



DATA TRANSACTION VIA A TRUSTED THIRD PARTY (TTP)

Eugene Sng

Policy Analyst, Health Services Research (HSR)
Singapore Health Services (SingHealth)

Henry Kang

Assistant Head, Data Privacy Framework Office (DPFO)
Agency for Science, Technology and Research (A*STAR)



The work of HSR is supported through funding from the SingHealth Foundation.

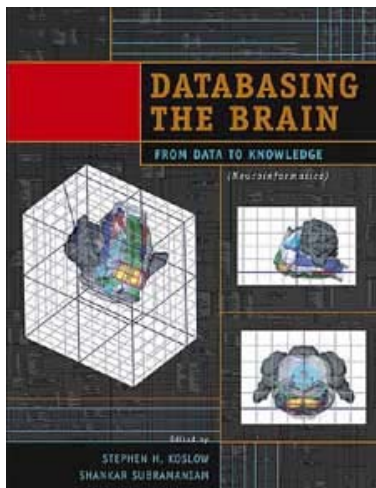


PREAMBLE



“ I believe that there is a great reluctance to share data because of the current lack of rewards for doing so and the concern that it would alter the scientific challenge...

To effectively share data, it will be necessary to create sharing rules and guidelines.”



From ‘Sharing Primary Data: A Threat or Asset to Discovery?’

- Steven Koslow,

Nature Reviews Neuroscience,
2002 April, 3(4): 311-313

PREAMBLE



This aim of this paper is to highlight a **working model** for data privacy and transaction via the mode of an institutional **Trusted Third Party (TTP)**.



SITUATION



- At present, there is **lack of optimal integration** in research and clinical databases across various public biomedical research and healthcare institutions in Singapore.
- For translational and clinical research to bear fruits, database management should overcome institutional silos and **establish a protocol for sharing**.
- Researchers, healthcare providers and administrators must be made aware that there are immense intellectual rewards for sharing data.

POTENTIAL SOLUTION

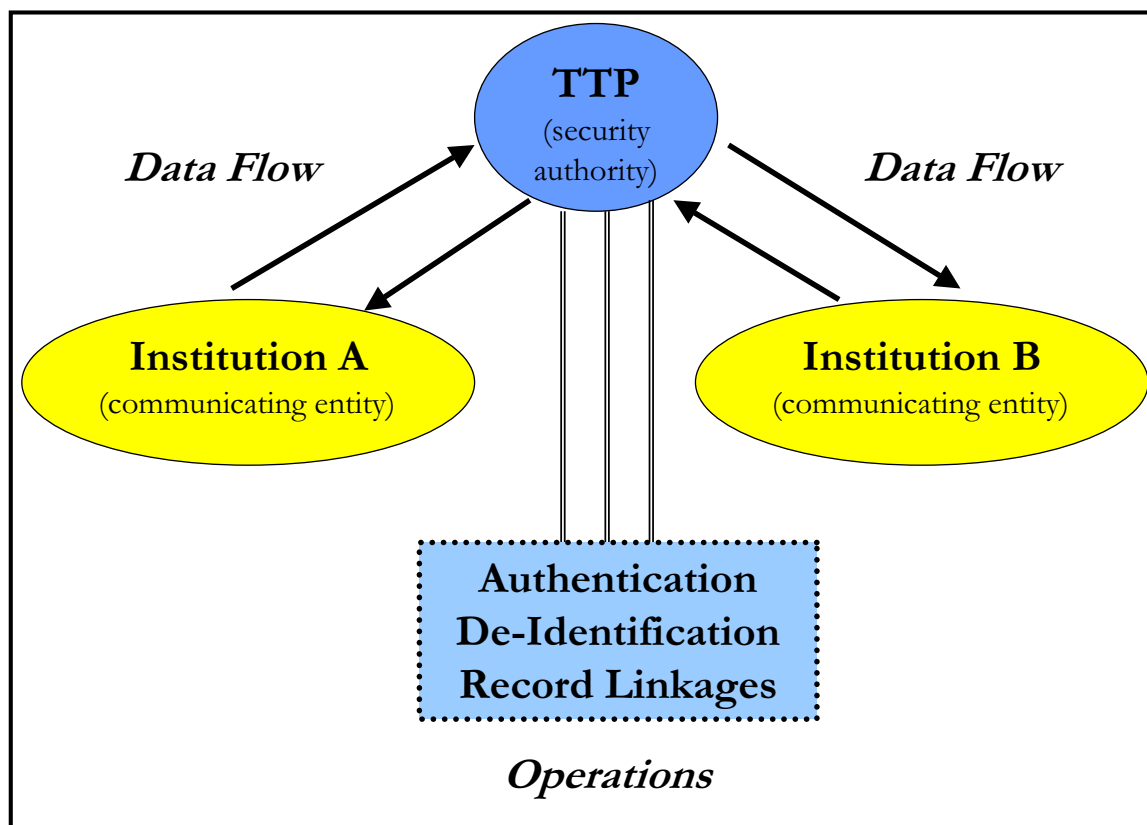


- In response to the current situation in data sharing, the Data Privacy Framework Office (DPFO) was set up in 2006 by A*STAR and reports to an oversight committee at the Ministry of Health.
- Currently, DPFO functions as an **institutional TTP** for the Singapore Consortium of Cohort Studies (SCCS) and the Singapore Tissue Network (STN).
- In the parlance of information technology, TTP is defined as a **security authority** that is trusted by **communicating entities** for the purpose of authentication.

POTENTIAL SOLUTION



- **DPFO:**
 - Provides **authentication** of database information by SCCS and STN;
 - Carries out **de-identification** of personal information to safeguard the privacy of patients/research subjects;
 - Facilitates **record linkages** between the two institutions for potential collaborative research.
- The structural and operational set-up of DPFO is first of its kind in the context of database management for translational and clinical research in Singapore.



CONSIDERATIONS

- Given the nascent emergence of DPFO, the **scientific synergies** of database integration, protection and transaction have yet to be actualized.
- There are strong grounds for justifying the establishment of an institutional TTP in Singapore operating within a **robust ethical and legal framework** for biomedical research and healthcare.
- Further developments in data transaction should explore **potential interface** with the **Electronic Medical Records Exchange (EMRX)**, ideally crossing the public-private divide.

CONCLUSION



The road ahead for database integration would be fraught with technical and logistical challenges, amidst others.

The vision should remain clear for researchers, clinicians, administrators and policymakers: scientific information - when appropriately integrated, managed and applied - would generate knowledge and yield insights to the benefit of a larger community.



THANK YOU