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POSITION: Manager of THIS, Senior research manager (Health Informatics)

　　　　　AeHIN Inc. Chairperson

EDUCATION

University of Minnesota, Twin Cities, MN

　　Ph.D.　　　　　　　　　　　　　　　　　　　　　　　　2008

　　　　Major : Health Informatics

　　　　Minor : Health Policy and Management

　　　　Research: Thailand Health Centers' Information Technology(IT)

　　　　　　　Knowledge, Use and Acceptance

M.S. Health Informatics   2004

      Research: Development of an instrument to measure Health

            Center (HC) Officers' computer use, knowledge and

            Functionality demand for HC computer system in

            Thailand

Thai Medical Council, Bangkok, Thailand

    Diploma of Clinical Preventive Medicine   1991

    Diploma of Internal Medicine   1989

        Residency training at Department of Medicine, Chulalongkorn

        Hospital, Chulangkorn University, Bangkok, Thailand

Sukhothai-Thammathirat Open University, Nonthaburi, Thailand

    B.Sc. Public Health Administration, First Class Honors   1985

Chulalongkorn University, Bangkok, Thailand

    M.D.   1983

    B.Sc. Medical science, Second Class Honors   1981

GRANTS, AWARDS AND HONORS

Marketplace Poster Awards at Prince Mahidol Award Conference 2010 : Global   January

Health Information Forum, Bangkok, Thailand   2010

    Poster presentation: eHealth in Thailand

World Health Organization Thailand Research Project Grant   2009

    Research: eHealth in Thailand, WHO Global Observation for eHealth survey

        administration in Thailand

Royal Thai Government Scholarship: 2001-2007

    Full tuition and benefits to pursue M.S. and PhD in Health Informatics

World Health Organization Thailand Research Project Grant ($13,400):   2005-2006

    Research: IT Knowledge, Acceptance and Use in Community Health

        Centers in Thailand (Principal Investigator)

IPHIE Fellowship:

    One of twenty health informatics students from U.S.A. and Europe   July 2003

    selected by the International Partnerships in Health Informatics

    Education (IPHIE) to attend the fifth IPHIE Master Class, at Salt Lake

    City, Utah. The international partnership consists of the Universities of

    Amsterdam(Netherlands), University of Heidelberg and Heilbronn

    (Germany), University of Minnesota (U.S.A.), University of Utah

    (U.S.A.) and UMIT(University for Health Informatics and Technology

    Tyrol, Innsbruck, Austria)

JICA Fellowship   January-

    One of four physicians in Asian countries selected by Japan International   April 1989

    Cooperation agency(JICA) to attend the training course of tropical infectious

    disease and control at Tokyo and Nagasaki, Japan

RESEARCH EXPERIENCE

Health Systems Research Institute   2016

    Principal Investigator

- Research: Thailand eHealth experiences on standards and interoperability
  development

- Funded by WHO SEARO

- Research goal: To study the current situation and development
  experience of eHealth standards and interoperability in Thailand and
  share the lesson learn with countries in WHO SEARO and WPRO

Health Systems Research Institute   2013-2014

    Principal Investigator

- Research and Development: National drug terminology and coding system: Thai Medicines Terminology (TMT)
- Funded by the Comptroller General's Department, Ministry of Finance
- Research and development goal: To study the ecosystem of drug terminology and coding practices in Thailand healthcare systems and develop national drug terminology and coding standard

Health Systems Research Institute   2011-12

   Principal Investigator

- Research: Evaluation of Civil Registration and Vital Statistics System in Thailand
- Funded by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)
- Research goal: To evaluate the current CRVS system and suggest future development of the system

Ministry of Public Health, Thailand   2009

   Principal Investigator

- Research: eHealth in Thailand
- Funded by WHO Thailand 2009
- Research goal: To study current situation of eHealth in Thailand

University of Minnesota, Twin Cities, MN   2006-2008

   Research Assistant

- Research: A Community-shared Clinical Abstract to Improve Care
- Principal Investigator: Donald P. Connelly M.D., Ph.D., FACMI.
- Funded by Agency for Healthcare Research and Quality (AHRQ) 2005-2008 (Est. total funding: $1,482,674)
- Research goals: Establish an electronic medical record system to enhance communication among area health care organizations and promote safe, high-quality care for patients with chronic illnesses

   Principal Investigator   2005-2006

- Research: IT Knowledge, Acceptance and Use in Community Health Centers in Thailand

- Funded by WHO Thailand 2005 (funding : $13,400)

- Designed and executed national survey to describe current Health IT adoption in health centers in Thailand. (1,607 health centers out of total 9,806 health centers)

RESEARCH INTERESTS

- Health data standards and Interoperability

- Health information exchange (HIE)

- eHealth in developing country especially Thailand

- Electronic Health Record (EHR), Electronic Medical Record (EMR), Personal Health Record (PHR)

- Socio-technical aspect of Health IT

- Health/biomedical informatics education in Thailand

TEACHING EXPERIENCE

- Thammasat University: Lecturer — 2018-present

- Kasetsart University: Lecturer — 2014-present

- Sana at The Massachusetts Institute of Technology (MIT), MA, USA : Lecturer — 2014

- College of Public Health Administrator, Ministry of Public Health: Lecturer — 2012 - present

- Silapakorn University: Lecturer — 2012 - present

- Chulalongkorn University : Lecturer — 2011- present

- Mahidol University: Lecturer , Health Informatics graduate program committee — 2011- present

- Naresuan University : Lecturer — 2010 - present

- Asian Institute of Technology (AIT) : Instructor   2009-2010
- University of Minnesota, Twin Cities, MN, USA : Guest Lecturer   2005-2006

PROFESSIONAL EXPERIENCE

Thai Health Information Standards Development Center (THIS), Health Systems Research Institute (HSRI)   2011- present

- Health Informatician, Research manager

Bureau of Policy and Strategy, Ministry of Public Health, Bangkok, Thailand   2008-2010

- Health Informatician

Srisangworn-Sukhothai Hospital, Sukhothai, Thailand

Deputy Director   2000-2001

Health Informatics:

- Established Sukhothai Provincial Health Computerized Data Network, which covered nine government hospitals.
- Conducted a study to assess the acceptability of telesonographic consultation in the Ministry of Public Health telemedicine network between radiologists as providers and general practitioners as consulting physicians and to determine the optimal bandwidth for telesonography consultations.

Administrative:

- Administered and managed the hospital information system unit, The Telemedicine and Computer Office.
- Administered all hospital clinical and technical units.
- Organized and managed the hospital quality improvement service unit and achieved Thailand International P.S.O. (Public Sector Standard

Management System and Outcomes) certificate from P.S.O.certification commission under the Office of the Prime Minister.

Chief of Telemedicine and Computer Office   1998-2001

Health Informatics:

- Set up the hospital telemedicine and computer office.

- Expanded the hospital local area network (LAN) and implemented computerized outpatient services information system.

- Developed telesonographic consultation services in The Ministry of Public Health of Thailand Telemedicine Network, which has 20 hospital-based stations nationwide.

Chief of Quality Service Improvement and Academic Section   1992-2001

Health Informatics:

- Designed the hospital information system network.

- Implemented a computerized medical record for outpatient department services.

- Improved the hospital administrative data repository system.

- Prepared annual hospital budgetary information.

Attending Physician, Internal Medicine   1989-2001

Clinical: Provided out-patient, in-patient and emergency services.

King Chulalongkorn Hospital, Department of Medicine, Chulalongkorn University, Bangkok, Thailand

Internal Medicine Resident   1987-1989

Clinical: Provided out-patient, in-patient and emergency services

Sawankholok and Sukhothai Hospital, Sukhothai, Thailand.

General Practitioner   1985-1986

Clinical: Provided out-patient, in-patient and emergency services

PUBLICATIONS

1. Aljibe M, Bettin J, **Kijsanayotin B**, Lee HA, Ng C, Sorsavanh T, Weerabaddana C, Marcelo A. Community of Interoperability Labs: Pragmatic Approach to Achieving Interoperability. Stud Health Technol Inform. 2024 Jan 25;310:38-42.

2. Marcelo, A.B., Pascual, K.C., Udayasankaran, J.G., Allaudin, F.S., **Kijsanayotin, B**. A framework for regional health information systems interoperability: The Asia eHealth Information Network (AeHIN) experience. Roadmap to Successful Digital Health Ecosystems: A Global Perspective, 2022, pp. 399–414

3. Lee HA, Wu WC, Kung HH, Udayasankaran JG, Wei YC, **Kijsanayotin B**, Marcelo AB, Hsu CY. Design of a Vaccine Passport Validation System Using Blockchain-based Architecture: Development Study. JMIR Public Health Surveill. 2022 Apr 6;8(4):e32411

4. Thit WM, Myint Thu SWY, Kaewkungwal J, Soonthornworasiri N, Theera-Ampornpunt N, **Kijsanayotin B**, Lawpoolsri S, Naing S, Pan-Ngum W. User Acceptance of Electronic Medical Record System: Implementation at Marie Stopes International, Myanmar. Healthc Inform Res. 2020 Jul;26(3):185-192.

5. Lee HA, Kung HH, Lee YJ, Chao JC, Udayasankaran JG, Fan HC, Ng KK, Chang YK, **Kijsanayotin B**, Marcelo AB, Hsu CY. Global Infectious Disease Surveillance and Case Tracking System for COVID-19: Development Study. JMIR Med Inform. 2020 Dec 22;8(12):e20567.

6. Lee HA, Kung HH, Udayasankaran JG, **Kijsanayotin B**, B Marcelo A, Chao LR, Hsu CY. An Architecture and Management Platform for Blockchain-Based Personal Health Record Exchange: Development and Usability Study. J Med Internet Res. 2020 Jun 9;22(6):e16748.

7. Mills S, Lee JK, Rassekh BM, Zorko Kodelja M, Bae G, Kang M, Pannarunothai S, **Kijsanayotin B**. Unique health identifiers for universal health coverage. J Health Popul Nutr. 2019 Oct 18;38(Suppl 1):22.

8. Beck EJ, Shields JM, Tanna G, Henning G, de Vega I, Andrews G, Boucher P, Benting L, Garcia-Calleja JM, Cutler J, Ewing W, **Kijsanayotin B**, Kujinga T, Mahy M, Makofane K, Marsh K, Nacheeva C, Rangana N, Vega MFR, Sabin K, Varetska O, Macharia Wanyee S, Watiti S, Williams B, Zhao J, Nunez C, Ghys P, Low-Beer D. Developing and

implementing national health identifiers in resource limited countries: why, what, who, when and how? Glob Health Action. 2018;11(1):1440782.

9. Ma S, Lawpoolsri S, Soonthornworasiri N, Khamsiriwatchara A, Jandee K, Taweeseneepitch K, Pawarana R, Jaiklaew S, **Kijsanayotin B**, Kaewkungwal J. Effectiveness of Implementation of Electronic Malaria Information System as the National Malaria Surveillance System in Thailand. JMIR Public Health Surveill. 2016 May 6;2(1):e20.

10. Thu SWYM, **Kijsanayotin B**, Kaewkungwal J, Soonthornworasiri N, Pan-Ngum W. Satisfaction with Paper-Based Dental Records and Perception of Electronic Dental Records among Dental Professionals in Myanmar. Healthc Inform Res. 2017 Oct;23(4):304-313.

11. **Kijsanayotin B**. Impact of Thailand Universal Coverage Scheme on the Country's Health Information Systems and Health Information Technology. Stud Health Technol Inform. 2013;192: 989.

12. Wongsapai M, Suebnukarn S, Rajchagool S, **Kijsanayotin B**. Health-oriented Electronic Oral Health Record for Health Surveillance. Stud Health Technol Inform. 2013;192:763–7.

13. **Kijsanayotin B.** Health Information Systems(HIS) and Health Information Technology Impact on Thailand Universal Coverage Scheme(UCS) Implementation. In: Proceeding APAMI 2012 Conference. Beijing, China: 2012

14. Porapakkham P, Porapakkham P, Assavahanrit J, **Kijsanayotin B**, Shing KW. Impact of right ventricular pacing on right ventricular function. J Med Assoc Thail Chotmaihet Thangphaet. 2012 Aug;95 Suppl 8:S44–50

15. Kawtrakul A, **Kijsanayotin B**, Mulasastra I. The Strategic Implementation of Data Interoperability for Better Health Care Services in Thailand. Eur. Conf. E-Gov., 2012, p. 369–77.

16. **Kijsanayotin B**, Kasitipradith N, Pannarunothai S. *eHealth in Thailand: The current status*. Stud Health Technol Inform. 2010;160:376-380.

17. **Kijsanayotin B**, Pannarunothai S, Speedie SM. *Factors influencing health information technology adoption in Thailand's community health centers: Applying the UTAUT model.* International Journal of Medical Informatics 2009;78(6):404-16.

18. Theera-Ampornpunt N, Speedie SM, Du J, Park Y-T, **Kijsanayotin B**, Connelly DP. Impact of prior clinical information in an EHR on care outcomes of emergency patients. AMIA Annu Symp Proc Amia Symp Amia Symp [Internet]. 2009 [cited 2010 Oct 2];2009:634–8. Available from: http://www.ncbi.nlm.nih.gov.floyd.lib.umn.edu/pubmed/20351932

19. **Kijsanayotin B** et. al: *Improving Access to Clinical Information in an Emergency Department: a Qualitative Study*, AMIA Annu Symp Proc, 2008

20. Theera-Ampornpunt N, **Kijsanayotin B**, Stuart M. Speedie: *Creating a Large Database Test Bed with Typographical Errors for Record Linkage Evaluation*, AMIA Annu Symp Proc, 2008

21. **Kijsanayotin B**, Speedie S and Connelly D: *Linking patients' records across organizations while maintaining anonymity*, AMIA Annu Symp Proc, 2007, p 1008

22. Connelly D, **Kijsanayotin B** and Speedie S: *Synthesis of a database test bed for evaluating record linkage algorithms*, AMIA Annu Symp Proc, 2007, p 917

23. **Kijsanayotin B**, Pannarunothai S, and Speedie S: *Penetration and adoption of health information technology (IT) in Thailand's community health centers (CHCs): a national survey.* Studies in Health Technology and Informatics, 2007. 129(2): p. 1154.

24. **Kijsanayotin B** and Speedie S: *Are health centers in Thailand ready for health information technology?: a national survey,* AMIA Annu Symp Proc, 2006, p 424-8.

25. **Kijsanayotin B**, Pannarunothai S, Speedie S. *Development of an instrument to measure health center (HC) personnel's computer use, knowledge and functionality demand for HC computerized information system in Thailand.* AMIA Annual Symposium Proceeding. 2005:1007.

National

26. **Kijsanayotin B.** *Physician and Health Information Technology.* In: Sridama V, editor. Integrated Knowledge for Physician. Bangkok: The Royal College of Physician of Thailand; 2009. p. 131-47. (Thai Language)

27. **Kijsanayotin B**, *Demystify 12 files and 18 files standard data* in TMI 2008 Health Informatics for Better Healthcare: the 17th Annual Conference of Thai Medical Informatics Association; 23-25 December 2008; Bangkok, Thailand: The Thai Medical Informatics Association.(Thai Language)

28. **Kijsanayotin B**, Saungyanon K, Laoboonstien K *Telesonography in Thailand Srisangworn-Sukhothai Hospital's experience*, Internal Medicine Journal of Thailand 2001; 17:297-30.

29. **Kijsanayotin B** *Toad Egg Poisoning - Report of two cases.* Bulletin of Department of Medical Services 1994; 19:360-366. (Thai Language)

30. Thiam-sa-ard P, **Kijsanayotin B** *Cutaneous Leishmaniasis- Treatment with ketoconazone: A Case Report*, Bulletin of Department of Medical Services 1992;17:158-165. (Thai Language)

Book & Book Chapters

1. **Kijsanayotin B**, Thit WM. Health Information Standards and Interoperability. Global Health Informatics: Principles of eHealth and mHealth to Improve Quality of Care. 2017 Apr 14:149

2. **Kijsanayotin B,** *eHealth in Thailand: interoperability and health information standards*. Nonthaburi, Thailand: Thai Health Information Standards Development Center, Health System Research Institution; 2016.

3. Kijsanayotin B, Ingun P, Sumputtanon K, *Thai Health Information Standards Development Center. Review of national civil registration and vital statistics systems: a case study of Thailand.* Nonthaburi, Thailand: Thai Health Information Standards Development Center; 2013.

RELATED EXPERIENCE

- Member of Regional Steering Group for Civil Registration and Vital Statistics in Asia and the Pacific, UNESCAP   2015 - present

- Member of health information standards sub-committee of the National Legislation Assembly, Thailand   2014 - present

- Member of health administration system reform sub-committee of the National Reform Council, Thailand — 2014 - present

- Member of health financing system reform sub-committee of the National Reform Council, Thailand — 2014 - present

- Member of national health information systems sub-committee of the Senate, Thailand — 2014

- Chair of Asian eHealth Information Network (AeHIN) — 2012 - Present

- Curricular committee members, co-advisor and lecturer of the Biomedical and Health Informatics graduate programs Faculty of Tropical Medicine Mahidol University — 2012 - present

- Co-advisor of PhD. students: Faculty of Dentistry, Thamasat University — 2012-2013

- Organizing committee member of the Healthcare Information and Management Systems Society (HIMSS) Asia Pacific 10th Health IT Congress, Daegu, South Korea 26-28 October 2010 — 2010

- PhD thesis examiner: School of Information Systems and Technology, University of Wollongong, Australia — 2010

- PhD thesis examiner: the Health policy PhD program , Faculty of Medicine, Naresuan University, Thailand — 2010

- Reviewer of submissions to the Asia Pacific Journal of Health Management — 2010

- Consultant to United Nation Department of Economics and Social Affair (UNDESA) on the ICT Applications for Education and Health at the Roundtable on "Governance and Applications of ICT for Achieving the MDGs" in Bangkok, Thailand; 9-10 December 2009 — November-December 2009

- Reviewer of scientific submissions to Asia Pacific Association for Medical Informatics Annual Conference 2009 : APAMI 2009 — 2009

- Reviewer of scientific submissions to American Medical Informatics Association Annual Symposium 2008 AMIA 2008 — 2009

- Reviewer of scientific submissions to 21st International Congress of the European Federation for Medical Informatics MIE 2008   2008-2009

- Reviewer of scientific submissions to American Medical Informatics Association Annual Symposium 2007 AMIA 2007   2007

- Advisory Board of Thai Student Association at the University of Minnesota   2001-2007

- Assistant of Thai Delegate at SEAMIC/IMFJ (Southeast Asia Medical Information Center/International Medical Foundation of Japan) Conference FY 2000, Singapore.   January 2001

- Thai Delegate in visiting study "Queensland Telemedicine Network", Queensland, Australia under collaboration between MOPH of Thailand and Australian's Ministry Of Health.   August 1999

PROFESSIONAL MEMBERSHIPS

- Asia eHealth Information Network (AeHIN) : Chair

- Thai Medical Informatics Association (TMI) : Vice president of the association

- International representative of TMI for International Medical Informatics Association (IMIA)

- American Medical Informatics Association (AMIA)

- Thai Medical Council

- Royal College of Physicians of Thailand

REFERENCE

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