

Systems Dynamics for Challenges to Universal Healthcare in a Southeast Asian Country

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Health technology assessment (HTA) was mandated to support evidence-informed decision-making for universal health coverage (UHC) in country X. Despite strong legal mandate, ongoing process refinement and capacity investment, persistent challenges remained. Backlogs of technologies awaiting assessment continued to grow, and HTA outputs were seen as not responsive enough for policy-making, resulting in lagging stakeholder support overtime. These patterns suggested the presence of broader system dynamics that could not be explained by performance of a single agency alone.

A system dynamics approach was used to examine factors influencing HTA system performance in Country X. Literature review findings and stakeholder interviews were analysed using the World Health Organization Evidence-Informed Policy-Making (EIPM) framework and integrated into causal loop diagrams (CLDs). CLDs were refined and validated through stakeholder workshops. System archetypes were identified to explain recurring patterns of behaviour and to identify leverage points for strengthening the perceived value and use of HTA.

Analysis identified multiple interconnected archetypes shaping the performance of the HTA system. Efforts to strengthen HTA independence and responsiveness generated unintended consequences that affected coordination, alignment, and system capacity. Short-term responses to immediate policy pressures often reduced incentives for longer-term system improvement, while investments in capacity development yielded smaller-than-expected gains due to workforce and coordination constraints. Together, these interacting feedback structures helped explain persistent challenges related to the responsiveness, relevance, and use of HTA despite ongoing reform efforts.

The study demonstrates how qualitative system dynamics methods can be used to examine complex policy systems involving multiple organisations and stakeholder groups. By making feedback structures explicit, the approach provided a shared platform for stakeholders to explore competing perspectives, identify common priorities, and discuss opportunities for coordinated system improvement. The findings suggest that strengthening HTA systems may require attention not only to technical capacity and formal mandates, but also to the broader relationships and interactions that shape how evidence is generated, interpreted, and used within policy systems.