Building a resilient public health system for international migrant workers: a case study and policy brief for COVID-19 and beyond

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Abstract
Purpose – This article analyzes deficiencies in public health services for international migrant workers (IMWs) during the COVID-19 pandemic and provides a policy brief for improvement of the public health system.
Design/methodology/approach – A COVID-19 outbreak that initially clustered in IMWs and further contributed to the resurgence of the disease across Thailand in December 2020 was analyzed to address the deficiencies in public health services based on the framework of the 10 Essential Public Health Services (EPHS). The EPHS framework was also applied to develop policy options and recommendations in the subsequent policy brief.
Findings – This outbreak unveiled unique challenges that make IMWs more vulnerable to COVID-19. The public health system, challenged by the COVID-19 outbreak among IMWs, manifested deficiencies in the planning and implementation of all essential services. Delayed detection of the outbreak along with the lack of policy accommodating undocumented IMWs and the lack of equitable access to testing and treatment for COVID-19 resulted in the transmission of the disease that harmed the public at large.
Originality/value – The comprehensive analysis of the deficiencies in public health services for IMWs enabled a clear description of problems that could be further prioritized by relevant stakeholders. The policy brief provides policymakers with evidence-based recommendations for improving public health services for IMWs during the COVID-19 pandemic and beyond.
Keywords COVID-19, International migrant workers, Disease outbreak, Vulnerable population, Public health policy
Paper type General review

Introduction
International migrant workers (IMWs) are the backbone of the economy in many countries. In Thailand, an estimated 3,005,376 IMWs have been granted work permits in 2019 [1]. However, a large latent population remains undocumented. Of those who are documented, many work in manufacturing, construction, wholesale and retail, accommodation and food services, as well as agriculture, forestry and fishing [1]. As with any industry, the health of its workforce reflects its productivity [2]. Therefore, it is critical to provide adequate and equitable health and social services to all workers.

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Nonetheless, IMWs, particularly those who are undocumented, face unique social challenges to maintaining good health and well-being within their host countries. For instance, they experience tight living conditions, language barriers, and limited access to health care [3]. The social vulnerabilities experienced within this population interact with COVID-19, exacerbating the effect of this infectious disease among IMWs. Thailand’s COVID-19 outbreak among IMWs during late 2020 is an example of this phenomenon [4]. This COVID-19 outbreak raised concern about care for IMWs, exposed existing deficiencies in public health planning and serves as a catalyst for building a more resilient public health system.

This article aims to analyze the deficiencies in public health services for IMWs during the COVID-19 pandemic, using the outbreak of COVID-19 among IMWs in Thailand as a case study. It further generates informed policy recommendations that can be used to improve public health services for IMWs during the COVID-19 pandemic and in the future.

**Method of analysis**

A cluster of 2,629 COVID-19 cases detected among IMWs in Thailand during the period between December 20 and 27, 2020 was critically analyzed to assess potential sources of disease exposure and to identify challenges in disease control and prevention among IMWs. The deficiencies in public health services for IMWs were then investigated and addressed using the 10 Essential Public Health Services (EPHS) as a framework [5]. The EPHS framework was also applied to the development of policy options and recommendations in the subsequent policy brief.

**Lessons learned and policy brief**

*Situation analysis of COVID-19 resurgence in Thailand*

Thailand was the second country to confirm a COVID-19 case after China on January 13, 2020 [4, 6]. However, the response this upper-middle-income country took to successfully manage the spread of COVID-19 was exemplary. Thailand’s success has been rooted in its participatory approach, which emphasizes engagement, inclusivity, and shared responsibility among all people – e.g. universal mask wearing in public [7–9]. Thailand’s universal healthcare coverage for its citizens ensures free testing and treatment for COVID-19 to contain all cases within hospitals. This limits risk of transmission from infected individuals to their communities. Nevertheless, the country faced a new challenge. A cluster of 2,629 COVID-19 cases was identified among IMWs – many of whom are undocumented – in a large shrimp market in the province of Samut Sakhon between December 20 and 27, 2020 [4]. This cluster has been linked to the spread of disease in 44 provinces – over half the country. This outbreak provides testimony that IMWs, particularly those undocumented, are at heightened risk for COVID-19 [10, 11]. The outbreak also illustrates the need to improve care for IMWs during and long after the COVID-19 pandemic.

*Unveiling challenges for COVID-19 control and prevention in IMWs*

This outbreak unveils unique challenges that make IMWs more vulnerable to COVID-19 than other populations. Before becoming migrant workers, some of these individuals face deprivations including educational and economic hardship, which drive them to leave their home country [12]. Others even risk their lives to enter their host country illegally. Once employed, they experience another set of challenges. Low daily wages restrict them to living in tightly packed rooms with other occupants, which compromises social distancing and facilitates the transmission of COVID-19. With limited health literacy and income, IMWs lack an adequate understanding about the importance of personal protective equipment (PPE).
and are hesitant to spend money on items like masks when resources can be used for rent, food or remittance.

While Thailand has strived to engage and include everyone in its COVID-19 control and prevention campaigns, public communication about COVID-19 is rarely in a language these workers understand. Language barriers perpetuate poor health literacy and poor COVID-19 outcomes [13]. If IMWs contract COVID-19, they continue to encounter other barriers such as reluctance to leave the job for testing or treatment due to loss of daily wage. Unlike documented IMWs, undocumented IMWs lack the right to access healthcare [14]. Undocumented workers also tend to distrust authorities due to a fear of deportation [15, 16]. As a result of these barriers, infected workers are left undetected and untreated. Since 90% of infected workers are asymptomatic, they further spread COVID-19 to their contacts at the shrimp market. This resulted in this newly emerging outbreak across Thailand.

Addressing deficiencies in COVID-19 public health services for IMWs
The deficiencies in all ten essential public health services for IMWs were identified using the EPHS framework (Table 1). The deficiencies identified can be simplified into three core functions: assessment, policy development and assurance [5].

Within the assessment, the public health system failed to address the vulnerabilities of IMWs during the COVID-19 pandemic. The system further lacked active surveillance to proactively identify cases of disease among IMWs. Once the outbreak was recognized, the system struggled with providing COVID-19 testing and treatment to IMWs. This lack of preparedness limited the effectiveness of disease containment to the local area.

Regarding policy development, the existing laws penalizing undocumented workers have created a hostile environment, which makes collaboration between IMWs and all acting authorities challenging to achieve [10]. The lack of mutual understanding and inability to effectively communicate due to language barriers further complicates cooperation between these stakeholders. This urges the need for public health systems to develop a more diverse and integrative workforce that builds trust, fosters relationships and gains cooperation among IMW communities and authorities [17]. Even after collaboration is achieved, public health systems still face challenges providing COVID-19 testing and other services to IMWs, especially those who are undocumented.

With regards to assurance, the public health system lacked preparedness in providing additional testing and health services to IMWs. Expanding these services that are available to the general population to cover IMWs, particularly those who are undocumented, would improve the public health system as a whole. Apart from the unavailability of services, public health systems need to integrate IMWs into the workforce by mobilizing existing groups – i.e. migrant worker health volunteers. To better serve IMWs, public health systems should also improve research regarding social inequities within this vulnerable population. This could further allow public health systems to better anticipate IMWs needs and social vulnerabilities to provide early interventions that improve care for IMWs [18].

Policy alternatives and recommendations
To build a more resilient public health system, existing deficiencies in public health services must be resolved through policy and system reform (Table 1). This starts with improving the assessment of health status among IMWs, the development of appropriate policies and the assurance of effective and sustainable delivery of public health services.

The assessment of vulnerabilities and factors influencing the overall health of IMWs is critical for developing a prevention-oriented health system that limits potential future outbreaks from occurring. Nonetheless, if an outbreak occurs, the surveillance system should function to timely detect the event [19]. Awareness of the outbreak etiology would further
1. Evaluate population health status, needs, and influencing factors
   (1) Inability of existing passive surveillance to detect COVID-19 cases among unreachable undocumented IMWs who lack access to care
   (2) Lack of health needs assessment among IMWs
   (3) Lack of evaluation of context-relevant factors influencing etiology, preventive and control measures for COVID-19 among IMWs (i.e., tight living conditions undermining social distancing, high contact work environment, compromised health literacy due to language barriers)

   (1) Utilize active surveillance
   (2) Initiate a participatory approach which leverages migrant worker health volunteers to report unusual events/disease
   (3) Assess needs among IMWs, employers, and other community members to establish resolutions through communal agreements
   (4) Evaluate context-specific factors influencing transmission of SARS-CoV-2 and practical preventive and control measures among IMWs

2. Identify and address population health problems and hazards
   (1) Fail to prioritize social vulnerabilities of IMWs
   (2) Lack of access to COVID-19 testing and treatment, particularly undocumented IMWs

   (1) Anticipate the potential impact of social vulnerabilities among IMWs that could contribute to emerging outbreaks
   (2) Monitor real-time health status and administer timely surveillance testing to identify and respond to emerging outbreaks among this vulnerable population

3. Effectively communicate and educate the public about health
   (1) Lack of collaboration among acting sectors including health authorities, employers, and IMWs to develop audience-appropriate health information
   (2) Underutilization of peer-to-peer communication channel
   (3) Ineffective communication of information in IMWs’ native languages

   (1) Engage stakeholders in the development of communication and dissemination of health information
   (2) Mobilize migrant health worker volunteers as liaison between IMWs and authorities
   (3) Provide communication in IMWs’ native languages

Table 1. Essential public health services framework for improving health system for international migrant workers (IMWs) in COVID-19 and future pandemics

| Problems in public health planning and implementation for IMWs during COVID-19 pandemic | Policy alternatives and recommendations |
|---|---|
| 1. Evaluate population health status, needs, and influencing factors | (1) Utilize active surveillance
   (2) Initiate a participatory approach which leverages migrant worker health volunteers to report unusual events/disease
   (3) Assess needs among IMWs, employers, and other community members to establish resolutions through communal agreements
   (4) Evaluate context-specific factors influencing transmission of SARS-CoV-2 and practical preventive and control measures among IMWs |
| 2. Identify and address population health problems and hazards | (1) Anticipate the potential impact of social vulnerabilities among IMWs that could contribute to emerging outbreaks
   (2) Monitor real-time health status and administer timely surveillance testing to identify and respond to emerging outbreaks among this vulnerable population |
| 3. Effectively communicate and educate the public about health | (1) Engage stakeholders in the development of communication and dissemination of health information
   (2) Mobilize migrant health worker volunteers as liaison between IMWs and authorities
   (3) Provide communication in IMWs’ native languages |

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| Essential public health services | Problems in public health planning and implementation for IMWs during COVID-19 pandemic | Policy alternatives and recommendations |
|----------------------------------|--------------------------------------------------------------------------------------|---------------------------------------|
| 4 Enhance community mobilization and partnerships to improve health | (1) Lack of connection among IMWs, health/social authorities and communities due to mutual distrust and discrimination | (1) Build bridges through migrant worker health volunteer program to foster relationships establish trust, and initiate collaboration among employers, IMWs and health/social authorities |
| 5 Develop and implement health policies, strategies and laws | (1) Existing law threatens to deport undocumented IMWs, creates a hostile environment in which IMWs feel reluctant to:  
  • cooperate in COVID-19 testing and control measures (and even go into hiding)  
  • collaborate with authorities | (2) Educate the community as a whole on the interconnectedness of individual and population health and the importance of mutual responsibility  
  (3) Prioritize cooperation over discrimination through unified response |
| 6 Employ legal and regulatory measures to protect public health | (1) Lenient enforcement of labor trafficking law limits the effectiveness of controlling illegal entry of IMWs  
  (2) Lack provision and regulation of personal protective equipment use to prevent community transmission  
  (3) Lack COVID-19 surveillance measures for IMWs – i.e. prompt testing of suspected individuals  
  (4) Lack mitigation measures to reduce COVID-19 transmission at congregate and occupational settings | (1) Adjust the existing law by waiving the penalties for undocumented IMWs and their employers during this time to reduce fear of deportation and improve IMWs cooperation with COVID-19 control measures  
  (2) Create a pathway to register undocumented IMWs already in the country and connect them with health and social services – i.e. labor services  
  (3) Reinforce labor trafficking law to prevent the influx of IMWs entering the country illegally  
  (2) Local health officials should regulate the use of personal protective equipment in the congregate and occupational settings  
  (3) Monitor the health of IMWs and provide prompt testing of suspected cases and timely treatment, if necessary  
  (4) Implement physical distancing and hand hygiene measures in congregate and occupational settings |

(continued)
Table 1.

| Essential public health services                                                                 | Problems in public health planning and implementation for IMWs during COVID-19 pandemic | Policy alternatives and recommendations                                                                 |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 7  Ensure equitable access to necessary health and social services                             | (1) Lack system that enables undocumented workers to COVID-19 testing and treatment     | (1) Establish a comprehensive system that                                                                  |
|                                                                                               |                                                                                       | • tracks undocumented IMWs to initiate connection                                                        |
|                                                                                               |                                                                                       | • with supportive services                                                                               |
|                                                                                               |                                                                                       | • provides a platform for undocumented IMWs to connect them with health and social authorities         |
|                                                                                               |                                                                                       | • paves a pathway for undocumented IMWs to obtain                                                      |
|                                                                                               |                                                                                       | • documentation and facilitates their access to                                                        |
|                                                                                               |                                                                                       | • healthcare coverage                                                                                   |
| 8  Build and support a skilled and diverse public health workforce                             | (1) Lack inclusivity of migrant worker health volunteers as partners in the health workforce | (1) Engage and integrate migrant health volunteers in the health workforce to                          |
|                                                                                               | (2) Lack cultural diversity and inclusion because public health officials and volunteers are restricted to citizens of the host country | • develop and enhance their knowledge and understanding of current health issues                        |
|                                                                                               |                                                                                       | • better support the diverse migrant worker populations                                                 |
|                                                                                               |                                                                                       | • establish a workforce that is representative of the people it serves                                 |
| 9  Innovate and advance public health practice through research evaluation and ongoing quality improvement | (1) Limited research on the social and health inequities in achieving the good health and well-being of IMWs especially during the COVID-19 pandemic | (1) Conduct research to understand the health problems,                                                |
|                                                                                               | (2) Lack evaluation of existing gaps in public health services, especially disease prevention education and surveillance for IMWs | • identify this population’s needs, and address the barriers to accessing these needs                  |
| 10 Foster and maintain a strong public health organizational infrastructure                      | (1) Inefficient use and delivery of public health resources due to the disunity of the organizational structure | (2) Utilize evidence-based research to inform decision making and improve quality of care for IMWs      |
|                                                                                               |                                                                                       | • Government agencies                                                                                  |
|                                                                                               |                                                                                       | • Non-government agencies                                                                               |
|                                                                                               |                                                                                       | • Employers to achieve a more sustainable and                                                          |
|                                                                                               |                                                                                       | comprehensive care plan for IMWs                                                                       |
allow systems to contain the disease at an early stage. To achieve timely detection, authorities should conduct active case finding and cooperate with IMWs. To overcome potential barriers in collaboration – i.e. distrust, language barriers, and poor health literacy – between IMWs and authorities, public health systems should engage IMWs as a part of the public health workforce. The migrant worker health volunteer program recruits volunteers from IMWs to facilitate that collaboration [20]. Since migrant worker health volunteers tend to be well-integrated in IMW communities, they can participate in active case finding by reporting unusual events and diseases to health authorities. Apart from facilitating the disease surveillance, volunteers also bridge further communication and deliver health messages to improve health literacy using IMWs’ native languages to encourage cooperation for further disease control measures – i.e. COVID-19 testing and quarantine [21].

Collaboration between IMWs, authorities and other stakeholders is also important for improving the development of inclusive policies. To protect IMWs, especially those who are undocumented, the system should acknowledge the vulnerabilities of IMWs and be adaptive to accommodate these vulnerabilities. Furthermore, the system should integrate individuals from multiple sectors to ensure a skilled and diverse workforce [22]. Public health systems should also be self-regulatory and provide essential services at their best, regardless of an individual’s immigration status or healthcare coverage [23]. Once the policy is developed and implemented, it is necessary to assure that the policy is working as intended. To achieve quality and sustainable care for IMWs, health systems should actively engage in research, innovation, and quality assurance.

Health system reform must commence at the core ideology that IMWs are a burden on the health systems of their host country. This notion drives stigmatization and xenophobia which further creates a hostile environment for the host communities and IMWs [24–26]. To alleviate the hostile environment, the public health system should cooperate with legal authorities to be adaptive by waiving the existing law that penalizes undocumented IMWs and their employers [10]. Establishing an inclusive and empathetic environment through partnerships and public health campaigns is essential. These public health campaigns should inform and educate members of the host communities on the importance of mutual understanding and acceptance of individuals from different social backgrounds, particularly highlighting the notion that they all are members of a larger community that must work together to achieve effective control and prevention of the disease. To provide further support, IMWs must be connected with social and health authorities through the facilitation of migrant worker health volunteers [20].

Apart from accommodating existing IMWs, there is a need to prevent the incidence of illegal entry of IMWs into the host country. The poor regulation of labor trafficking laws is the root cause for becoming an undocumented IMW. Trafficked workers are imposed to human rights violations including infringements upon their right to healthcare. As a result, labor trafficking laws must be reinforced and individuals involved in importing migrant workers illegally must be prosecuted [27].

The lack of COVID-19 testing and treatment for undocumented IMWs is a key factor that heightens the transmission of disease within this vulnerable population. Therefore, providing COVID-19 testing and necessary treatment to IMWs is essential for controlling outbreaks within communities. However, in the long run, providing COVID-19 testing and treatment can consume resources within the health system of the host country. Even countries with universal healthcare coverage like Thailand face challenges in providing sustainable services to undocumented IMWs. While Thailand provides healthcare benefits to documented IMWs, these essential services do not cover undocumented IMWs. Expansion of this coverage to undocumented IMW is controversial and can further strain healthcare resources [14].

Intersectoral collaboration to engage multiple stakeholders including members of government and non-government agencies, employers and IMWs can enable a more
sustainable and comprehensive care plan for IMWs. For the case of Thailand, key
government agencies including the Ministry of Defense, the Ministry of Labor, the Ministry of
Public health collaborate to initiate a pathway for undocumented IMWs to have essential
healthcare benefits in the long run. The Ministry of Defense provides IMWs who have entered
the country illegally a two-year amnesty period for them to enroll in the registration of the
Ministry of Labor. The Ministry of Labor further assists IMWs by connecting those who are
unemployed with employers who are willing to hire and sponsor them. Once they are
sponsored and registered by the Ministry of Labor, these IMWs become documented. This
allows them to utilize the copayment system and receive healthcare benefits [28].

To further assure quality care for IMWs during and after the COVID-19 pandemic,
ongoing needs assessments will be necessary to address their health needs and to better
serve IMWs. Providing disease prevention services to all individuals including this
vulnerable population would protect the health of the population at large [4]. Research
conducted to identify the social inequalities of IMWs could also identify areas that need
improvements. Long-term engagement of IMWs in the public health workforce will be key
in building a supportive environment, establishing mutual understanding and promoting
solidarity necessary to protect the community from the existing health threats and future
pandemics.

Conclusions
Resilient public health systems must be comprised of the five foundational components:
awareness, diversity, integration, adaptability and self-regulation [29]. A resilient public
health system for IMWs should timely detect the emerging health threats through
appropriate surveillance strategies and provide channels for prompt disease diagnosis
and treatment. The system should also be adaptive to effectively respond to
unprecedented situations. To successfully protect the health of the public at large,
public health systems should integrate diverse stakeholders in the workforce and
promote intersectoral collaboration. The function of the public health system at its best
should be self-regulatory.

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