



From Insight to Foresight: Singapore's Experience In Horizon Scanning Of Medical Technologies

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Introduction

In response to the rapid emergence of medical technologies (MedTechs) that diffuse readily into the healthcare system, the Agency for Care Effectiveness (ACE) in Singapore has established a horizon scanning (HS) system for MedTechs since 2020 to:

- Provide advance notice of new and emerging MedTechs to healthcare policymakers and providers for early service planning;
- Safeguard against the use of low-value MedTechs; and
- Identify potential topics for HTA for subsidy consideration.

This poster describes ACE's early HS experience and future opportunities to enable a fit-for-purpose HS system.

Methods

• A review of ACE's key HS activities was conducted using a mixed-method approach (Figure 1).

Identify key areas for review

Assess strengths and gaps for each key area through a mixed-methods analysis



- Number of MedTechs assessed
- Correlation of MedTechs assessed with trends identified internationally
- Number and types of stakeholders engaged
- Impact assessment (e.g. adoption rate of assessed MedTechs, cost savings or cost-avoidance)



- Stakeholder perception and satisfaction
- Impact on knowledge exchange with external parties
- Strategic alignment with the Ministry's long-term goals

Figure 1: Mixed-methods analysis based on qualitative and quantitative measures

Results

- Four key areas of ACE's HS activities were identified and analysed for its strengths and gaps (Figure 2).
- Key strengths included development and dissemination of HS reports (n=20) to over 100 key stakeholders with positive feedbacks received (1), enabling early HTA (2), broad stakeholder engagements (3) and active sharing of knowledge (4).
- Key gaps included unclear downstream impact of HS activities, limited diversity of HS products (1) and wider stakeholder engagement including patient involvement in the HS process (3, 4).
- The review recommended diversifying HS outputs, strengthening patient involvement and formal impact assessment through stakeholder surveys.

Discussion

- Through ACE's HS system, the healthcare system can be better prepared for the introduction of new MedTechs. However, like international experiences, its impact remains unclear mainly due to its short period of establishment.
- To better serve the needs of our stakeholders, future initiatives identified include formal impact assessment, enhancing stakeholder engagement to potentially include patients, and broadening the type of outputs.

1. Facilitate early service planning

Strengths

- Twenty HS reports produced as of July 2023, with a five-fold increase between 2021 (n=2) and 2023 (n=10). Of which, 70% of assessed MedTechs aligned with top trends identified by the Canadian Agency for Drugs and Technologies in Health (CADTH).
- Dissemination of HS reports to >100 policymakers and healthcare providers.
- Positive initial stakeholder feedbacks, citing the reports' relevance for clinical practice.

Opportunities

- Formal impact assessment of HS on early service planning.
- Expand the diversity of HS products to meet stakeholder's demand.

2. Support early HTA to close the gap between regulatory approval and HTA

Strength

• Surfaced 138 technologies that have recently obtained local regulatory approval to the relevant technical evaluation team for consideration for HTA.

3. Stakeholder engagement

Strengths

- Engaged 25 clinical experts across multiple disciplines (as of July 2023) to determine local clinical unmet need and seek feedback on HS assessments.
- Periodic engagement with policymakers to ensure that the HS system remain in line with the prevailing overarching direction of the healthcare system.
- Engaged industry to seek submission of pipeline MedTechs.

Opportunities

Engage patients and consumers in HS process.

4. Local, regional and international collaborations

Strength

 Participation in network activities (e.g. i-HTS) and conferences to share knowledge.

Opportunities

- Greater partnership across regional and international HS systems.
- Potential for collaborations with local developers and innovation centers.

Figure 2: Key areas of HS activities with the corresponding strengths and opportunities identified

Conclusion

- ACE's HS has made significant progress in its effort to enable service planning for the introduction of new and emerging MedTechs.
- This remains an iterative process with multiple future initiatives.