International Journal of Technology Assessment in Health Care

www.cambridge.org/thc

Policy

Cite this article: Ahmad M, Akhras KS, Saleh S (2023). Genuine policy learning is fundamental: the journey of the United Arab Emirates toward the establishment of health technology assessment. *International Journal of Technology Assessment in Health Care*, **39**(1), e3, 1–6
https://doi.org/10.1017/S0266462322003348

Received: 01 February 2022
Revised: 15 August 2022
Accepted: 19 November 2022

Key words:
HTA; health policy analysis; health innovations; COVID-19; UAE

Author for correspondence:
*Maiss Ahmad,
E-mails: maiss-ahmad@hotmail.com

Genuine policy learning is fundamental: the journey of the United Arab Emirates toward the establishment of health technology assessment

Maiss Ahmad[1]*, Kasem S. Akhras[2] and Shadi Saleh[3]

[1]Faculty of Business and Law, The British University in Dubai, Dubai, UAE; [2]UIC College of Pharmacy, Chicago, IL, USA and [3]Global Health Institute, American University of Beirut, Beirut, Lebanon

Abstract

The launch of innovative technologies has been credited with significant improvements in health indicators, but it comes at a high financial impact, and the value of certain innovations may not be well documented. Health technology assessment (HTA) is a universally established process to assess the incremental value of innovations. Despite its acknowledged value, almost one-third of the countries around the globe have not established yet a formal HTA in their health systems. The UAE is one of the pioneering countries worldwide in adopting innovative health technologies. This emphasizes the importance of exploring the key elements in the UAE's journey toward the establishment of HTA. Our study aims to articulate an academic insight that can support the ongoing endeavors to establish the HTA in the UAE. This case study was guided by an analytical framework. Data was collected from document review and semistructured interviews, then analyzed by applying the codebook thematic analysis technique. The findings outline multiple facilitators and challenges in the perspective process, as they show a multidimensional interlink between all identified elements. Markedly, leveraging the role of specialized academia and building HTA genuine knowledge are the areas that need the most attention. The originality of this research is associated with analyzing the three health policy pillars: the context, actors, and content in a prospective HTA establishment process. The main practical implications generated from this study are supporting global health organizations, HTA policy entrepreneurs, and academics in improving their strategies and designing more effective HTA policy learning programs.

Introduction

Health technology assessment (HTA) is a multidisciplinary, evidence-based policy tool intended to standardize the decision-making process in the healthcare field. It is a set of techniques that systematically evaluate the clinical efficacy, safety, effectiveness, cost, and overall impact of health technology applications. HTA's chief objective is to guide health policies at all levels on both the short-term and long-term consequences of adopting novel health technologies, and it is typically developed to provide a reliable, consistent, and fair model for health resource management (1). For these reasons, the World Health Organization (WHO), the World Bank, and other international organizations encourage establishing HTA as a standard methodology for healthcare priority-setting (1–3).

Historically, HTA was established in the United States in the 1970s. During recent decades, it has reached an advanced level of institutionalism in the developed world, with remarkable progress in many developing regions (2;4–6). However, there are still many countries, some estimates put it as much as a third, across the world that has not yet adopted HTA principles in their decision-making process (3;6–8).

The UAE is recognized as a pioneering country globally in adopting innovative technologies in all sectors, including the health sector. Moreover, the UAE's health system is ranked highly as per several universal indicators and reports (9;10). According to the UAE's ministry of finance report, UAE health expenditure is projected to reach $21 billion by the end of 2021, and it is forecasted to rise to $26 billion by 2025 (11). This increase is mainly triggered by demographic changes, medical tourism, and the rise in national wealth (11–13). All of this raises the significance of sustainable resource management and, thus, the understanding of when and how the UAE will adopt the HTA in its health system (8;14).

The HTA literature has shown that the complex legislative, political, and professional structures of health systems are the main reasons behind the delay in adopting the HTA (6;15;16). However, there has been little evidence on how these components are interlinked (16). Additionally, most of the HTA's existing social literature is retrospective and focused on successful cases (15;16). This study aims to contribute to the knowledge in this field by exploring the opportunities and challenges in the prospective journey of the UAE toward the HTA establishment.

Methods

This research was designed as an exploratory case study guided by an analytical framework. The adopted framework is based on the Walt–Gilson policy analysis triangle. The value of this framework lies in its comprehensiveness, as it captures the three pillars of any policy process: policy content, context, and actors (17).

The data set for this study was collected from two sources: document reviews and semistructured interviews (SSI). The document review step helped in drawing the research context and triangulating the data that emerged from the interviews. The words UAE, Gulf Cooperation Council (GCC), and Middle East North Africa (MENA) were used to ensure geographic relevance. Then, to ensure topic relevance, these words were coupled with topic-specific terms and words such as health policy, HTA, public health, health priority setting, and so forth. As this research is a contemporary case study, and in order to ensure time relevance, the selection criteria for documents were set to include only the documents that were issued in 2018 onward. Regarding the authenticity of documents, the research has considered only officially recognized, well-reputed, and reliable electronic websites and online platforms. These include PubMed, Google Scholar, ResearchGate, websites of global organizations, official websites of the UAE government, official websites representing the regional healthcare industry, official websites of epistemic communities, and official social media pages. Overall, 104 documents were collected between January 2018 and September 2021 and included in the final analysis.

A total of thirty-four experts from the UAE's health sector participated in the interviews. The study used a purposive sampling technique to ensure the collection of rich and fit-for-purpose information (18). The theoretical reference for the primary policy participant groups was the HTA literature (6;14;16). The final confirmation of the targeted groups was done after the pilot study. It is important to mention that the three pilot interviews had been carried out before the actual research, which helped tremendously in confirming the sampling roadmap and refining the interview protocol. The SSI participants represent twelve groups, as shown in Figure 1. The represented groups were academia, scientific communities, global organizations, professionals from within the health industry, healthcare providers, medical associations, patients' organizations, payers (insurers), policy advisors, regulators, and market research companies. Here, it must be highlighted that several participants belonged to more than one group at the time of data collection, that is, a regulator who worked as an academic. The sample saturation was decided by representing participants from all identified policy actor groups (19). Also, we respected the saturation principles in the thematic analysis technique, where sampling was continued up to the point when all themes in the predefined codebook had been covered. The interview questions were guided by the policy triangle clusters and designed to cover the three pillars of the examined health policy topic. All SSIs were carried out between 1 December 2020 and 1 April 2021. Both the pilot interviews and actual SSIs were done after receiving the ethics committee approval from the British University in Dubai. The transcripts of the interviews and collected documents were coded and analyzed simultaneously in one cohesive process using the codebook thematic analysis technique (19). The themes of the pre-set codebook were developed to reflect the policy clusters in the policy triangle. Thus, data were coded into three main themes: context, actors, and content. The analysis was performed with the assistance of the NVivo software version 13. The coding matrix feature in NVivo was applied to generate the thematic matrix between the identified elements, as shown in Table 1.

Results

The results represented in this section are the outcome of the analysis of the SSI transcripts and the reviewed documents. The first part of this section describes the outlines of the UAE's health policy context, followed by an overview of the identified challenges and opportunities per each policy cluster. At the end of this section, Table 1 demonstrates the thematic interlink between the identified elements.

The outlines of the UAE's health policy context

The UAE is a federation established in 1971 when all seven emirates merged into one federal state; Abu Dhabi is the capital and occupies 84 percent of the UAE's total land area (20). According to statistics published in September 2021, the UAE has a population of 10,016,009 (21). Around 10 percent of this population are UAE nationals, while the rest are expatriates from more than 200 nationalities (20). Several recent reports and studies show how the political and economic stability of the UAE attracted a vast number of

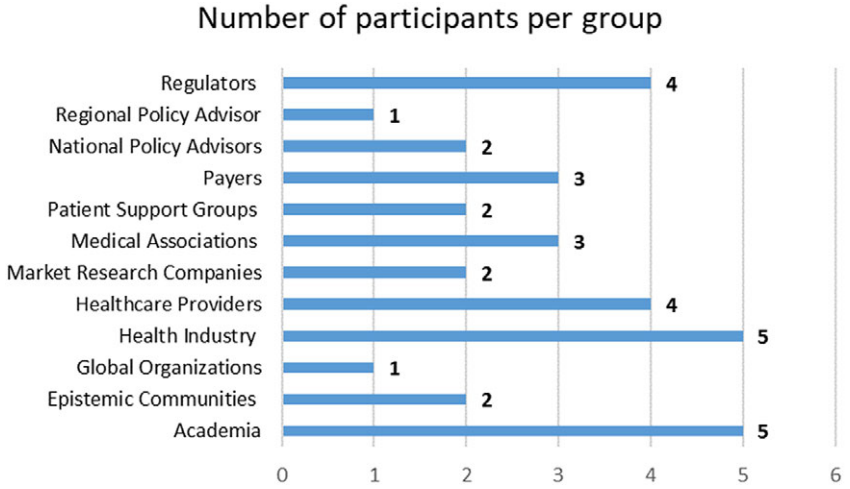

Figure 1. The semistructured interview (SSI) participants groups and representation.

https://doi.org/10.1017/S0266462322003348 Published online by Cambridge University Press

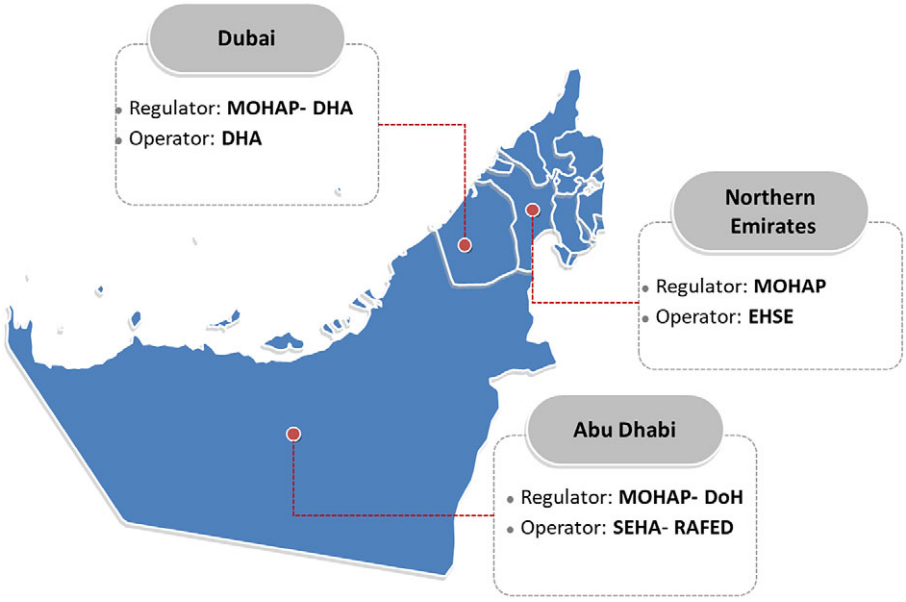

Figure 2. The macrostructure of the UAE's health system.
MOHAP: The Ministry of Health and Prevention, DoH: Department of Health Abu Dhabi, SEHA: The biggest operational network in the UAE responsible for managing healthcare operations in Abu Dhabi, RAFED is a Group Purchasing Organization in Abu Dhabi, DHA: Dubai Health Authority, EHSE: Emirates Health Services Establishment

expatriates over the past years, which resulted in significant population growth (12;13). Moreover, there is a documented growth in the aging population and the prevalence of noncommunicable diseases (NCDs) (13). These demographic changes are found to create further pressure on health expenditure and, consequently, on the national economy (8;9).

Health governance in the UAE is a symbol of the national political system, which is principally federal with centrality in specific aspects. In light of that, the decision making in UAE health policy has two pathways; top-down in certain aspects and bottom-up in many others (20). Figure 2 displays the macrostructure of the UAE's health system. Health funds in the UAE are operated by a public–private system; the public part is purely governmental and covers only UAE nationals, whereas the private part is reserved for expatriates and managed by private insurance. Notably, private health insurance plays an important role because the majority of the population are expatriates (8;10;14).

Despite the signs of applying certain HTA technical models sporadically in the DoH and the EHSE, the majority of interviewees confirmed the findings of recently published papers which have indicated that adopting HTA principles to lead the decision-making process in the UAE's health system is still in a nascent stage (8;14).

The challenges of establishing the HTA in the UAE

Policy context

The results of the analysis of the documents and SSI transcripts signify three chief contextual challenges concerning HTA establishment in the UAE. First, the macrostructure of the health system. Several participants remarked that the current structure is anticipated to be a barrier to HTA adoption. Those participants explained that having multiple decision makers at multiple levels creates a complexity that makes it difficult to accommodate all stakeholders. As one participant said: "It will be a barrier because we have not seen national guidelines adopted until now…." Another participant commented: "Having multiple payers will complicate the HTA implementation." Most importantly, several participants alerted that following a decentralized or fragmented approach in the HTA might delay patient access and could affect health equity. As one interviewee expressed: "…having different HTA means having different decisions related to patient access, and this unhelpfully impacts health equity in the country." Funding for the HTA's project was also raised as a concern linked to the HTA's potential institutional model, centralized or localized.

The second contextual challenge is data governance. The availability of data sources for generating HTA local reports was deemed to be a core element in designing the HTA institutional and technical model. Ten experts insisted on addressing this aspect earlier to ensure a successful implementation of the model. For instance, a policy advisor stated: "Our healthcare context and system have several fundamental challenges that must be addressed before establishing the HTA, such as health data centralization."

The last contextual challenge is related to the COVID-19 pandemic. It was reported that the pandemic had delayed the progress toward establishing an independent HTA entity in Abu Dhabi, as one policy advisor mentioned: "We are working to have a separate authority to do this in the long run, and our timeline is around one and a half to two years to fully implement HTA. Up until now, we have not gotten the leadership's approval regarding the independent entity. As we all know, the leadership's priority right now is COVID-19 pandemic management." Similarly, a few participants have talked about how the pandemic has led to a delay or even a freezing in HTA awareness and learning initiatives. As one participant stated: "Upon the COVID-19 pandemic, we have seized our activities. The pandemic has delayed our progress in the HTA topic, as more urgent and critical liabilities have emerged in the health sector and many educational activities have been stopped." Here, it must be highlighted that other participants marked the COVID-19 pandemic as a potential accelerator of the HTA establishment process. This notion is further explained in the contextual opportunities section.

https://doi.org/10.1017/S0266462322003348 Published online by Cambridge University Press

Policy actors

The results of the analysis of the collected data set showed two main challenges related to the UAE's health policy actors: the lack of HTA expertise and the scant HTA policy learning activities. More precisely, the results indicated a lack of HTA competence, in addition to some notes about knowledge exclusivity. As one academic put it: "This is one of the barriers toward the implementation as it is one of the reasons behind the lack of awareness and knowledge. We have very few knowledgeable people in pharmacoeconomics and health economics, and some of them do not want to share the knowledge to be unique." Furthermore, various participants pointed out the issue of health expertise turnover in the UAE. Therefore, numerous participants stressed that HTA awareness activities must not rely on individuals but have to be institutionally driven. Typical of these opinions is the following statement: "Because of the turnover in the expertise in the country. HTA awareness needs to be system-driven and not person-driven."

Regarding HTA's policy learning activities in the UAE, the findings show that these activities tended to be random and nonstructured while lacking coordination and coherence, as one participant described: "There is no collaboration between HTA promoters, they are separate islands." Another critical remark concerning the policy learning aspect is the domination of the industry, namely the Pharma Multinational Enterprises (MNEs) in the ISPOR UAE chapter and in the Emirates Health Economic Society. In fact, several regulators, academics, payers, and healthcare providers stated that they had lost interest in participating in HTA's events, since the events were led by an actor group that has an agenda to serve market access interests. As one regulator disclosed: "Personally, I stopped attending the ISPOR UAE chapter meetings. It is okay to ask for support from pharma, but they should not run the meeting." In the same way, quite a few participants observed that pharma MNEs are influencing the learning content activities to shift attention from the need to institutionalize HTA to the application of value-based or cost effectiveness models only. The following statement shared by one interviewee illustrates this point: "There is a difference between HTA and health economics (HE). HEs is the science that provides justification, while the HTA principle is to make the right decision. That is why pharma companies promote health economics but not HTA."

Policy content

The most remarkable challenge associated with the policy content was the lack of awareness about the HTA's value. Indeed, several experts pointed out an underestimation of the need for the HTA in the UAE, and they justified that by the belief that the UAE is a wealthy country with abundant health resources with no critical need for the HTA to manage health expenditures. As one expert commented: "Right now, some people might tell you, there are no access issues… but in the long term and for sustainability reasons, HTA should be adopted." Other expected technical complexities were mainly related to the implementation details, not the policy reform phase, that is, the industry's concerns about the projected economic model or payment threshold.

The opportunities for establishing the HTA in the UAE

Policy context

The UAE leadership's ambitious vision to be pioneers globally in all aspects, was the most significant reported contextual prospect. As one interviewee said: "What is unique about the leadership in the UAE is that they have a vision. Once any topic is brought to the national vision, It will be done with the full support of the government and by the key leaders." Several comments confirmed this while addressing the fact how fast decisions can be made on a national level: "In the UAE, we do not believe in time. Time is a secondary element in any project. Once HTA reaches the level of being on the decision makers' agenda, I promise you that we will have a proper policy and national plan within a year."

While the majority of the participants perceived the system structure as a barrier, a number of participants suggested that this structure could be a facilitator. They justified their standpoint by explaining how multiple entities could allow pilot implementation to learn at a limited scope. As one interviewee said: "It might be more flexible to have several authorities in order to do pilot implementation; then, the successful model can be the standardized model."

Notably, several participants saw the COVID-19 pandemic as a potential accelerator of HTA establishment in the UAE. Their reasoning was that the pandemic had created substantial pressure on the global economy, and particularly on health resources. Consequently, they predicted that such pressure will amplify the need for HTA establishment. The following statement is an example of this perspective: "COVID-19 crisis has drastically impacted many hospitals and health institutions; and this negative impact is not only for now, but more consequences will be seen in the future. Thus, the COVID-19 pandemic has increased the necessity for HTA implementation."

Policy actors

Having multinational expertise in the UAE has been recognized as a major strength related to the actors' pillar. Correspondingly, the majority of the participants underlined the significance of optimizing the role of this expertise in the health policy development process. As one expert expressed: "The positive part is related to the existence of many calibres of experts in the UAE's health system. Yet, those experts must be given more space and better exposure to share their ideas and recommendations." It must be highlighted here that this strength was linked to the general evolution of the UAE's health policy and, thus, it does not address the reported lack of HTA experts.

One more reported opportunity related to this pillar is the existence of the ISPOR UAE chapter and the Emirates Health Economic Society (EHES). Nevertheless, the participants emphasized that the envisioned roles of these two communities are conditioned by their attention to the group composition and policy learning direction, which implies downsizing the influence of the industry in their activities.

Policy content

All participants agreed that HTA's international evolution represents a vital advantage to rely on in the UAE's envisioned journey. At the same time, the majority of the participants emphasized that the UAE's HTA projected model should be designed carefully to fit the UAE's health policy context and purpose. As one participant advised: "HTA worldwide has gone through many evolutions… We have to get the benefits and learn from all this evolution. Then we begin to design it all together to fit the purpose that we want it for in the UAE."

https://doi.org/10.1017/S0266462322003348 Published online by Cambridge University Press

Table 1. Summary of the opportunities and challenges of HTA's establishment in the UAE

Policy cluster	Element	Opportunity	Challenge	Thematic interlink with other clusters
Policy context	The vision of the UAE's leadership	✓		Policy actors (potential roles) and HTA policy content (the entire process)
	The macrostructure of the health system	✓	✓	Policy content (the design and implementation of the HTA model)
	COVID-19 pandemic	✓	✓	Policy content (framing the policy issue)
	Data governance		✓	Policy content (the design and implementation of the HTA model)
Policy actors	The existence of multinational expertise in the UAE	✓		HTA policy content (awareness and implementation)
	The dominance of the industry in the policy learning activities		✓	HTA policy content (policy learning messages)
	The existence of EHES and ISPOR UAE chapter	✓		HTA policy content (awareness and implementation)
	The lack of HTA expertise in the UAE		✓	HTA policy content (awareness and implementation)
Policy content	HTA global evolution	✓		Policy actors (actors' technical expertise and policy learning)
	The lack of a genuine understanding of the HTA's value and significance		✓	Policy actors (actors' positions and policy learning)

Abbreviations: EHES, Emirates Health Economic Society; HTA, health technology assessment.

Discussion

The thematic interlink demonstrated in Table 1 implies two points: First, it confirms the complex political and institutional environment of the HTA establishment process. Second, it underlines the importance of doing a comprehensive health policy analysis (HPA) if we want to understand the dynamics of HTA establishment in any health policy. Although these two points are well recognized across a wide range of HTA studies (3;6;7), there is still a lack of broad and balanced empirical policy analysis about the complexities of HTA establishment; especially when examining ongoing or prospective instances (16). This study contributes to bridging this gap by using the policy triangle to explore prospectively the policy pillars involved in establishing the HTA in the UAE.

The literature of both HTA and HPA highlights the critical nature of political will in any policy reform, particularly in the agenda setting and reform phases (2;5;16;17). In the UAE, several participants believed that once the political leadership is convinced of the HTA's value, its role will be far beyond the agenda setting or reform phases (9;10). It can thus be suggested that the crucial and basic step is to design a compelling HTA policy awareness program and ensure effective communication of the same to the political leaders in the country. Additionally, it is vital to ensure alignment between the UAE's political leadership and the healthcare decision makers on the benefits of the HTA for the UAE healthcare system.

Despite the fact that COVID-19 has reshaped the healthcare sector worldwide, including in the UAE, the consequences are yet to be quantified or measured (22). While the opinions about the impact of COVID-19 on HTA adoption were inconsistent, regional research and recent HTA studies prove that the pandemic has underlined the importance of managing health resources effectively, which stresses the value of adopting HTA principles and tools (22–24). It is therefore likely that the COVID-19 pandemic will be an accelerator in the HTA establishment process. However, this is also determined based on how this notion is phrased and communicated in the HTA's policy learning programs (23;24).

Another key finding is related to the observed influence of the industry on HTA's policy learning programs, which was viewed as a challenge by several experts. At this point, several political studies have underscored the correlation between informal engagement processes and industry lobbying because the industry has the power and the resources to deal with informal settings. It can therefore be suggested to examine the existing participatory rules to enhance the engagement channels for all actor groups in the UAE's HTA policy process (2;4;8). Furthermore, the reported dominance of the industry could be attributed to the reticent presence of academics in the HTA policy learning activities, as well as the lack of HTA experts in the UAE. This finding implies the notion of giving specific attention to the capabilities and role of academia in building and leading HTA policy learning programs in the UAE. It also suggests conducting a thorough stakeholder analysis, to identify the potential roles of all concerned groups in policy reforms and implementation (25).

Last, the belief that HTA has no significance in wealthy countries is inconsistent with the HTA literature, as the most advanced HTA institutions and models are based in wealthy countries such as the USA, UK, Canada, and Australia (2;4). Furthermore, the value of HTA is recognized to be beyond cost-saving aspects; it is one of the substantial global advancements toward evidence-based decision-making processes and the sustainability of health resources (1;2). This inconsistency refers to a confusion concerning the understanding of the spirit of the HTA. Hence, it could be suggested that revising the policy learning messages about the value of the HTA in the UAE's health system is a fundamental step.

The methodological strength of this study lies in exploring an HTA establishment process from a comprehensive contemporary stance and in the triangulation of data sources. Nonetheless, the reader should bear in mind that the findings were generated at a particular point in time. Furthermore, given that interview data are inherently limited by the participants' recall bias, power dynamics, and sample size, and that the health policy environment is subject to continuous changing dynamics, including stakeholders' knowledge, positions, and behaviors, caution must be applied in the interpretation of the findings.

https://doi.org/10.1017/S0266462322003348 Published online by Cambridge University Press

Conclusion

This study was set out with the aim of exploring the institutional and political elements that may accelerate or hinder the UAE's journey toward HTA establishment. The results show multiple factors that have a multidimensional impact on more than one policy cluster. Clearly, HTA policy learning programs are the areas that need most attention because they are associated not only with the influence map of HTA's policy actors but also with the content of the policy learning initiatives.

The findings of this study have several important implications. First, they underline the need to enhance the quality and credibility of HTA's policy learning programs and platforms. Second, they emphasize the importance of leveraging the role of academia, and the necessity to collaborate with international and regional HTA experts across all phases. Third, they offer an idea of how the COVID-19 pandemic could be used as a window of opportunity to put the HTA on the political agenda.

All in all, this study supports the idea of leveraging the role of specialized academia, global organizations, and international experts to build compelling and genuine HTA awareness campaigns. Further studies could identify the power and the potential role of all HTA stakeholders in the UAE, as it would be interesting to understand how policy engagement rules might affect the potential roles of actors and policy learning endeavors in an HTA establishment process.

Acknowledgments. This research is part of an academic project (Ph.D. thesis) at the British University in Dubai.

Funding statement. This study received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest. All of the authors agree to the *International Journal of Technology Assessment in Health Care*'s submission policies, and they declare that they have no conflicts of interest to disclose. K.S.A. is a full-time employee of Novartis Gene Therapies.

References

1. **O'Rourke B**, **Oortwijn W**, **Schuller T**. The new definition of health technology assessment. *Value Health*. 2020;**23**(6):824–825.
2. **Banta D**. Perspective: Some conclusions from my life in health technology assessment. *Int J Technol Assess Health Care*. 2018;**34**(2):131–133.
3. **Rashidian A**, **Mandil A**, **Mahjour J**. Improving evidence informed policy-making for health in the eastern Mediterranean region (editorial). *East Mediterr Health J*. 2018;**23**(12):793–794.
4. **Kristensen FB**, **Lampe K**, **Wild C**, et al. The HTA Core Model®—10 years of developing an international framework to share multidimensional value assessment. *Value Health*. 2017;**20**(2):244–250.
5. **Kim T**, **Sharma M**, **Teerawattananon Y**, et al. Addressing challenges in health technology assessment institutionalization for furtherance of universal health coverage through south-south knowledge exchange: Lessons from Bhutan, Kenya, Thailand, and Zambia. *Value Health Reg Issues*. 2021; **24**:187–192.
6. **Liu G**, **Wu EQ**, **Ahn J**, et al. The development of health technology assessment in Asia: Current status and future trends. *Value Health Reg Issues*. 2020;**21**(C):39–44.
7. **Hasan SS**, **Kow CS**, **Dawoud D**, **Baines D**, **Babar Z-U-D**. Pharmaceutical policy reforms to regulate drug prices in Asia Pacific Region: The case of Australia, China, India, Malaysia, New Zealand and South Korea. *Value Health Reg Issues*. 2019;(18):18–23.
8. **Kanavos P**, **Kamphuis BW**, **Fontrier AM**, et al**.** Pricing of in-patent pharmaceuticals in the Middle East and North Africa: Is external reference pricing implemented optimally? *Health Policy*. 2020;**124**(12):1297–1309.
9. **U.S.-U.A.E. Business Council**. US-UAE Business Council Health Sector report. 2019, pp. 1–68. Available from: http://usuaebusiness.org/wp-content/uploads/2019/01/2019-Healthcare-Report.pdf.
10. **Alrahbi D**, **Khan M**, **Hussain M**. Exploring the motivators of technology adoption in healthcare. *Int J Healthc Manag*. 2021;**14**(1):50–63.
11. **UAE's MoF**. UAE's Ministry of Finance official website. 2021.
12. **The World Bank**. The World Bank—UAE's health expenditure. 2021. Available from: https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=AE.
13. **Al-Utaibi G**. Predicting future health demands in United Arab Emirates. *Int J Psychosoc Rehabil*. 2020;**24**(5):3385–3390.
14. **Kapar H**, **Mukadam M**, **Mohamed O**. *Health technology assessment in MEA pharmaceutical perspective*. MEA (Middle East Africa) office: IQVIA; 2018, pp. 1–17.
15. **Torbica A**. HTA around the world: Broadening our understanding of cross-country differences. *Value Health*. 2020;**23**(1):1–2.
16. **Löblová O**, **Trayanov T**, **Csanádi M**, **Ozierański P**. The emerging social science literature on health technology assessment: A narrative review. *Value Health*. 2020;**23**(1):3–9.
17. **O'Brien GL**, **Sinnott SJ**, **Walshe V**, **Mulcahy M**, **Byrne S**. Health policy triangle framework: Narrative review of the recent literature. *Health Policy OPEN*. 2020;**1**(3):100016.
18. **King O**. Two sets of qualitative research reporting guidelines: An analysis of the shortfalls. *Res Nurs Health*. 2021;**44**(4):715–723.
19. **Braun V**, **Clarke V**. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Couns Psychother Res*. 2021;**21**(1):37–47.
20. **UAE Government**. About UAE. 2021. Available from: https://u.ae/en/about-the-uae.
21. **World Population Review**. United Arab Emirates population 2021. 2021. Available from: https://worldpopulationreview.com/countries/united-arab-emirates-population.
22. **Najib D**. COVID-19 and the Arab world-between a rock and hard place. *Sci Dipl*. 2021;**10**:1–7.
23. **Lorgelly P**. Impact of COVID-19 pandemic on HTA. PharmacoEconomics Outcomes News. 2020;**853**(1):2–2.
24. **Mukherjee K**. Integrating technology, innovation and policy: COVID-19 and HTA. *Health Policy Technol*. 2021;**10**(1):16–20.
25. **Franco-Trigo L**, **Fernandez-Llimos F**, **Martínez-Martínez F**, **Benrimoj SI**, **Sabater-Hernández D**. Stakeholder analysis in health innovation planning processes: A systematic scoping review. *Health Policy*. 2020; **124**(10):1083–1099.

https://doi.org/10.1017/S0266462322003348 Published online by Cambridge University Press