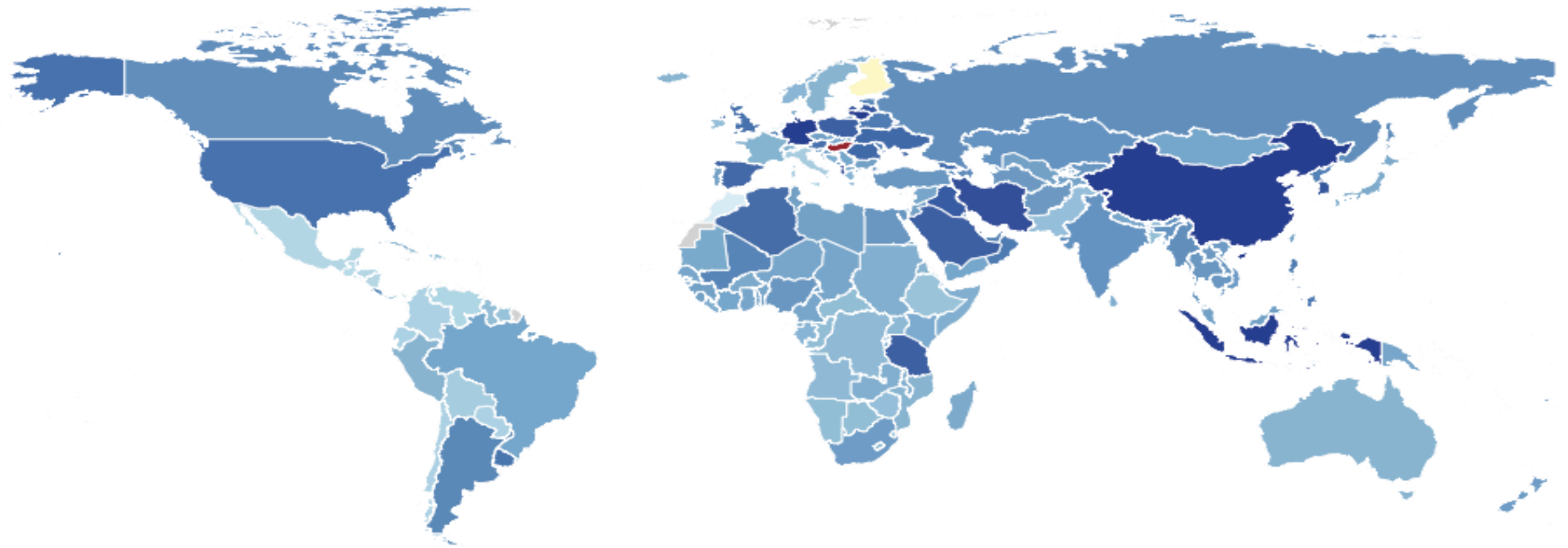
DALYs (disability-adjusted life years) =
YLLs (years life lost) + YLDs (years lived with disability)

1. Eczema (#60 to 59) 29%

Eczema
Both sexes, All ages, 2010
DALYs per 100,000

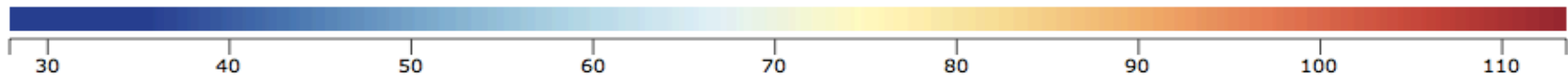
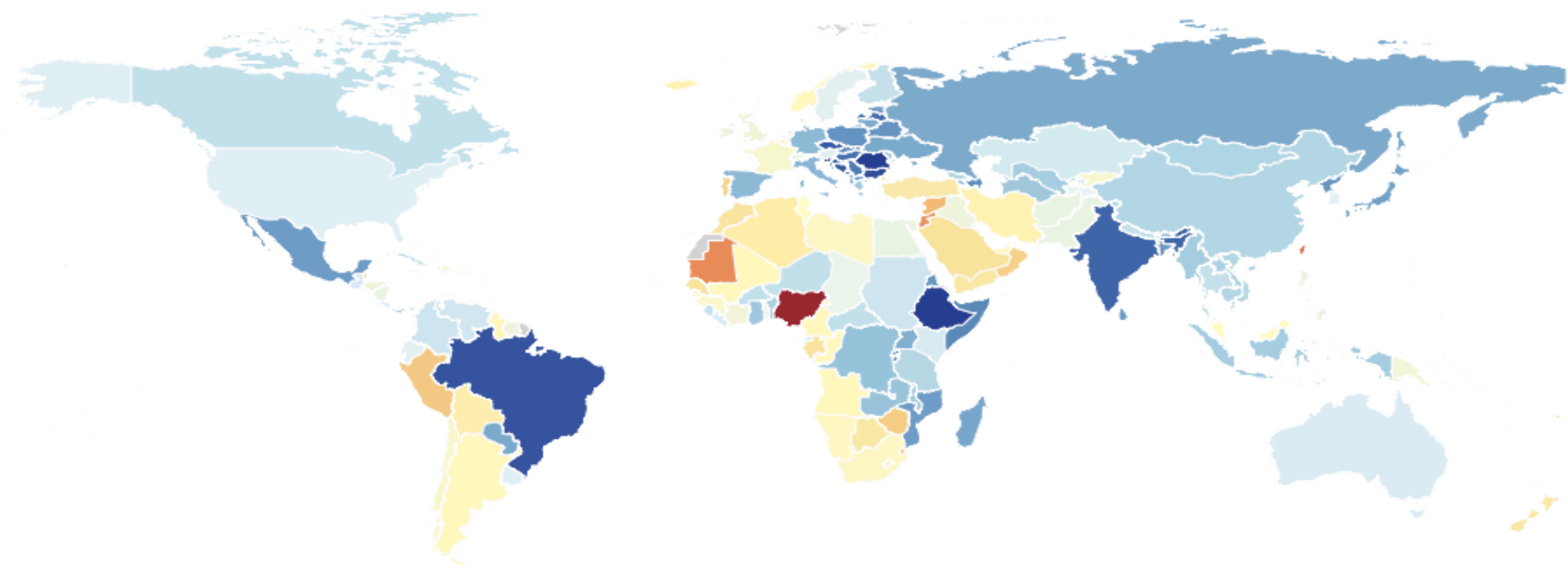


Eczema
Both sexes, All ages, 1990
DALYs per 100,000



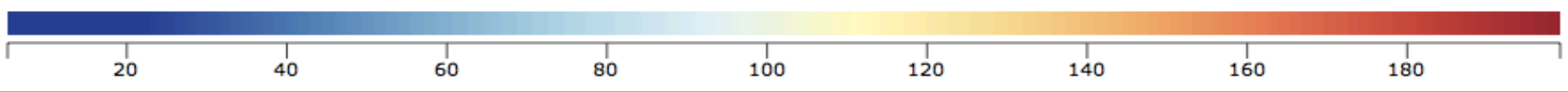
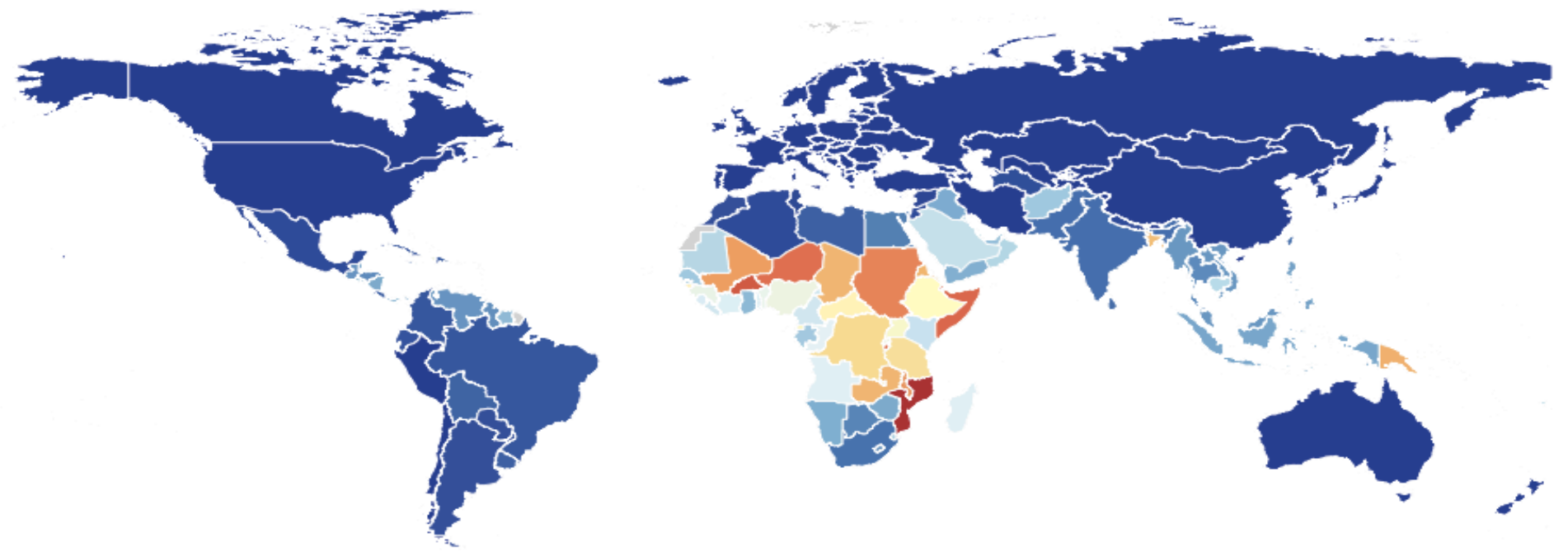
2. Acne (#90 to 86) 22%

Acne vulgaris
Both sexes, All ages, 2010
DALYs per 100,000



3. Bacterial skin diseases (#88 to 106) -10%

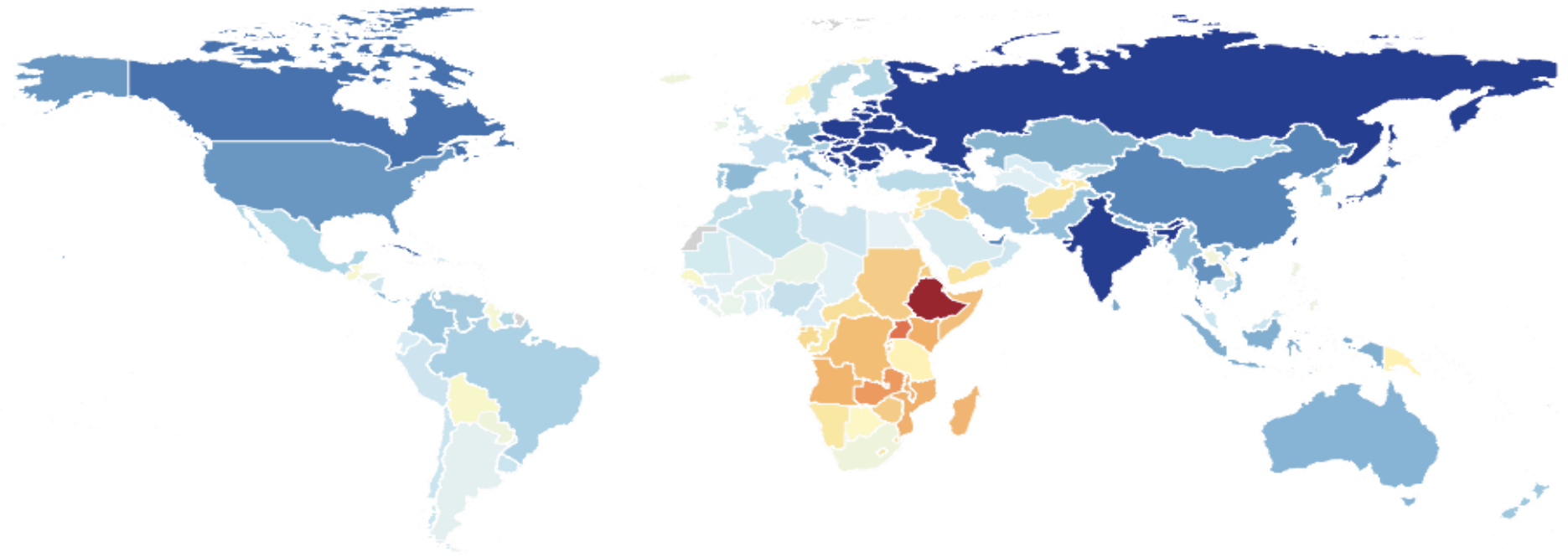
Abscess, impetigo, and other bacterial skin diseases
Both sexes, All ages, 2010
DALYs per 100,000



A dock at the bottom of the screen containing various application icons including a calendar showing June 26, a globe, a music note, a photo gallery, a Spotify logo, a clock, a guitar, a star with '43%' next to it, a globe with a person, a document with a magnifying glass, a person icon, a red document icon, a globe icon, a blue document icon, a red document icon, and a blue document icon.

4. Viral skin diseases (#106 to 109) 16%

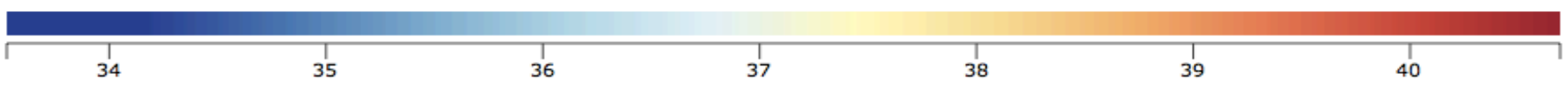
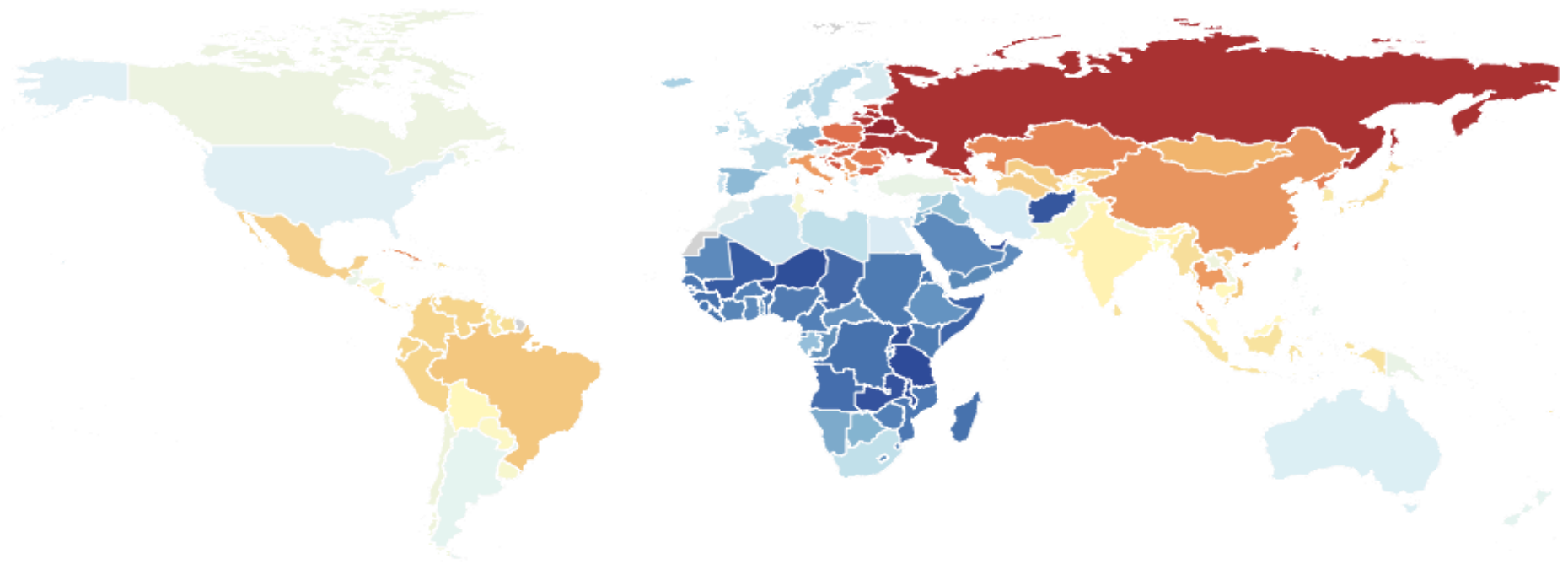
Viral skin diseases
Both sexes, All ages, 2010
DALYs per 100,000



Mac OS X dock with various application icons including Calendar (showing June 26), Safari, Music, Photos, Mail, Spotify, Clock, Guitar Hero, a star icon with 43%, a globe, a calendar, a person icon, a PDF viewer, a globe, a blue icon, a red icon, and a hand icon.

5. Urticaria
(#118 to 112) 32%

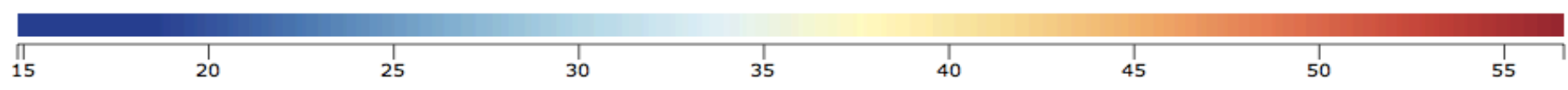
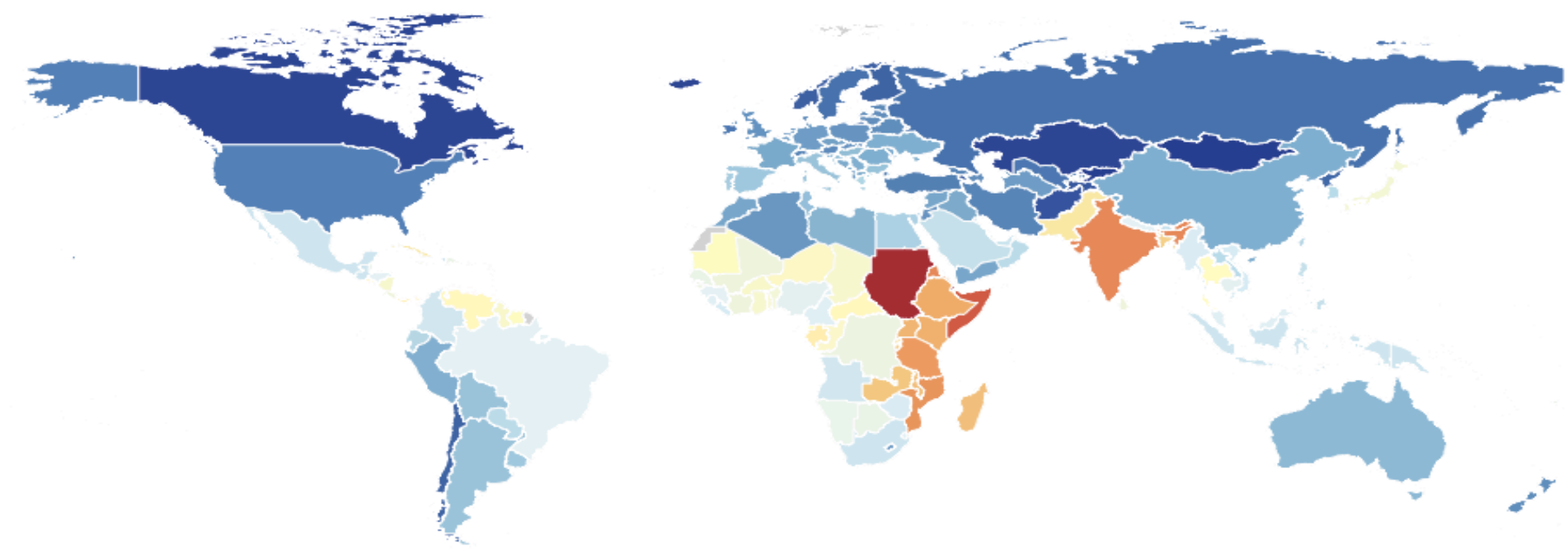
Urticaria
Both sexes, All ages, 2010
DALYs per 100,000



Mac OS X dock with various application icons including Calendar (June 26), Safari, Music, Photos, Spotify, iPhoto, iMovie, iTunes, and others.

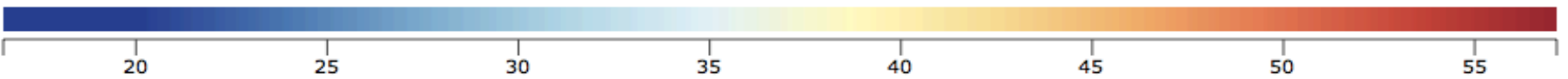
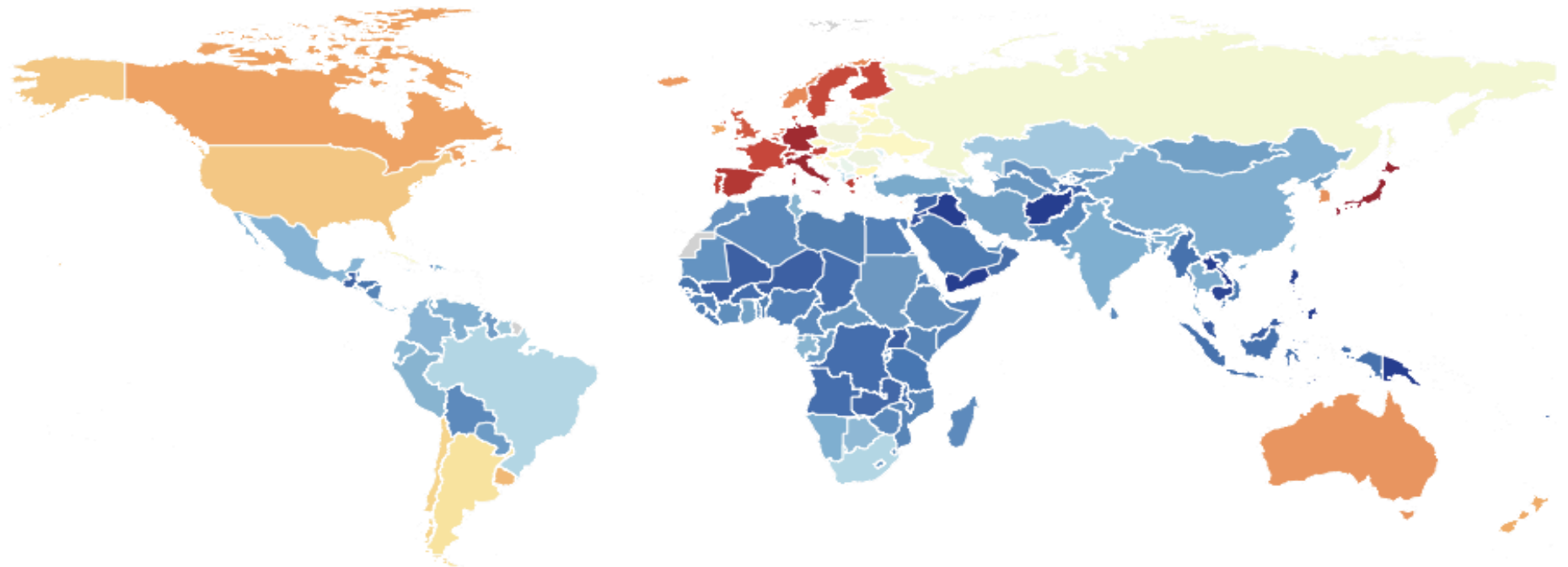
6. Fungal skin diseases
(#125 to 117) 42%

Fungal skin diseases
Both sexes, All ages, 2010
DALYs per 100,000



7. Pruritus
(130 to 119) 45%

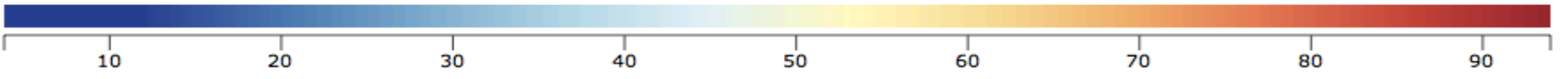
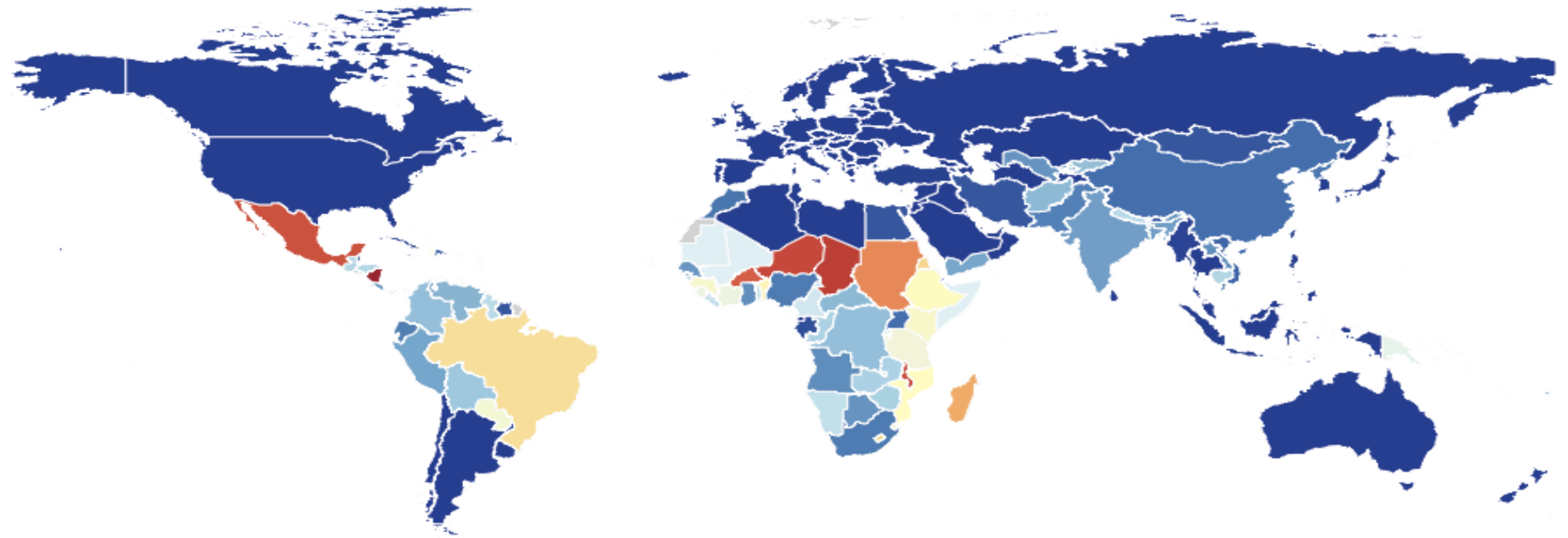
Pruritus
Both sexes, All ages, 2010
DALYs per 100,000



8. Scabies

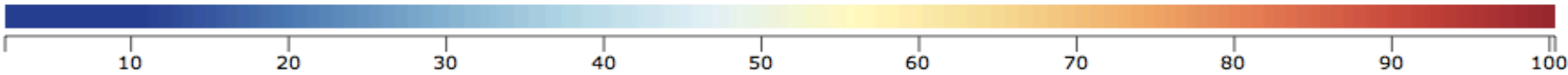
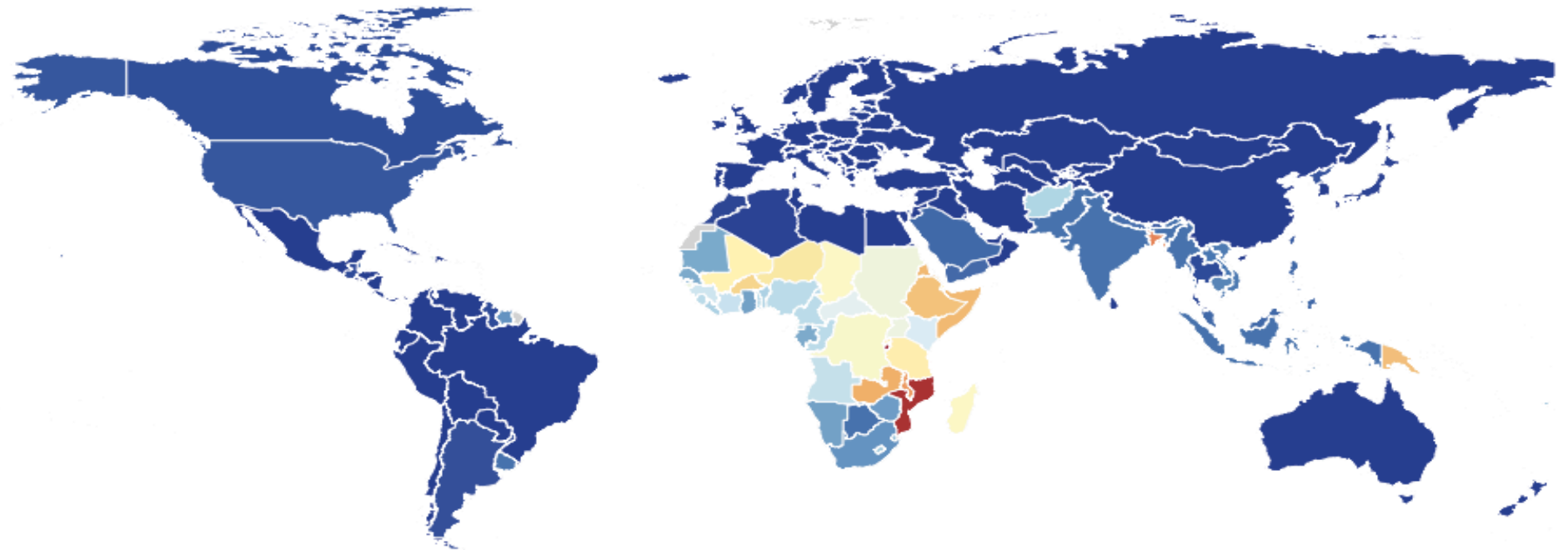
(#120 to 129) -16%

Scabies
Both sexes, All ages, 2010
DALYs per 100,000



9. Cellulitis
(#129 to 133) -11%

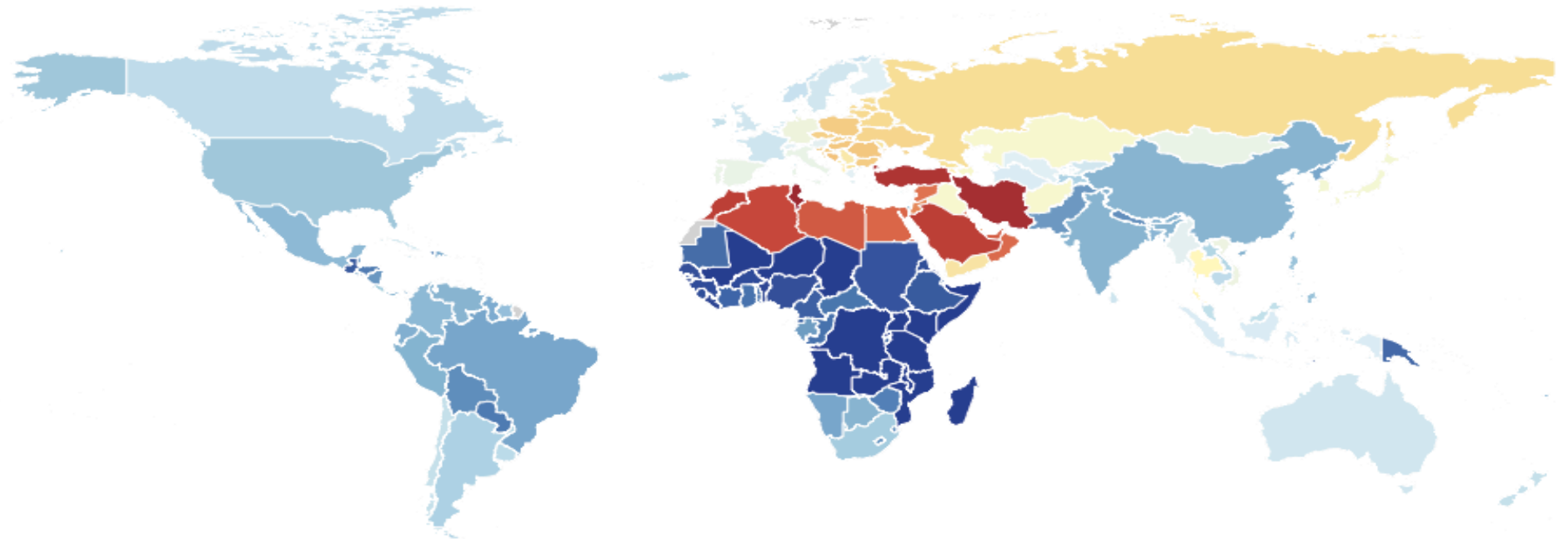
Cellulitis
Both sexes, All ages, 2010
DALYs per 100,000



A Mac OS X dock containing various application icons. From left to right, the icons include: a calendar showing '26', a compass, a photo gallery, a music note, a photo of a person, a Spotify logo, an iMessage icon, a guitar, a Star Wars character, a globe with a download arrow, a Firefox browser icon, a blue person icon, a red document icon, a blue globe icon, a blue person icon, a red document icon, and an orange person icon.

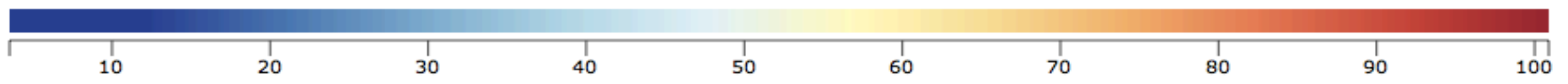
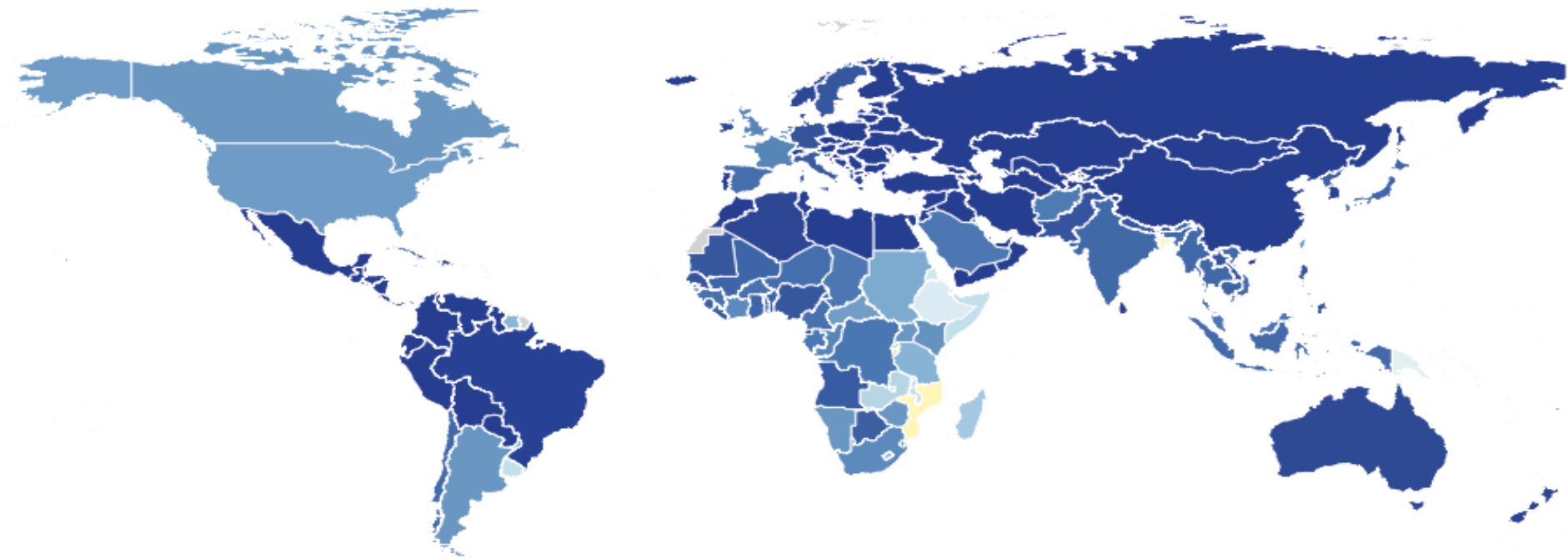
10. Alopecia Areata
(#141 to 136) 35%

Alopecia areata
Both sexes, All ages, 2010
DALYs per 100,000



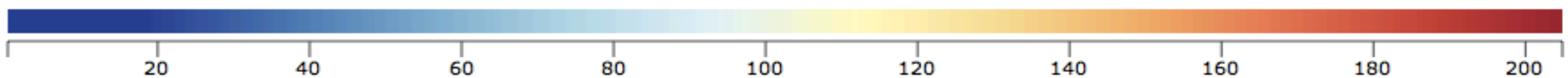
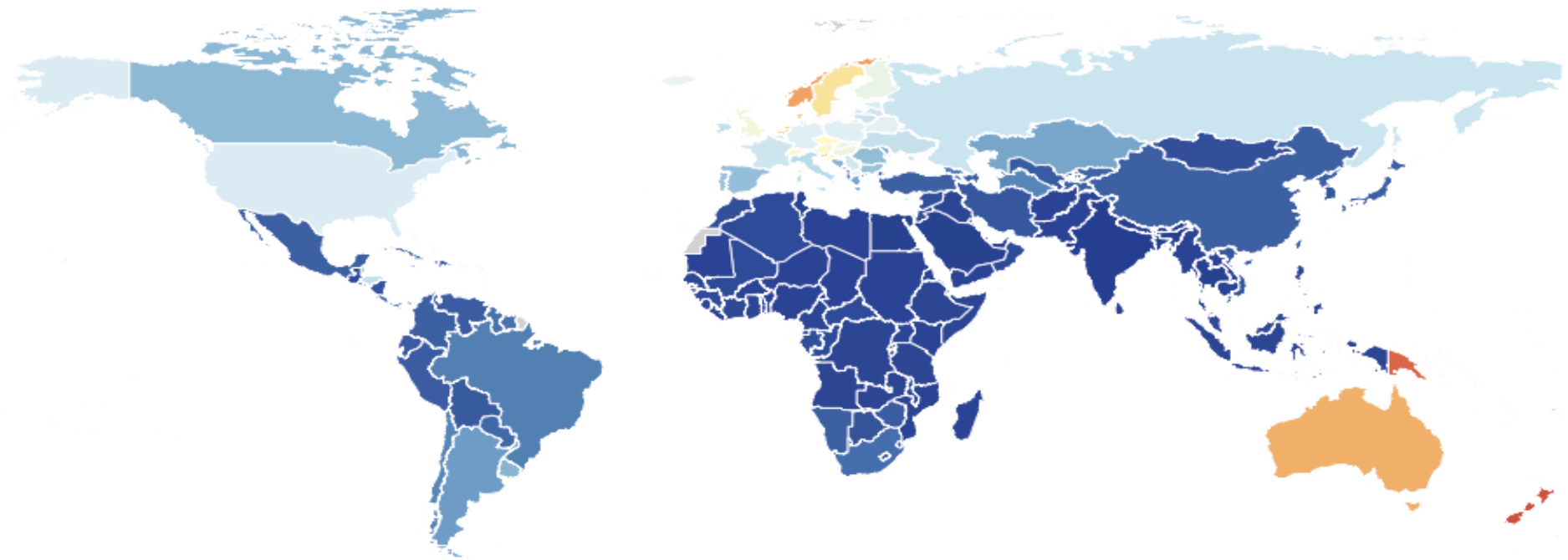
11. Decubitus ulcer
(#140 to 137) 24%

Decubitus ulcer
Both sexes, All ages, 2010
DALYs per 100,000



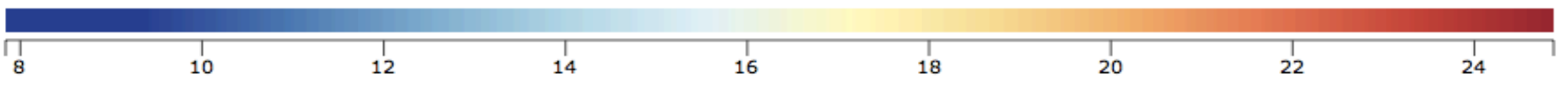
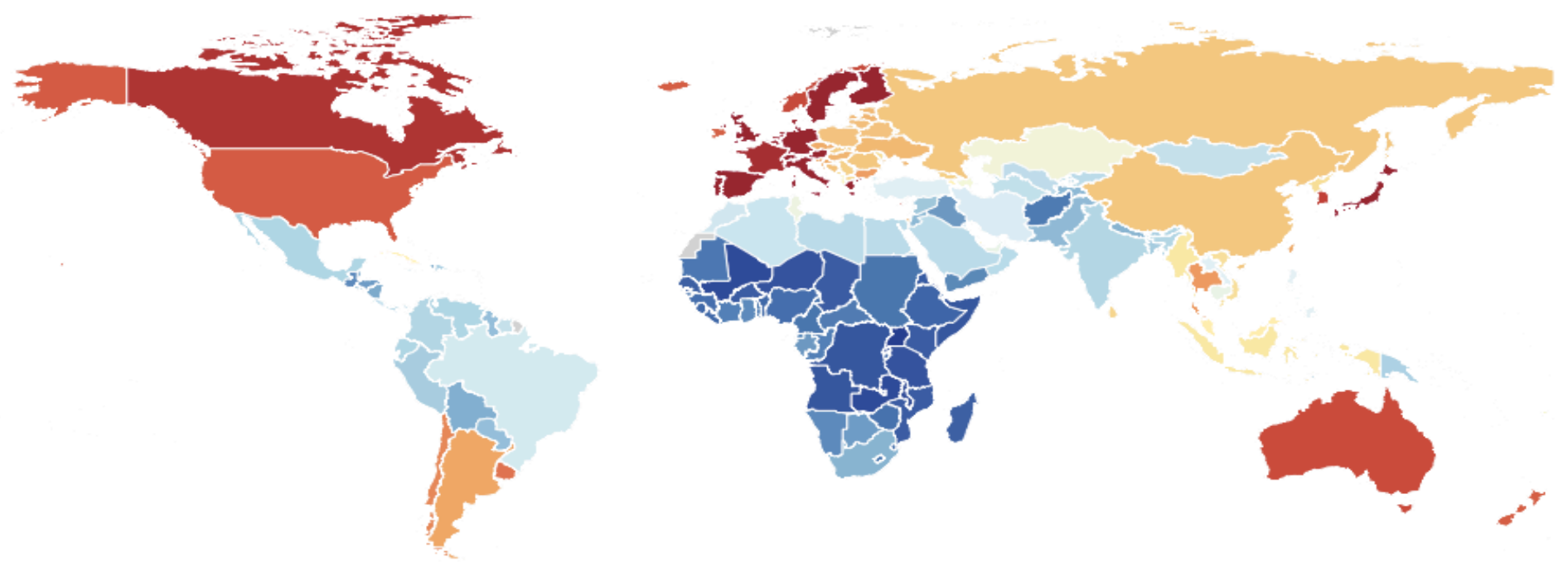
12. Melanoma
(#147 to 139) 39%

Malignant melanoma of skin
Both sexes, All ages, 2010
DALYs per 100,000



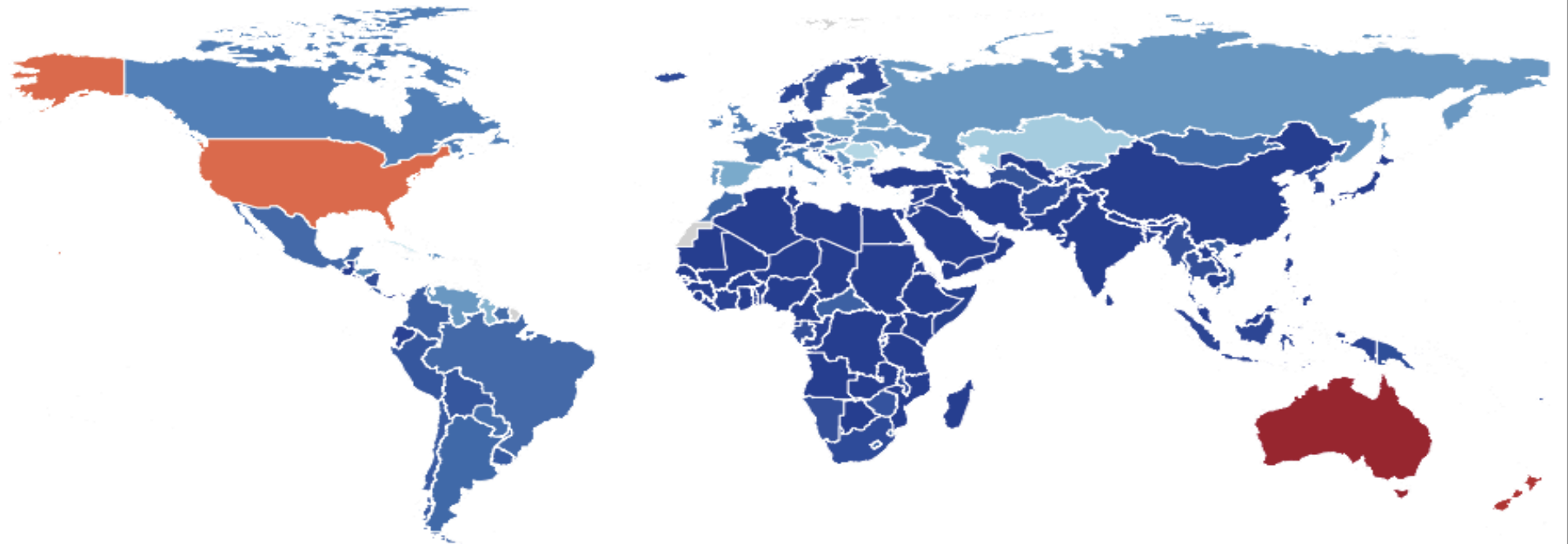
13. Psoriasis
(#150 to 144) 43%

Psoriasis
Both sexes, All ages, 2010
DALYs per 100,000



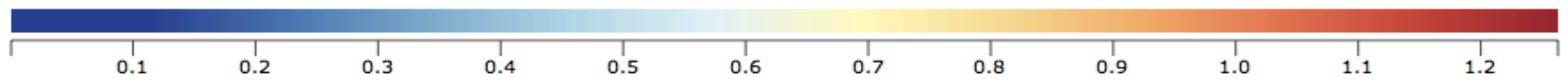
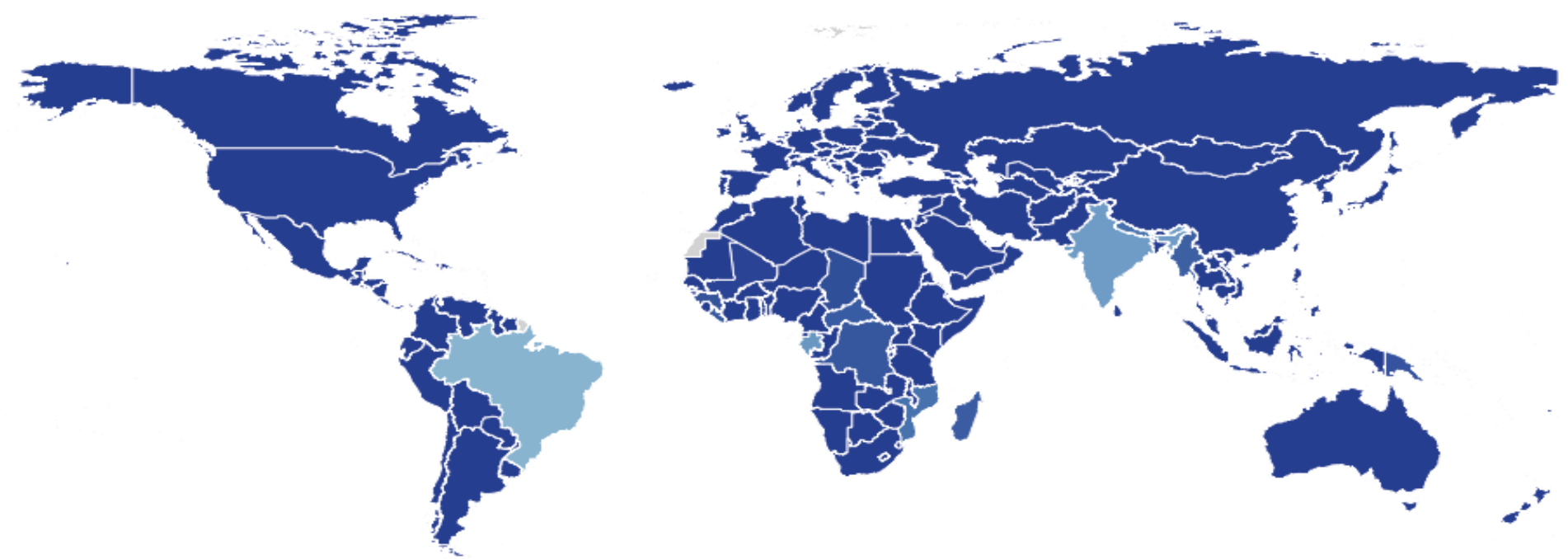
14. Non-melanoma skin cancer
(#159 to 151) 56%

Non-melanoma skin cancer
Both sexes, All ages, 2010
DALYs per 100,000



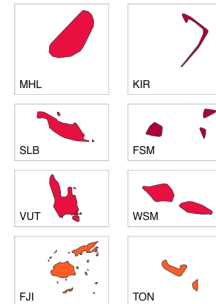
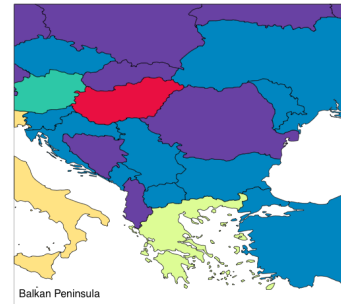
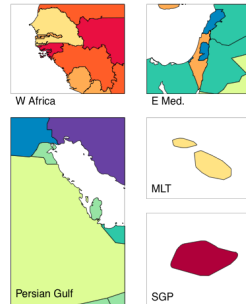
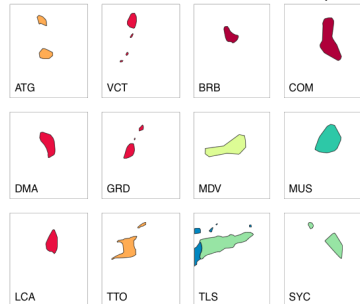
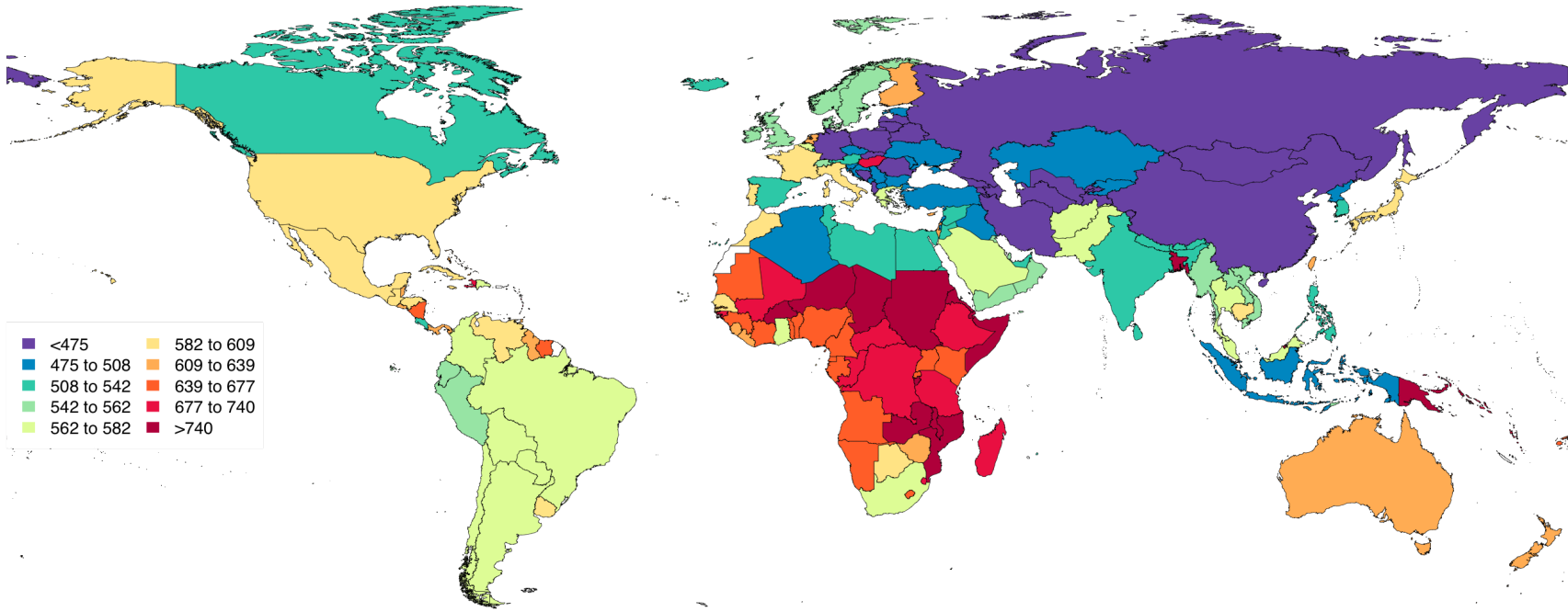
15. Leprosy
(#175 to 175) -77%

Leprosy
Both sexes, All ages, 2010
DALYs per 100,000

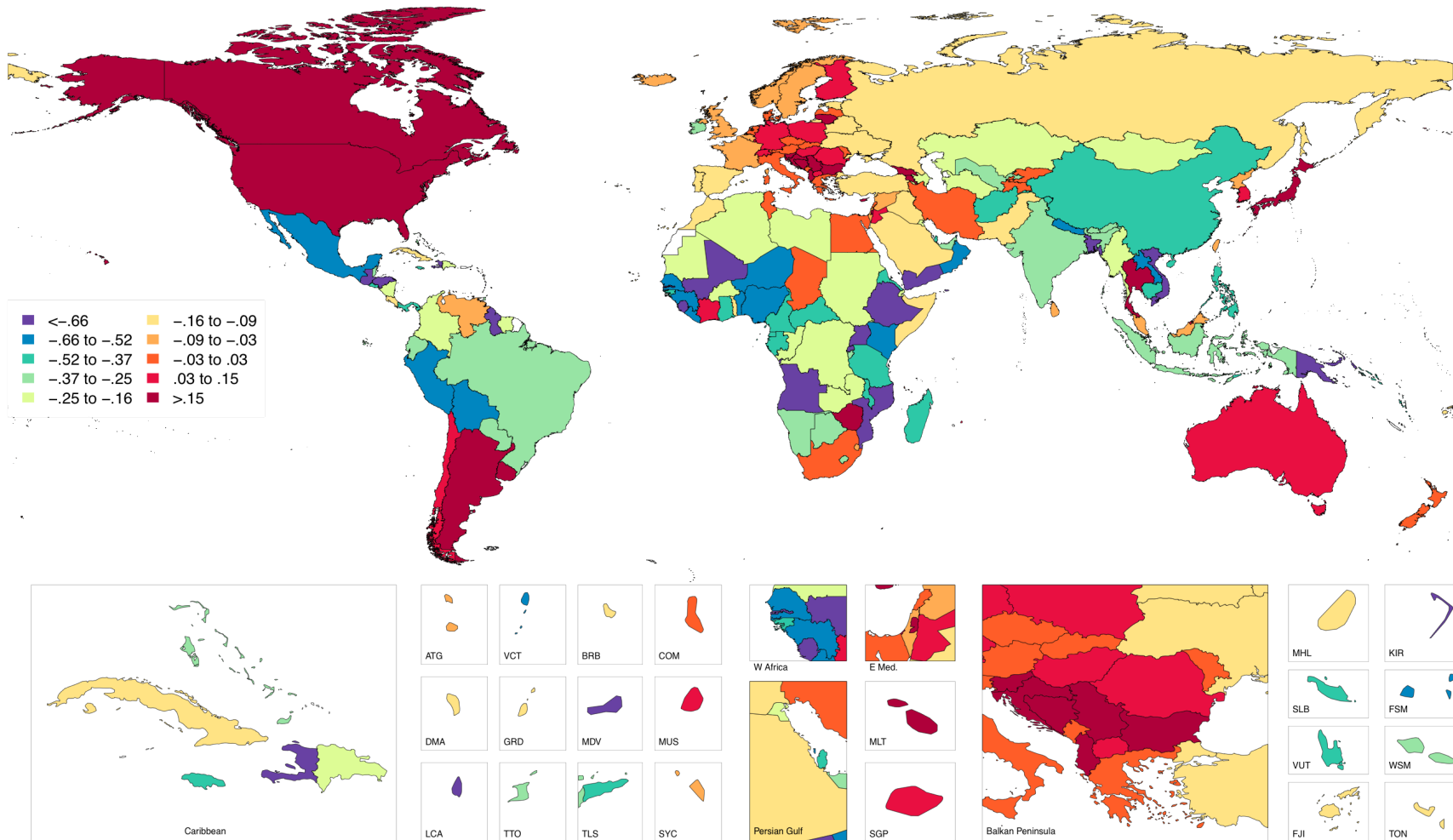


“Of all of the forms of inequality, injustice in health is the most shocking and the most inhumane.” --Martin Luther King Jr.

Overall skin conditions DALYs per 100,000, 2010



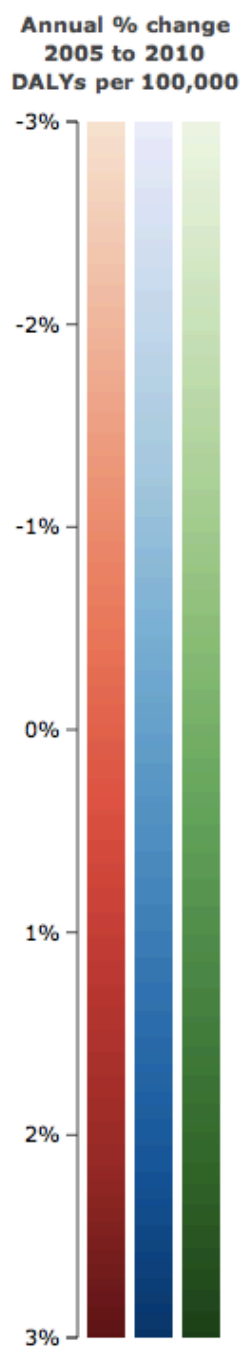
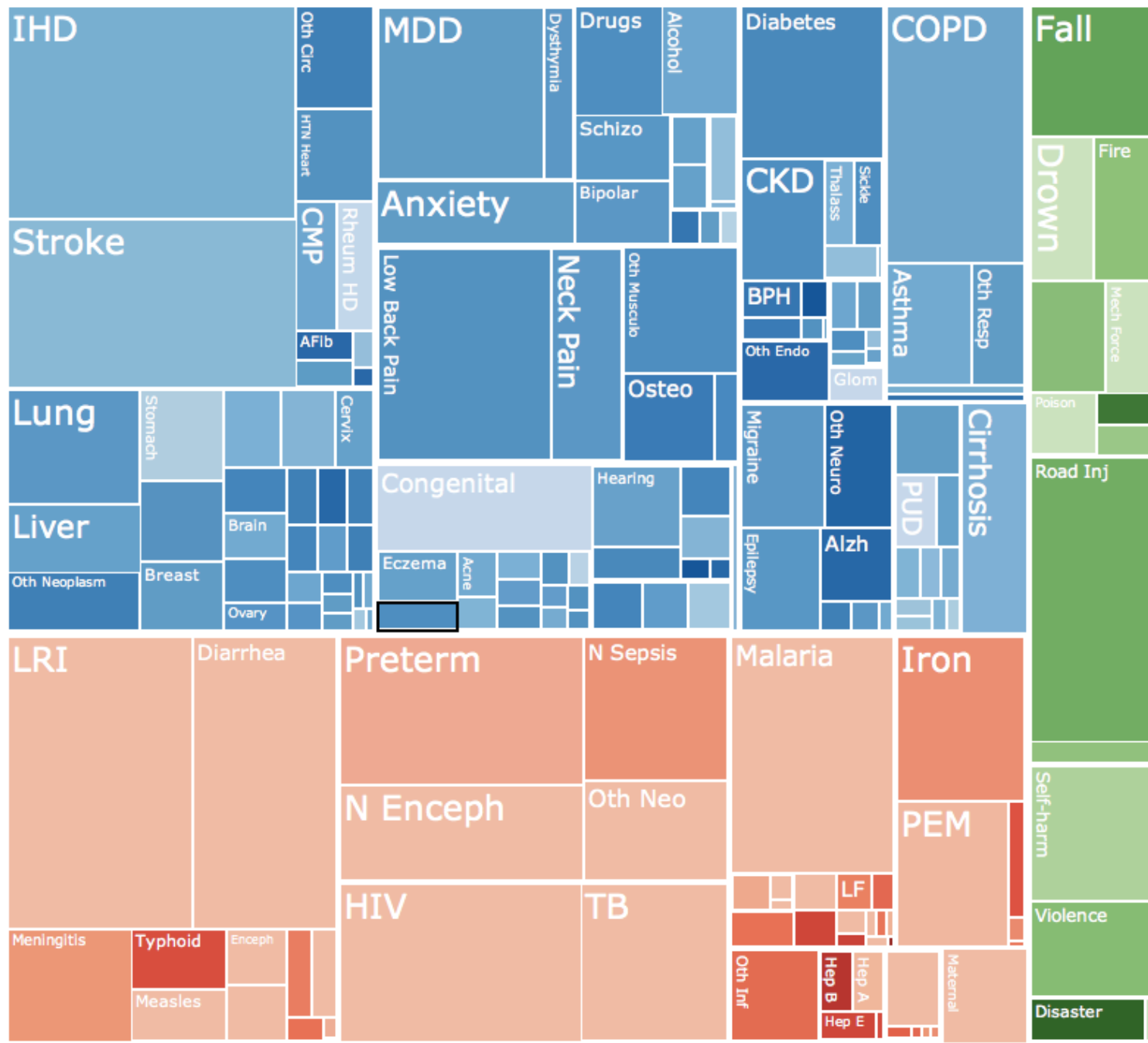
Annualized percent change in skin conditions DALYs, 1990–2010



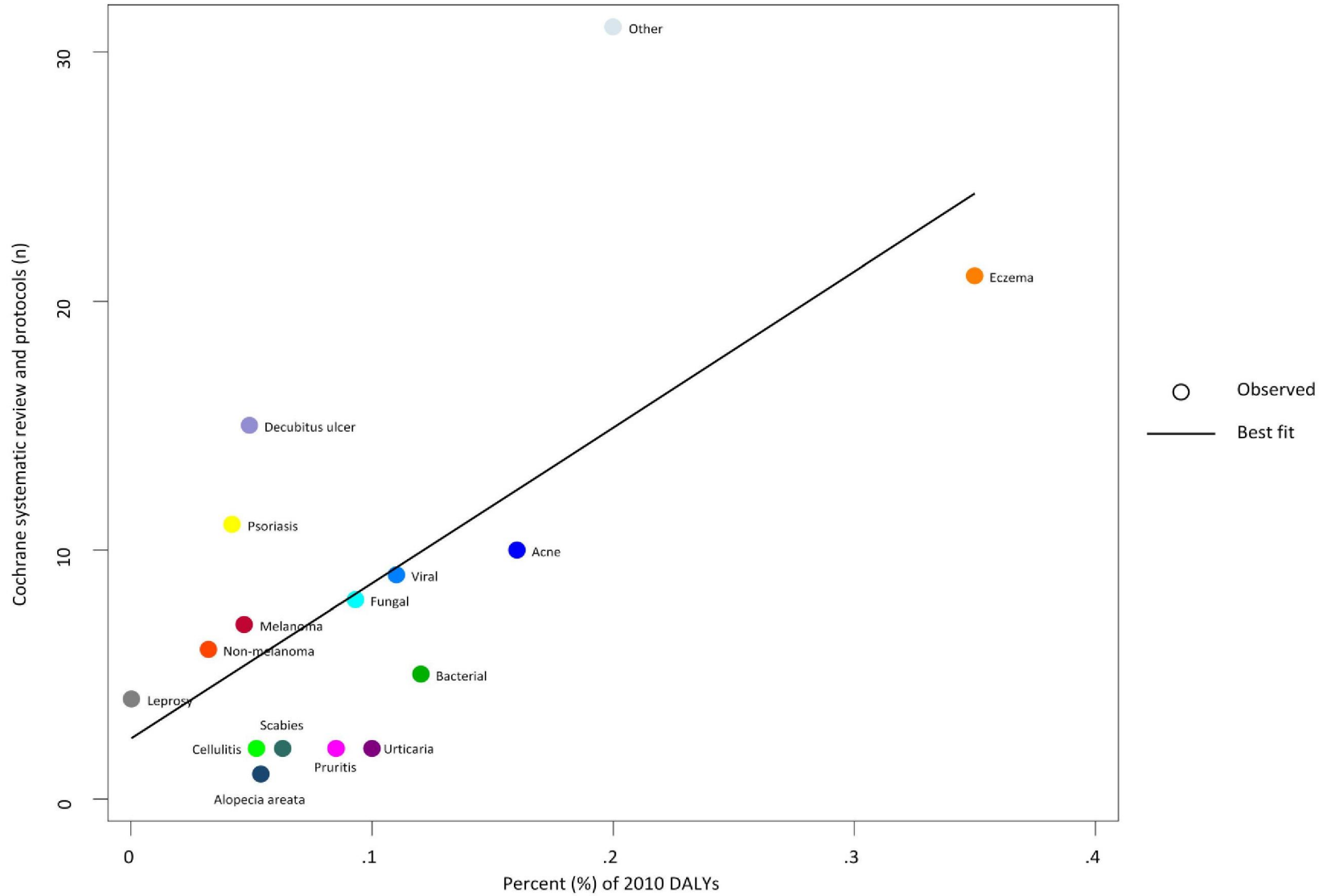
Refining

- Data
 - Real time updates
- Funding?
 - Do systematic reviews reflect GBD?

Global, DALYs
Both sexes, All ages, 2010



Skin Condition systematic review and DALY comparison



Comparing GBD results with systematic review content in the following domains:

1. Dermatology
2. Ophthalmology
3. ENT
4. HIV
5. Neglected tropical diseases (derm)
6. All





TO VAIL PASS



Thank you!

