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Letter

Considerable Uncertainty About the Burden of Gout in the Middle East and North Africa Region

To the Editor:

Amiri et al[1] provide extensive burden of disease estimates for gout in the Middle East and North Africa (MENA) region sourced from the Global Burden of Disease (GBD) 2019 study. We would like to draw attention to the considerable uncertainty with these estimates and advise readers to interpret the estimates cautiously.

The authors report GBD estimates for prevalence, incidence, and years lived with disability (YLD) for 21 countries in the MENA region for the period of 1990 to 2019, stratified by 5-year age bands and sex. The granularity of the GBD study is appealing because people can access the disease metrics most relevant to their interests. However, granularity can be a weakness as the approach taken in the GBD study is to provide a burden estimate for all possible disease metrics, even where there are no primary data specific to a country, age group, and other variables.[2]

To understand how much primary data were available for the MENA gout estimates, we identified the primary studies using the GBD Data Input tool.[3] This showed that there were 4 cross-sectional studies,[4-7] each providing prevalence data for 1 country. As the YLD estimates are derived from the prevalence estimates, data completeness for YLD is the same as for prevalence. None of the 4 studies provided incidence data. The 4 studies and their prevalence results are shown in the Table. The studies from Turkey,[7] Kuwait,[5] and Lebanon[4] found 3, 2, and 1 cases of gout, respectively. Clearly, we do not have much primary data on the burden of gout in the MENA region.

Table. Prevalence data from the 4 primary studies (prevalence result, sample size).

	1990-1999	2000-2009	2010-2019
Afghanistan			
Algeria			
Bahrain			
Egypt			
Iran		0.13%[a] (? cases/10,291)	
Iraq			
Jordan			
Kuwait	0.03% (2 cases/7670)		
Lebanon		0.03%[a] (1 case/3530)	
Libya			
Morocco			
Oman			
Palestine			
Qatar			
Saudi Arabia			
Sudan			
Syrian Arab Republic			
Tunisia			
Turkey		0.02% (3 cases/17,835)	
United Arab Emirates			
Yemen			

No study provided incidence data. Studies identified from the GBD Data Input tool site, December 12, 2022. [a] Lebanon prevalence figure calculated from gout cases and study sample size in Table 3 of Chaaya et al[4]; Iran study does not report number of cases, only % prevalence.

In our view, the authors could have done more to alert readers to the lack of primary data. The sentence in the Discussion section, "The main limitation of the study is data sparsity on the incidence and prevalence of gout in several of the MENA countries, especially the less developed countries..." is perhaps misleading. Data were sparse across all the countries (not several), and data sparsity was not confined to the less developed countries. To not explicitly state that there were no primary incidence data seems a missed opportunity. It would also have been possible to quantify how many country-years of prevalence data there were (7 country-years) for the 21 countries and 30 years (630 country-years). Providing a map of the region with the number of available primary studies noted for each country would also have provided more transparency.[8]

The GBD estimates also seem at odds with the prevalence data from the primary studies. Of the 4 countries with measured prevalence, Iran has by far the highest measured prevalence but surprisingly receives the lowest GBD estimate. The authors report that in 2019, prevalence was highest in Qatar and lowest in Yemen, but those 2 countries have no data for any year. There are also burden estimates stratified by sex for Lebanon and Turkey, but the primary studies[4-7] reported only male cases. The estimates for increase in prevalence from 1990 to 2019 range from 1.9% (Iraq) to 27.1% (Oman), but those 2 countries have no data. Further, none of the 21 countries have repeat studies to understand if gout prevalence within the country is changing over time.

The problems in the current study are shared by many papers that represent GBD burden estimates.[9] We feel that these papers would be improved if authors (1) reminded readers that they are presenting model estimates, not data; (2) provided quantitative information on data sparsity so readers can appreciate the uncertainty; and (3) discussed the estimates in the context of the primary study data, particularly when model estimates behave in ways that are unexpected, given the primary data.

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The authors declare no conflicts of interest relevant to this article.

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