

COMMENTARY

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Unleashing the potential: the imperative of political support for health technology assessment in Iran

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Abstract

Health Technology Assessment (HTA) is essential for evidence-based healthcare decision-making, yet its integration into Iran's healthcare system faces political and logistical challenges. Despite HTA's potential to improve resource allocation, limited awareness, data gaps, and competing priorities hinder its implementation. This commentary emphasizes the need for political support, advocating capacity-building, collaboration, and alignment with long-term health policies. Leveraging international partnerships and monitoring outcomes can enhance HTA's role in improving healthcare in Iran and contributing to global health advancements.

Keywords Health technology assessment, Iran, Political support, Evidence-based decision-making, Healthcare system, Health policy

Background

Healthcare systems globally are under pressure to allocate resources effectively while managing budgetary constraints [1]. Health technology assessment (HTA) has become essential in guiding evidence-based healthcare decisions [2]. HTA evaluates the clinical, economic, and social impacts of health technologies, offering insights to policymakers for informed decisions on the adoption and pricing of medical innovations [3]. While HTA has gained traction in many developed countries, its

implementation in developing nations remains complex, with political support being a key determinant [4].

Iran, with its rich history of healthcare advancements, has made commendable progress in expanding access to medical services [5]. Recent efforts to strengthen healthcare infrastructure demonstrate the country's commitment to addressing public health challenges [6]. However, the successful integration of new health technologies in Iran requires a systematic approach, driven by political commitment to HTA [7]. Political backing is essential to establish HTA institutions, foster collaboration, and incorporate HTA findings into policy discussions, enhancing transparency and accountability in healthcare resource allocation [8].

Despite Iran's healthcare progress, political, economic, and social factors influence how health technologies are prioritized and resources allocated [9]. As healthcare policymaking is inherently interdisciplinary, effective coordination among ministries, regulatory bodies, and healthcare providers is necessary to implement HTA fully. This commentary explores the challenges of HTA

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implementation in Iran, emphasizing the need for consistent political support to overcome these obstacles [10].

Political landscape and support for HTA

Iran operates under a unique political system, combining elements of both a theocracy and a republic. The Supreme Leader holds significant authority, while elected officials, including the President and Parliament (Majlis), are responsible for making and implementing policies [11]. In healthcare policymaking, various actors and institutions shape decisions, including the Ministry of Health and Medical Education (MOHME), which oversees healthcare policies and regulates the pharmaceutical and medical device industries [12].

Although the government has expanded healthcare services, integrating evidence-based decision-making, such as HTA, into policy processes has faced obstacles. Political interests often influence resource allocation and the prioritization of health technologies [13]. The level of political support for HTA is influenced by several factors, including healthcare priority-setting, budgetary constraints, public perception, and international collaboration [8].

Benefits of political support for HTA

Political support for HTA provides policymakers with evidence-based information about the clinical and economic impact of health technologies, enabling informed decisions on technology adoption, funding, and prioritization [14]. This ensures efficient use of limited resources, directing them toward interventions that offer the greatest benefit [15]. Key benefits include:

1. **Informed policymaking:** Political backing ensures that policymakers base their decisions on robust evidence, improving the adoption and funding of health technologies [16].
2. **Resource optimization:** HTA aids in the rational allocation of healthcare resources, promoting cost-effective interventions and sustainable healthcare systems [17].
3. **Transparency and accountability:** Political support fosters a transparent healthcare system where decisions are grounded in objective HTA studies, reducing the influence of vested interests [18].
4. **Collaboration and stakeholder engagement:** Political backing encourages collaboration between policymakers, healthcare providers, and researchers, leading to better-informed HTA studies and greater uptake of recommendations [19].
5. **Improved access to innovation:** With political support, HTA can accelerate the evaluation and adoption of novel technologies, benefiting patients with unmet medical needs [20].
6. **Economic efficiency:** HTA promotes the use of cost-effectiveness data in decision-making, leading to significant cost savings for the healthcare system [21].
7. **Global alignment:** Political support aligns Iran's healthcare decision-making with international best practices, enhancing its position in global health networks [22].

Challenges and barriers

Although HTA holds immense potential, several challenges and barriers impede its full implementation in Iran. These challenges can be grouped into broader categories:

1. **Economic and political challenges:** Competing demands for limited resources and political priorities often overshadow long-term investments in HTA [23]. Policymakers must balance various healthcare needs, and HTA initiatives may face competition for funding amidst other pressing issues [24].
2. **Lack of awareness and understanding:** Limited awareness of HTA's benefits among policymakers can hinder its integration into healthcare decision-making [25]. Without a clear understanding of HTA principles, decision-makers may be hesitant to endorse or fund HTA initiatives [26].
3. **Data availability and quality:** HTA relies on comprehensive data to assess the clinical and economic impacts of health technologies [48]. However, inadequate or poor-quality data may limit the scope of assessments, making it difficult to produce meaningful results [47].
4. **Institutional capacity and expertise:** Building and maintaining HTA capacity within governmental institutions requires skilled experts in health economics and epidemiology [2]. A lack of adequate expertise and institutional support can delay HTA implementation [40].
5. **Stakeholder resistance:** Resistance from industry stakeholders is common, especially when HTA recommendations are unfavorable to specific technologies [41]. Conflicting interests within MOHME may also contribute to resistance [42].
6. **Policy receptivity and timing:** Policymakers' receptiveness to HTA findings may depend on political timing and priorities [43]. Short-term political goals may not always align with the long-term benefits of HTA, limiting its impact on decision-making [44].
7. **Socioeconomic factors:** Cultural beliefs, public perceptions, and social inequalities may influence how HTA findings are received and implemented,

especially in addressing diverse healthcare needs [45].

8. **Fragmented healthcare system:** Iran's healthcare system is fragmented, with multiple stakeholders involved at various levels [46]. Coordinating these stakeholders to support HTA implementation can be challenging [47].

Recommendations

To overcome these challenges and maximize HTA's benefits, several steps can be taken:

- I. **Political advocacy and awareness:** Advocates of HTA must engage policymakers through targeted campaigns, workshops, and educational programs [36]. These efforts will raise awareness of HTA's role in evidence-based decision-making, demonstrating its value in achieving healthcare goals [18].
- II. **Strengthening HTA capacity:** Investing in HTA capacity within governmental institutions is crucial [37]. This includes recruiting experts, providing training, and ensuring access to necessary resources and infrastructure [38].
- III. **Collaboration and knowledge sharing:** Foster collaboration between HTA researchers, policymakers, and healthcare providers through regular knowledge-sharing forums [39]. These interactions can enhance understanding and support for HTA's role in decision-making [40].
- IV. **Policy alignment:** Integrate HTA findings into Iran's broader health policy framework [41]. Encouraging policymakers to use HTA as a guiding tool for resource allocation will strengthen evidence-based decision-making [42].
- V. **Stakeholder engagement:** Involving patient advocacy groups, healthcare providers, and industry representatives early in the HTA process will improve the quality of assessments and increase acceptance of HTA recommendations [43].
- VI. **Data improvement:** Improve data infrastructure and accessibility, ensuring relevant data is available for HTA assessments [44]. This will ensure HTA recommendations are based on robust evidence [45].
- VII. **International collaboration:** Engage with international HTA organizations to access best practices, share knowledge, and collaborate on joint research efforts. International partnerships can help enhance Iran's HTA capabilities [13].
- VIII. **Incentives for adoption:** Consider financial or policy incentives to encourage the adoption of HTA recommendations, such as preferential reimbursement for interventions that demonstrate cost-effectiveness [46].

- IX. **Evaluation mechanisms:** Establish systems to monitor HTA's impact on healthcare decision-making and patient outcomes [47]. Regular evaluations and stakeholder feedback will help refine the HTA process [48].

Conclusion

The successful implementation of HTA in Iran hinges on strong political support and collaboration. HTA has the potential to transform healthcare decision-making, optimizing resource allocation and improving patient outcomes. Overcoming the challenges requires sustained political commitment, capacity building, and strategic alignment with long-term health policies. With these elements in place, HTA can be a driving force for a more equitable, efficient, and patient-centered healthcare system in Iran. By adopting these recommendations, Iran can position itself as a leader in healthcare innovation, benefiting its citizens and contributing to advancements in global health.

Abbreviations

HTA	Health technology assessment
MOHME	Ministry of Health and Medical Education

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MeB, MaB and AA designed the study. AB, SA, AA and MaB collected the data and performed the data analysis. MaB and NLB edited and revised the paper for grammar. All authors read and approved the final paper for publication.

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References

1. Harris C, Green S, Elshaug AG. Sustainability in Health care by allocating resources effectively (SHARE) 10: operationalising disinvestment in a conceptual framework for resource allocation. *BMC Health Serv Res*. 2017;17(1):632.
2. Alkhalidi M, Al Basuoni A, Matos M, Tanner M, Ahmed S. Health Technology Assessment in High, Middle, and low-income countries: new systematic and interdisciplinary Approach for Sound informed-policy making: Research Protocole. *Risk Manag Healthc Policy*. 2021;14:2757–70.

3. Ciani O, Tarricone R, Torbica A. Diffusion and use of health technology assessment in policy making: what lessons for decentralised healthcare systems? *Health Policy*. 2012;108(2–3):194–202.
4. Culyer A, Chalkidou K, Teerawattananon Y, Santatiwongchai B. Rival perspectives in health technology assessment and other economic evaluations for investing in global and national health. Who Decides? Who pays? *F1000Res*. 2018;7:72.
5. Arab-Zozani M, Sokhanvar M, Kakemam E, Didehban T, Hassanipour S. History of Health Technology Assessment in Iran. *Int J Technol Assess Health Care*. 2020;36(1):34–9.
6. Doaee Sh, Olyaeemanesh A, Emami Sh, Mobinzadeh M, Abooe P, Nejadi M, et al. Development and implementation of health technology assessment: a policy study. *Iran J Public Health*. 2013;42(Suppl1):50–4.
7. Mohtasham F, Yazdizadeh B, Zali Z, Majdzadeh R, Nedjat S. Health technology assessment in Iran: barriers and solutions. *Med J Islam Repub Iran*. 2016;30:321.
8. Behzadifar M, Behzadifar M, Saran M, Shahabi S, Bakhtiari A, Azari S, et al. The role of Iran's context for the development of health technology assessment: challenges and solutions. *Health Econ Rev*. 2023;13(1):23.
9. Behzadifar M, Ghanbari MK, Azari S, Bakhtiari A, Rahimi S, Ehsanzadeh SJ, et al. A SWOT analysis of the development of health technology assessment in Iran. *PLoS ONE*. 2023;18(3):e0283663.
10. Aryankhesal A, Behzadifar M, Bakhtiari A, Shahabi S, Azari S, Darvishi Teli B, et al. Exploring the landscape of health technology assessment in Iran: perspectives from stakeholders on needs, demand and supply. *Health Res Policy Syst*. 2024;22(1):11.
11. Doshmangir L, Behzadifar M, Shahverdi A, Martini M, Ehsanzadeh SJ, Azari S, et al. Analysis and evolution of health policies in Iran through policy triangle framework during the last thirty years: a systematic review of the historical period from 1994 to 2021. *J Prev Med Hyg*. 2023;64(1):E107–17.
12. Khankeh HR, Bagheri Lankarani K, Zarei N, Joulaei H. Three decades of Healthcare System Reform in Iran from the perspective of Universal Health Coverage: a macro-qualitative study. *Iran J Med Sci*. 2021;46(3):198–206.
13. Olyaeemanesh A, Doaee S, Mobinzadeh M, Nedjati M, Abooe P, Emami-Razavi SH. Health technology assessment in Iran: challenges and views. *Med J Islam Repub Iran*. 2014;28:157.
14. Fanourgiakis J, Kanoupakis E. Health technology assessment (HTA): a brief introduction of history and the current status in the field of cardiology under the economic crisis. *J Evid Based Med*. 2015;8(3):161–4.
15. Hollingworth S, Fenny AP, Yu SY, Ruiz F, Chalkidou K. Health technology assessment in sub-saharan Africa: a descriptive analysis and narrative synthesis. *Cost Eff Resour Alloc*. 2021;19(1):39.
16. Noorani HZ, Huserau DR, Boudreau R, Skidmore B. Priority setting for health technology assessments: a systematic review of current practical approaches. *Int J Technol Assess Health Care*. 2007;23(3):310–5.
17. Huserau D, Boucher M, Noorani H. Priority setting for health technology assessment at CADTH. *Int J Technol Assess Health Care*. 2010;26(3):341–7.
18. Staniszewska S, Söderholm Werkö S. Mind the evidence gap: the use of patient-based evidence to create complete HTA in the twenty-first century. *Int J Technol Assess Health Care*. 2021;37:e46.
19. Gagnon MP, Tantchou Dipankui M, Poder TG, Payne-Gagnon J, Mbemba G, Beretta V. Patient and public involvement in health technology assessment: update of a systematic review of international experiences. *Int J Technol Assess Health Care*. 2021;37:e36.
20. Ciani O, Wilcher B, Blankart CR, Hatz M, Rupel VP, Erker RS, et al. Health technology assessment of medical devices: a survey of non-european union agencies. *Int J Technol Assess Health Care*. 2015;31(3):154–65.
21. Falkowski A, Ciminata G, Manca F, Bouttell J, Jaiswal N, Farhana Binti Kamaruzaman H, et al. How least developed to Lower-Middle Income Countries Use Health Technology Assessment: a scoping review. *Pathog Glob Health*. 2023;117(2):104–19.
22. Kim T, Sharma M, Teerawattananon Y, Oh C, Ong L, Hangoma P, 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;24:187–92.
23. Al-Harakeh L, Abbas H, Hassan H, Hallal Z, Hamadeh G, Kurdi M, et al. Survey investigating the knowledge and awareness of payers and patient advocacy groups about the health technology assessment process in Lebanon. *Int J Technol Assess Health Care*. 2021;37(1):e72.
24. Hollingworth SA, Ruiz F, Gad M, Chalkidou K. Health technology assessment capacity at national level in sub-saharan Africa: an initial survey of stakeholders. *F1000Res*. 2020;9:364.
25. de Pouvourville G, Armoiry X, Lavorel A, Bilbault P, Maugendre P, Bensimon L, et al. Real-world data and evidence in health technology assessment: when are they complementary, substitutes, or the only sources of data compared to clinical trials? *Therapie*. 2023;78(1):81–94.
26. Downey L, Rao N, Guinness L, Asaria M, Prinja S, Sinha A, et al. Identification of publicly available data sources to inform the conduct of Health Technology Assessment in India. *F1000Res*. 2018;7:245.
27. Yazdizadeh B, Mohtasham F, Velayati A. Impact assessment of Iran's health technology assessment programme. *Health Res Policy Syst*. 2018;16(1):15.
28. Trowman R, Migliore A, Ollendorf DA. Health technology assessment 2025 and beyond: lifecycle approaches to promote engagement and efficiency in health technology assessment. *Int J Technol Assess Health Care*. 2023;39(1):e15.
29. Zimmermann G, Michelmore S, Hilgsmann M. Stakeholder perspectives on cooperation in the clinical and nonclinical health technology assessment domains. *Int J Technol Assess Health Care*. 2023;39(1):e29.
30. Wong J. The History of Technology Assessment and Comparative Effectiveness Research for Drugs and Medical Devices and the role of the Federal Government. *Biotechnol Law Rep*. 2014;33(6):221–48.
31. Wilkinson M, Gray AL, Wiseman R, Kredt T, Cohen K, Miot J, et al. Health Technology Assessment in Support of National Health Insurance in South Africa. *Int J Technol Assess Health Care*. 2022;38(1):e44.
32. Wale JL, Thomas S, Hamerlijnc D, Hollander R. Patients and public are important stakeholders in health technology assessment but the level of involvement is low - a call to action. *Res Invol Engagem*. 2021;57(1):1.
33. Vervoort D, Tam DY, Wijesundera HC. Health Technology Assessment for Cardiovascular Digital Health Technologies and Artificial Intelligence: why is it different? *Can J Cardiol*. 2022;38(2):259–66.
34. Vella Bonanno P, Bucsis A, Simoens S, Martin AP, Oortwijn W, Gulbinović J, et al. Proposal for a regulation on health technology assessment in Europe - opinions of policy makers, payers and academics from the field of HTA. *Expert Rev Pharmacoecon Outcomes Res*. 2019;19(3):251–61.
35. Uzochukwu BSC, Okeke C, O'Brien N, Ruiz F, Sombie I, Hollingworth S. Health technology assessment and priority setting for universal health coverage: a qualitative study of stakeholders' capacity, needs, policy areas of demand and perspectives in Nigeria. *Global Health*. 2020;16(1):58.
36. Stühlinger V. Health Technology Assessment (HTA) and Access policies. *Eur J Health Law*. 2020;27(3):274–89.
37. Soárez PC. Health Technology Assessment: informed by science or in the service of politics? *Rev Saude Publica*. 2021;55:64.
38. Simões Corrêa Galendi J, Caramori CA, Lemmen C, Müller D, Stock S. Expectations for the Development of Health Technology Assessment in Brazil. *Int J Environ Res Public Health*. 2021;18(22):11912.
39. Sharma M, Teerawattananon Y, Dabak SV, Isaranuwatchai W, Pearce F, Pilsant S, et al. A landscape analysis of health technology assessment capacity in the Association of South-East Asian Nations region. *Health Res Policy Syst*. 2021;19(1):19.
40. Rozmovits L, Mai H, Chambers A, Chan K. What does meaningful look like? A qualitative study of patient engagement at the Pan-canadian Oncology Drug Review: perspectives of reviewers and payers. *J Health Serv Res Policy*. 2018;23(2):72–9.
41. Ramponi F, Twea P, Chilima B, Nkhoma D, Kazanga Chiumia I, Manthalu G, et al. Assessing the potential of HTA to inform resource allocation decisions in low-income settings: the case of Malawi. *Front Public Health*. 2022;10:1010702.
42. Prevolnik Rupel V. Current implementation of health technology assessment in healthcare system in Slovenia. *Int J Technol Assess Health Care*. 2017;33(3):360–4.
43. Oortwijn W, van Oosterhout S, Kapiriri L. Application of evidence-informed deliberative processes in health technology assessment in low- and middle-income countries. *Int J Technol Assess Health Care*. 2020;27:1–5.
44. Oortwijn W, Mathijssen J, Banta D. The role of health technology assessment on pharmaceutical reimbursement in selected middle-income countries. *Health Policy Plan*. 2010;95(2–3):174–84.
45. Oortwijn W, Jansen M, Baltussen R. Use of evidence-informed deliberative processes by Health Technology Assessment Agencies around the Globe. *Int J Health Policy Manag*. 2020;9(1):27–33.
46. MacQuilkan K, Baker P, Downey L, Ruiz F, Chalkidou K, Prinja S, et al. Strengthening health technology assessment systems in the global south:

a comparative analysis of the HTA journeys of China, India and South Africa. *Glob Health Action*. 2018;11(1):1527556.

47. Lehoux P, Blume S. Technology assessment and the sociopolitics of health technologies. *J Health Polit Policy Law*. 2000;25(6):1083–120.
48. Husereau D, Henshall C, Sampietro-Colom L, Thomas S. Changing health technology assessment paradigms? *Int J Technol Assess Health Care*. 2016;32(4):191–9.

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