การทบทวนเพื่อหาช่องว่างความรู้ในการจัดการด้านสุขภาพสำหรับแรงงานต่างด้าวที่อาศัยในประเทศไทย

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บทคัดย่อ

สุขภาพของคนต่างด้าวเป็นที่กำลังได้รับความสนใจจากทั่วโลก ในประเทศไทยนโยบายประกันสุขภาพสำหรับคนต่างด้าวได้ดำเนินการ

มาตั้งแต่ พ.ศ. 2547 อย่างไรก็ตามยังมีประเด็นท้าทายในการนำนโยบายไปปฏิบัติอยู่มาก การศึกษานี้มีวัตถุประสงค์ที่จะทบทวนหาช่องว่างความรู้ของการบริหารจัดการนโยบายสุขภาพสำหรับคนต่างด้าวในประเทศไทย

การศึกษานี้ใช้วิธีการทบทวนวรรณกรรมอย่างจำกัด (scoping review)จากฐานข้อมูล PubMed และผลการศึกษาทั้งที่ไม่ได้ตีพิมพ์ในวารสารวิชาการ (grey literature) แล้วสังเคราะห์ผลการศึกษาภายใต้

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กรอบแนวคิดองค์ประกอบระบบสุขภาพ (health system building blocks) ผลการศึกษาพบว่า มี 19 บทความเรื่องที่ผ่านเกณฑ์คัดเลือกและถูกนำมาทบทวนในขั้นสุดท้าย บทความส่วนใหญ่เน้นเรื่องการให้บริการทางการแพทย์ ขณะที่มีบทความจำนวนไม่มากที่ระบุถึงการอภิบาลระบบและการจัดการข้อมูลสุขภาพ ในเรื่องการบริหารจัดการบุคลากรสุขภาพ การจ้างบุคคลต่างด้าวให้ทำงานในสถานพยาบาลเป็นวิธีการที่มีประสิทธิภาพในแก้ปัญหาเรื่องการสื่อสารระหว่างผู้ป่วยต่างด้าวและผู้ให้บริการด้านสุขภาพไทย การมีบัตรประกันสุขภาพไม่ได้เป็นการรับรองว่าคนต่างด้าวจะมาใช้บริการมากขึ้น เนื่องจากอุปสรรคในการเข้าถึงบริการยังคงอยู่ เช่น ความแตกต่างทางภาษาและวัฒนธรรม นอกจากนั้นกระทรวงสาธารณสุขยังมีขีดความสามารถที่จำกัดในการกำกับติดตามและประเมินผลการสุขภาพแก่คนต่างด้าว รวมถึงขาดการบูรณาการเรื่องข้อมูลระหว่างกระทรวงสาธารณสุขกับกระทรวงอื่นๆ

การทบทวนวรรณกรรมพบว่าปรากฏมีช่องว่างความรู้ในทุกองค์ประกอบระบบสุขภาพสำหรับคนต่างด้าว ในแง่การอภิบาลระบบ คำถามสำหรับการวิจัยที่สำคัญกฎหมายและมาตรการที่มีอยู่ใช้สนับสนุนให้เกิดการดูแลสุขภาพที่เป็นธรรมแก่คนต่างด้าวหรือไม่ มากน้อยเพียงใด ในแง่การจัดการบุคลากรสุขภาพ ควรมีการศึกษาเพิ่มเติมว่า พนักงานสาธารณสุขต่างด้าวมีขีดความสามารถเพียงพอต่อการให้บริการสุขภาพที่จำเป็นหรือไม่ และระบบระยะยาวที่ที่จะเสริมสร้างขีดความสามารถให้กับพนักงานสาธารณสุขต่างด้าวจะพัฒนาขึ้นได้อย่างไร การทบทวนวรรณกรรมชิ้นนี้จึงน่าจะใช้เป็นรากฐานของการกำหนดคำถามวิจัยเพื่อการพัฒนาระบบบริการสุขภาพสำหรับคนต่างด้าวในประเทศไทยต่อไป

คำสำคัญ: แรงงานต่างด้าว, ระบบสุขภาพ, ประเทศไทย, การทบทวนวรรณกรรม, ช่องว่างความรู้

Literature review for identifying knowledge gaps in the health system management policies for cross-border migrants in Thailand

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Abstract

Migrants' health is becoming a thriving concern all over the world. In Thailand, the health insurance policy for migrants was established in 2004; however, there are still challenges in implementation. This study aims to identifying knowledge gaps in the arrangement of healthcare policies on migrants in Thailand.

A scoping review method was exercised. Potential articles were searched from PubMed and grey literatures, then synthesised with health system building blocks. Nineteen eligible articles were

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included for final review. Most articles focused on service provision. Few articles focused on governance and healthcare information system. In terms of health personnel management, hiring migrant health workers was effective method to address communication difficulties between migrant patients and Thai healthcare providers. Possessing health insurance card did not guarantee increasing service utilisation of migrants due to several barriers such as language and cultural differences. Besides, the Ministry of Public Health has limited institutional capacity for monitoring and evaluation of the performance of health facilities, and lack of effective data integration between ministries was noted.

There were knowledge gaps in all migrant health system components. For governance issue, there were important research questions regarding legal instruments, whether and to what extent existing legal instruments support equitable provision of health care for migrants. For human resources management, it is worth questioning that whether migrant health workers have adequate capacities in providing essential services, and how a long-term mechanism that supports capacity building of migrants is to be developed. Thus, this literature review was serving as a foundation of future research in migrant health system development in Thailand.

Keywords: migrant, health system, Thailand, literature review, knowledge gap

Introduction

Health problems of migrants are important issues that have obtained much attention from policy makers in many countries. The current economic and technological advancement has facilitated the transportation of people all over the globe. In 2000, the International Organization for Migration (IOM) reported that international migrants constituted about three percent of the world population (International Organization for Migration,2015).The destinations of immigration are not only developed countries but the developing nations also serving as receiving sites as well. The volume of international migrants immigrating to developing countries has been rapidly increasing (United Nations Secretary General,2006)(United Nations Secretary General 2006). With increasing number of people on the move, migrant health has become a key public-health issue and has raised awareness of many international development agencies, such as the World Health Organization (WHO) (World Health Organization: 60st Assembly,2007), and the United Nations General Assembly (UNGA). In 2007 and 2008, the WHO endorsed the key World Health Assembly Resolutions (WHR), namely WHR60.27 and WHR61.17, which emphasised the reorientation of healthcare policies on migrants (World Health Organization: 61st Assembly,2008), and required member states to engage in the creation of migrant-sensitive healthcare policies.

In Thailand, migrant health issues are now on the spotlight as well due to the increasing number of registered cross-border

migrant workers under the Ministry of Labour (MoL) from 826,329 in 2003 to 1,133,851 (Office of Foreign Workers Administration.Statistics of migrants with work permit in Thailand,2014).(Office of Foreign Workers Administration 2012)In addition, migrant workers have played an important role in driving economic growth of the country. The International Labour Organization (ILO) indicated that, in 2007, the proportion of migrant's total revenue was about six percent of the country Gross Domestic Product (GDP) (Martin P.,2007), and Thai workers were less likely to engage in risky jobs, so-called "3Ds" (dirty-dangerous-difficult jobs), than migrant workers (Chantavanich S., 2013).

The Thai government, therefore, had introduced several measures in protecting and promoting health of migrant workers, while taking into account the balance between economic necessity and public health protection. One of the key measures is selling health card to migrant workers, who are not covered by the Social Security Scheme (SSS). This policy has been implemented since 2004, and is managed by the Health Insurance Group of the Ministry of Public Health (MoPH) in cooperation with the Ministry of Interior (MoI) in authorising citizenship status, and the MoL in issuing work permit for migrants. Since August, 13th, 2013, the MoPH has expanded the benefit package of migrant workers to cover antiretroviral drugs (ARVs). In addition, the dependents of migrants (spouse, children, and relatives) were allowed to purchase the health insurance card as well. The premium of migrant health insurance card has increased

from 1,300 Baht to 2,200 Baht per annum, while the cost for a health examination for infectious diseases before being insured was fixed at 600 Baht (Health Insurance Group,2013).(Health Insurance Group 2013).However, the recent policy of the National Council for Peace and Order (NCPO), which formed the new government after the coup d'état in 2014, has reduced the cost of health check to 500 Baht and decreased the card premium to 1,600 Baht, Table 1.

Table 1 Health insurance card provisions and benefits

Card	Time	Length of coverage	Premium	Benefit packages	Beneficiaries
Health Insurance Card (for labour migrants)	April 2004 - August 2013	1 year	1,900 Baht (1,300 Baht for medical services and disease prevention and administration + 600 Baht for a medical examination)	OP, IP, and PP services, excepting some high-cost conditions, eg, ART and RRT	Illegal migrants migrants under the NV in informal sector
Health Insurance Card for Foreigners	August, 2013 onwards	1 year	Subtype (1): 2,800 Baht (1,300 Baht for medical care and disease prevention and administration + 600 Baht for medical examination + an extra 900 Baht pooled at the Health Insurance Group for high-cost treatment)	OP, IP, and PP services, including ART and RRT for acute renal failure, but excluding some high-cost conditions, eg, RRT for ESRD patients and treatment for mental diseases	Illegal migrants Migrants' followers Migrants under the NV in informal sector

Table 1 Health insurance card provisions and benefits

Card	Time	Length of coverage	Premium	Benefit packages	Beneficiaries
Health Insurance Card for Foreigners		3 months	Subtype (2): 1,150 Baht (550 Baht for medical treatment + 600 Baht for medical screening)	OP, IP, and PP services, including ART and RRT for acute renal failure, but excluding some high-cost conditions, eg, RRT for ESRD patients and treatments for mental diseases	Migrants under the NV but still pending for entitlement to the SSS
		1 year	Subtype (3): 365 Baht (58 Baht for disease prevention + 36.5 Baht for administration + 256.5 Baht for medical treatments + 14 Baht for high-cost care pooled at the Health Insurance Group)	OP, IP, and PP services, including ART and RRT for acute renal failure, but excluding some high-cost conditions, eg, RRT for ESRD patients and treatments for mental diseases	Children aged less than 7 years old

Table 1 Health insurance card provisions and benefits

Card	Time	Length of coverage	Premium	Benefit packages	Beneficiaries
Health Insurance Card	May-2014 onwards	1 year	2,100 Baht (1,600 Baht for medical services and disease prevention and administration + 500 Baht for a medical examination)	OP, IP, and PP services, including ART and RRT for acute renal failure, but excluding some high-cost conditions, eg, RRT for ESRD patients and treatments for mental diseases	Illegal migrants and dependants who have registered with the One Stop Service (OSS)

Source: Health Insurance Group, Ministry of Public Health 2013[8]

Note: ART = anti-retroviral treatment ESRD = end-stage renal disease IP = inpatient
NV = nationality verification OP = outpatient PP = prevention and promotion
RRT = renal replacement therapy

Although the policy in selling health insurance card is quite open, there are still several challenges in its implementation. Therefore, the literature review in identifying knowledge gaps of migrant healthcare system in Thailand is very important in shaping a better understanding on: 1) the state-of-the-arts of the existing system in providing care to migrant populations in Thailand, and 2) existing knowledge that might be useful for the improvement of migrant health care policies, and might be useful for determining future healthcare research. These reasons thus become the objective of this study.

MATERIALS AND METHODS

A scoping review was applied as the main reviewing tool. The review processes in literature search, consistency checking, and information extraction are not much different from the approaches used in systematic review. Relevant literature would be recruited in order to address the research questions. The key benefit of scoping review over systematic review is to obtain a broad array of literature so as to determine the gaps of knowledge. However, the scoping review does not intend to assess quality of the literature and does not aim to aggregate the results of the retrieved articles in order to answer specific research question, like what is commonly used in meta-analysis (Levac, D., H. Colquhoun, et al.,2010). (Levac, Colquhoun et al. 2010)

The literature search was based on two approaches: 1) a systematic search carried out in PubMed, which comprises medical and public health articles in electronic journals, and 2) a purposive search, which is used for the search for grey literature. The key information obtained from literature review would be extracted according to the study framework. Next, articles and reports obtained from the search were analysed and synthesised through a brain-storming session amongst internal reviewers and external reviewers, who are health system experts in migrant healthcare policies.

This recruited articles would be excluded if the one of following criteria are met: 1) being focused on biomedical research, or focusing on drugs and/or medical supplies that not related to the healthcare system, 2) being focused on epidemiological aspects (such as, disease prevalence and incidence studies, or surveys of health risks), and 3) being focused on medical tourists, international health professionals, foreign businessmen/ students and also Thai populations living abroad.

The systematic search was carried out in PubMed for studies published between 1 January 1980 and 31 December 2014, using the search terms, *(("Transients and Migrants"[Mesh]) OR ("Emigrants and Immigrants"[Mesh])) AND (Thailand))*. The search was limited to articles published in English language. There were two stages of searching. First, abstracts were reviewed independently by two reviewers (KK and RS). If the abstracts fitted the study framework, full-text articles would be obtained. Should the two reviewers had

different opinions on particular articles, those articles would be again considered by the discussion between both reviewers until consensus was reached. Second, selected abstracts from the first stage were extracted for key information. Subsequently, such information was mapped against the study framework and presented in the data extraction table. The purposive search and data extraction of grey literature was conducted in the same way as the systematic search. Noted that the grey literature was confined to papers or reports published by the MoPH or allied health institutions, such as the Health System Research Institute (HSRI) and the Health Insurance System Research Office (HISRO).

Framework analysis was applied. The analytical framework devised the Six Building Blocks of A Health Care System established by WHO, see Figure 1 (WHO.,2010).

The review is focused on both existing and innovative health care delivery systems for migrants in Thailand. The relevant issues are:

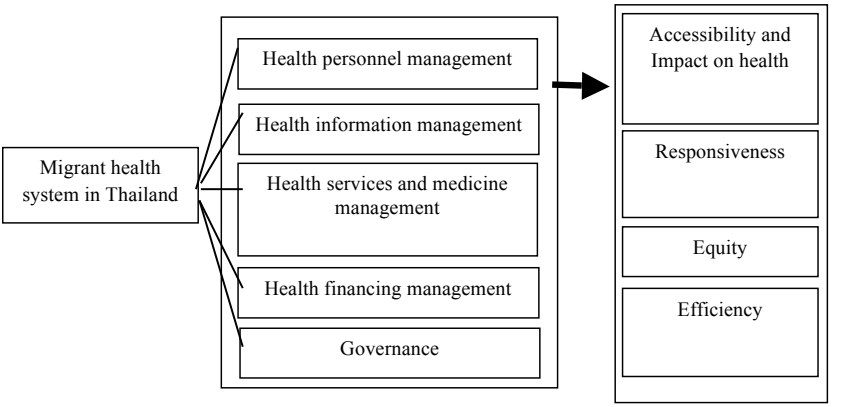

Figure 1 Review framework

1) health personnel management, 2) health information management, 3) health service and medicine management, 4) health financing management, and 5) governance or stewardship and regulation system for monitoring healthcare delivery system, regardless of whether the study is focused on clients or healthcare providers. This study is targeting only on migrants residing in Thailand, who are not covered by the SSS. Accordingly, medical tourists, international students or businessmen, or those entering the country with certain duration and with specific business purposes were excluded. However, migrants in this study are also included stateless persons in Thailand as well.

Result

In a broad picture, a total of 163 PubMed citations were seemed relevant. Since 2008, the volume of articles on health of migrants in Thailand has been rapidly growing, see Figure 2.

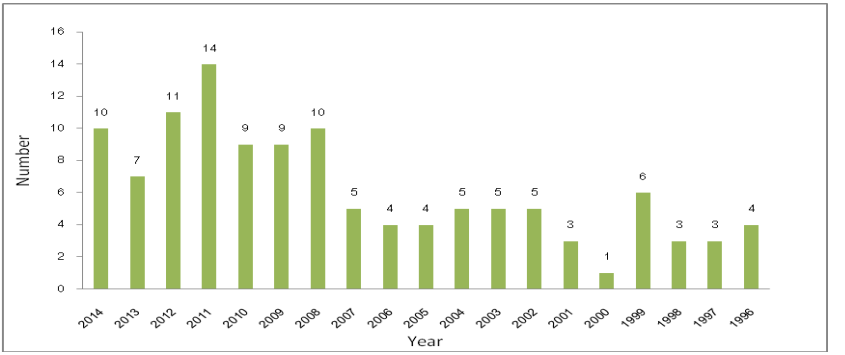

Figure 2 Numbers of articles regarding health of migrants in Thailand in PubMed (1996-2014)

The research team had screened 163 abstracts, and then selected 14 relevant articles. The Kappa coefficient was estimated in order to determine the level of screening-result consistency between two independent screeners, namely inter-rater reliability (KK and RS). It appeared that the coefficient (Kappa statistics) was 0.75, interpreting that the screeners tended to have similar agreement on the screening results. After adding with 11 studies from the hand search, the total number of selected articles for full reading was 25. Of these 25 articles, 5 articles were excluded due to irrelevancy, and one article was unavailable for its full text. In summary, a total of 19 articles were read in full and summarized by researchers including 14 published papers and 10 reports. All nineteen articles assessed various topics of the health system. Most articles (16/19) focused on service provision. The governance and healthcare information got the lowest attention level, at only 4 and 5 out of the 19 articles, respectively. Grey literature mostly focused on general service provisions and health insurance system while those from electronic database emphasised on specific health service, such as maternal and child care (Parr, M., C. P. Dabu, et al.,2014), and HIV/AIDS screening programmes (Crozier, K., P. Chotiga, et al.,2013). The majority of the study population were migrant workers. Only 3 studies explored health system for stateless people (Hu J.,2010) (Paisanpanichkul, D.,2008). Most studies were conducted in specific areas, except for 2 studies executed by the Bureau of i nternational Health, the MoPH, which investigated migrant health

issues at the national level (Bureau of International Health,2013). Thailand-Myanmar border serves as the most common study site (Webber G., Spitzer D.,2012).Noted that there were only two studies collecting data in Bangkok and one study investigating the healthcare situation Thai-Cambodia border (Kantayaporn, T, Sinhkul N.,2013).

The review finding can be summarised according to the WHO's health system building blocks as follows:

Governance: Srithamrongsawat et al (2009) argued that governance under arrangements of the Ministry of Public Health has led to inefficient system management. This is because the MoPH acted as the provider, and at the same time, the purchaser (Srithamrongsawat S.,et al.,2009). Suphanchaimat et al (2013) found that the Health Insurance Group of the MoPH lacks budgets, resources, therefore has difficulties in monitoring and evaluation of its policies (Suphanchaimat, Seneerattanaprayul et al. 2013). Regarding the Immigration and Customs Control checkpoints of (1) diseases, (2) food and medications, (3) custom, and (4) immigration, each checkpoint employed different procedure and also lacked of integration of information, and it was not clear that which department in the MoPH served as the governing body in managing these checkpoints (Bureau of International Health, 2013).

Health care financing: Most selected articles in this area devised methodology in evaluation research. Common findings reported that (1) there was subsidising in the budget across different insurance schemes, and (2) health facilities in urban areas with dense

population of migrants tended to gain much revenue from the card premium, whereas facilities in the rural areas were more likely to gain less benefit from the card since the facilities needed to allocate part of the card revenues to subsidise the uninsured, including border people and stateless population (Srithamrongsawat S.et al.,2009). Nonetheless, the migrant health insurance card significantly reduced out-of-pocket payment of insured migrants (Suphanchaimat, R., et al.,2013). Prasitsiripol et al (2013) evaluated the optimal price of the migrant health insurance card that should be set in order to cover the HIV/AIDS treatment (Prasitsiriphol, O, et al.,2013). However, the study still suffered from the lack of data from some health facilities and findings were based on the assumption, the healthcare system was able to track records of all migrants in Thailand and they were able to require all migrants to buy the insurance card.

Health workforce: A study by the HISRO and some international literature found that migrant health workers and migrant health volunteers had played dominant roles in health promotion and health education for migrant populations (Akiyama, T, et al.,2013) (Health Insurance Systems Research Office,2014). However, the capacity of migrant health workers and migrant health volunteers is limited. Task shifting (relegating some health promoting activities from health professionals to non-health professionals) seemed to be an effective strategy in promoting better health for migrants. Examples of such activities are: providing health promotion services in schools by teachers,

or antenatal care by migrant health personnel supervised by health professionals. Nonetheless, laws and regulations supporting the employment of migrants in healthcare services are unclear. These facilities therefore found a leeway by contracting migrants in activity-based programmes, not as permanent employees (Sirilak S., et al., (2013).

Information system: Canavati et al (2011) reported that the data management of health utilisation of migrants in healthcare facilities was not well enough organised, in particular the vaccination information. Reporting system is overlapped between facilities as migrants often changed their domiciles (Canavati S, et al.,2011). Note that problems derived from unclear reporting system was noted (Charoenmukkayanan, Sakulpanich et al. 2013). Occasional reports were made just upon requests. This was because providers did not recognise the benefit of data reporting. Kantayaporn et al (2013) reported that there were three ministries, which were responsible in estimating the number of migrants. These included the MoL, the MoI, and the Ministry of Information and Communication Technology (MICT). These ministries devised different methods in collecting the data, which created huge variations in the estimated numbers of migrants (Kantayaporn, Sinhkul et al. 2013). For utilisation data, each authority under the MoPH had its own data reporting system. Some were sent to the National Health Security Office (NHSO) as well. In practice, health facilities could generate their own 13-digit identification number

(like a Thai citizen) for a migrant patient for the purpose of reimbursement of treatment expense. This practice however rendered difficulties in data verification and claiming system.

Health services and medicine management: The Thai health facilities normally use similar systems in providing medicines and medical devices, between migrants and Thai patients. If migrants could not afford the cost of treatment, health facilities usually shoulder that financial burden instead (Prasitsiriphol, O, et al.,2013). Hu (2010) reported that migrants had lower utilisation rate than Thai beneficiaries (Hu 2010). Webber et al (2012) argued that some migrants did have health insurance card but they rarely used services where they registered due to a number of difficulties, particularly the mobile behaviour of migrants , contradicted the gatekeeper system (Webber, G., et al.,2012). In particular services such as HIV/AIDS, providers should take into consideration migrants’ working habits, which might limit their ability in taking medicine and following up with healthcare providers, for example, taking medicines and antiretroviral drugs every 12 hours might not suit migrants’ working lifestyles, and this might result in poor health outcomes due to incompliance and improper drug administration (Saether, Chawphrae et al. 2007).

Sullivan et al (2004) suggested using a checklist in individual clinics could improve quality of care and increase migrant patients’ satisfaction (Sullivan T, et al .,2004).In some provinces such as Ranong, migrant patients could receive care at any health facilities within the province. However, some Thai patients (insured by the

Universal Coverage Scheme) argued that they had less privilege than migrants since they were required to visit the health facility to which they were registered. Some provinces created innovative payment mechanism in order to incentivise providers in catering some specific diseases, for example, earmarking part of the budget from the insurance for stateless people and paying for some under-served service items, such as vaccination and family planning by fee schedule regardless of citizenship status of a patient. It should be noted that all articles recruited in this study were confined to providers' perspectives (Bureau of International Health,2014).Crozier et al (2013) reported that hospitals usually suffered from work overload due to increasing utilisation of migrant patients and this might lead to the lack of quality of care and shortage of translating staff (Crozier, Chotiga et al. 2013) Canavati et al (2011) suggested school-based immunisation might be effective measure to address problems regarding frequent moves of migrants (Canavati, Plugge et al. 2011).

Discussion

The study found that the reviewed articles varied in terms of methodology used and topic of study. Taking into account the existing healthcare policy and its contextual environment, the knowledge gaps were summarised as follows;

Knowledge gap in migrant healthcare policy at a broad picture: In Thailand, there are various groups of migrants. Some migrants have already turned their nationality status to Thai, some

are migrant workers (either passing nationality verification or not passing nationality verification), and some are dependents of migrants. Understanding policy environment and existing legal instruments that the migrant healthcare system in Thailand is operating is likely to better shape the direction of future migrant health research, whether it should focus on evidence generation for policy formulation or policy advocacy. For example, the flow of migrants from point of entry to points of involvement with all relevant sectors (the MoI, the MoL, and the MoPH) is very complex and there is a huge demand for knowledge to address problems in all steps of policy process, see Figure 3.

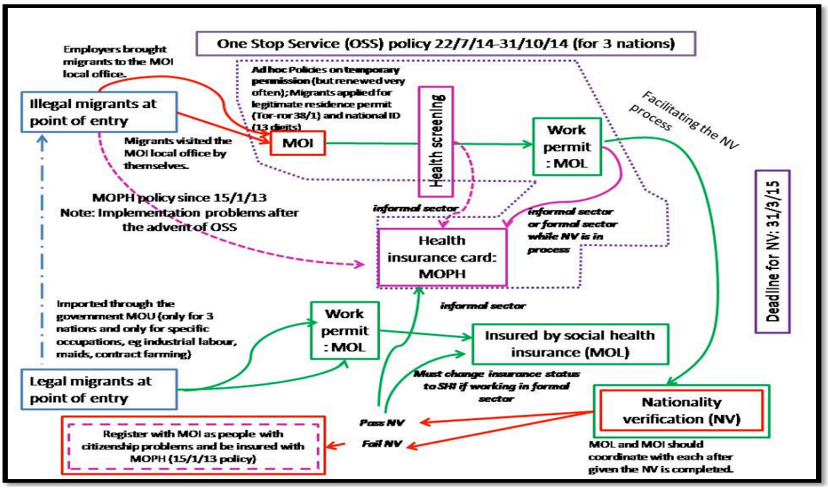

Figure 3 Overview of migrant policies and Migrant Health Policies

Source: Synthesized by the researchers (The Secretariat of the Cabinet,2004) (The Secretariat of the Cabinet,2005) (National Council for Peace and Order,2014)

Remark: Green = Policies of the Ministry of Labour
Red = Policies of the Ministry of Interior
Purple = Policies of the Ministry of Public Health

The above figure shows that the status of migrants is overlapping with the stateless persons. The status of these people can be changed over time. Migrants who entered the country legally might turn to be illegal migrants if their residence permit is expired. However, most studies explore migrant health as a static phenomenon. Indeed, there is a lack of knowledge in investigating migrant populations in a dynamic way or in a precarious citizenship status; for instance, how to deal with migrants who are already registered for a residence permit but did not engage in the nationality verification. Migrants who are already registered for legitimate residence permit, work in an enterprise, possess health insurance card, and are verified of their nationality but have not switched their insurance to the SSS. These issues are interesting study subjects. Potential research questions on this matter may include: how these situations happen?, what are barriers that limit illegal migrants to involve in the nationality verification?, what are the roles of health personnel in dealing with citizenship status problems of migrants?.

At the present time, the Thai government has launched a clear political message that migrants and their dependents are obliged to buy the health insurance card provided by the MoPH. Although the migrant insurance is open to all migrants in principle, many migrants refuse to buy insurance. Some migrants do not realise that they are eligible to be insured. As a result, migrants usually buy health insurance card at the hospital when they are severely ill.

Knowledge gap in system governance: The efficiency of governance depends on the capacity and administration system of a governing body. Generally, the MoPH is the main authority responsible for managing migrant health care. However, it suffers from several limitations, such as staff shortage and system bureaucracy. The knowledge gap may include the alternative of organisation management (Is there other organisations that have greater capacities than the MoPH in managing the migrant insurance scheme?, How does the MoPH improve its capacity and governance structure?, How should the MoPH invest in human resources and health technology to increase effectiveness of governance?). In addition, what kind of monitoring system and complaint handling process should be adopted in order to better respond to migrant health demand?.The knowledge gap in governance also includes the limitations of current migrant laws that address scope and power of health organisations in Thailand. For example, what are the expected roles and responsibilities of the NHSO and the MoPH in protecting health of migrants in Thailand and overseas Thai citizens?. Does that current legislations keep pace with the existing situation of migrants, especially in response to the emergence of ASEAN Community by December 2015?

Knowledge gap in health financial management: The principle of health financing consists of (1) revenue generation, (2) pooling, and (3) purchasing(WHO 2010). The literature review shows that

most research questions of the migrant health financing focused on the impact of the existing financing scheme on an individual patient or an individual hospital (for example, how much is the amount of out of pocket payment made by a migrant patient?, what is the amount of financial burden shouldered by a hospital?, what is the optimal insurance premium for covering specific diseases such as HIV/AIDS?) (Prasitsiriphol, O, Sakulpanich T, et al.,2013).It is clear that most reviewed articles neither addressed the three principles of health financing properly and systematically, nor did propose other financial management alternatives.

The management in migrant health insurance scheme in Thailand has not been changed for over a decade. Individual hospitals shoulder the financial risk; only high cost treatment is shared at the national level. and is operated within the concept that the MoPH serves as the only authority that is responsible for managing the migrant health system. The knowledge gap in this issue includes the appropriateness of current health financing, particularly sources of the insurance revenue. Some instances of potential research questions include: is it possible to collect money via tax system like the Universal Coverage Scheme instead of collecting remittance from the card premium?, is there any mechanism that make the financial risk equitably shared by all beneficiaries?, to what extent the current risk sharing mechanism lead to equity and efficiency through the perspective of both patients and providers?, what are benefits and

drawbacks if the insurance system includes the private sector in financial management?, and what can be done in order to regulate the involvement of private sectors in health insurance management for migrants?.

Knowledge gap in health personnel management: The literature review found that migrant health volunteers have been served as a key mechanism in bridging language and cultural differences between migrant patients and the government health personnel. Several articles expressed that health facilities with migrant health employees did concern about the sustainability of employing migrant health workers; whether this contradicts the existing employment laws (since some migrant health personnel entered the country illegally). As a result, the system in managing migrant health workers and health volunteers is still questionable.

One of the interesting knowledge gap is whether these migrant health volunteers already have enough competencies and whether there are effective mechanisms that help retain migrant health workers and volunteers working in the public sector. Accordingly, future research should aim to explore the competencies of government health personnel in providing care to migrants. The competencies mentioned here cover not only health knowledge and language ability, but also included the understanding of cultural differences and a comprehension in the management in immigration or citizenship

status system, which will help the implementation of healthcare policy, legislation policy and also employment policy more harmonised.

Knowledge gap in health data management: There are few studies exploring the health information building block the health system framework, either in (1) migrants baseline data, or (2) utilisation data. Concerning the baseline data, there seems to be difficulties in estimating the actual number of migrants in Thailand. This is due to the fact that the related agencies used different counting criteria. In addition, most migrant workers are quite mobile, this makes the estimation of the actual number of migrants more complicated (Kantayaporn, Sinhkul et al. 2013). Accordingly, the knowledge gap in this matter includes the appropriate counting system that suits the migration dynamics for example, migrant's life table.

Regarding utilisation data, this study found that various departments within the MoPH use different recording system for migrants. Some migrant health data, such as vaccination data of migrant children were also submitted to the NHSO. This finding is consistent with the above discussion that the personal 13-digit system (the national identification number) is not a unique identifier for migrants since the 13-digit number can be changed according to the acquired citizenship status at particular time. A concrete example is when migrant workers with the 13-digit code failed to verify their nationality, they will become stateless population and the

personal digits have to be changed. Some key potential research questions include; what is the most appropriate unique identifier?, how large is the financial investment for implementing biometric data as unique identifier?, and what mechanisms should be done in order to make a health facility able to track and monitor health problems of migrant inhabitants who may or may not show up at a facility in its responsible areas?

Knowledge gap in health service and drug/medicine management: According to the literature review, the service provision system for migrant patients is quite similar to Thai beneficiaries; however, the utilisation rate of migrant patients is still much lower than that of the Thai citizens (Hu J.,2010). Nevertheless, most studies employed cross-sectional descriptive analysis, and lacked the adjustment for time effect and lack of comparison group, which are very important factors in policy impact evaluation. Thus, it is difficult to point out whether the health insurance really increase or decrease the service utilisation rate of migrants.

Many facilities have created their own innovative managing system by allowing migrants to visit any facility within a province, in other words, cancelling the gatekeeper policy. The knowledge gap in this matter includes; what are lessons learned from this innovative management?, does it benefit the migrant healthcare system as a whole?, how can it be sustainable over time?, and is this innovation consistent with the national policy?.

Due to insufficient human resource capacity and budget constraints, it is almost impossible that the government serves as the only sector that solves all migrants' health problems. The literature found that a large number of migrants could not access to public health service due to language and cultural difficulties as well as lack of knowledge about rights to health service access. Thus, it is interesting to explore the possibility and to what extent that private sector involves in the healthcare system management for migrants, particularly in the context of ASEAN Community. To sum up, the knowledge gap that needs to be fulfilled includes;

(1) What should be included in the benefit package, which is able to cover financial risk of both providers and users and, in the meantime, is able to protect all essential health services?, and what conditions should be covered regardless of citizenship status of a patient?. According to the literature review, there are always groups of migrants, who did not buy the health insurance card creating the so-called 'adverse selection', no matter how hard the government force them to buy it; and when these become severely ill and could not afford the treatment cost this financial burden will almost always be borne by a hospital (Health Insurance Systems Research Office, 2014). —Some hospitals thus allow only healthy migrants to buy the card.

(2) Most literature focused on patients who 'showed up' at point of service. The evidence of pro-active work to access sensitive migrants (eg, the handicaps, the psychotic patients) is still lacking. The access of these sensitive migrants is difficult since the present government policy only focuses on health insurance for 'migrant workers'.

(3) Most of the studies focused on short-term outputs of the service provision, such as the service use rate, expense paid at point of care, but did not much exploring the medium to long term outcomes, such as mortality rate and quality adjusted life year (QALY).

After synthesising all the review findings in all health system angles, examples of key potential research questions to fulfil the knowledge gaps in migrant healthcare area can be summarised as follows, see Table 2.

Table 2 Examples of research questions to fulfil knowledge gaps of migrant health service

Issue	Examples of research questions
Overview of the Policy	• What are the consistencies between migrant health policies, security policies, and labour recruitmentpolicies? • Does the existing migrant policy research completely cover important areas/aspects of migrant populations? (such as Thai-Myanmar, Thai-Cambodian, Thai-Laotian, Urban-Rural, and Rich-Poor)
Governance	• What are the limitations of current migrant laws? • Are these legal instruments legitimate/justifiable? If so, to what extent? • What are the existing capacities and resources of the MoPH for managing governance? and how can the MoPH improve its capacity in managing the scheme?
Health personnel management	• What are the legislative limitations in migrant health volunteer employment? What is the proper solutions to overcome these limitations? and how can the migrant health worker employing system improve its efficacy and sustainability? • Does migrant health volunteers have sufficient ability to provide healthcare services? What kinds of capacity should be provided to migrant health volunteers? and what kinds of follow up system should be applied for monitoring the performance migrant health volunteers? • To what extent are migrant health personnel familiar competent with migrant friendly services? (eg, understanding of language, culture, and multi-ethnic beliefs)

Table 2 Examples of research questions to fulfil knowledge gaps of migrant health service

Issue	Examples of research questions
Health information system	• What is the proper information tracking system that suits mobile behaviour of migrant populations? • What is the appropriate unique identifier for migrants, and how much does it cost in implementing this system? • What is an effective mechanism that helps a facility monitor health behaviours and health problems of migrant inhabitants in nearby communities?
Health financing	• What are pros and cons of existing financing management?, and is the existing management consistent with the health economic principles? • What are the other alternatives for migrant health financing scheme? (eg, tax-based revenue generation, payment mechanism through private sector)
Health service and medicine management	• What are lessons from innovative approaches/mechanisms (such as cancelling gatekeeper system) in migrant service provision in certain areas?, what are their pros and cons?, and are those mechanisms sustainable and consistent with the national policy? • What are proper benefit packages that are able to protect financial risks of both providers and migrant users?

Conclusion

The literature review found that most of recruited articles focused on service provision component. Only few literatures emphasised on the governance and information system components. Majority of literature targeted on migrant workers residing along the Thai–Myanmar border. Gaps of knowledge were identified as the following. In the governance issue, potential research questions include, what are the limitations of existing immigration laws?, are the current legislations justifiable with the contextual environment?, to what extent do the existing laws suit the performance of healthcare providers?. Regarding health personnel management, key research questions include, whether migrant health volunteers have enough competencies to provide health service to migrants and how to monitor the performance of migrant health workers. For the provision of services, key research questions include, what are the proper benefit packages that are able to protect financial risk on both providers and migrant patents?. It is hoped that results of this study will serve as a foundation for future research for better development of migrant healthcare system in Thailand.

Limitation of the study

Despite a rigorous design on study method, this study still faces some limitations. Firstly, the review was conducted in a short time period and illustrates a broad array of literature but it does not intend to answer specific research questions. In addition, the as-

sessment of literature quality in the review is less stringent than systematic review. Thus, this study does not aim to determine which approach or mechanism in managing migrant healthcare system is more effective than another. To answer such question, a systematic review or meta-analysis might be more appropriate. Secondly, it is difficult to collect all types of grey literature, such as theses and research reports, in limited time and budget. Thirdly, only studies published either in Thai or English were collected. Hence, it is difficult to avoid the bias in language. Fourthly, it is difficult to claim that the review was done thoroughly. Even in the systematic search, electronic journals other than PubMed databases have not been explored due to limited study time. Future research, which expands the search databases, is recommended. Finally, this study focused only on some parts of migrant populations, especially the vulnerable groups. The better-off migrant populations, such as tourists, foreign businessmen, high-skilled migrant workers and foreign professions, are not this study's primary focus. Remaining challenges are how to incorporate the system knowledge and create a better healthcare system which suits both the better-off and destitute migrants as well as their dependants.

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