Taiwan's
Digital Health Diplomacy

Policy Progress & Insights from the Conceptual Nexus of International Relations, Technology & Health

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Overview

— What is **'Digital Health Diplomacy' (DHD)?**

— **DHD at Global & Regional Diplomatic Conferences**

— **Taiwan's Digital Health Diplomacy**

— Diplomacy for Digital Health: _Socio_**-technical Interoperability**

— Digital Health for/in Diplomacy: **International Relations**

— Digital Health in Diplomacy: E.g. **Cybersecurity**

— An **Open Invitation** to Collaborators!

What is 'Digital Health Diplomacy'?

<u>Digital Health</u> Diplomacy?
OR
Digital **<u>Health Diplomacy</u>**?

'Twitter Health diplomacy'
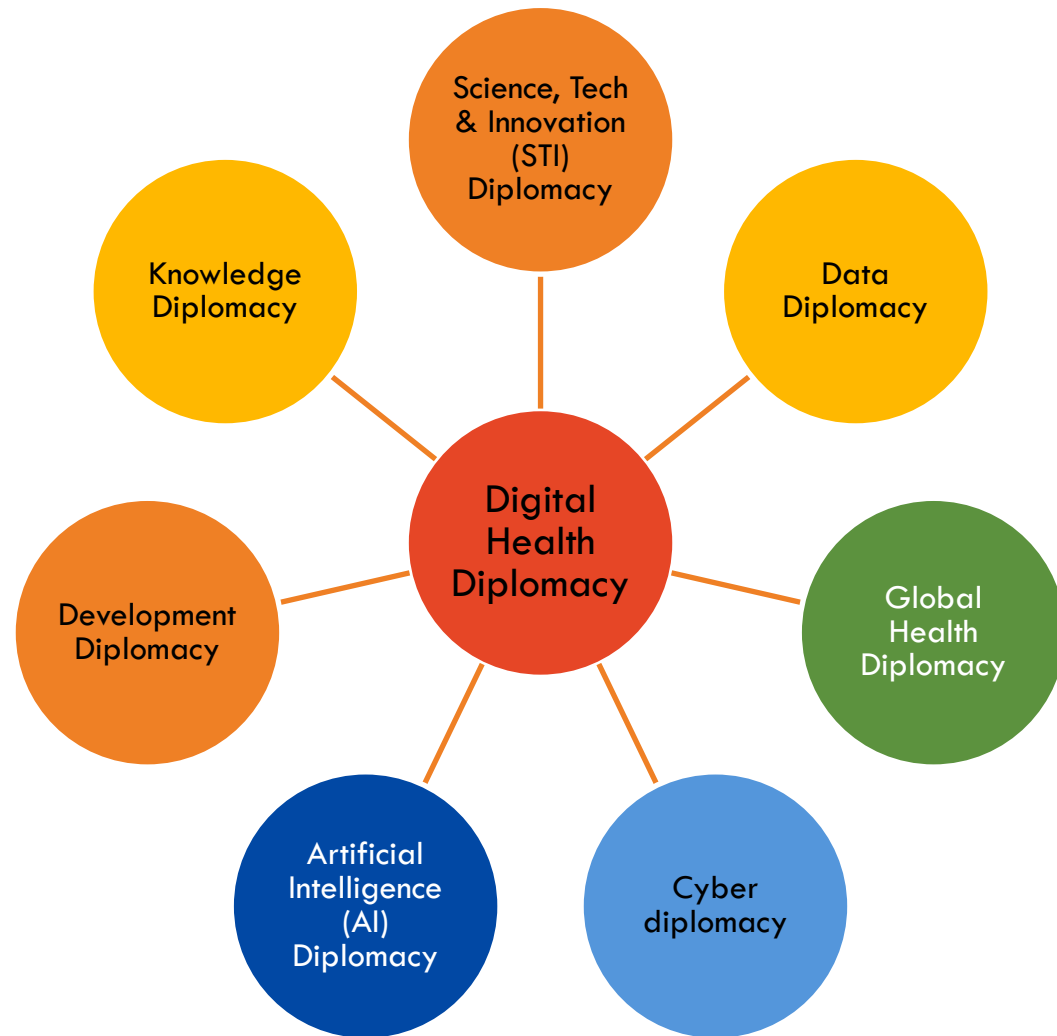'Health Digi-plomacy'
'Digital global health diplomacy'

- Different discourses
- Non-Exclusionary

'Digital Health Diplomacy': opening the black box

Digital Health Stakeholders ⟷ **?** ⟷ **Diplomatic Stakeholders**

DHD Dimension & Definition	COVID-19-related Examples
1. Diplomacy for Digital Health: Diplomatic means to achieve Digital Health objectives	Countries cooperated diplomatically to institute the use of **digital vaccine passports**, with the EU's diplomatic efforts in this regard culminating in the WHO's Global Digital Health Certification Network.[8, 9]
2. Digital health for Diplomacy: Digital Health as a means to achieve Diplomatic objectives	As health data became essential for COVID-19 response, **cross-border health data sharing** became a signal of **diplomatic trust**, while delayed/incomplete data sharing bred **diplomatic strife.**[10]
3. Digital health in Diplomacy: Digital Health informing foreign policy	As COVID-19 drove the adoption of digital health, cybersecurity breaches positioned the **cybersecurity of health data** as a focus of diplomacy.[11, 12]

Godinho MA, Martins H, Al-Shorbaji N, Quintana Y, Liaw ST. "Digital Health Diplomacy" in Global Digital Health? A call for critique and discourse. Journal of the American Medical Informatics Association. 2021 Dec 20.
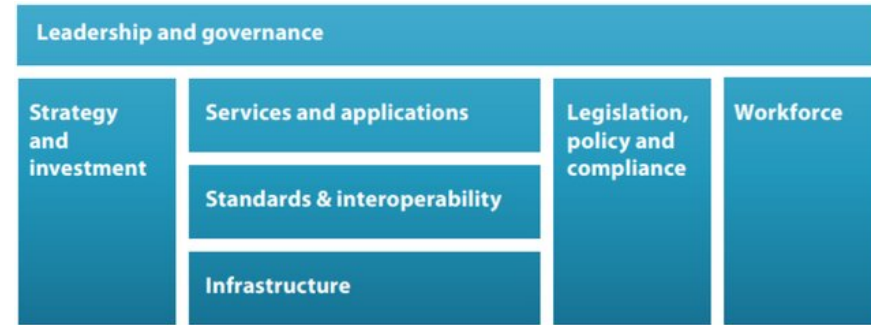
DHD: Conceptual Overlaps

Godinho MA, Liaw ST, Quintana Y, Martins H, Craig A, Al-Shorbaji N, Marin H F, Nabukenya J, Hastings J. **Digital Health Diplomacy in Global Digital Health: a framework analysis of regional diplomatic meetings.** 2024 [In Peer Review]

Digital Health Diplomacy at the Global Level: **WHO**

– Resolutions (eHealth, Digital Health)

– National eHealth Strategy Toolkit

– Global Strategy on Digital Health

4 strategic objectives:

1. promote **global collaboration** & <mark>**knowledge transfer**</mark> on DH;

2. advance the **implementation** of national DH strategies;

3. strengthen governance for DH at <mark>**global, regional and national**</mark> levels;

4. advocate **people-centred health systems** enabled by digital health.

DHD: **Regional levels**

47 documents analysed:

– Meeting outcome reports

– Technical reports

– Policy reports

Regional Meetings	WHO-ITU NEST Framework Dimensions						
	Leadership & Governance	Strategy & investment	Legislation, policy & compliance	Services & applications	Standards & interoperability	Infrastructure	Workforce
Assembly of the African Union (AU) *(Intra-regional)*	✓	✓	✓	✓	✓	✓	✓
Pacific Health Minister's Meetings & PHIN *(Sub-regional)*	✓	✓	✓	✓	✓	✓	✓
ASEAN-EU Dialogue *(Inter-regional)*		✓	✓	✓			
Group of Twenty (G20) *(Trans-regional)*	✓	✓	✓	✓	✓	✓	✓

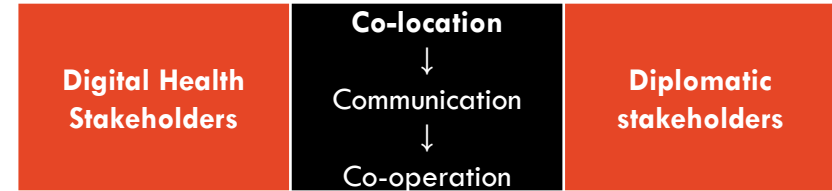Note: Abbreviated for brevity. See full paper for details.

Taiwan's Digital Health Diplomacy

Meeting	Laterality	Digital health-related Discussion Themes & Actions	Diplomacy-related Discussion Themes & Actions
Taiwan-HIMSS MOU	Multilateral	Cybersecurity resilience, Workforce development, Digital capacity building, Artificial intelligence, HIMSS Digital Health Indicator (DHI)	Attended by Department of Information Management, Ministry of Health and Welfare, Taiwan
APEC Policy Dialogue 2022, APAMI 2022, AeHIN 2022	Multilateral	Interoperability (open standards VS commercial), Health data security and privacy National eHealth strategies, Governance Enterprise Architecture, Standards & Interoperability Program management, People (Workforce)	**Regional integration** "…jointly address wicked problems that: No country is in a position to tackle in isolation, No market / EMR vendor has an incentive to tackle, and No vendor consortium-developed technology standard is equipped to handle"
UK-Taiwan MOU	Bilateral	Quote: "U.K. intends to reciprocate **health insurance** with Taiwan". (health data sharing → interoperability & regulation). Also: pandemic preparedness, digital health	information sharing and exchange, visits, joint workshops and meetings.
Taiwan-Czech MOU	Bilateral	"MOU on partnership regarding increasing the capacities to assist Ukraine in the reconstruction of **primary health care**,"	'rebuild healthcare capabilities in war-torn Ukraine"
Canada-Taiwan MOU	Bilateral	digital health, international health security, Taiwan's health insurance system, electronic medical records& database establishment	"institutionalized cooperation between Taiwan and Canada in the field of public health…." ; "prioritizing public health issues as an area for bilateral cooperation."

- *22 sources (75% press releases)- Challenges finding meeting outcome reports.*
- *We welcome contributors able to provide **primary data** this analysis*
- *Looking forward to the outcomes of the **APEC DH Policy Dialogue 2024!***

Taiwan's DHD: Preliminary insights

- Taiwan plays an **outsized leadership and agenda-setting role for DHD**
  - Advanced **technical expertise** in digital health (e.g. 'Niche Diplomacy').
  - Health applications in **conflict settings** (e.g. 'Disaster diplomacy')

- Most global meetings in our analysis lacked evidence of **direct collaboration** between digital health stakeholders and their diplomatic counterparts…

- Taiwan's 'co-location' in Taipei of
  - the APAMI 2022 meeting,
  - the APEC Digital Health Policy Dialogue 2022 &
  - he AeHIN 2022 general meeting

Digital Health Stakeholders	Co-location ↓ Communication ↓ Co-operation	Diplomatic stakeholders

- demonstrates a strategy to effectively facilitate DHD for the co-creation of
  - international digital health policy & strategy, and
  - cooperative technical outputs (e.g. AeHIN's Community of Interoperability Labs).

DHD: Digital Health Maturity MetaModel (DHM3)

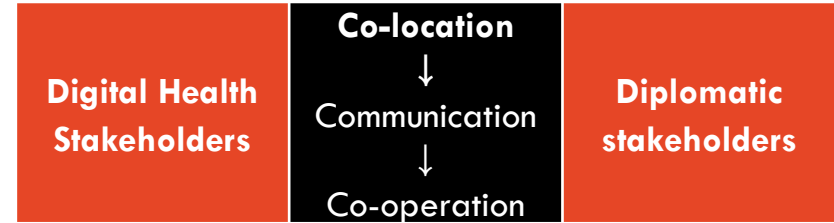|		Emerging & Getting Control (Stages 1 & 2)	Harmonised Interoperability (Stage 3)	Optimising & Innovating (Stages 4 & 5)
		Knowledge Sharing & Transfer	**Agreed 'Global Standard' (Equity-focused)**	**Co-creating novel Digital Public Goods**
DHMM foundations	**Foundation 1. ICT/IoT infrastructure**	**Knowledge Sharing & Transfer** for standards-based infrastructure for **national** DH systems	Countries collaborating **regionally** for GDH infrastructure.	Countries innovating novel ICT/IoT infrastructure for GDH, **globally**.
	Foundation 2. Digital tools	**Knowledge Sharing & Transfer** to adopt and implement standards-based digital health tools	Countries collaborating **regionally** on cross-border DH tools in care delivery	Countries optimising and innovating **global** use of DH tools.
	Foundation 3. Information exchange	**Knowledge Sharing & Transfer** for **national interoperability** standards	Countries collaborating on **cross-border regional interoperability** standards.	Countries **innovating global interoperability** of health data.
	Foundation 4. Enablers of adoption & trust	**Knowledge Sharing & Transfer** for national DH governance, leadership & workforce.	Establishing frameworks for **fair and reciprocal cross-border regional DH.**	**Global** DH strategy for innovation, governance, leadership & workforce.
	Foundation 5. QIMME	**Descriptive assessment** of domain-specific protocols and structures in each country	Monitoring, evaluation & governance of **routine activities in regional DH**	Monitoring, evaluation & **responsive governance** of **innovation in** global DH.
		Note: Abbreviated for brevity. See book chapter for details		

Godinho MA, Liaw ST. 'Digital Health Diplomacy, cooperation and harmonization in global health informatics for Global Digital Health Maturity' in 'Digital Health Maturity, Quality, Interoperability, and Innovation'. 2024 [In-Press]

Diplomacy *for* Digital Health: *Socio*-technical Interoperability

	← Sociotechnical interoperability continuum →			
	Technical	**Syntactic & Semantic**	**Organisational & Operational**	**Regulatory & Legislative**
Global Health Informatics	*Data Exchange Platform* (e.g. Global Electronic Health Record Systems)	*Languages & Coding systems* (e.g., ICD-11, HL7 FHIR)	*Services* (e.g., Cross-border telehealth & virtual care)	Policy & Legislation (e.g., *European Health Data Space*)
Digital Health Diplomacy	*Mutual Trust/Social Capital* (i.e., Shared Norms and Values)	*Shared Vocabulary* (i.e., Terminology & Concepts)	*Common Aims* (i.e., Strategic Objectives & approaches	*Formal Agreements* (i.e., Treaties/ Memoranda of Understanding)
Legend: G-EHR: Global Electronic Health Record; ICD-11: international code of diseases version 11; HL7 FHIR: Health Level 7 Fast Healthcare Interoperability Resources;				

Digital Health <u>for</u> Diplomacy: **International Relations**

- **Co-Location!**

Digital Health Stakeholders	Co-location ↓ Communication ↓ Co-operation	Diplomatic stakeholders

- **Trends towards Regionalism**
  - Deglobalisation & Regionalisation → **"Networked multi-lateralism"**

- DHD requires significant technical knowledge:
  - Health Attaches… → **Digital Health Attachés?**

- Not just 'soft' power…
  → **'Smart Power'** (both soft & hard power, strategically-applied).

Digital Health in Diplomacy: **E.g. Cybersecurity**

- **Digital health** informing the design & conduct of **Foreign Policy.**

- Seen in **Taiwan's HIMSS partnership: '<mark>Cybersecurity</mark> resilience'**
  - Australia: Medibank (insurance), MediSecure (ePrescript.), Medlab (pathology)
  - global movement of patients using IoT health devices (e.g., pacemakers);
  - global market: threats are device/company specific (less national).

- Opportunities: countries & organizations could share threat alerts.

- **Geopolitics** in a multipolar world:
  - Security alliances can learn from each other.
  - DHD has a role in guardrails for 'Managed strategic competition' in an increasingly volatile geopolitical landscape.

An Invitation to Collaborate!

We are drafting publications on
DHD in <u>Taiwan</u> & **<u>ASEAN</u>** and …

We invite collaborators from all fields to join our diverse DHD working group from <u>every global region</u>!

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