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THOHUN STRENGTHENS

health-personnel capacity to be ready
for responding to the COVID-19 pandemic.



COVID-19 pandemic has huge negative impacts on health, public health, and the economy. Thailand One Health University Network (THOHUN) has assisted government to improve disease detection and surveillance systems for both human and environment, create innovative innovations for Infection Prevention Control; IPC of COVID-19 and strengthen health personnel capacity on risk communication to be ready for a new wave of COVID-19 outbreaks in Thailand health-personnel capacity to be ready for responding to the COVID-19 pandemic.





Innovative contact-less care services for COVID-19 testing

Diagnosis and surveillance of COVID-19 are crucial for control infection and its spreading. Manifestations of the disease are both symptomatic and asymptomatic. Symptomatic patients are managed by government, however symptomatic carriers are highly potential to transmit the virus to other people. The project “Outreach and contactless care services for COVID-19 testing” was rolled out by THOHUN member, Faculty of Associated Medical Sciences, Chiang Mai University. This project consisted of training and practice of junior health workers on standard procedure and practice on clinical sample collecting for the COVID-19 testing and diagnosis.

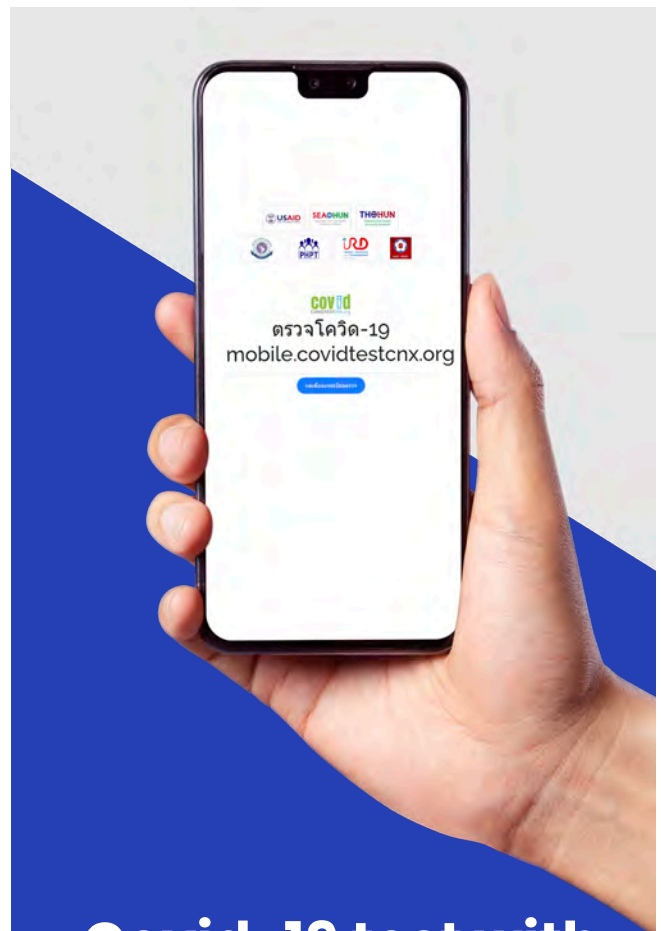


A web-based application was successfully developed for medical personnel to manage COVID-19 tests. The team research team also established mobile COVID-19 testing units that is helpful for rapid disease detection and response within 24 hours after the initial testing and highly accessible by general people. The service was





highly supported from the Department of Disease Control, the Ministry of Public Health to search for risk areas for the disease and reflect readiness of THOHUN for the disease control by providing rapid disease detection and identification of new cases and prompt quarantine.



Covid-19 test with the application "COVIDTESTCNX"

It is a web-based application, where people can make an appointment for COVID-19 testing at www.mobile.covidtestcnx.org or via QR code. The application will send diagnostic results to a tester within 24 hours via SMS.



www.mobile.covidtestcnx.org
or scan via QR code



COVID-19 spread prevention in Songkhla province “Collaboration”, A key success of COVID-19 surveillance and prevention at Thai-Malaysia border



Each hospital or immigrant department has its own guidelines to respond to emergency. This project demonstrated that multisectoral collaboration to adapt their practices to be suitable for broader situations. The adopt guideline on environmental surveillance of COVID-19 will be shared with organizations, who are involved in COVID-19 prevention and control.

Environmental virus surveillance for preventing intra-hospital infection and transmission of COVID-19

In COVID-19 risk areas, immigrant checkpoint and hospital are areas, where could protect people from infection, meanwhile they are also virus spreading sites. THOHUN together with a member; Prince of Songkla University, Thailand conducted the project “Environmental virus surveillance for preventing intrahospital infection and transmission of COVID-19”. The project focused on community participation and outreach to identify strength-weakness of existing management and operational guidelines for COVID-19 surveillance in the environment and improvement of the guidelines of hospitals, custom and immigrant centers within Songkla province and its Thai-Malaysia border.



COVID-19 spread prevention in Songkhla province

A seminar aimed to transform knowledge to good practice in prevention of COVID-19 outbreak in Songkhla province, exchanges of data on COVID-19 situation and actual operations of healthcare professionals. A research team also conducted a focused-group and in-depth interview with staff of hospitals, public health sectors and immigrant checkpoint on their management, response and surveillance of COVID-19 of risk travelers who cross Thai-Malaysia border. Environmental samples were collected from hospitals and immigration checkpoints for COVID-19 testing.

COVID-19 response using One Health approach

Pandemic of infectious diseases such as COVID-19 accelerates urgent needs to develop disease surveillance, preparedness, and response to diseases that are required collaboration from stakeholders from various levels, sectors and local communities. Therefore, THOHUN member, Faculty of Veterinary Medicine, Chiang Mai University successfully organized the workshop on “Application of participatory epidemiology to identify the potential solution for the surveillance and prevention measures: a case study of COVID-19 infection” with public health practitioners across the country.

Participatory Epidemiology



Participatory Epidemiology

PE is the application of participatory appraisal in epidemiology to strengthen understanding of disease and disease prevention and control. This approach enables communities to identify their problems and aware of impact of disease problem and develop specific solutions for disease surveillance and control.



The training objective is to advocate health practitioners on participatory epidemiology (PE) and application of PE tools in the routine works. The network of multidisciplinary PE experts was considered as the strength of this activity, while the opportunity of the network members to share and exchange their knowledge and experience was identified as other key success. Members could provide consultation through Line application and utilize the PE tools available to collect data from their communities for better understanding of their needs and participation levels among the community members.

Risk communication provides accurate information and builds trust with society

Nowadays, there is a large amount of information and news that are easier to access. Without proper communication, both real and fake information can be health and psychological risks that cause panic and misunderstanding, affecting the life of the individuals, government, and the general public.



This training workshop on risk communication aimed to strengthen communication, crisis-risk management and information management skills during the COVID-19 pandemic of personnel from relevant departments of government. The workshop aimed also to disseminate knowledge and information on COVID-19 outbreak as well as appropriate measures for infection prevention to organizations and the general public that reduce communication effect to health behaviors. These risk communication strategies could be applied in neighboring countries.



Innovative Prototype to Prevent COVID-19 in the New Normal

In the current situation of COVID-19 pandemic, it needs design thinking for prevention and control of the disease. THOHUN led by Asst. Prof. Sivapong Sangpradit, Faculty of Veterinary Science, Mahidol University, the principal investigator of the project developed innovative prototypes for Infection Prevention and Control (IPC) using design thinking processes.



A workshop on prototype development for COVID-19 IPC was conducted among multidisciplinary teams from THOHUN member faculties and institutes. The speakers and resource persons are discipline based experts who have high experience in Virology or design thinking. The selected prototypes received seeding fund to develop prototypes.



THOHUN is opened for new collaborations to develop and produce prototype innovations

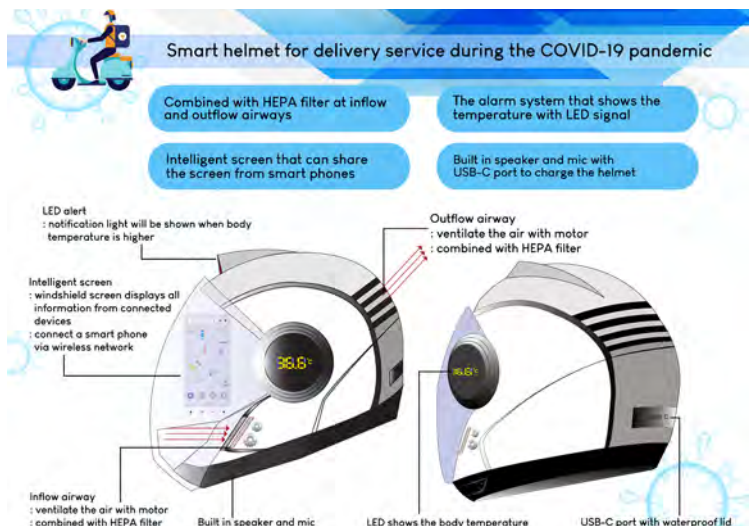
THOHUN is welcome for collaborative partners from both governmental and private sectors, who are interested in transforming IPC prototypes to be innovation, which is beneficial for the communities.

Be our partner contact us

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Smart helmet

This prototype was discovered to overcome limitations regarding wearing masks such as being difficult to breathe and unsuitable for the wearer. The helmet comprises temperature and heartrate detectors that visualize to the screen. The helmet is also equipped with various systems such as filters, ventilation and microorganism decontamination, and water spraying systems provided in the helmet. Moreover, the helmet is lightweight and translucent for the convenience of examining the face of people, who wear the helmet.

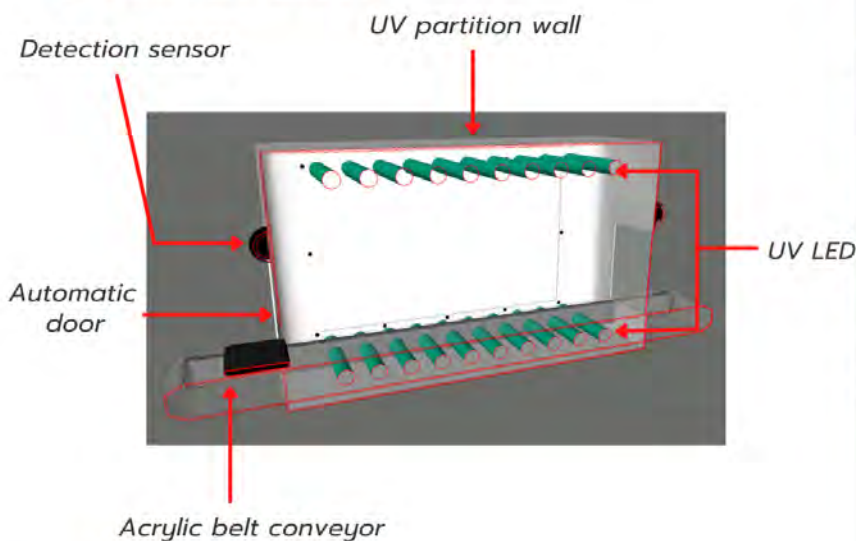


U.WE BOX

The prototype is disinfection box for daily-life stuff such as glasses, watch, mobile phone, UV light, wallet, etc. using UVC light. The belt in the box will bring a stuff from one side to the other side of the box. In addition, there are at least three emotional signs showing level of contamination of a stuff before disinfection.



COMPONENTS

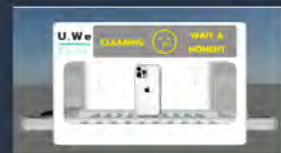


INNOVATION

THE DISPLAY



Red light and frowning emoticons show when the machine starts.



Yellow light and neutral face emoticons show when the machine is running.



Green light and smiley face emoticons show when the machine finish.

QR CODE 3D ANIMATION





Smart Trash Can

This prototype was initiated to reduce the number of disposable masks, which affect the environment. The prototype proposes two channels, the ultraviolet light and oven. The ultraviolet light functions on mask disinfection, so that the mask can be reused. The oven is used to destroy the infected masks, especially in the communities, where the government cannot provide incinerator.

โมเดลถังขยะอัจฉริยะ



กำจัดหน้ากากแบบใช้แล้วทิ้ง และฆ่าเชื้อหน้ากากผ้าด้วย UV



ทำงานแบบอัตโนมัติ ใช้ไฟฟ้า



ขนาดเล็กประมาณ 45x50x60 cm เหมาะกับครัวเรือน

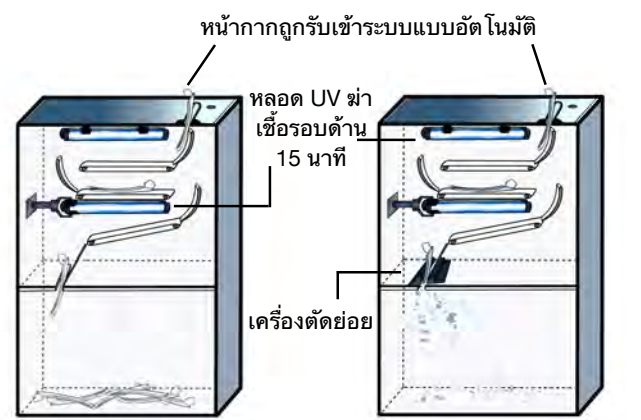


ลดการปล่อยหน้ากากติดเชื้อสู่สิ่งแวดล้อม



ลิ้นชักรับหน้ากาก/เศษหน้ากาก

ภายนอก



หน้ากากผ้าปราศจากเชื้อ

เศษพลาสติกนำไป Recycle เช่น กระจกต้นไม้

ภายใน

Be an important part of stable and sustainable COVID-19 prevention



All of the projects reported here were results of multisectoral collaboration from academic institutes, who are THOHUN members and worked on COVID-19 related activities. The projects focused on educating and building collaborative efforts from academic institutes and the communities in areas of creating innovative interventions in areas of IPC for COVID-19 and training of health personnel, educators, and local authority staff on risk communication strategies, and development and service on contact-less COVID-19 testing, and COVID-19 surveillance at hospital environment and risk zones within Songkhla area and at Thai-Malaysia border. All of these activities were supported by the COVID-19 TRANCHE 4 Emergency fund of The United States Agency for International Development (USAID).



