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From Practice to Purpose: Embedding Knowledge Translation in Health System Design

Commentary

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Abstract: The pursuit of universal health coverage (UHC) in Cambodia requires more than expanded access; it demands the ethical, contextual, and sustainable application of knowledge. This commentary argues that knowledge translation (KT), the dynamic process of adapting research into practice, policy, and education, is essential for bridging the "know–do gap" that too often delays life-saving interventions. In low-resource contexts, failure stems not from a lack of capacity, but from the misalignment of global evidence with local realities. Drawing on regional examples from Cambodia, Myanmar, the Philippines, and beyond, we illustrate how co-design, cultural safety, and reciprocity can transform evidence into action. We highlight structural barriers, including limited information access, hierarchical professional cultures, and historical distrust, and propose strategies for sustainable KT. This includes localizing evidence, building workforce capacity, fostering equitable partnerships, leveraging digital tools, embedding inquiry, and tailoring communication. By positioning KT as a central pillar of health system strengthening, Cambodia can move from importing solutions to cultivating locally grounded approaches, making UHC both achievable and equitable.

Introduction

The pursuit of universal health coverage (UHC) is not simply about access; it is about appropriate, effective, and sustainable care. For countries like Cambodia, the path to UHC is shaped by cultural, systemic, and historical contexts that cannot be addressed through funding alone.

Too often, nations like Cambodia, often described as "low-resource settings," are portrayed as if a lack of resources is the defining characteristic that prevents knowledge from being heard or implemented (due to a lack of money, resources, or ability). However, in reality, what is needed is a shift in how we apply and adapt global evidence to settings where systems, values, and constraints differ. Cambodia's journey toward UHC requires not just more resources, but more innovative, more ethical use of what we know.

Knowledge translation (KT) is the mechanism that allows that. Defined as the dynamic and iterative process of synthesizing, disseminating, and applying research evidence into clinical practice, policy, and education, KT is particularly vital in contexts where the "know-do gap" contributes directly to preventable illness and death (Gagliardi et al., 2015).

This commentary draws on practice, experience, and regional lessons to argue that KT must be seen not as an add-on, but as a central pillar of ethical and effective health system development.

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Bridging the Know-Do Gap

The helicopter problem - where dropping in money, equipment, or imported interventions fails to create lasting change - reminds us that health is situated within a system. Without context, good intentions miss their mark. KT asks us to understand the why, the where, and the how; to ask not just what works, but what works here, and for whom.

One of the foundational arguments for KT lies in its power to bridge the gap between what is known from research and what is done in practice (Malla et al., 2018). The World Health Organization has long acknowledged that evidence-informed decision-making is essential for health system strengthening, yet research findings too often remain locked in academic silos, inaccessible or irrelevant to frontline workers (WHO, 2012; WHO, 2024). In those nations considered as low-resource settings, the average delay of 17 years for research findings to be implemented in practice (Grant, Water & Ion, 2023) is not just a statistical lag; it is a human cost.

Rather than seeing this gap as a failure, KT reframes it as a space for innovation and dialogue. For example, when maternal health guidelines in rural Myanmar were only 30% aligned with WHO guidelines (UNFPA, 2020), success only followed when midwives, community leaders, and local language tools were embedded in the process (Wangmo et al. 2016). Similarly, hypertension guidelines in the Philippines saw impact only when simplified and delivered by trained community workers (Global Alliance for Chronic Disease, 2025). These examples remind us: KT is not about pushing evidence – it is about co-designing solutions with those who will live and work with them.

The Ethical Imperative of KT

Ethically, we cannot afford to treat research as an export. The Declaration of Helsinki reminds us that research without benefit to its participants is a violation (Bull et al., 2015). In Cambodia and across the region, there is a history of extractive research: studies conducted on, rather than with, local communities. This resulted in findings and benefits accruing to researchers or pharmaceutical companies elsewhere, rather than the communities involved in the studies (Lawrence & Hirsch, 2020).

KT provides a counter-narrative to this form of extractivism by embedding reciprocity, cultural safety, and co-ownership into the research process (Sarkies et al., 2021). Integrated knowledge translation (IKT) models, for example, promote ethical practice by engaging participants and stakeholders throughout the research cycle - from defining the problem to implementing the findings (Graham et al., 2006).

This was powerfully demonstrated in the Pēpi-Pod project in South Australia, which embedded First Nations knowledge systems and prioritized culturally appropriate safe-sleep strategies through collaborative research and implementation (Grant et al., 2022).

Why Cambodia? Local Relevance and Regional Insight

Cambodia stands at a critical inflection point. With national efforts pushing toward UHC (notably the Royal Government of Cambodia's Roadmap Towards Universal Health Coverage in Cambodia 2024 - 2035), the need for contextual adaptation of evidence is urgent. Whether integrating mental health into primary care, addressing NCDs, or responding to epidemic threats, KT must become part of how programs are designed: not just how they're delivered.

Regional and local lessons offer guidance. Thailand's HIV/AIDS program successfully localized global protocols, reducing mother-to-child transmission from 10.3% to 1.9% (UNAIDS, 2021). In the Philippines, simplified hypertension management guidelines led to 81% patient adherence when delivered

by trained community workers (Ojangba et al., 2023). In Cambodia, KT has supported the integration of mental health into primary care, helping to address trauma legacies from the Khmer Rouge era. Through collaborations with NGOs and local leaders, including Buddhist monks, evidence-based mental health education is being disseminated in a way that respects local spiritual and cultural frameworks (Sun et al., 2019). These examples underscore the importance of not only translating information, but also transforming how it is communicated and acted upon in specific cultural and systemic contexts. This is not about importing solutions. It's about grounding evidence in Cambodian soil.

Structural Barriers to Effective KT

Too often, KT challenges are framed as the inability of "low-resource" systems to absorb research. This overlooks the systemic constraints and complex dynamics that shape healthcare delivery. To be clear, there are certainly access issues: limited access to information, due to unreliable internet, high journal subscription costs, and language barriers, remain major obstacles (Kalbarczyk et al., 2021). This is further complicated by a culture of hierarchical clinical environments that can suppress innovation, with junior staff reluctant to challenge outdated practices (Malla et al., 2018); cultural resistance to externally sourced knowledge, lack of institutional incentives; and time-poor healthcare workers compound the difficulty of implementing new practices. For example, as highlighted in Southeast Asian studies, traditional medicine continues to have a significant influence, and trust in Western research varies considerably depending on the historical and political context (Graham et al., 2006).

In such a context, there is no lack of skill or will (as is too often implied). There is a system that struggles to support translation. Infrastructure gaps matter, but so do histories of distrust, undervaluing local knowledge, and policy environments that reward status quo over innovation. Accordingly, KT must be reframed not as a savior's tool (Easterly, 201), but as a collaborative process of sense-making - one that builds capacity within systems, not around them. At the academic level, the lack of institutional support, including continuous engagement and incentivization, remains a challenge for conducting KT activities. Additionally, researchers' soft skills are limited in engaging policymakers for KT practice (Kalbarczyk et al., 2021).

Strategies for Sustainable KT

Effective knowledge translation (KT) must be more than dissemination. It requires systemic embedding within the health ecosystem. The following strategies offer not only theoretical tools but also actionable frameworks that can align with and amplify Cambodia's pursuit of universal health coverage (UHC).

Localizing Evidence: KT begins with ensuring that research is not only translated linguistically but transformed contextually. Gagliardi et al. (2015) emphasize that co-designing interventions with local communities allows evidence to become truly actionable. This is particularly important in settings where global clinical guidelines may not reflect available resources, health-seeking behaviors, or cultural priorities.

In Cambodia, where many rural clinics operate with limited diagnostic equipment or multilingual capabilities, the local adaptation of guidelines (as seen in community-led maternal health efforts in Myanmar) can offer a valuable template. Embedding local leaders and using Khmer-language materials tailored to community norms would not only increase uptake but also promote ownership.

Building Workforce Capacity: KT is only as effective as the people who carry it. Sarkies et al. (2021) highlight the need to embed KT competencies - including critical appraisal, communication, and research literacy - into professional education for nurses, doctors, and public health workers.

In Cambodia, where medical and nursing curricula are rapidly evolving, this is a timely opportunity to develop KT as a core professional skill. It also aligns with recent Ministry of Health efforts to strengthen primary care through evidence-informed training. Building capacity ensures that providers are not only recipients of evidence, but also participants in its interpretation and application.

Leveraging Partnerships: KT thrives in networks of trust. Lawrence and Hirsch (2020) argue that equitable research partnerships, including South-South collaborations and academic-NGO alliances, can democratize knowledge and avoid extractive practices.

Cambodia's active NGO sector and growing regional engagement create fertile ground for these models. Partnerships with local universities, ASEAN health forums, and global health alliances can support KT strategies that are grounded in mutual benefit, not dependency. These alliances can also act as vehicles for KT mentorship, peer learning, and policy advocacy.

Investing in Digital Tools: When infrastructure is sparse, mobile platforms offer a scalable way to deliver evidence. PATH (2019) documented how the "mHero" platform in Laos used simple SMS to share real-time updates and training with frontline workers.

This model has clear implications for Cambodia, where digital health investments are growing but often concentrated in urban hubs. Adapted for Khmer speakers and designed with input from rural health workers, a localized mHealth platform could bridge gaps in training, coordination, and communication.

Embedding a Culture of Inquiry: KT cannot flourish in static systems. As Grant et al. (2023) argue, a sustainable KT ecosystem requires institutions to promote curiosity, reflection, and dialogue. This means building a culture where evidence use is normalized and expected, not exceptional.

For Cambodia, this could mean embedding KT expectations into hospital quality improvement cycles, Ministry-level planning, and continuous professional development frameworks. Critically, it also requires leadership that models evidence-informed practice and rewards staff for critical engagement, not just compliance.

Tailoring Communication: KT also depends on how information is communicated. Eljiz et al. (2020) introduce the README and STEP frameworks, which help align message formats—such as infographics, podcasts, or webinars—with audience needs and engagement styles.

In Cambodia, where literacy levels, media access, and professional hierarchies vary widely, tailoring communication channels is essential. For example, community health messages may travel more effectively via radio dramas or peer educators, while policymakers may prefer concise policy briefs with cost-effectiveness modelling. Matching form to function is a hallmark of thoughtful KT.

Conclusion

As Cambodia advances toward the ambitious goals outlined in the Royal Government's Roadmap to Universal Health Coverage, knowledge translation must be recognized as a foundational system function, not a peripheral activity. It is through KT that research becomes real-world practice, global guidance becomes locally relevant, and policy becomes lived experience.

This commentary has argued that KT, when done ethically and contextually, is a tool of equity and empowerment. It enables health systems to respond not just to what is known, but to what is needed, and by whom. For Cambodia, this means embedding KT into how health services are designed, delivered, and evaluated: from training health workers to engaging communities, from adapting evidence to

ensuring it speaks the right language. KT offers the scaffolding through which Cambodia can translate aspiration into action. In doing so, it becomes not just a means of knowledge sharing but a core engine of sustainable, locally grounded universal health coverage.

Conflict of Interest

There are no conflicts of interest associated with this commentary.

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