

Minimal improvements in the global burden of skin disease from 1990 to 2013



To the Editor: Skin disease often impairs quality of life and results in an increase in years lived with disability (YLDs). In 2010, skin disease was the fourth cause of nonfatal disease burden worldwide.¹ Skin conditions ranked between the second and eleventh leading causes of YLDs globally.¹ We investigated changes in the global burden of skin disease experienced in developed and developing countries between 1990 and 2013.

We used the Institute for Health Metrics and Evaluation (IHME) reports of Leading Causes of YLDs, 1990 and 2013.² The percent change in skin diseases between 1990 and 2013 was collected for each country listed. Of the 187 reported countries, we identified 47 developed countries according to the 2015 Human Development Index.³ The greatest improvements were seen in Portugal, with a 9% decrease in disability between 1990 and 2013. Israel, Spain, the Czech Republic, and Hungary followed the lead with a 7% decrease in YLDs. In addition, 6 of the 47 developed countries did not see any changes in YLDs from skin conditions, and 11 experienced an increase in their YLDs (Fig 1). The mean percent change seen in developed countries was a 1.85% improvement in disability (standard deviation

[SD] = 3.73 [95% confidence interval {CI}, -2.92 to -0.78]).

Of the 140 developing countries, 26 reported improvements in YLDs from skin diseases, as indicated by a negative percent change from 1990 to 2013 (Fig 2). The average percent change in disability (SD = 3.75 [95% CI, 2.04-3.29]). Ten countries saw no change, and the majority of developing countries (n = 104) experienced an increase in disability. Nicaragua, Oman, and Palestine saw the greatest increase in percent change of disability (11%, 11%, and 15%, respectively).

Skin diseases continue to affect not only those living in developing countries, but also those living in developed countries. The decrease experienced in the United States was low (1%), especially when compared to other developed countries. In other words, the percentage of Americans living in less than ideal health because of skin diseases has not changed substantially in the past 23 years, even though the United States has been spending far more on health care than any other developed country.⁴

An increase in life expectancy of Americans may partially account for a larger number of people living in the United States with skin diseases. Yet most of the developed countries have also experienced an increase in life expectancy. This therefore does not fully explain why the United States lags behind the majority of developed countries in terms of

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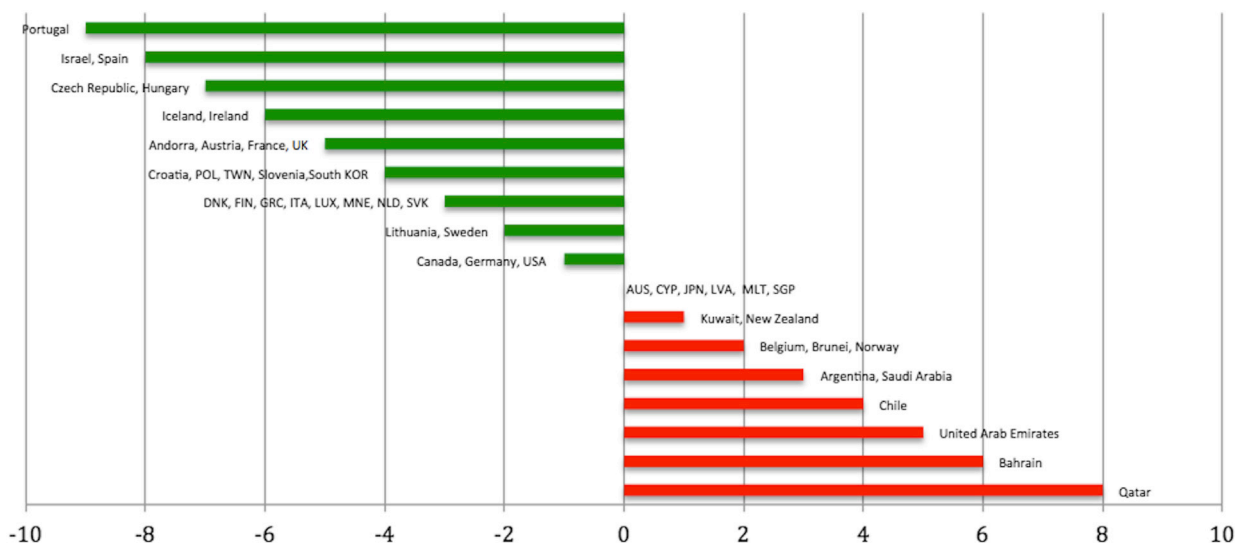


Fig 1. Percent change in disability-adjusted life years for top 10 and bottom 10 developed countries. Negative values indicate a decrease in disability-adjusted life years (95% confidence interval, -2.92 to -0.78). An abbreviation key can be found online at <http://www.jaad.org>.

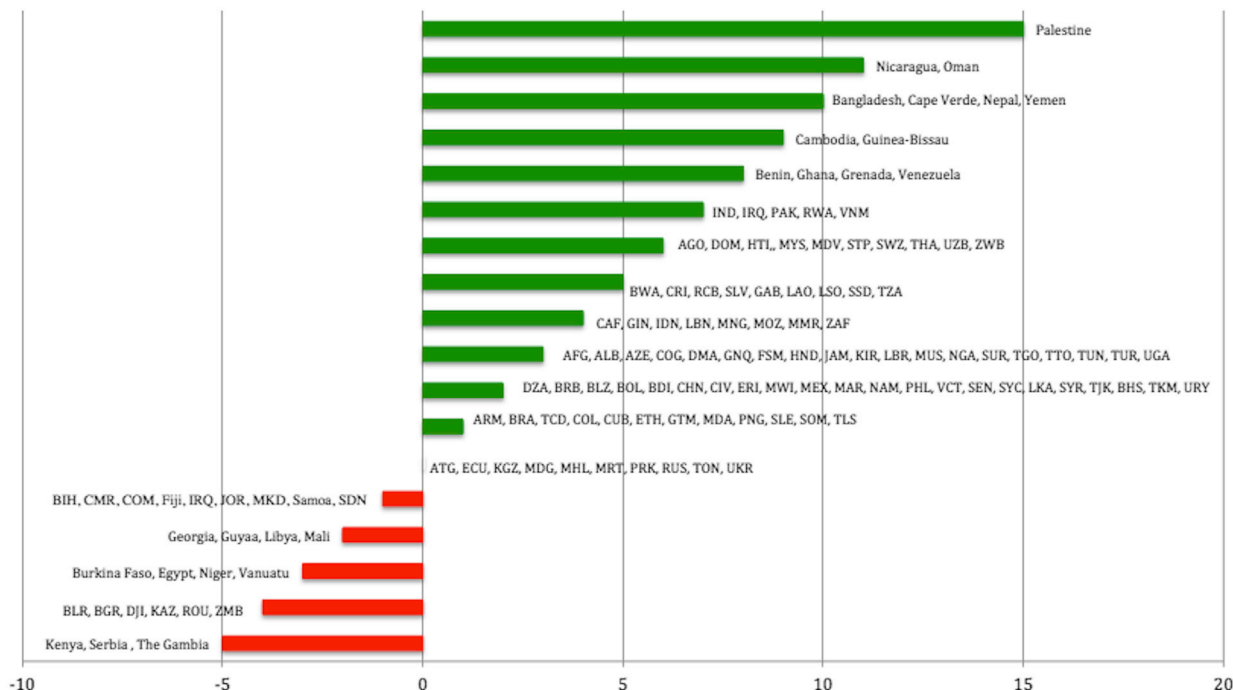


Fig 2. Percent change in disability-adjusted life years for developing countries. Negative values indicate a decrease in disability-adjusted life years (95% confidence interval, 2.04–3.29). An abbreviation key can be found online at <http://www.jaad.org>.

improvements in disability from skin disease. In addition, Americans may have higher expectations regarding treatment of skin diseases as a result of direct-to-consumer pharmaceutical advertising, which may overemphasize potential benefits of medications.⁵ Patient expectations are unaccounted for in the IHME data.

Over the past 2 decades, the majority of both developed and developing countries have experienced little or no improvement in disability caused by skin diseases. Health care providers around the world must shift their focus to improving the quality of lives in their patients with skin diseases.

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Abbreviations used:

Poland – POL
 Taiwan – TWN
 Korea – KOR
 Denmark – DNK
 Finland – FIN
 Greece – GRC
 Italy – ITA
 Luxembourg – LUX
 Montenegro – MNE
 The Netherlands – NLD
 Slovakia – SVK
 Australia – AUS
 Cyprus – CYP
 Japan – JPN
 Latvia – LVA
 Malta – MLT
 Singapore – SGP
 India – IND
 Iran – IRN
 Pakistan – PAK
 Rwanda – RWA
 Vietnam – VNM
 Angola – AGO
 Dominican Republic – DOM
 Haiti – HTI
 Malaysia – MYS
 Maldives – MDV
 Sao Tome and Principe – STP
 Swaziland – SWZ
 Thailand – THA
 Uzbekistan – UZB
 Zimbabwe – ZWB
 Botswana – BWA
 Costa Rica – CRI
 Democratic Republic of the Congo – RCB
 El Salvador – SLV
 Gabon – GAB
 Laos – LAO
 Lesotho – LSO
 South Sudan – SSD
 Tanzania – TZA
 Central African Republic – CAF
 Guinea – GIN
 Indonesia – IDN
 Lebanon – LBN
 Mongolia – MNG
 Mozambique – MOZ
 Myanmar – MMR
 South Africa – ZAF
 Afghanistan – AFG
 Albania – ALB
 Azerbaijan – AZE
 Congo – COG
 Dominica – DMA
 Equatorial Guinea – GNQ
 Federated States of Micronesia – FSM
 Honduras – HND
 Jamaica – JAM
 Kiribati – KIR
 Liberia – LBR
 Mauritius – MUS
 Nigeria – NGA
 Suriname – SUR
 Togo – TGO
 Trinidad and Tobago – TTO
 Tunisia – TUN
 Turkey – TUR
 Uganda – UGA
 Algeria – DZA
 Barbados – BRB
 Belize – BLZ
 Bolivia – BOL
 Burundi – BDI
 China – CHN
 Cote d'Ivoire – CIV
 Eritrea – ERI
 Malawi – MWI
 Mexico – MEX
 Morocco – MAR
 Namibia – NAM
 Philippines – PHL
 Saint Vincent and the Grenadines – VCT
 Senegal – SEN
 Seychelles – SYC
 Sri Lanka – LKA
 Syria – SYR
 Tajikistan – TJK
 The Bahamas – BHS
 Turkmenistan – TKM
 Uruguay – URY
 Armenia – ARM
 Brazil – BRA
 Chad – TCD
 Colombia – COL
 Cuba – CUB
 Ethiopia – ETH
 Guatemala – GTM
 Moldova – MDA
 Panama – PA
 Papua New Guinea – PNG
 Sierra Leone – SLE
 Somalia – SOM
 Timor-Leste – TLS
 Antigua and Barbuda – ATG
 Ecuador – ECU
 Kyrgyzstan – KGZ
 Madagascar – MDG
 Marshall Islands – MHL
 Mauritania – MRT

North Korea — PRK

Russia — RUS

Tonga — TON

Ukraine — UKR

Bosnia and Herzegovina — BIH

Cameroon — CMR

Comoros — COM

Iraq — IRQ

Jordan — JOR

Macedonia — MKD

Sudan — SDN

Belarus — BLR

Bulgaria — BGR

Djibouti — DJI

Kazakhstan — KAZ

Romania — ROU

Zambia — ZMB