KPMG

Articulating value

Align stakeholders' priorities through value assessment

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MedTech value alignment in SEA

In Southeast Asia (SEA), Medical Technology (MedTech) adoption can be significantly challenged by a mismatch between communicated value and stakeholder priorities. Despite the innovative potential MedTech offers, its perceived value often falls short for key stakeholders such as patients[1], providers[2] and payors[3]. A global review found that only 11 percent of MedTech assessments effectively integrate user engagement and data into decision-making processes.[4] Consequently, value assessment outcomes can be frequently misaligned with the user priorities, reducing the perceived value of MedTech innovations as integral components of healthcare systems.[2] Furthermore, a study revealed that less than half of physicians report clear benefits from MedTech innovations, such as digital solutions.[5] This skepticism amongst patients and clinicians can hamper integration into existing workflows,[6] resulting in fragmented adoption and limiting the benefits of MedTech investments.

> I have failed to push for MedTech adoption many times when stakeholders do not see the real value. They want to see different metrics. Money is often the concern. Yet without a budget, payors cannot afford it. Even if there is a budget, we might not have the interest, expertise, or resources from healthcare providers to use technology.
>
> Chief Executive Director of a Provincial Public Health Office in a rural province in Thailand

To address gaps in value articulation, MedTech stakeholders in SEA are increasingly turning to Value-based Assessment, including Health Technology Assessment (HTA).[7] HTA offers a structured approach to evaluate the clinical and economic benefits of medical intervention. A recent joint study by HTA agencies in Thailand and Lao PDR found that 71 percent of government, hospital and academic stakeholders strongly agreed HTA could improve the allocation of health resources, while 66 percent believed it could enhance quality of care.[8]

In SEA, the role of HTA varies by country: Thailand uses it to assess new technologies for inclusion in its Universal Coverage Scheme (UCS) package; Singapore employs it for subsidy decisions on existing technologies; and Indonesia uses it to remove less cost-effective interventions.[9] Well-developed HTA frameworks that involve stakeholders and integrate with national decision-making processes are more likely to align with broader healthcare priorities and effectively influence coverage decisions.[10] By systematically evaluating technologies through HTA, MedTech stakeholders can better demonstrate value, leading to more informed decision-making on adoption and reimbursement, increased acceptance of beneficial innovations, and ultimately, improved healthcare outcomes across the region.

> HTA is a must-have step. It helps us quantify the holistic values of Medical Technology. It informs us that this technology is worth investing in.
>
> **Dr Fadli Kharie**
> Physician and Public Health Expert in new health technologies from Malaysia

Barriers to effective value communication with HTA in SEA

Despite HTA implementation across SEA, translating HTA research into technology adoption remains challenging due to a disconnect between evaluation outcomes and real-world decisions.[11] A global study indicates that 81 percent of HTA bodies' outcomes are non-binding, softening their impact during reimbursement negotiations and adoption.[10] Moreover, MedTech HTA is less mature compared to pharmaceutical evaluations, constrained by limited clinical evidence, dependence on user behavior, shorter product life cycles and indirect clinical outcomes.[7] Beyond these global barriers in MedTech value communication, there are challenges specific to SEA. Discussions with hospital management, physicians, HTA experts and payors across the region have highlighted three key barriers: limited expertise, insufficient financial support and a lack of HTA awareness within the healthcare community. These obstacles impede the translation of HTA research into practical decision-making tools for MedTech adoption in SEA.

Limited HTA manpower and expertise

The developing HTA expertise in SEA has made it challenging to produce locally relevant evaluations that meet individual countries' needs such as the inclusion of societal parameters. The growth of HTA expertise is constrained by limited exposure to MedTech value assessments and persistent gaps in HTA training.[12] In countries like Indonesia, the Philippines and Vietnam, HTA systems remain nascent, with evaluations of new medical technologies often conducted ad-hoc rather than through consistent, institutionalized processes.[13] In Indonesia, for example, only 50 percent of staff at the HTA agency hold postgraduate qualifications in HTA.[12] Meanwhile, in the Philippines, the lack of sustained research collaborations with academic institutions has emerged as a barrier to expanding HTA capacity. In Singapore and Malaysia in contrast, the key issue reported a shortage of qualified staff to handle increasing workloads. The shortage of experienced HTA personnel across the region undermines the ability to develop context-specific evaluations and to effectively communicate the value of medical technologies to key decision-makers, such as policymakers and payors.

Limited expertise in MedTech HTA has led to methodological gaps in addressing societal dimensions — such as non-medical consequences, ethical considerations, and social values — largely due to insufficient patient engagement and the lack of integration with reimbursement considerations. These framework gaps hinder the ability to capture the unique needs, values and expectations of each population, resulting in misalignment with local healthcare priorities.[10] Figure 1 highlights the variability between HTA systems in the extent to which they engage patients and payors during evaluations. Without meaningful integration of local user contexts, MedTech value propositions risk being misaligned with country-specific needs, weakening effective engagement with SEA stakeholders.[10]

> Our country's HTA team is lean, whereas other countries have larger pools of practitioners that are able to exert more influence on healthcare decisions.
>
> **Dr Fadli Kharie**
> Physician and Public Health Expert in new health technologies from Malaysia

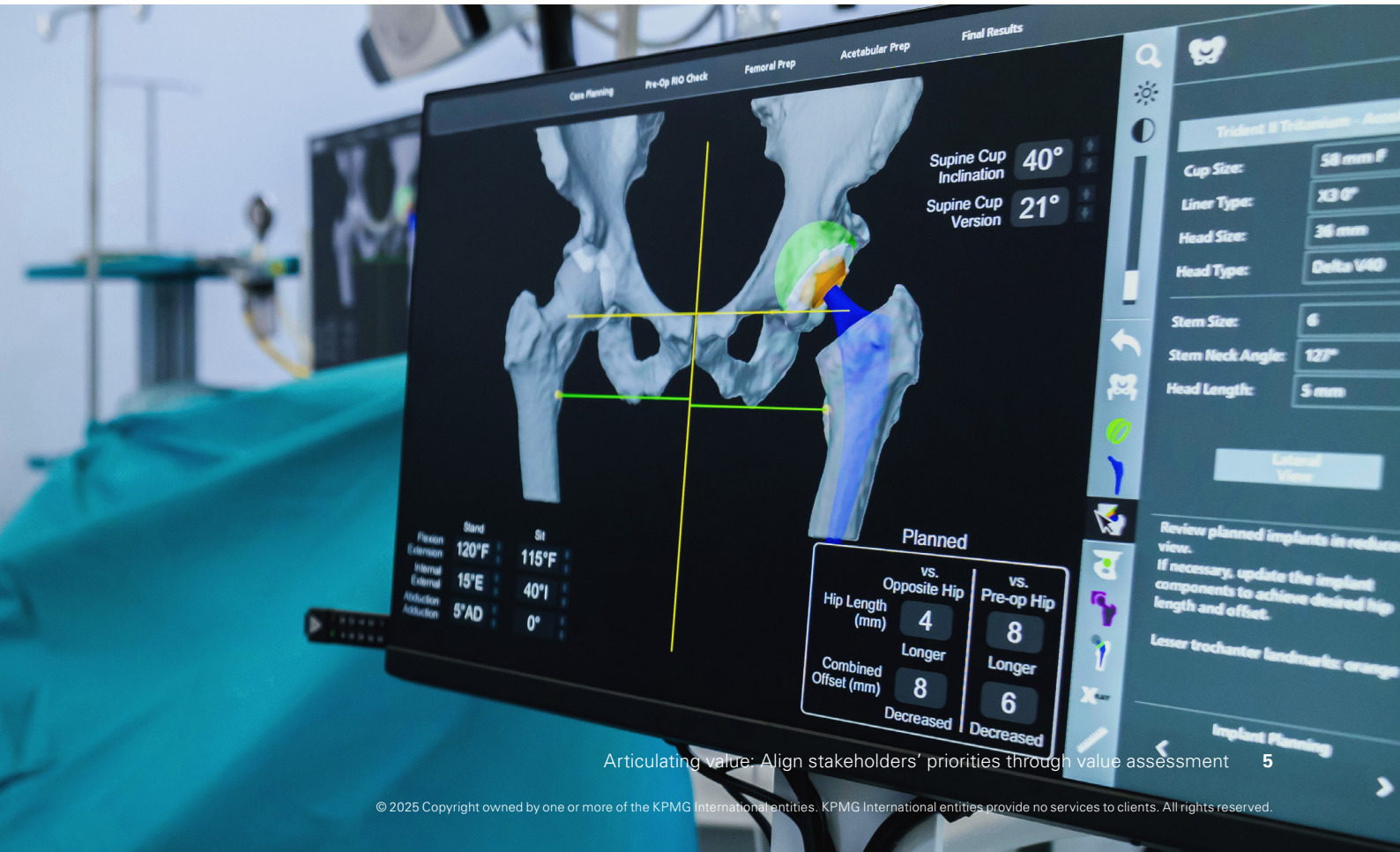

Figure 1: An overview of primary HTA bodies in Southeast Asia

HTA bodies	Singapore's Agency for Care Effectiveness (ACE)	Philippines' Health Technology Council (HTA Council)	Malaysian Health Technology Assessment Section (MaHTAS)	Thailand's Health Intervention and Technology Assessment Program (HITAP)	Vietnam's Health Strategy and Policy Institute (HSPI)	Indonesian Health Technology Assessment Committee (InaHTAC)
HTA body maturity						
Number of HTA professionals	80 technical and non-technical professionals[12]	More than 45 HTA professionals[13]	More than 33 HTA professionals[13]	120 staff members[13]	Unpublished	More than 10 HTA workers[13]
Patient consultation for HTA	Strong involvement[14]	Developing involvement[15]	Strong involvement[16]	Strong involvement[17]	Channels for involvement to be developed[18]	Developing involvement[19]
Payor consultation for HTA	Strong involvement[20]	Strong involvement[21]	Developing involvement[22]	Strong involvement[17]	Developing involvement[18]	Developing involvement[19]
Reimbursement integration	ACE's HTA is embedded within a broader national strategy for value-based healthcare and reimbursement decisions	HTA Council's conducts HTAs with local contextualization in the Philippines, guiding public health program decisions and inform coverage and pricing	MaHTA provides HTA evidence to MOH policymakers but is not directly involved in coverage decisions	HITAP's works closely with the National Health Security Office (NHSO) for policy, budgeting, and innovation decisions	The Department of Health Insurance is developing HTA guidelines to support reimbursement decisions	The national health insurance payor (BPJS-K) is involved in HTA topic selection and prioritization
MedTech HTA						
Examples of MedTech HTA performed	Home Sleep Test for Obstructive Sleep Apnea[23] and Elastomeric Infusion Pumps[24]	Pulse Oximetry[25] and Tuberculosis Diagnostics[26]	Ultra-portable Digital X-Ray system for TB Screening[27] and Far Infrared Therapy for Arteriovenous Fistulas and Wound Healing[28]	Non-sputum-based Assays for Tuberculosis (TB)[29] and PET-CT scan for large B-cell lymphoma[30]	No published HTA results on MedTech	No published HTA results on MedTech
Local context integration for MedTech HTA	Strong local context integration into evaluations	Developing local context integration into evaluations	Developing local context integration into evaluations	Strong local context integration into evaluations	Local context integration to be developed	Local context integration to be developed
Evidence types for MedTech HTA	ACE evaluates MedTech using the best available evidence. Although preferring randomized controlled trials, ACE considers lower levels of evidence when relevant and appropriate.	HTA Council's MedTech HTA are reliant on established HTAs reviews, contextualized to local setting with local data if available.	MaHTAs uses literature reviews and clinical observations, and measured clinical outcomes, organizational feasibility and economic implications	HITAP conducts early HTA, landscape reviews, stakeholder consultations, cost-effectiveness modelling and real-world feasibility analysis	HSPI has not published HTA for medical devices	InaHTAC has not published HTA for medical devices

Present state of value assessment practices

Strong Developing To be developed

Financial constraints resulting in limited local evidence

Across the region, financial constraints pose a major barrier to producing local data essential for user-relevant assessments. Stakeholders often require experiential knowledge, including local data and clinical experience, before adopting MedTech solutions.[31] However, this lack of adoption stifles the generation of local data needed to support the technologies' effectiveness or relevance. This creates a cycle that hinders the development of a robust body of evidence necessary for HTA evaluations. Additionally, limited investment in advanced digital tools, data analytics platforms and health information infrastructure — such as reliable cost databases and local health outcomes data — limits the capacity of HTA systems to generate and utilize local data during value assessments.[9,32] While local real-world evidence is not always mandated for HTA evaluations, its presence can significantly improve the accuracy and applicability of MedTech assessments, enhancing effective value communication.[33]

Resource and infrastructure constraints remains a major hurdle for SEA, as they impede the collection of local data essential for robust HTA processes.

> Limited adoption of MedTech solutions leads to insufficient clinical evidence in the local context; without localized data, it is difficult to assess effectiveness and relevance.
>
> Health policy & HTA expert from Indonesia

HTA education and awareness in the wider healthcare network

Efforts to institutionalize HTA across SEA have increased,[7] but a significant awareness gap that hinders the effective use of evaluation outcomes in decision-making, remains. Health system stakeholders have indicated the need to address gaps in HTA understanding to promote meaningful participation in the value assessment process. According to a study on HTA across 32 countries, 77 percent of stakeholders believe these gaps should be addressed by policymakers, 44 percent among clinicians and 22 percent among patients. Frequently, a cautious approach is adopted towards HTA because of concerns about conflicts of interest and the need for independence.[12] This caution includes avoiding direct collaboration with private companies and refraining from actively promoting technologies to hospitals, letting them make their own decisions. However, low awareness and knowledge gaps around HTA recommendations make it difficult to use these assessments effectively in healthcare decisions.

Recognizing the barriers to MedTech value assessment in SEA is crucial in driving meaningful solutions that can enhance healthcare decision-making in the region. These obstacles present opportunities for strategic improvements and development. By targeting these barriers, stakeholders in the region can foster a more favorable environment for MedTech innovation.

> The HTA results are publicly available. The technologies-adopters will need to look them up in our publication. I believe there is still an awareness gap. HTA findings could be more effectively utilized in healthcare decisions, particularly those concerning reimbursement in Malaysia.
>
> **Dr Fadli Kharie**
> Physician and Public Health Expert in new health technologies from Malaysia

Addressing challenges in value assessment:

Activating regional expertise, adapting locally and advancing together

Building expertise, optimizing resources and enhancing awareness — ultimately aligning MedTech value propositions with the needs and priorities of local populations — requires collaborative effort. We propose focusing on enhancing expertise and manpower through regional collaboration, optimizing resources with adaptable HTA frameworks, and advancing awareness and engagement through strategic partnerships. Together, these initiatives can transform MedTech value assessment and its adoption in SEA.

Addressing expertise and manpower concerns with regional expertise

Regional collaboration is helping address expertise and manpower concerns by facilitating cross-border initiatives that transfer knowledge, skills and best practices. This support enables HTA bodies across SEA to overcome resource and technical capacity constraints.[34] The availability and quality of a country's resources greatly influence its ability to produce HTA results. Consequently, sharing resources, results and data empowers nations with limited resources to make more timely and informed policy decisions.

An example of regional efforts to create a relevant value assessment is the development of preference-based measures by HTAsiaLink, known as the "Asia preference-based measures 7 dimensions" or AP-7D.[35] These measures are grounded in data gathered from patients in SEA, ensuring they capture preferences and outcomes that are most meaningful to this population. Additionally, emerging HTA bodies in the region are leveraging regional expertise to cultivate their own local practices. For instance, in March 2024, representatives from Indonesia's Health Development Policy Agency and Directorate General of Pharmacy and Medical Devices visited Singapore's Agency for Care Effectiveness (ACE) to study its HTA framework and best practices for local adaptation.[36] This visit is part of a broader initiative to enhance Indonesia's healthcare decision-making processes. The current Minister of Health, Budi Gunadi Sadikin, also emphasized learning from Singapore during his speech at the launch of Business Process Health Technology Assessment (HTA) One Door One Standard.[37] Through such collaborations, gaps in evaluation frameworks for developing HTA systems can be bridged, enabling more rapid and comprehensive assessments of medical technologies, ultimately enhancing value articulation in SEA markets.

Case study

Collaboration between Health Intervention and Technology Assessment Program Foundation (HITAP) and Unit for Health Evidence and Policy (UHEP)

Since 2019, HITAP has supported the capacity building and establishment of UHEP.[38] The UHEP is a significant milestone in building infrastructure for HTA and evidence-informed health policy practices in Lao PDR. It is expected to serve as a hub for generating and applying health evidence, including HTA, working with national and international partners to address Lao PDR's limited infrastructure, human resources and funding for HTA.[39]

Additionally, key collaborations between HITAP and UHEP encompass situational analysis, stakeholder mapping, introductory HTA workshops, knowledge building and peer learning. These efforts include an internship program for Lao staff, offering practical experience in conducting economic evaluations and exploring various HTA aspects.

Working with limited resources by scaling HTA to reflect local contexts

Adaptive health technology assessments

Adaptive Health Technology Assessment (aHTA) offers a potential solution to resource-constrained SEA.[40] While full-scale HTAs demand significant manpower, time and funding,[41] smaller-scale HTAs offer an alternative. They support evidence-based decision-making in MedTech evaluations by leveraging existing data, evaluations and models. The Malaysian Health Technology Assessment Section (MaHTAS) produces three types of reports, depending on the assessment needs: the HTA report, Technology Review (mini-HTA) and Information Brief (Rapid Review).[42] The decision for which type of HTA to conduct depends on the urgency of the request, the availability of data and the specific policy question. This approach allows evaluations to align with the level of financial support and assessment needs in the HTA systems, thereby facilitating more effective MedTech value assessment and communication.

Locally relevant matrices

Utilizing data that reflects the unique cultural, social and economic contexts of the local population can significantly reduce uncertainties in decision-making about health technologies and encourage their adoption.[45] The HTA process should be tailored to accommodate these local nuances rather than being purely mechanical. Without this adjustment, the applicability of international data may be compromised, risking misinterpretation and leading to suboptimal decision-making.[40] As previously discussed, region-specific preference-based measures like the AP-7D, which includes dimensions such as interpersonal interactions and burden to others, capture the region's values more accurately.[35] Another vital consideration specific to this region is equity.[46] Thailand's HTA processes focus on equity by incorporating Distributional Cost-Effectiveness Analysis (DCEA) into its assessments.[47] In SEA, resource constraints necessitate considering factors like workforce availability, training needs and potential automation to ensure technologies are sustainable, equitable and improve workforce efficiency.[48] Similarly, MedTech companies entering Muslim-majority countries like Indonesia should consider Halal requirements.[49]

Additionally, there is a shift towards MedTech services or Everything as a Service (XaaS), where the value of a device is perceived not as a standalone entity but as part of a broader service. By including these factors for value assessment, HTA bodies in the region can ensure their evaluations align more closely with local population perspectives rather than relying solely on measures developed elsewhere.

Insights from the EU

Regional collaboration and calls for adaptive HTA

The EU has called for an adaptive approach for MedTech assessments across its member states.[43] As of January 2025, the EU employs the Joint Clinical Assessment (JCA), where companies submit reports to the Health Technology Assessment Regulation (HTAR), a centralized body that conducts initial evaluations and issues reports on clinical parameters like outcomes and safety.[44] JCA has been implemented for medicinal products and is planned to be launched for medical devices and in vitro diagnostics in 2026. JCA's analysis provides a basis for HTA where member states are encouraged to adapt the assessment to specific technologies and local context. This approach aims to ease the workload of local HTA bodies while giving healthcare systems the flexibility to make decisions that suit their local markets. Although JCAs have yet to conclude, such an approach could potentially enhance assessment efficiency, reduce system burden and meet the growing demand for MedTech value assessments.[40]

Enhancing awareness with strategic partnerships

For MedTech companies, collaborating with the right local stakeholders is crucial to driving technological adoption and demonstrating the value of their innovations. During the value assessment process, MedTech companies should take proactive steps to identify and engage strategic partners to support key activities, including navigating the HTA submission process, conducting local pilots, and securing appropriate technology financing and coverage. The following section outlines recommendations from HTA stakeholders on how these partnerships can facilitate the value assessment of MedTech solutions.

> Engaging stakeholders, clinicians, patients, industry and policymakers early and throughout the process is key. We employ a flexible, context-specific approach that leverages real-world evidence and capacity building to ensure evaluations are relevant, robust and aligned with local priorities.
>
> HTA pioneer from Thailand

Case study

Fostering MedTech innovation through innovation-inclusive HTA and reimbursement

In Thailand, the National Health Security Office (NHSO) has partnered with the Thailand Center of Excellence for Life Sciences (TCELS) to ensure that innovation is a key consideration during HTA processes. This marks a departure from traditional HTA criteria by incorporating innovation, particularly for commercialized technologies developed by Thai organizations that are listed on the national innovation registry. A notable example is the recent integration of AI-based X-ray analysis technology from Siriraj Hospital and Perceptra in public hospitals. This technology has successfully obtained universal healthcare coverage (UHC) scheme approval.[50] This approach not only promotes MedTech innovation but also accelerates the adoption of advanced technologies in the healthcare system.

Choosing the right partner for HTA submission

MedTech innovators entering new markets should prioritize engaging with local HTA agencies to align with country-specific landscapes and processes. The ability of private companies to submit direct HTA applications varies by jurisdiction. According to an Indonesian HTA and public policy expert, limited resources within HTA teams mean that not all promising technologies can be evaluated internally. A stakeholder-led submission pathway has been established to address this, allowing external entities such as MedTech companies, patient associations and health professionals to conduct independent HTAs and forward them to the Health Ministry for further study.[51]

Conversely, Thailand does not permit the direct submission of HTA assessments. According to a Thai HTA expert, while Thailand once allowed private HTA submissions, the policy lasted for just one year. Only three studies were conducted in that period, and all concluded that the sponsor's products were not cost-effective, leading to the discontinuation of private submissions. While MedTech companies can prepare and gather materials to support the assessment process, a partnership with a local, established entity — which could be healthcare professionals, public health scholars, civil society organizations, or patient networks — is required for HTA submission. Understanding country-specific submission requirements is essential to ensure successful navigation of the HTA process and to facilitate the entry of new technologies into the market.

Choosing the right partner to conduct local pilots

Collaborating with grant providers and healthcare institutions to pilot MedTech solutions gives companies a critical opportunity to gather local evidence and secure early market access. Such programs allow companies to test their technologies in local environments, facilitating direct interaction with patients and clinicians to obtain invaluable feedback. This process allows companies to refine their innovations and strengthens their capacity to effectively demonstrate the value and applicability of their technologies in the local context, ultimately accelerating commercialization.

An exemplary initiative is the Malaysian Research Accelerator for Technology & Innovation (MRANTI), which is supported by the Ministry of Science, Technology and Innovation (MOSTI) and the Malaysian Ministry of Health. MRANTI provides grants to both local and international startups for sandboxing activities.[52] Five hospitals have been designated as National Technology and Innovation Sandbox (NTIS) Health Technology Hubs, where technologies such as robotics and the Internet of Medical Things (IMOT) are tested, leveraging 4G/5G facilities. By participating in pilot programs, MedTech companies can fast-track commercialization efforts and ensure they are well-positioned for effective market entry.

Choosing the right partner for activation

MedTech companies, along with HTA and reimbursement applicants, should engage with the right stakeholders whose concerns align with the solutions offered by MedTech innovations. This alignment is crucial to overcome obstacles in securing buy-in and financial support for the innovation.

A public health and HTA expert working with public payors in Thailand shared an experience related to securing funding for Hyperbaric Oxygen Therapy (HBOT) to treat decompression sickness (DCS) and other diving-related injuries in Trat, a seaside province in eastern Thailand. The project was not successful due to high upfront costs and the lack of a qualified care team in the province. Later, approval for HBOT was successfully obtained in Phuket, a popular tourist destination in southern Thailand. This success was driven by demand from a higher volume of divers, the availability of a qualified care team and additional support from the Ministry of Interior.

This example underscores the importance of engaging and securing buy-in from relevant stakeholders. By tailoring their approach to address specific issues relevant to key stakeholders, companies can enhance the likelihood of successful adoption and implementation of their technologies.

Conclusion

The ***Innovate to Integrate*** series introduces a strategic framework centered on the "Three A's" — achieving acceptance, articulating value and ensuring accessibility through affordability — to drive the adoption of MedTech solutions in SEA. This release emphasizes the importance of articulating MedTech value assessments effectively by aligning evaluation outcomes with values that resonate with patients, payors and providers.

The key actions of adapting locally, advancing together and activating regional expertise remain crucial to overcoming barriers in value assessment to ensure effective MedTech value communications.

1. Activate regional expertise to address HTA capacity gaps:

Regional collaborations can help overcome resource constraints and technical capacity challenges through the sharing of knowledge and industry best practices across borders.

2. Adapt locally to help ensure efficient resource use:

Resource constraints can be addressed through the use of adaptive health technology assessment frameworks and locally relevant matrices that reflect the cultural, social and economic contexts of the region accurately.

3. Advance together to promote awareness and collaboration:

Strategic partnerships with local stakeholders encourage proactive engagement, fostering early dialogue and mutual understanding to increase awareness and facilitate effective communication.

Three key execution nuances are crucial to successfully implement these strategies:

clear stakeholder engagement,

proactive cultural alignment and

strong institutional capacity for sustainability.

KPMG member firms are prepared to collaborate with pivotal stakeholders within SEA's healthcare ecosystem with the aim of ensuring effective value assessment and integration of MedTech innovations. By leveraging KPMG professionals experience in localized market entry strategies, innovation translation and adoption, and local stakeholder and partnership management, we can offer guidance through the intricate landscape of healthcare technology adoption. With support from our local teams, we seek to emphasize the cultural nuances unique to each country in the region. Working together, we can create customized approaches, strengthen integration efforts and address specific local needs, cultivating an innovative and sustainable SEA healthcare ecosystem.

Innovate to integrate series explanation

KPMG's series *"Innovate to integrate"* delves into key challenges and drivers that empower MedTech stakeholders to realize three essential goals in SEA:

Achieve acceptance among users.

Ensure effective value articulation of MedTech.

Enhance accessibility, ensuring affordability.

The first installment of this series focused on the specific challenges in SEA that impact the acceptance of MedTech. The effective communication of the value of MedTech to stakeholders, aligning with their strategic visions and objectives, is to greater user acceptance.

In this second installment, we will delve into how the value of MedTech is evaluated and communicated within the SEA healthcare system to actively engage stakeholders in the adoption process. While the series follows a sequential structure, successful MedTech adoption requires a holistic approach, simultaneously addressing user acceptance, value communication and affordability for successful integration.

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