

Methodological Quality and Transferability of Cancer Costs within the MENA Region:

A Systematic Review and Secondary Analysis of Published Data

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Objectives

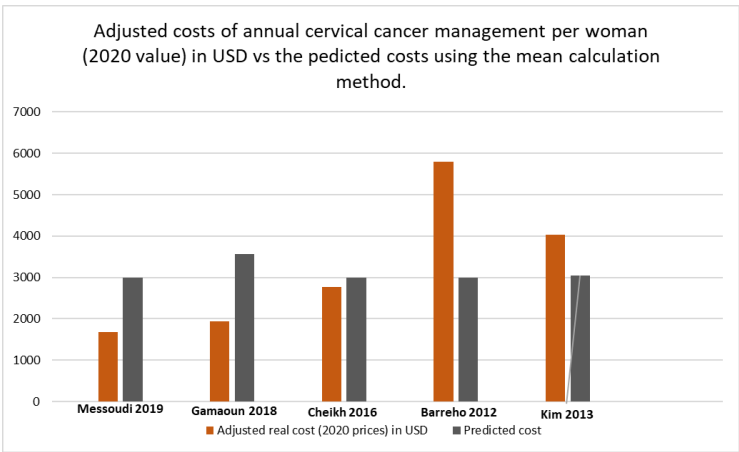
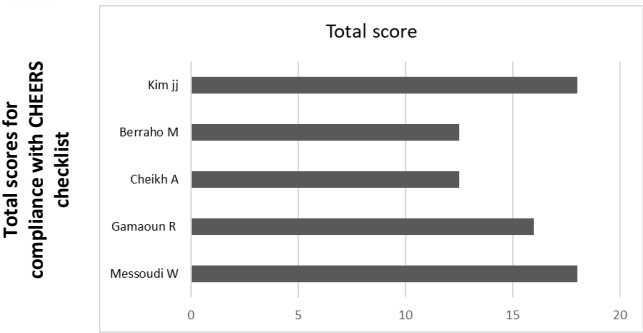
To evaluate the methodological quality of health economic studies reporting cancer costs from the Middle East and North Africa (MENA) and explore their intra-regional transferability using the case study of cervical cancer (CC).

Methods

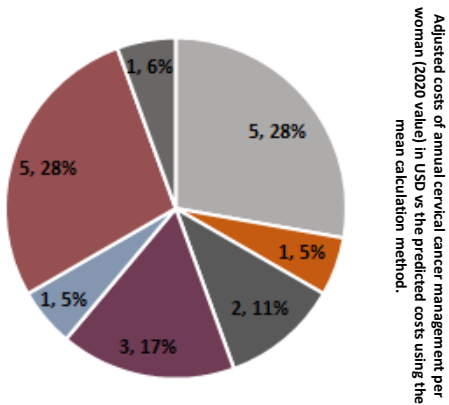
A systematic review of health-related costs published from MENA between 1995 and 2019 was conducted following PRISMA guidelines. PubMed and references of regional health economic systematic reviews were searched. Cancer studies were included. Reporting quality of CC studies was assessed using 18 items of the CHEERS checklist relevant to costs. Annual CC costs were adjusted to 2020 USD, and their determinants were analyzed via regression techniques. Transferred cost estimates were compared to actual country costs as a reference.

Results

From 1646 citations we identified 18 cancer studies reporting 260 costs, with CC being reported in most studies (n=5). CHEERS scores of CC studies ranged between 12.5/18 and 18/18. Neither GDP, nor costing year, reporting quality (CHEERS scores) or treatment components explained the variance of costs. Annual CC costs were 1946 USD in Tunisia, 4039 USD in Lebanon as well as 1674 USD, 2769 USD and 5795 USD in three Moroccan studies. Mean cost of Morocco was 3,412 (SD 2,134) USD amounting to 63% of the mean. Using the unweighted average of other countries, the estimated cost and % difference from the reference cost was 3,569 USD (+46.6%) for Tunisia, 3,045 USD (-32.6%) for Lebanon and 2,993 USD (-12.3%) for Morocco. The three Moroccan studies differed by -93%, 7.8% and 44.1% from the Moroccan estimate.



- Egypt (EGY)
- Extended Middle East & North Africa (EMENA)
- Jordan (JOR)
- KSA (SAU)
- Lebanon (LBN)
- Morocco (MAR)
- Tunisia (TUN)



Conclusion

Costs reported from a single country varied considerably without apparent explanation. Transferred costs differed similarly from reference costs as multiple measurements of a single country differed from their average. Therefore, when estimating cancer costs among MENA jurisdictions, multiple MENA country averages should be used.