# SVIUEUII Middle East

# **Review of Health Technology Assessment Guidelines Worldwide**

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#### Health Technology Assessment (HTA) is a multidisciplinary approach that synthesizes medical, social, economic, and ethical information on health technologies to inform decision-making. HTA guidelines ensure thorough, evidence-based evaluations of 20% health technologies, reflecting best practices. By encompassing methodologies for cost-effectiveness analysis, budget impact analysis, and quality-of-life assessments, these guidelines adapt to the unique healthcare, economic, and societal contexts of each country.



#### Discounting

For discounting costs and benefits, most guidelines recommended a discount rate within the 3% to 5% range (figure 7).



### **OBJECTIVE**

INTRODUCTION

This research analyses HTA guidelines globally, aiming to unveil diverse patterns which can be used to craft effective guidelines.

# **METHODS**

We reviewed all HTA guidelines listed on the Professional Society 40% for Health Economics and Outcomes Research (ISPOR) website 35% yielding a list of 45 guidelines. Key features were extracted 30% including assessment perspective; target population; choice of 25% comparator; time horizon; sensitivity analysis; etc.. Finally, a 20% thematic analysis to organize and group the collected data was 15% conducted followed by subgroup analysis by geographical 10% 5% regions and income levels.

# **RESULTS**

#### **Demographics of the included countries**

Most guidelines (58%) belonged to countries located in Europe A long-time horizon sufficient to include all potential benefits and Central Asia region followed by East Asia & Pacific and Latin was the most common (82%). The remaining guidelines either America & Caribbean (16% and 11%) (Figure 1). Around 70% of did not specify a time horizon (7%), recommended a 5-year, 10the guidelines belonged to high-income countries, 22% to year or lifetime horizon (6%), depended on the specific research

Figure 3: Indication of the technology

#### **Choice of comparator**

The "standard of care" was selected as the comparator of choice by more than 40% of the guidelines. Comparators stated by other guidelines are shown in Figure 4.





#### **Time Horizon**

question or the nature of the disease or treatment (4%).

*Figure 7: Costs and benefits discount rate* 

# **Equity** issues

More than half of the countries (51%) considered equity issues in their guidelines. The rest (49%) either did not consider equity (22%) or did not state whether they consider equity or not (27%).

#### **Sensitivity analysis**

Most guidelines (78%) advocate for evaluating uncertainty using deterministic and/or probabilistic sensitivity analyses (Figure 8).



#### upper-middle-income and 9% to lower-middle-income.



Latin America & Caribbean Sub-Saharan Africa Europe & Central Asia Middle East & North Africa **East Asia & Pacific** North America **South Asia** 

Figure 1: Analysis by geographical location Perspective

The most common perspective among the guidelines was the payer (24%), followed by the payer and societal together (20%), the healthcare system (20%), and societal only (16%). The Figure 5: Preferred Analytical Method remaining 20% of the guidelines were split into other preferences (Figure 2).



#### **Preferred Analytical Method**

Over 60% of the countries' guidelines showed a preference for **Budget Impact Analysis Requirement** conducting economic evaluations using cost-effectiveness or

cost-utility analysis or any of them (Figure 5).



#### **Efficacy versus effectiveness**

More than half of the countries (53%) display a preference for incorporating effectiveness data rather than efficacy data in HTA submissions.

Cost-utility analysis only

other analytical techniques

Not specified

Cost-effectiveness analysis only

Cost-effectiveness and/or cost-utility only

#### **Cost sources**

40%

**50%** 

Local and national databases were stated by 40% of the

guidelines with other guidelines preferring other sources such Over three-quarters of the countries (76%) evaluated the as published research or medical records (20%) and health broader applicability of their findings, with approximately 30% focused their assessment on their national context. insurance (7%) as shown in Figure 6.

Figure 8: Sensitivity Analysis

Over two-thirds of the countries (71%) mandate a budget impact analysis to be submitted, with 65% of them in Europe and Central Asia and 75% fall into the high-income category (figure 9).



#### **Generalizability of results**

Figure 2: Model Perspective

#### **Target Population**

Almost all countries have stated that the target population should be clearly defined in a detailed comprehensive manner preferably using inclusion and exclusion criteria.

#### **Indication of the technology**

An approved or officially licensed technology was stated by more than half of the guidelines (56%). Other guidelines did not specify (18%), stated no indication (2%), and required mentioning the indication (24%) (Figure 3).



Submitting an assessment for the technology was mandated by 47% of the guidelines, recommended by 38%, voluntary by 11%, and not mentioned by 4%.

# CONCLUSION

HTA guidelines have a critical role in the economic evaluation of healthcare technologies. With most guidelines originating from high-income countries, our results can act as a foundation for middle and low-income countries to develop their guidelines, considering economic and cultural variations.

#### References

Pharmacoeconomic Guidelines Around the World [Internet]. Ispor.org. [cited 2024 Mar 5]. Available from: https://www.ispor.org/heor-resources/more-heor-resources/pharmacoeconomic-guidelines



Figure 6: Cost sources

#### **Preferred Outcome measure**

The most common outcome measure was Quality-adjusted life years (QALYs) alone followed by a combination of QALYs with life years.