

# **Final Annual Performance Report**

*Cooperative Agreement Year 01 (2022)*

**Program: DGMQ Program**

**Project Code: DGMQ-MNPC**

**Project Name: Migrant Health Volunteer Network on Disease Surveillance, Prevention and Control of COVID-19 situation in the Southern area Community, Pilot in Phuket Province**

**Budget Period: September 1, 2021 – August 31, 2022**

## **Background/Introduction:**

The project conducted research in Thailand's South Andaman Coast, with a pilot in the Phuket provinces. Aims were to establishment of migrant health volunteers' network in Phuket province and provided the training about COVID-19 for them. Accomplishments from Year 01, are following;

- Procurement for system equipment for DGMQ-MNPC project, which comprised of 7 items; Computer, Notebooks, Printers, iris scanners, cloud server for data storage, Rental Fee (software for iris scan), and migrant volunteers' data in redcap program.

- Ethical consideration clearance from Vachira Phuket hospital and Department of Disease Control sent to DGMQ with completely translate Certificate of Approval the DGMQ-MNPC and protocol identification from Vachira Phuket Hospital Research Ethic Committee. Completely translate resolution of the Research Ethics Committee, Department of Disease Control and send these documents both English and Thai version to DGMQ for release funding restriction of DGMQ-MNPC project.

- Meeting with local authorities in November 29-30, 2021 at Phuket Provincial Public Health Office, Phuket province. The purpose is to introduce Migrant Health Volunteer Network on Disease Surveillance, Prevention and Control of COVID-19 situation in the Southern area Community, Pilot in Phuket Province project and to collaborate this project with local authorities. Currently, Phuket province are approximately 498 migrant health volunteers in 3 districts (Mueang Phuket, Kathu, and Thalang district) and there are 30,000 migrant workers in Phuket. For training Migrant Health Volunteers, the District Health Promotion Hospital officers should assist in the training because migrant workers are familiar with officers and they are willing to cooperate.

- Finished 751 migrants KAP surveyed in Phuket province.

- Set up migrant volunteers' database for total 404 people. All migrants have been clarified for the purpose of MHVS registration, data collection by using biometrics, its application, and asked for their consent.

The project has finished the first migrant health volunteers' training for COVID-19 disease. The topics for training migrant health volunteers are about MHVs registration in our application and its description, and healthcare guidelines during the COVID-19 situation. There are 2 manuscripts done in this project; 1) Knowledge assessment and practice toward disease surveillance, prevention and control of COVID-19 among industrial migrant health volunteers in Phuket Province 2) Survey of migrant workers' knowledge, attitude and practice toward COVID-19 in Phuket, 2022.

**Management/Staffing/Administrative:**

1. Dr. Chuleekorn Tanathitikorn, Principle Investigator
2. Dr. Suthat Chottanapund, Co-Principle Investigator
3. Ms. Tuenjai Nuchtean, Co-Principle Investigator
4. Mr. Sanwit labchoon, Project IT
5. Ms. Parichat Suwanmueng, Research assistant
6. Ms. Sansuk Charoenkun, Project staff
7. Ms. Saowanee Junlawong, Project staff
8. Ms. Chatchayanin Sataman, Project staff
9. Ms. Chariya Damrongsak, Project staff
10. Mr. Thachcharit Jaiphook, Project staff

**Project Goals:** To establishment of Migrant Health Volunteers Network System (MHVs), who could help MOPH in implementing public health programs.

**Project Objectives:**

Objective 1: To establishment of Migrant Health Volunteers Network System (MHVs).

Objective 2: To set up Cloud database with identification of Migrant Health Volunteers.

Objective 3: MHVs will have the capability to ensure the health of migrants, especially in this COVID-19 situation, in the South Andaman Coast of Thailand.

Objective 4: Migrant workers will receive quality information on health care (COVID-19) from MHVs, they can stay healthy and provide treatment for themselves and their family members.

Objective 5: Implementation of action plan for health promotion, disease prevention and control, and implementing health care insurance for migrant workers in the future.

**Major Activities**

- Set up network of migrant health volunteers in Phuket province.
- Using Iris scan with redcap program and set up cloud database to collect Migrant Health Volunteers identification.
- Training Migrant Health Volunteers about COVID-19.
- Doing Survey Measuring Knowledge, Attitudes, and Practices Around COVID-19 Using a Migrant Health Volunteer Network in Phuket Province.

## Program Indicators/Narrative Summary of Activities/Accomplishments/Results:

### Program Indicators

1. Set up one MHVs network with their database
2. The enrollment number of migrant health volunteers to be trained in targeted province amounts to 400 persons. (Phuket province). The project has 404 of migrant health volunteers participate in the training.
3. MHVs pass Pre-Post evaluations of migrant health volunteer training program. (The pass mark for this program is 80%). The knowledge scores before and after receiving the training in health care knowledge in the situation of COVID-19 infection, the mean scores were 4.6 and 7.4 respectively. It was found that after the training, the trainees had higher knowledge than before. The training was statistically significant at  $p < 0.05$ .
4. The quality of MHVs' service meet health officers and migrant workers expectation. (The standard is 60 %).
5. 60% of Application users are satisfied with the quality of application.

### Narrative Summary of Activities

1. Visiting related government agents such as Phuket Provincial Employment Office, Phuket Immigration, Phuket health Provincial Office, Phuket Provincial Employment Office for study of migration process, law and regulation, migrant workers' access to healthcare service and data of migrant workers in Phuket province.



**Picture 1. Project implementation at Phuket Provincial Public Health Office**



**Picture 2. Meeting with Social Security Fund officers**

Migrant workers in Phuket are classified into several groups as follows;

1) Lifetime aliens are aliens who are permitted to stay and work in the Kingdom.

According to the Announcement of the Revolutionary Council No. 322 dated December 13, 1972,

2) Foreigners under Section 59, general category, aliens with residence in the Kingdom or allowed to enter the Kingdom temporarily under the law on immigration without permission to enter as a tourist or passers-by and does not have any prohibited characteristics as prescribed in the Ministerial Regulations,

3) Aliens Section 59 Proving Nationality (Original) Foreigners of Myanmar, Lao and Cambodian nationalities who fled to immigration have been granted a waiver to work and temporarily reside in the Kingdom in accordance with the Cabinet resolutions after nationality verification and legal immigration situation has been adjusted,

4) Foreigners under Section 59 imported under the MOU; foreigners of Myanmar, Lao and Cambodian nationalities who come to work under the agreement between the Thai government with the government of the country of origin,

5) Foreigners Section 62 Investment Promotion Foreigners who come to work in the Kingdom according to the law on investment promotion (Investment Promotion Act, B.E. 2520) or other laws namely the Industrial Estate Authority of Thailand Act, B.E. 2522 (1979) and the Petroleum Act 1971 such as investors, craftsmen, experts,

6) Foreigners under section 63, minority groups Foreigners who do not have Thai nationality under the law of nationality, and the Ministry of Interior has issued documents to prove the status for applying work permit,

7) Aliens Section 64. Foreigners of Myanmar, Lao and Cambodian nationality who come to work at the border in the manner of round trips or seasonally in the area of the Agreement on Border Crossing between the Kingdom of Thailand with countries adjacent to the Kingdom of Thailand,

8) Foreigners of 4 nationalities (Myanmar, Laos, Cambodia and Vietnam) refer to workers who come to work in Thailand as labourer or as servant. According to the Memorandum of Understanding on the employment of labour between Thailand and Myanmar, Lao, Cambodia and Vietnam for replacing the shortage of Thai workers, including illegal immigrant workers who have been upgraded to legal immigration status with permission to work.

Currently, there are approximately 60,000 migrant workers in Phuket, namely Cambodia, Laos, Myanmar and Vietnam. While there are 6,200 general migrant workers who are foreigners under Section 59, general category, aliens with residence in the Kingdom or allowed to enter the Kingdom temporarily under the law on immigration without permission to enter as a tourist or passers-by and does not have any prohibited characteristics as prescribed in the Ministerial Regulations. They are skilled labourers who work in international schools or government schools, universities and hotels.

There are 261 migrant workers under section 52 who come to work with investment-promoted businesses, and migrant workers under section 63/1 are ethnic minorities or a person who does not hold an identity card or registration situation. However, the most top three nationalities of migrant workers who live in Phuket are Myanmar, Cambodia and Lao. They come with different travel status, however, most of them are registered due to the rules and regulations of the Cabinet.

Migrant workers in Phuket are live in various districts such as Mueang Phuket District, Thalang District and Kathu District. Migrant workers' Data will be collected according to the residence of the migrant workers and classified by type of business. About 27,000 migrant workers are construction and other migrant workers' occupations are service or work in restaurant.

Migrant workers' information are stored in database system. Migrant workers will be registered according to the resolution of the Cabinet. Their data will be organized and classified according to sections that they applied. However, there is not much of data linkage. At present, the quality of service for migrant workers has been improved. Moreover, it has been approved by the Cabinet. The database of all migrant workers will be consolidated. A private company (Out Source) will be hired to do work permits. This service will be completed in 2023.

Department of Employment has database system which can be linked throughout Thailand. Besides, this system can be shared identification of people who do not have Thai nationality or pink card with the Department of Provincial Administration. Department of Employment's headquarter takes charge of creating and maintaining database of Foreigners under Section 59. Other provinces must use this system. They cannot create their own database.

When migrant workers move and if they want to start new job with new employers, the new employers must register migrant workers with the nearest Employment Office. The previous employers have to notify Employment Office about migrant workers quit as well.

The identification of migrant workers (such as similar name/surname) is never mistaken because their information from passports is recorded by experienced officers who can be distinguished and can search information from the source database. For illegal migrant workers, the Employment office does not have any information of them because only documented migrant workers will be stored. However, they will be registered later because of government announcement. Therefore, migrant workers who entering illegally must registered to change their status from illegal to legal, and receive their ID card, etc.

Any data from the Employment office can be exported with permission. The data will be kept for 5 years. When record migrant workers' data, the system will create new identification number. Identification card (Pink card) of a person who is not Thai which issued by the government office will begin with the number 00, meaning a person who does not have Thai nationality (Foreign labour number). For migrant workers in Phuket province who live in Mueang District, the number will start with 8301. Information about work permit days and expiration is written on the back of the pink card. In COVID-19 situation, Phuket Provincial Employment Office is unable to issue identity cards for people who do not have Thai nationality in time. The office issues a specific book for recruitment purpose instead of Pink card. The pink card is like an identification card. It contains general information such as first name, last name, address, etc. And work permit card is used for showed permission to work. It contains information about name, position, place of work, etc.

The procedure of hiring migrant workers without going outside the country

1. The employers operate by themselves or let their parent, sibling handle the case. For organisations, they can have authorities act on their behalf. The employers must pay a security deposit 1,000 Baht for one migrant worker. It cannot be paid more than 100,000 Baht per case.

2. Employer hires the person who granted permission to bring migrant workers to work in the country. That person will act on migrant worker's behalf. He/she will present the work permit card and the last month's social security payment to the Employment officer for examination.

The procedure of applying for work permit

Step 1: Employer download form in website: [www.doe.go.th](http://www.doe.go.th) or receive form paper at Phuket Provincial Employment Office.

- 1.1 Request migrant worker form.

1.2 Request to stay in the kingdom form.

1.3 Application concerning work permit of an alien who is permitted to enter into the Kingdom under the law on immigration according to the Memorandum Of Understanding on cooperation in the employment of workers between government of the Kingdom of Thailand and other national government.

1.4 Information of migrant worker form.

1.5 Protocol for employer. Employers prepare all migrant worker's documents (Passport, Work permit, Visa).

Step 2: Employers submit all document to the Employment office.

2.1 Officer check migrant worker's information in e-Work Permit database.

2.2 Issuing the invoice.

2.3 Printing name list for 5 copies (Employer, the Employment office, Provincial Public Health Office, Immigration Bureau and Department of Provincial Administration).

2.4 Registrar sign his/her name in name list with stamp.

Step 3: Employer contacts hospital for migrant workers to do health check-up and asks for the price of health check-up.

Step 4: Employer pays at Counter Service by paying separately for 10 Baht each.

Step 5: Employer takes migrant worker for health check-up at hospital.

Step 6: Employer takes migrant worker to Immigration Bureau for Visa.

Step 7: Employer make an appointment with the Employment office.

Step 8: At the Employment office,

8.1 Employer submits application concerning work permit of an alien who is permitted to enter into the Kingdom under the law on immigration according to the Memorandum Of Understanding on cooperation in the employment of workers between government of the Kingdom of Thailand and other national government.

8.2 Officer records migrant worker's result of medical examination and visa.

8.3 Printing Request form for employer.

Step 9: Employer takes migrant worker to register identification card at Department of Provincial Administration with these documents;

9.1 Request form

9.2 Identification card (the previous one, if you have)

9.3 Passport

9.4 Proof of payment (receipt)

9.5 Copy of social security card

9.6 Copy of healthcare insurance

The number of migrant workers with work permit which showed as the table below,

District	Number	Myanmar		Lao		Cambodia		Vietnam	
		Male	Female	Male	Female	Male	Female	Male	Female
Phuket Muang	37,109	21,995	14,532	163	231	112	66	7	3
Thalang	12,988	7,944	4,653	139	129	75	48	0	0
Kathu	10,071	5,589	4,361	52	35	21	13	0	0
<b>Total</b>	60,168	35,528	23,546	354	395	208	127	7	3
		59,074		749		335		10	

**Table 1. The number of migrant workers with work permit (updated in March 25, 2022)**



**Picture 3. Meeting with Phuket Provincial Employment Office**

Phuket Provincial Administration Office manages the migrants' work of 3 nationalities (Cambodia, Laos and Myanmar) to support and control the COVID-19 endemic as follows;

1. Migrants of 3 nationalities (Cambodia, Laos and Myanmar) who live and work in the Kingdom without a work permit when an employer comes to apply for a work permit on behalf of an alien along with documents or evidence are complete. In addition, the registrar will issue work permits to migrant workers until February 13, 2023, allowing migrants to work until that day. After that, the migrant must have health insurance and go to get health check and Personal Identity's Data Collection



for migrant worker by Biometric within March 31, 2022 in order to be processed for a Visa stamp on the passport and permission to stay in the Kingdom temporarily by August 1, 2022.

**The implementation of the relevant organization is following;**

**Ministry of Interior**

- Permits migrants are allowed work permits by the Department of Labour to work in the Kingdom as a special case until August 1, 2022 for requests for a Visa stamp on the passport and permission to temporarily stay in the Kingdom.

- Permits migrants to stay in the Kingdom temporarily until February 13, 2023. Get a visa stamp on your passport from the immigration office allowing you to stay in the Kingdom temporarily until August 1, 2022. By August 1, 2022, the migrant must be self-managed in order to obtain a passport or a document in lieu of a passport.

- Migrants can work anywhere in the Kingdom as long as it is the employer's place of business. Displacement, on the other hand, must be conducted in compliance with each province's and Bangkok's disease control guidelines.

**Ministry of Labour**

- To offer businesses and migrants with advice on the implementation of public health measures by visiting construction sites, factories, and workplaces.

- When officers proceeded to investigate the construction site, factories, and workplaces, officers detected migrants working without a permit in the Kingdom. Employers submit documents or evidence indicated in the request form, as well as payment of the application fee and work permit costs, to apply for work permits on behalf of migrants. When the employer verifies that the request for the work permit on behalf of a migrant includes valid and complete documents or evidence Until February 13, 2020, the registrar must issue work permits to migrants in accordance with the Department of Employment's criteria.

**Ministry of Public Health and Medical Service Department**

- Conducting a prohibited disease assessment in compliance with ministerial regulations governing the qualifications and prohibited features of migrants requesting employment permits.

- Sell health insurance to migrants who work with companies that do not on the Social Security Fund and migrants who are intermediaries entering the social security system. Must be purchasing health insurance as prescribed by the Ministry of Public Health, with the exception of migrants who have intermediary to entering the social security system and passed the forbidden disease examination and have purchased health insurance with an

insurance company for a period of four months, with the rate of insurance premiums varying by an insurance company.

### **Immigration Office**

- Personal Identity's Data Collection For a migrant worker at Immigration Office within March 31, 2022.

- Get a visa stamp on your passport from the immigration office allowing you to stay in the Kingdom temporarily until August 1, 2022.

### **Department of Provincial Administration and Bangkok**

- Civil registration records are stored or revised in accordance with civil registration legislation at the Bangkok District Office, the registration administration bureau, or another location approved by the Department of Provincial Administration.

Furthermore, from February 15, 2022 to September 30, 2022, Phuket province will provide service for storing or revising civil registration records and non-Thai identification cards for three nationalities (Cambodia, Laos, and Myanmar) at the bureau of registration administration section 8 Phuket province.

### What is a Pink ID Card (non-Thai identification cards)?

This pretty little card is an official form of identification for non-Thai nationals living in Thailand long term. Those with permanent residency, and long-stay expats (O visa, etc) are eligible. The card also provides a form of ID for stateless persons.

### Required Documents

The list of documents that migrant will need to take with them to a local district office, known as a district office.

1. Passport (with visa inside): You'll need copies of the photo and visa page, which you'll have to sign.

2. Work permit

3. House registration book

4. Marriage certificate

5. Permanent residency books (if it applies)

6. Birth certificate of Thai children (if you have any)

7. The result of testing COVID-19 and negative result is necessary.

Please note that this list represents the standard requirements; however, your local district office may request additional documentation.

The benefits of such a card are that it can be used as a form of identification while flying domestically in the kingdom of Thailand, to check into (some) hotels, and to open bank accounts at some banks (some bank branches will only accept a passport). Furthermore, it is easy to carry a form of identification, and providing the holder with special discounts when visiting national parks and other tourist attractions where prices for foreigners are considerably higher than the prices for Thai nationals.

#### How to apply non-Thai identification cards

1. Submit a list of names for permission to work at the employment office
2. Personal Identity's Data Collection For migrant worker and visa stamp at immigration office
3. Health check
  - Testing COVID-19
  - Six prohibited diseases are Leprosy, Tuberculosis, Drug addiction, Alcoholism, Elephantiasis and 3rd degree Syphilis (pregnancy for women)
4. Migrants submit a medical certificate at the employment office
5. Make a non-Thai identification card (pink card) at the Regional Registration Administration Center, Phuket Branch (Thalang District Administrative Office).
  - Check document
  - Record information (ID number, employer information and health information)
  - Photograph and fingerprints
  - Complete document น.ต 2/1 or น.ต 2/2 and receipts
  - Check document
  - Signature by migrant/follower and registrar
  - The renewal fee is 60 Baht.
  - Receive non-Thai identification card (pink card)

In conclusion, the pink ID card may be an easy form of identification to obtain, but as of right now, it does not provide the holder with any substantial benefits. In the future, the card may grant the holder certain rights that non-holders do not possess, but as of now, those benefits are limited to those mentioned above.

## How to Apply non-Thai identification cards

1. Check document and record information



2. Photograph



3. fingerprints



## How to Apply non-Thai identification cards (2)

4. Check all document before signed by registrar and receive payment



5. Check document again and finally issue a non-Thai identification card (pink card)



Picture 4. The process of making non-Thai identification card (pink card) at Phuket Provincial Administration Office

Ref. (PP) AT589786 บัตรประจำตัวคนซึ่งไม่มีสัญชาติไทย  
NON THAI IDENTIFICATION CARD  
เมียนมา(Myanmar)  
00 1005 100019 9

ชื่อ นายทศสอน คำวงศ์  
Name Mr.Todsob Tangdao  
เกิดวันที่ 10 ม.ค. 2550  
Date of Birth 10 Jan. 2007

ที่อยู่ 15/99 หมู่ 1 Address  
ต.คลองหนึ่ง อ.คลองหลวง จ.ปทุมธานี

วันที่ออก 1 Apr. 2016 31 มี.ค. 2560 31 Mar. 2024  
วันหมดอายุ Date of Issue Date of Expiry

นายทศสอน คำวงศ์  
ผู้รับสมัครยื่นขอขอ

ประเภทการทำงาน  
ชื่อสถานประกอบการ/นายจ้าง บริษัท โกลด์ พลัส จากัด  
ที่ตั้ง/ที่อยู่บางรัง 176 หมู่ 11  
ต.เกาะหลัก อ.เมืองประจวบคีรีขันธ์ จ.ประจวบคีรีขันธ์  
สถานที่ทำงาน 176 หมู่ 11  
ต.เกาะหลัก อ.เมืองประจวบคีรีขันธ์ จ.ประจวบคีรีขันธ์

ประเภทงาน Type of work  
Labour (make electronic)  
กรมกร ( มีผลหลังจากทำขึ้นแล้วเท่านั้นเด็กทรอนิกส์ )

อนุญาตทำงานถึง 31 มี.ค. 2563 Date of permit to work

Date of permit to stay  
สถานพยาบาลประจำตัวคนซึ่งไม่มีสัญชาติไทย 11 มี.ค. 2563  
ชื่อสถานพยาบาล (ประเทศไทย) บริษัท อ.ค. 2563  
ชื่อสถานพยาบาล (ต่างประเทศ) บริษัท อ.ค. 2563  
ชื่อสถานพยาบาล (ชื่อภาษาไทย) บริษัท อ.ค. 2563  
ชื่อสถานพยาบาล (ชื่อภาษาอังกฤษ) บริษัท อ.ค. 2563

กรมการจัดหางาน  
กระทรวงแรงงาน  
DEPARTMENT OF EMPLOYMENT  
MINISTRY OF LABOUR



Picture 5. Pink card and work permit book

## **Phuket Provincial Fisheries Office**

### **Measures to control migrant workers working in fishing in the situation of a COVID-19 epidemic in Phuket province**

#### Commercial fishing boats in Phuket province

Strengthen controls over fishing ports, boats, and workers in the fishing industry. In Phuket, a total of 8 orders have been issued as of now.

For the harbour, it will close from 10 p.m. to 4 a.m., and migrants must be fully vaccinated against COVID-19. The work area will be divided into distinct proportions, and the owner shall test COVID-19 for 10% of workers every 10 days.

#### Ship owner

- Fishing boats arrive in Phuket province after departing from other regions. COVID-19 pandemic prevention and control measures are required. Workers aboard fishing boats, on the other hand, must have received COVID-19 vaccination or have a COVID-19 testing result that is negative within 7 days of arriving in Phuket province, or who have recovered from COVID within 90 days.

- Every 14 days, the ship-owner must test 10% of the workers for COVID-19.

Phuket fishery Inspection office is responsible for controlling and ensuring that fish and fishery products exported from Thailand are safe, Wholesome and met the standards and requirements of the importing countries. Its major tasks include:

1. Verifying that approved fish processing establishments are effectively implementing a quality management program based on Hazard Analysis and Critical Control Point (HACCP) and importing countries requirements.

2. Controlling the quality and safety of fishery products to meet the microbiological, chemical and physical standards.

3. Providing analytical services and ensuring the private related laboratories are reliable and accredited.

4. Issuing Health certificate for export fisheries products.

The procedure for alerting the ship when it arrives and departs is as follows:

1. By using the E-PIPO system, the ship owner must notify the ship when it arrives and departs before 24 - 1 hr. The information that must be notified are ship registration, fishing license, type of tools, name list of worker, date and time to entry and exit, name of the port to entry and exit, the objective for entry and exit and type of communication equipment.

2. Automatic system to notify of request arrivals and departures are status of a ship's registration, the status of ship permit, Shipmaster's certificate level, Mechanic and expiration date, the status of ship lock, fishing license status, vessel monitoring system (VMS), number of fishing days, return to docking time (not more than 30 days) and fishing port status.

3. Response system for sending consideration results to the E-PIPO system, where the ship owner will be notified when the response is ready to print the notification to board a fishing vessel.

4. In-out notification requests are sent by the E-PIPO system. To analyse and assess the risk level of fishing vessels.

5. The Risk Vessel Assessment System is designed to identify fishing vessels that require inspection and notify the PIPO Center's staff.

6. The Fishing Info System is used by the FMC Center to send targets of fishing boats found in suspicious behavior to the PIPO Center's staff.

7. PIPO center's staff will check the fishing boat by doing the following;

- Check the fishing boat
- Check fishing tools
- check the crew and worker
- Interview
- check document
- Check the species and quantity of fish
- Check Logbook

8. Fishing boats are being inspected by officers. To the chief of the inspection team, report the results of the ship assessment. And submit the results of the ship inspection to the PIPO Center's director.

9. The system is recorded, and the generation of reports in accordance with the system's requirements. Have competent officials in the field of work perform an inspection and prosecute according to the applicable powers and responsibilities in the situation that a violation is discovered.



**Picture 6. Meeting with Phuket Provincial Fisheries Officers**

### **Phuket Immigration Bureau**

The immigration office is a mission to inspect people and vehicles that traveling in and out of the Kingdom. The immigration office likes the door of the country including providing services to foreigners while residing. Thailand shares a border with 4 neighboring countries, with the Kingdom of Cambodia at 798 km, Lao Democratic Republic at 1,810 km, and Malaysia at 547 km. Immigration offices are located in 68 provinces, with 118 lanes for land, water and air that people use to travel across the border. Immigration officials inspected 116,665,228 persons entering and leaving the Kingdom (Thai 30,986,314 persons and foreigners 85,678,974 persons).

#### General Information

1. Generally, a foreign citizen who wishes to enter the Kingdom of Thailand is required to obtain a visa from a Royal Thai Embassy or a Royal Thai Consulate-General. However, nationals of certain countries do not require a visa if they meet visa exemption requirements as follows:

(1) they are nationals of countries which are exempted from visa requirements when entering Thailand for tourism purposes. Such nationals will be permitted to stay in the Kingdom for a period of not exceeding 30 days.

(2) they are nationals of countries which hold bilateral agreements with Thailand on the exemption of visa requirements.

2. Nationals of certain countries may apply for visa upon arrival in Thailand. Travelers with this type of visa are permitted to enter and stay in Thailand for a period of not exceeding 15 days.

3. Travellers traveling from/through countries that have been declared Yellow Fever Infected Areas must acquire an International Health Certificate verifying the receiving of a Yellow Fever vaccination.

4. Nationals of certain countries are required to apply for a visa only at the Royal Thai Embassy or the Royal Thai Consulate-General in the applicant's country of residence, or at the Royal Thai Embassy which has jurisdiction over his or her country of residence. Travellers are advised to enquire about authorised office for visa issuance at any Royal Thai Embassy or Royal Thai Consulate-General before departure.

5. To apply for a visa, a foreigner must possess a valid passport or travel document that is recognised by the Royal Thai Government and comply with the conditions set forth in the Immigration Act of Thailand B.E.2522 (1979) and its relevant regulations. In addition, the visa applicant must be outside of Thailand at the time of application. The applicant will be issued with a type of visa in accordance to his or her purpose of visit.

6. In general, applicants are required to apply for a visa in person. However, Royal Thai Embassies and Royal Thai Consulates-General in some countries and in some cases may also accept applications sent through representatives, authorised travel agencies or by post.

7. Please note that the period of visa validity is different from the period of stay. Visa validity is the period during which a visa can be used to enter Thailand. In general, the validity of a visa is 3 months, but in some cases, visas may be issued to be valid for 6 months, 1 year or 3 years. The validity of a visa is granted with discretion by the Royal Thai Embassy or Royal Thai Consulate-General and is displayed on the visa sticker.

8. On the other hand, the period of stay is granted by an immigration officer upon arrival at the port of entry and in accordance with the type of visa. For example, the period of stay for a transit visa is not exceeding 30 days, for a tourist visa is not exceeding 60 days and for a non-immigrant visa is not exceeding 90 days from the arrival date. The period of stay granted by the immigration officer is displayed on the arrival stamp.

9. Foreigners entering Thailand are not permitted to work, regardless of their types of visa, unless they are granted a work permit. Those who intend to work in Thailand must hold the correct type of visa to be eligible to apply for a work permit.

10. Royal Thai Embassies and Royal Thai Consulates-General have the authority to issue visas to foreigners for travel to Thailand. The authority to permit entry and stay in Thailand, however, is with the immigration officers. In some cases, the immigration officer may not permit foreigner holding a valid visa entry into Thailand should the immigration officer find reason to believe that he or she falls into the category of aliens prohibited from entering Thailand under the Immigration Act B.E. 2522 (1979).



Royal Thai Embassies and Royal Thai Consulates-General may issue the following types of visas: Transit Visa, Tourist Visa, Non-Immigrant Visa, Diplomatic Visa, Official Visa and Courtesy Visa.

#### **THAI ENTRY PERMIT - INITIAL PERMIT**

An initial entry permit is a bluish rectangular ink stamp paced into your passport by an Immigration officer of the Royal Thai Police, at an entry point into Thailand. It can normally be issued for 15, 30, 60, or 90 days, depending on the type of visa that was in your passport when you entered Thailand.

#### **THAI ENTRY PERMIT - UNDER CONSIDERATION STAMP**

If you apply for a long-term extension of your entry permit, you will normally be issued a purple or bluish-green ink "Under Consideration" stamp, stating that your "Application for extension of stay is under consideration". It is normally issued for 30 days. It has the date by which your passport must be returned to Immigration, and also the date of issue, with both dates normally machine stamped

#### **THAI ENTRY PERMIT - LONG-TERM EXTENSION**

Once you receive an entry permit extension, you will receive a blue-ink stamp that says "Extension of stay granted until DATE" with a machine stamped expiration date, an issue date. There is also a hand-written Immigration file number for your case.

#### **RE-ENTRY PERMIT**

For any entry permit, in the event that you will exit Thailand before the expiration date of your entry permit, and you wish to reenter with that entry permit still remaining valid, you must obtain a reentry permit from an Immigration office. A re-entry permit is a large blue or black ink-stamp that is placed into your passport. It has a "Valid Until" Date that is normally machine-stamped, and which matches the expiration date of your underlying entry permit, the number of reentries that the stamp is valid for: Single or Multiple, and the date of issue.



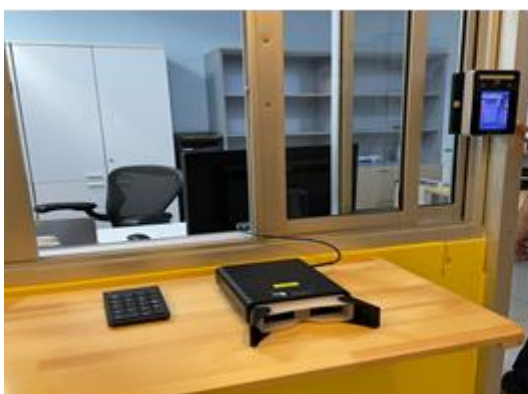
**Picture 7. Meeting with Phuket Immigration Bureau**

2. Creating official Handbook of the Migrant Health Volunteer Curriculum Training (COVID-19).



**Picture 8. Handbook of the Migrant Health Volunteer Training (COVID-19)**

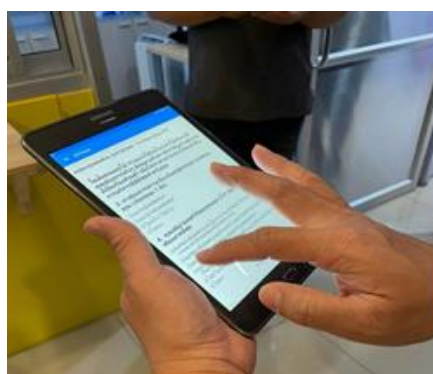
3. Setting criteria to select the migrant health volunteers in the community and recruiting Migrant Health Volunteers. All subjects will be asked for informed consent prior to data collection.
4. Creating Redcap application registration system (Biometrics/palm detection is used to recognize individuals, instead of reveal their personal information) and setting a database for bioinformatics (Information technology).



**Picture 9. BMT-20 binoculars type dual iris recognition**



**Picture 10. Test the scan**



**Picture 11. Fill information by yourself**

5. Registering Migrant Health Volunteers in the program and creating the Migrant Health Volunteers network via social networking sites e.g., Facebook and Line. Test application and develop record system and data management system to record MHVs' and migrants' information

The screenshot shows a REDCAP form with the following sections:

- Name - Surname:** Fields for first name and last name.
- Date of Birth:** Field for birth date with a calendar icon and 'Today' button.
- Sex:** Radio buttons for Female and Male.
- Age:** Field for age and a dropdown for unit (years, months, days).
- Passport Number:** Field for passport number.
- ID No. from IRIS Scan:** Field for the IRIS scan ID number, highlighted with a red box.
- Phone No.:** Field for phone number.
- Address (House No., Alley, Road):** Fields for address details.
- Affiliation:** Field for affiliation.
- Date of Training:** Field for training date with a calendar icon and 'Today' button.
- Name of Employer or Company:** Field for employer name.
- Address (House No., Alley, Road):** Fields for employer address details.
- Phone No.:** Field for employer phone number.

### ACTIVITY 1: IRIS SCAN AND COLLECT MHVs INFORMATION

#### How to COLLECT MHVs INFORMATION by REDCAP system

The data record system for migrant health volunteers is composed of 3 parts: migrant health volunteer data, address, affiliation, and employer details. The data recorder must completely fill out the form. Only fill in the **ID number** must from the **IRIS Scanner system**, and then press the "Submit" button to finish the process.

Picture 12. Record form of migrant volunteer information in REDCAP database

6. Setting Migrant health volunteers' community to improving the health of their own community. This program implementation and evaluation by MHVs.



Picture 13. Migrant health volunteers group picture

7. Training MHVs for healthcare guidelines during the COVID-19 situation, hold the meeting at 4 places in 3 districts for their convenience and reduce the size of public gatherings.

## ACTIVITIES FOR TRAINING the MHVs



The following are the guidelines for the activity "To educate, attitudes, and practice guidelines (Knowledge, Attitudes, and Practices (KAP)) on the COVID-19 and others related"

**Activity 1: IRIS SCAN & Migrant Health Volunteers' register**

**Migrant health volunteer data record system (Migrant Health Volunteers' register)**

a. Login

Migrant health volunteer data record system is the system that can be accessed from any web browser, including Chrome, Microsoft Edge, and Firefox.

Users can access by <https://redcap.link/982w2qa9>




**Picture 14. Login the Migrant health volunteer data record system by**

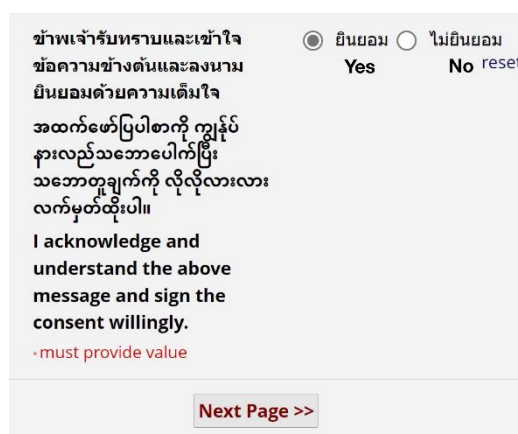
<https://redcap.link/982w2qa9>

The first page of the system will display information and details of the project, user can select the language (Thai/ Myanmar/English). After that, scroll down to the bottom of the screen and press "Yes" if you agree to the terms and conditions of the recording agreement, or press "No" if the terms and conditions of the recording agreement are not accepted.





Picture 15. The First page of the system, you can choose language (Thai/ Myanmar/English)



Picture 16. To accept the terms and conditions of the data recording agreement, press the button

Then press “Next page” to enter the migrant health volunteer data record

b. Migrant health volunteer data record system

Migrant health volunteer data record system consists of 4 parts: data of migrant health volunteers, address, affiliation, and employer information. The data recorder must fill in the form completely. Must fill out information from the IRIS Scanner system only and when the data is complete, press the “Submit” for completely.

**Activity 2: SELF-COVID-19 SCREENING**

What is a thermometer and How to use a digital thermometer?

A digital thermometer can be used in three different ways. These include:

Oral: For this method, the thermometer is placed under the tongue. This method is used for adults and children 4 and over who are able to hold the thermometer in their mouths.

Rectal: For this method, the thermometer is inserted gently into the rectum. This is mostly done in babies but can use in children up to 3 years of age. You can take rectal

temperatures in children older than 3 years, but it might be difficult to keep them as still as they need to stay.

Axillary: For this method, the thermometer is placed in the armpit of young children or adults whose temperature can't safely be done orally. This method is not as accurate as oral or rectal but can be used as a quick first check. You can follow this with oral or rectal reading.

Criteria of screening symptoms of coronavirus disease 2019 can be classified into 3 groups as follows;

Group 1: Green group - Patients will have a sore throat, no smell, no taste, cough/snot, rash, diarrhea, red eyes, body temperature more than 37.5°C. Patients will treat at home (Home Isolation) and (meet, give away, end) or if symptoms change to the yellow/red group should be refer to a hospital that can take care of you (can use UCEP Plus right).

Group 2: Yellow group - General patients will have chest tightness, rapid breathing, difficulty breathing, shortness of breath, pneumonia, coughing and tiredness, fatigue, diarrhea more than 3 times a day, and complications from underlying diseases.

Group 3: Red group - The patient will have symptoms of severe fatigue. Slurred speech, chest tightness, chest pain. Severe pneumonia, fatigue, slow reflexes, unconsciousness, shock/coma, lethargy, fever over 39°C and have low levels of oxygen in their blood lower than 94.

#### What is a pulse oximeter?

A pulse oximeter measures how much oxygen is in someone's blood. It is a small device that clips onto a finger, or another part of the body. They are used often in hospitals and clinics and can be bought to use at home.

A normal level of oxygen is usually 95% or higher. Some people with chronic lung disease or sleep apnea can have normal levels around 90%. The "SpO2" reading on a pulse oximeter shows the percentage of oxygen in someone's blood.

If your home SpO2 reading is lower than 95%, call your health care provider.

#### **Activity 3: HOW TO SELF-TESTING COVID-19 BY ATK**

Rapid Antigen Test tests for the presence of the virus through nose swab to find the protein strand of Coronavirus. Antigen Test is a "quick screening" before thorough lab test or RT-PCR Test, and can tell you whether there are active viruses in your body. In order to use the Antigen Test Kit correctly, you must learn how to use the kit and read instructions on the box carefully. You must also know how to dispose of the kit safely after using it to avoid

spreading the virus to others. Find out how to collect nasal sample with the Antigen Test Kit (ATK) as following:

1. Wash your hands thoroughly.
2. Prepare the vial of the lysis buffer included in the kit.
3. Take the swab stick out and gently push it into your nose according to the depth suggested on the swab stick. Turn 3-4 times, then let it soak there for about 3 seconds.
4. Put the swab stick with the sample into the vial of lysis buffer. Turn the stick around in the vial 5 times.
5. Suck the liquid from the vial, drop 3-4 drops onto the hole of the test kit.
6. Wait 30 minutes.
7. Check the results. 1 line means no virus detected (NEGATIVE), 2 lines mean virus detected (POSITIVE)
8. If the result is positive, you must confirm the infection with a RT-PCR Test

#### **Activity 4: Self-care and ways to protect yourself after infected COVID-19 (Home Isolation)**

When found to be infected with COVID-19 and is still waiting to enter the medical service system, should follow the instructions as follows;

1. Do not leave the house and do not pay anyone a visit at their house for prevent the infection from spreading to others in the nearby,
2. Sharing meals with others is not a great thing. You should consume enough and complete meals to provide energy,
3. Separate rooms and personal items from the others (Should stay as far away from others as possible if unable to separate),
3. Always wear mask,
4. When have symptom should be symptomatic treatment,
5. If symptoms are severe, call 1669 for emergency medical services.

#### 7 steps of hand washing

Step 0: Wet your hands and apply soap - For a start, use clean water to wet your hands. Take enough soap to cover your entire hands and wrists.

Note: Avoid washing your hands with hot water as it may dry out your skin

Step 1: Rub your palms together - Now you're ready to begin scrubbing! Put your palms together and rub in a circular motion.

Step 2: Rub the back of each hand with interlaced fingers - Next, place your right palm over the back of your left hand and rub with your fingers interlaced. Once you're done, do the same with your left palm over the back of your right hand.

Step 3: Rub your hands together with interlaced fingers - Clean in between your fingers by rubbing your palms together with fingers interlaced.

Step 4: Rub the back of your fingers - It's now time to clean the back of your fingers! Clench your fingers and interlock them with one another. Rub them against your palms and switch over once you're done with one hand.

Step 5: Rub your thumbs - Clean around your thumb by wrapping one hand over the other thumb and rubbing in a rotational motion. You can do the same for the other side once you're done.

Step 6: Rub the tips of your fingers - Finally, rub your fingertips on the palm of the opposite hand in a circular motion. Swap over to do the same for your other hand.

Step 7: Rinse and dry your hands - The last step is to rinse your hands thoroughly with clean water and dry them.

If you happen to be in a place where soap and water aren't readily available you can use an alcohol-based hand sanitiser to disinfect your hands.

According to the Ministry of Health (MOH), alcohol-based hand sanitizers are great for reducing the number of microorganisms on your hands. They can also prevent the spread of germs, reducing your likelihood of falling sick and COVID-19.

### **Activity 5: THINGS YOU SHOULD TO KNOW ABOUT COVID-19**

#### What is the origin of COVID-19?

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a novel severe acute respiratory syndrome coronavirus. It was first isolated from three people with pneumonia connected to the cluster of acute respiratory illness cases in Wuhan. All structural features of the novel SARS-CoV-2 virus particle occur in related coronaviruses in nature.

Symptoms of COVID-19 are variable, but often include fever, cough, headache, fatigue, breathing difficulties, loss of smell, and loss of taste. Symptoms may begin one to fourteen days after exposure to the virus. At least a third of people who are infected do not develop noticeable symptoms. Of those people who develop symptoms noticeable enough to be classed as patients, most (81%) develop mild to moderate symptoms (up to mild pneumonia), while 14% develop severe symptoms (dyspnea, hypoxia, or more than 50% lung involvement on imaging), and 5% develop critical symptoms (respiratory failure, shock, or multiorgan dysfunction). Older people



are at a higher risk of developing severe symptoms. Some people continue to experience a range of effects (long COVID) for months after recovery, and damage to organs has been observed. Multi-year studies are underway to further investigate the long-term effects of the disease.

COVID-19 transmits when people breathe in air contaminated by droplets and small airborne particles containing the virus. The risk of breathing these in is highest when people are in close proximity, but they can be inhaled over longer distances, particularly indoors. Transmission can also occur if splashed or sprayed with contaminated fluids in the eyes, nose or mouth, and, rarely, via contaminated surfaces. People remain contagious for up to 20 days, and can spread the virus even if they do not develop symptoms.

Several COVID-19 testing methods have been developed to diagnose the disease. The standard diagnostic method is by detection of the virus's nucleic acid by real-time reverse transcription polymerase chain reaction (rRT-PCR), transcription-mediated amplification (TMA), or by reverse transcription loop-mediated isothermal amplification (RT-LAMP) from a nasopharyngeal swab.

Long COVID is a term used to describe the effects of COVID-19 that persist for weeks or months beyond the initial illness. Long COVID can typically develop particularly in patients who have had COVID-19 symptoms for 4-12 weeks, or longer. In fact, long COVID symptoms usually last more than four weeks from initial infection, though for some people the symptoms can persist for more than 12 weeks. Long COVID results in a broad range of manifestations, affecting different organs and systems in the body. Statistic reports point out that women are more prone to long COVID-19 than men. The condition seems more likely in COVID-19 patients who have developed lung infections with certain underlying diseases. Pneumonia as the result of lung infections can cause long-standing damage to the tiny air sacs (alveoli) in the lungs, resulting in scar tissue or fibrosis that substantially impair lung functions and lead to long-term breathing problems and other related conditions. However, the severity and duration of long COVID is broadly different, depending individual's response and overall health status.

#### **Activity 6: MIGRANT WORKER'S HEALTH BENEFIT**

Criteria for medical examination and health insurance for migrant workers

- To the service unit to get the rights registered for Daily health checks and sales of health insurance cards, or as authorized by the service department's implementation plan.
- Medical certificate for health insurance valid for 1 year from the date of health examination.

- The health insurance card is valid for 1 year from the date of purchase of a health insurance card, the rate is 2,100 baht, a health check-up fee is 500 baht per person, and a health insurance fee is 1,600 baht per person.

When sick. Where migrant goes to get the service?

- In the case of emergency, migrant workers' health insurance requires them to seek medical treatment only at a registered hospital. If you receive services from a non-participating medical system, you must pay for services yourself.

- Medical service charges will be reimbursed in accordance with the Ministry of Public Health's medical service fee recovery criteria.

Finally, the migrant health volunteer participates throughout every as well as every activity. Overall knowledge, attitude, and practices of migrant health volunteers have strengthened by 17.32 %. The pre-test result for 164 migrant health volunteers was 68.21%, while the post-test result for 164 migrant health volunteers was 85.53%. As a result, the activity "To educate, attitudes, and practice guidelines (Knowledge, Attitude, and Practices (KAP)) about the COVID-19 and others related" had a positive outcome for migrant health volunteers, and the researcher believed that migrant health volunteers could apply the knowledge, attitude, and practices in their daily lives and could recommend one another to others.

**The training date is May 23-27, 2022**



**Picture 17. Training at the Phuket Muang District Public Health Office**





**Picture 18. Training at Kathu Districts Public Health Office**



**Picture 19. Training at 2 worker Camps of Thalang Districts  
(Natthapong Tracter worker camp and The Anasiri project worker camp)**



The training date is July 9-11, 2022



Picture 20. Training at Fish Marketing Organization

The training date is July 19-22, 2022



Picture 21. Training at Super Cheap and Thalang district Public Health Office

Shirt



Certificate and ID card with iris scan barcode



COVID-19 guideline for MHVs



Set of mask/ alcohol gel/ ATK/ Guideline



Documents (such as information sheet and copy of consent form) and compensation.

Picture 22. Set of mask/ alcohol gel/ ATK/ Guideline, Certificate and ID card with iris scan barcode, Shirt, Documents (such as information sheet and copy of consent form) and compensation



All participants receive certificate after the training. They also got migrant health volunteer shirt, ID card with iris scan barcode, set of mask/ alcohol gel/ ATK, documents (such as COVID-19 guideline for migrant health volunteers (MHVs), information sheet and copy of consent form) and compensation.

8. Inventing health status and determinants of health survey form to collecting data and information in migrant population. Name and ID will not be collected (Anonymous). The first implementation as the reason for creating registry is to survey of coverage of COVID vaccination in migrant. Complete the questionnaire survey for COVID-19 (KAP)



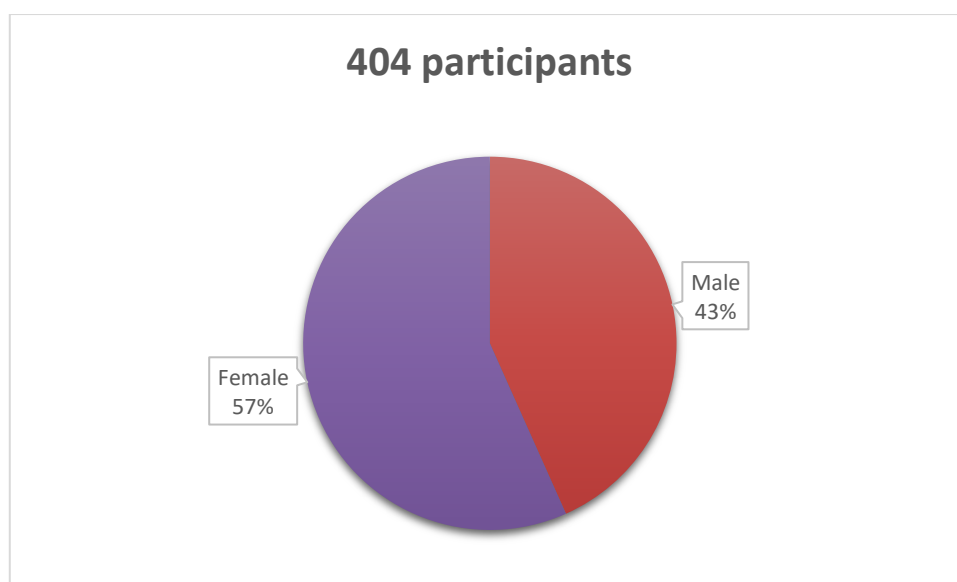
Picture 23. Doing KAP survey

9. Writing two manuscripts for publication.

## Accomplishments

### 1. Training migrant health volunteers and establish their network. The results of the training are described as below;

According to **404** migrant health volunteers in training, 56.68% were females, 43.32% were males. The ratio of females to males was 2:1. Most participants aged between 40-59 years (41.58%) with average age at 34.25. Most of the participants were Burmese (77.97%), living in Muang Phuket District (77.72%) (Figure 1 and Table 1).



**Figure 1. Percentage of males and females among participants in 3 districts (Muang District, Thalang District and Kathu District) in Phuket Province**

**Table 1. Demographic characteristics of participants (n=404)**

General Information	N	%
<b>Gender</b>		
Male	229	57
Female	175	43
<b>Age</b>		
20 – 39 year olds	145	35.89
40 – 59 year olds	168	41.58
> 60 year olds	91	22.52
Mean = 34.25 year olds		
<b>Nationality</b>		
Burmese	315	77.97

<b>General Information</b>	<b>N</b>	<b>%</b>
Cambodia	74	18.31
Lao	15	3.71
<b>District</b>		
Kathu	75	18.56
Thalang	15	3.71
Muang	314	77.72


### **Knowledge of health care in regards to COVID-19 among migrant health volunteers**

Both before and after the training, it was found that the knowledge that the volunteers answered the least correctly was item 3, practice to prevent contracting COVID-19 by eating and sharing food, followed by item 4, Long COVID condition. And item 5, have symptoms after infection for more than 2-3 months with chest pain, palpitations, numbness, weakness in the limbs, should seek for medical advice.

The most correct answer was 90.84% from item 8, infectious waste means tissue paper, masks, antigen test kits, food containers and plastic cutlery. Followed by item 1 (88.37%), the test for COVID-19 by ATK, users must blow a snot before testing, wash your hands thoroughly, protrude your nose and wait for the results to be read for about 5 minutes and item 2, positive result is infected with COVID-19, a red bar will appear on both the test strip (T) and the control strip (C). Followed by item 7 (85.40%), hands must be cleaned before putting on the mask, pull the mask below until it reaches under the chin. and press the top metal rod to attach to the face.

Other issues that can be answered with high score were item 10 (81.68%), guidelines for preventing and reducing the spread of COVID-19 are social distancing, wearing a mask or cloth mask all the time when outside. Item 9 was 82.18% correct, fingertip oxygen value less than 90 was considered not dangerous. Item 6 was 84.41% correct, group 608 means people aged 60 years and over, people with diabetes or obesity, overweight > 90 kg. Item 9 was 82.18% correct, fingertip oxygen value less than 90 is considered not dangerous (Table 2).

**Table 2. Percentage of migrants' knowledge level about health care situation of COVID-19 during the training session (N=404).**

Question	% for correct answer	
	Pre-test	Post-test
1. Testing for COVID-19 by ATK requires blowing your nose before testing. Wash your hands thoroughly, protrude your nose and wait for the results to be read for about 5 minutes.	84.90	88.35
2. Positive results for COVID-19 a red bar will appear. Both the test strip (T) and the control strip (C) are the same as in the COVID-19 picture.	72.77	88.37
		
3. Preventive measures against COVID-19 by eating and sharing food items.	32.43	46.29
4. COVID-19 patient condition Symptoms persist for more than 3 months and may have permanent effects on the body.	67.57	73.02
5. Having abnormal symptoms after being infected for more than 2-3 months, chest pain, palpitations, numbness, weakness in limbs, risk of COVID-19 and should see a doctor.	67.57	73.02
6. Group 608 refers to people aged 60 years and over, people with diabetes or obesity, weighing more than 90 kg.	64.11	84.41
7. To wear a mask, hands must be cleaned before putting on the mask. Pull the mask below until it reaches under the chin. Then, press the top metal rod to attach to the face.	64.04	85.40
8. Infectious waste means tissue paper, masks, antigen test kits, food containers and plastic cutlery.	85.89	90.84



9.	Fingertip oxygen levels below 90 are considered harmless.	64.85	82.18
10.	Practice guidelines to prevent and reduce the spread of COVID-19 is to keep distance and wear a mask or cloth mask at all times. when away from home	78.96	81.68

\* Correct answer received 1 point. Incorrect answer received 0 point.

When comparing the knowledge scores before and after receiving the training in health care knowledge in the situation of COVID-19 infection, the mean scores were 4.6 and 7.4 respectively. It was found that after the training, the trainees had higher knowledge than before. The training was statistically significant at  $p < 0.05$  (Table 3).

**Table 3. Mean and Standard Deviation of Migrant Health Volunteer Acquisition Score**

Knowledge toward COVID-19	N	$\bar{x}$	S.D.	t	Sig (1-tailed)
Before training	404	28.09	6.95	10.87*	0.001
After training	404	32.58	8.06		

**Conclusion:** From the study of knowledge and practice among migrant health volunteers in COVID-19 prevention and control, the study found that participants still did not understand how to prevent COVID-19 infection precisely. For example, they would not do social distancing during mealtime and isolation of individuals' items. Besides, there was still a lack of understanding that COVID-19 might cause a long-term illness (known as Long COVID). Patients with COVID-19 might have symptoms that continue for more than 3 months and might have permanent effects on the body and might have symptoms such as chest pain, palpitations, numbness, weakness in the limbs. These conditions should seek medical attention. Therefore, in case of protect migrants' health in COVID-19 situation, we should focus on providing health behaviors such as avoiding sharing meals together and understanding the long-term effects of being sick with COVID-19.

Migrant health volunteer networks played an important part to do disease prevention and control among migrants. Providing knowledge and practice about COVID-19 training for them, so that they could take care of themselves and their community. The findings revealed that communication should be carried out in both Thai and their mother language. The

training should limit the number of participants in each groups. Organizing suitable places and equipment for training, including the opportunity to ask questions during the training.

### **Recommendations for migrant health volunteers’ development**

- Public health organizations should take part as mentors to support the updated knowledge, trainings, guidelines on Diseases and Health Hazards. Especially the outbreak of emerging infectious diseases for migrant health volunteers continuously.
- Channels for risk communication and knowledge should be developed between public health organizations and migrant health volunteers. In order to creating a network to work together in surveillance, prevention and control of diseases among migrant in Phuket province. This could be the model for migrant health volunteer network in Thailand.

## **2. Survey of migrant workers’ knowledge, attitude and practice toward COVID-19 in Phuket, 2022.**

**Objective 1:** To describe key demographic characteristics, knowledge, attitudes, and behavior patterns around COVID-19 to inform evidence-based policies and programs.

**Demographic characteristics of participants:** There were **751** migrants participated in this survey. 53.9% of migrants were females, 46.1% were males. Most participants completed secondary school (33.2%) while only 1.1% had Master or Ph.D. degree. Their income is between 5,001-10,000 Baths (56.9%). Mostly, they were employed for wages full time (69.1%). 743 of participants were Burmese. They live in Muang Phuket District (78.1%). Most of them moving to Thailand because of work (86.3%). 653 migrants had work permits. Their job description were other (34.9%), merchant (19.0%) and Fishery industry (15.0%), respectively. (Table 4).

**Table 4. Demographic characteristics of participants (n=751)**

<b>General Information</b>	<b>N</b>	<b>%</b>
<b>Gender</b>		
Male	346	46.1
Female	405	53.9

<b>General Information</b>	<b>N</b>	<b>%</b>
<b>Education</b>		
No education	119	15.8
Primary school	224	29.8
Secondary school	249	33.2
High school	130	17.3
Bachelor	21	2.8
Master or Ph.D.	8	1.1
<b>Nationality</b>		
Burmese	743	98.9
Cambodia	4	0.5
Lao	3	0.4
Others	1	0.1
<b>Income</b>		
< 5,000 BTH	120	16.0
5,001 – 10,000 BTH	427	56.9
10,0001 – 15,000 BTH	186	24.8
15,001 – 20,000 BTH	18	2.4
<b>Job status</b>		
Employed for wages full time	519	69.1
Employed for wages part time	98	13.0
Unemployed and currently looking for work	45	6.0
Unemployed and not currently looking for work	34	4.5
Student	1	0.1
Retired	3	0.4
Old age or Unable to work	11	1.5
Other	40	5.3

<b>General Information</b>	<b>N</b>	<b>%</b>
<b>Amphoe</b>		
Maung	572	78.1
Kathu	91	12.4
Talang	69	9.4
<b>Reason moving to Thailand</b>		
Employment	648	86.3
With family	69	9.2
Political issue	9	1.2
Do not want to answer	25	3.3
<b>Work status</b>		
<b>Works permit (VISA)</b>		
Have	653	87.0
Not have	53	7.1
Do not want to answer	45	6.0
<b>Job description</b>		
Fishery industry	113	15.0
Agriculture field	34	4.5
Merchant	143	19.0
Factory worker	101	13.4
Hotel/Food/Tourism	98	13.0
other	262	34.9

**COVID-19 History:** Some of migrants had ever been contacted by someone who was conducting contact tracing for COVID-19 (63.8%). 53% of Migrants agreed to self-quarantine for 14 days if they were notified that they came into contact with someone who tested positive. However, the main barrier that made them unwilling to self-quarantine for 2 weeks was inadequate space to isolate (43.5%). 327 migrants tested for COVID-19. Mostly, it took 2 - 3 days for migrants to test for COVID-19 after the symptoms started (30%). They took nasal swab to detect infection of COVID-19 (84.7%). The testing result were negative for COVID-19 (75.2%), while 98 migrants were positive. Households of migrants that tested for COVID-19 were negative (74.2%), only 17.8% of them were positive for COVID-19. Most of migrants'

household tested positive for COVID-19 were Husband/ Wife/ Live in partner (8.9%). Also, their household has been hospitalized as a result of having COVID-19 were mostly husband/ wife/ live in partner (45.7%) while 11% of parent and child (son or daughter) were both hospitalized.

**Objective 2:** To establish baseline levels of KAP around COVID-19.

**Knowledge:** Migrants' knowledge toward COVID-19 were positive. 78.8% of them understood that COVID-19 could spread from person-to-person when people were in close contact with each other. 563 participants knew that person infected with COVID-19 could transmit the virus to others even if they did not have symptoms. They agreed that isolating people infected with COVID-19 was an effective way to reduce the spread of the virus (85.8%). Moreover, 76.6% of migrants perceived that older adults and those with chronic illness, such as heart or lung disease, are at increased risk of having serious COVID-19 symptoms.

**Attitudes:** Most of migrants agreed to wear a mask at indoor in public spaces (85.4%) and at outdoor in public spaces (83.2%). They accepted that it was important for everyone to practice physical distancing when they were indoor in public spaces (84.3%) and at outdoor in public spaces (83.5%) even if wearing a mask. Besides, they admitted cleaning and sanitizing doorknobs/handles, countertops and other surfaces to prevent the spread of COVID-19 (85.1%). 670 migrants agreed that it was important to wash your hands with soap and water for 20 seconds after they had been in a public places.

83.2% migrants had any health conditions that put them at risk for getting so sick from COVID-19. So, they might need to go to a health facility. If migrants had symptoms, 77.4% of them likely to get tested for COVID-19. Besides, they more likely to get tested for COVID-19 if they could easily get a Ministry of Health approved pill to reduce the chance that they would get really sick (60.9%).

Hospital was the best place for migrants to get tested and get treatment soon after symptoms started (59.4%). They mostly trusted doctor (84.0%), nurse (12.8%), and community healthcare worker (9.2%), respectively to receiving information about a new pill for COVID-19 approved by the Ministry of Health. However, migrants trusted traditional healer only 1.9%. They preferred to get the new pills from hospital (63.3%).

Top three of medicine that migrants would take for avoid getting very sick were a new pill that the Ministry of Health approved for COVID-19 (47.8%), Traditional or herbal medicine e.g., fah talai jone (23%), Vitamins (16.4%) and Favipiravir, fluvoxamine (13.2%). In additions, The chance of bad side effects is low (54.1%) and the new pill is cheap or free (16%) were the

main factors which encouraged migrants to take a new pill for COVID-19 approved by the Ministry of Health.

According to the survey, 710 participants were vaccinated for COVID-19. Only 15 migrants did not receive COVID-19 vaccine. The first dose of COVID-19 vaccine that migrants received most were Sinovac (73.3%) while 20.8% injected AstraZeneca. It was similar to the second dose that they received most. 65.9% of migrants did not have any concern about vaccine or preference. They also planned to get vaccine when a COVID-19 vaccine becomes available (83.1%). On the other hand, 34.1% of them concern about vaccine. They concern about side effects. Therefore, when a COVID-19 vaccine becomes available, 8.7% would not get vaccinated. Their main reason to not get the COVID-19 vaccine was concern over side effects and safety (52.7%).

### **Behavior**

In the last 3 months, migrants what change to their lifestyle or daily activities that they had made because of the COVID-19 pandemic mostly were wearing a face mask or covering (87.1%), Washing hands properly more frequently (56.9%), avoiding non-essential shopping (42.2%), avoiding crowded indoor places (35.2%), and cough/sneeze into a tissue and then wash hands with soap and water for 20 seconds more often (34%).

However, lifestyle or daily activities that they had less changed because of the COVID-19 pandemic were avoiding ride share (Grab) or taxis (84.7%), avoiding hospitals or health centers for essential services (pregnancy/ well child/ HIV treatment) (82.4%), avoiding public transportation (i.e. buses, trains, etc.) (81.2%), avoiding contact with family that do not live in your household outdoors (79.5%), avoiding hospitals or health centers for routine or preventative care (79.2%), and avoiding contact with friends indoors (76.3%) and outdoors (75.4%).

**Face Mask or Covering Use:** In the last month, Most of migrants wear a face mask to reduce the spread of COVID-19 (95.1%). 85.7% of them wear a face mask when in public spaces.

**Physical Distancing:** Most of Migrants try to maintain physical distance between yourself and persons who do not live in your household to prevent the spread of COVID-19 (89.7%). They always (all the time they were in public) did practice physical distancing when in indoor public spaces (75.7%). In the past 7 days, they had contact mostly with 1 – 5 persons that were not living in their household (56.2%).

**Self-isolation:** Since March 2020, 59.6% of migrants (practiced self-isolation (staying away from others, including household members) because they were diagnosed with or thought that they had COVID-19.

**Quarantine:** 48.4% of migrants never practiced quarantine (separating and restricting your movements) because they had been exposed to COVID-19 since March 2020. Nevertheless, 46.6% of them practiced quarantine. The reasons for them to practice quarantine (separating and restricting your movements) because they believed that they was was exposed to COVID-19 (48.3%), recent travel (18%) and their community had stayed at home order or lockdown (8.6%) respectively.

**Intention to Visit Locations, Business or Events:** The following businesses, locations, or events migrant would visit or attended in the next two weeks if they were operating at full capacity were restaurants with only indoor seating (76.4%), indoor food markets/stores (65.1%), outdoor food markets/stores (63.4%), restaurants with outdoor seating (61.1%), restaurants with only take away food (57.8%), indoor retail shops/shopping malls (55.3%), outdoor retail shops/markets (52.9%), indoor work spaces/office building (47.7%), parks and/or beaches (47%), and hospitals and/or health clinics (44.6%). Moreover, they indicated that they would wear a mask the entire time.

**Objective 3:** To assess and identify communication processes and sources commonly used to convey information on COVID-19 to inform development of context specific risk communication strategies information.

The primary sources of information about COVID-19 among migrants were Social media websites and apps (56.2%), Place of work (42.7%), Friends and family (39.8%), Online - global/international news (22.8%), and Radio-global/international news (19.6%). On the contrary, the sources that migrant less used were Online sources (blogs, non-social media and non-news sources) (8.7%), Television-local news (8.5%) and Religious leaders (7.6%).

**Objective 4:** To assess the economic and occupational disruption and the psychosocial impact including coping mechanism and resiliency and other effects of COVID-19 pandemic.

### **Mental Health**

**Traumatic Stress:** In the past 2 weeks, 5.7% of them had little interest or pleasure in doing things more than half the days, while 67.4% of migrant answered not at all. They had been bothered with feeling down, depressed or hopeless (8.8%). 23.4% of migrants did not want to answer to this question. However, 59.1% had not been bothered with feeling down, depressed or hopeless at all. Some migrant (6.7%) felt nervous, anxious or on edge more than

half the days and three point seven percent felt that way several days. They had not been able to stop or control worrying nearly every day (6.9%), nevertheless, 58.5% answered not at all.

### **Impact of COVID-19**

**Finances:** Since March 2020, 57.5% of migrants or their household experienced a loss of income. Mostly they prefer not to answer (44.1%). 35% of them got very little loss income (10 – 35%). Only 3.3% did a large loss of employment income (60 – 85%).

**Food Security:** In general, 30.9% were a little worried about not having enough food. While 349 migrants were not worried at all. Since March 2020, they never ran out of food (55.9%). Nonetheless, 14.9% of participants ran out of food a little more than before the pandemic, and they did not have a way to get more (14.9%). Migrants (19.4%) did cut the size of their meals or skip meals very little because there wasn't enough money for food for their household. Only 3.2% did cut the size of their meals a great extent. However, most of them (62.3%) did not cut the size of their meals or skip meals at all.

**Housing Security:** Most of migrants (74%) never moved their household permanently or temporarily because of the COVID-19 pandemic due to inability to pay for housing, to be closer to family, to have more space etc. However, 9.2% of them moved temporarily less than 3 months and 5.2% moved temporarily more than 3 months. A few of them (2.8%) moved permanently.

### **3. The overall accomplishment of this project**

In summary, we have a very good collaborative with all government provincial offices in Phuket. They have very good perspective to provide necessary data and helps for this project. The project addresses an important problem on migrants' health database and public health system to reduce the risks in migrants who are living in the South of Thailand. The results found that each government agencies have their own migrant's database such as immigration database, labor license database, and health database. Each database has their own format. The registered migrants' database from this project can be merge to current data if need or request by Ministry of Public Health (MOPH) or other organizations. It will be in the standard format by using iris scan which will generate unique identification number for each migrant.

The project has achieved enrollment number of migrant health volunteers as plan. These volunteers have been trained for COVID-19 disease. The project has recorded all lists and contact information of these migrant health volunteers and crate a database in cloud



system (using redcap program). From the data collection, the project has developed 2 manuscripts for publication. For financial perspective, the project could not spend the budget as plan due to the limit of activities by the pandemic of COVID-19. The project was limited by travel restriction and limited number of persons per meeting.

To strengthen the migrant's network, the project needs a continuation of activities in the study area. The main purpose of the second-year continuation will be strengthen the migrant's network. One technical issue found in this project is the price of biometric license (iris scan). The price is quite high and limit by one year license. The project plans to find the alternative biometric identification method on the second-year.

### **Results**

Results of this project were positive. We achieved and accomplished as we planned with good collaboration within local authorities in Phuket province. From the results, we learn to prepare activities in year 02 such as doing pre-training session for Burmese interpreters. Some of them were not familiar with medical terminology. Also, doing brief of questionnaire with Burmese interpreters before doing real survey and gathering data from migrants would be best. This is to make sure that Burmese interpreters understand clearly. Some of questions in our survey were too long and complicated due to language barrier.

### **Compare Actual Accomplishments against project goals**

First year project has accomplished to setting up the migrant health volunteers' network in Phuket as plan, but the network still needs to be strength and improve the quality of their health literacy in order to take care of migrants in Phuket province. The project achieved in term of quantity or number and need to improve in quality. There were some language barriers, timing and travelling cost that effect the participation of these volunteers.

In technical aspect, the project has implemented the iris scan (biometric identification method) and developed the database of migrants in Phuket province. The project has trained migrant health volunteers for health behavior during COVID-19 pandemic. The project has finished one handbook about COVID-19 (in Burmese language) for migrants.

### **Other pertinent information i.e., Challenges/Lessons learned (if any):**

#### **1. Problems and Obstacles that Found in Migrant Health Volunteers' Training**

- Language used for communication because the participants were all foreigners. Some can't listen to Thai. Moreover, the use of an interpreter to interpret the information may be lost and not fully communicated sometimes.
- Question-answer time should have provided a reward. Participants would be more enthusiastic to answering questions.
- As for the practice equipment, there should be sufficient equipment support for the activities (such as pulse oximeters and thermometers).
- Place of training. The meeting room space was quite limited with 4 groups, causing noise disturbance from other groups.

- The number of trainees in the training for each topic should not exceed 10 people. Participants were be able to receive accurate information and exchange past experiences.
- Communication aids helped to amplify sound (such as a floating mic and speaker). In order to provide the information loud and clear.

2. For doing survey by using questionnaire, we have to check version translation with experienced Burmese language.

3. It is a great opportunity for project team to learn how to manage grant from aboard. We learn about official documentation, report development and financial process. Team has learn to develop network and work with other government agencies which was very useful experience.

**List of publications resulting from the project, with plans, if any, for further publication:**

1. Knowledge assessment and practice toward disease surveillance, prevention and control of COVID-19 among industrial migrant health volunteers in Phuket Province. Publish in journal name: Institute for Urban Disease Control and Prevention.
2. Survey of migrant workers’ knowledge, attitude and practice toward COVID-19 in Phuket, 2022. Publish in journal name: Institute for Urban Disease Control and Prevention.

**Future Direction:**

1. To strengthen the network of migrant health volunteers. It will create or strengthen the volunteer system in the area, which is the expected achievement compare to the current situation.
2. To comprehensive identification of migrant workers. The platform will add on the current system by collecting the data of migrant health volunteers and migrants in digital format, also, investigating migrant workers’ knowledge, attitudes, and practices toward COVID-19.
3. Survey access to health service of migrant workers especially in this COVID-19 situation, in the South Andaman Coast of Thailand (COVID-19 vaccination coverage and vaccine booster does).
4. Implementation of action plan for health promotion, disease prevention and control, and implementing health care insurance for migrant workers effectively.

**Budget Summary of Year 01 (2022):**

<b>Total Approved Budget</b>	<b>USD 142,726</b>
<b>Total Expenditure</b>	<b>USD 97,569.4635</b>
<b>Total Balance</b>	<b>USD 44,143.5322</b>