

requirements, HDP should be beyond that. Since 2008, CHPM UGM has been providing various HDP training. However, during the COVID-19 pandemic, there was a change in offline assistance that shifts to online. This study reports the learning activities, output, and challenges.

**Method:** There were three batches of HDP-paid online courses in 2021. Each batch consists of three series courses. The first series was a basic HDP seminar. The second series was for intensive HDP mentoring for two months. In the second series, the participants focused on analyzing risk and hospital safety index (HSI), detailing job action sheets, and detailing disaster standard operating procedures. Moreover, the third series in the fourth month was an online tabletop exercise (TTX).

**Results:** 25 hospitals and 112 people participated. However, only five hospitals that committed finalized the HDP document. The learning process challenges were the participant's unstable network and their focus on who was on duty while attending the courses. Although the TTX online was a new trial, it worked to assess hospital preparedness for disaster management through well preparation, detailed scenario and proper evaluation instrument. However, it was still difficult to assist participants in completing the HDP documents online, because observation of the hospital environment cannot be carried out while the evidence provided by participants were limited, for example supporting evidence for the HSI indicators.

**Conclusion:** The online series of HDP is feasible because it saves accommodation and transportation costs. However, the intensive online mentoring should be carried out longer to allow participants to do assignments and collect evidence of indicators that must be shown to the facilitators.

*Prehosp. Disaster Med.* 2023;38(Suppl. S1):s14–s15  
doi:10.1017/S1049023X23000821

### The Effect of Different Degrees of Cold Exposure on Medical Laypeople's Tourniquet Application Time and Quality: A Within-Group Trial

*Wilhelm Brodin MSc<sup>1</sup>, Marc Friberg MSc<sup>2,1</sup>, Carl-Oscar Jonson PhD<sup>2</sup>, Erik Prytz PhD<sup>1,2</sup>*

1. Department of Computer and Information Science, Linköping University, Linköping, Sweden
2. Center for Disaster Medicine and Traumatology, and Department of Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden

**Introduction:** Cold exposure generally has a negative effect on tasks that rely on finger dexterity. It is not known if cold exposure will affect medical laypeople's ability to perform first aid for life-threatening bleedings, specifically tourniquet application. This study investigates the effect of cold exposure on medical laypeople's tourniquet application ability.

**Method:** Twenty-nine adult medical laypersons received brief tourniquet application training and then completed a tourniquet application test in a baseline condition and three partial cold immersion conditions where their hands were immersed in nearly 0°C water. The three cold immersion conditions were 16°C, 12°C, and 8°C hand-skin temperature. Tourniquet application quality was measured using a procedural checklist. Time until bleeding control was also measured.

**Results:** The results show that cold exposure significantly increases the time to bleeding control,  $F(3, 84) = 5.42$ ,  $p < .01$ ,  $\eta^2 = .05$ . Planned contrasts revealed a significant increase in time between baseline and 8°C hand-skin temperature ( $M_{\text{baseline}} = 65.5\text{s}$ ,  $SD = 17.0$ ;  $M_{8^\circ\text{C}} = 76.9\text{s}$ ,  $SD = 19.6$ ),  $t(28) = 3.77$ ,  $p < .01$ ,  $r = 0.38$ . No effect was found on the procedural application quality,  $F(3, 84) = 2.21$ ,  $p = .09$ .

**Conclusion:** Cold exposure can decrease the chance of survival for the injured person when a medical layperson provides first aid for life-threatening bleedings due to increased application time. The results can also be used when educating medical laypeople in first aid for life-threatening bleedings as it provides evidence of specific effects from a stressor that is common in regions with cold climate. Future research should be aimed at exploring possible mitigation strategies such as tourniquet design or rewarming procedures and investigating if a similar effect exists for prehospital professionals.

*Prehosp. Disaster Med.* 2023;38(Suppl. S1):s15  
doi:10.1017/S1049023X23000833

### Regional Program for Knowledge Co-creation on Disaster Health Management in ASEAN and Japan

*Taro Kita<sup>1,2</sup>, Phumin Silapunt MD<sup>3,4</sup>, Alisa Yanasan MD<sup>5,4</sup>, Yusuke Ito MD<sup>6,7</sup>, Shuichi Ikeda MSc<sup>1,2</sup>, Mika Aono RN, PHN, MPH<sup>1,2</sup>, Tsukasa Katsube MA<sup>1,2</sup>, Yuichi Koido MD, PhD<sup>8,7</sup>, Tatsuro Kai MD<sup>9,7</sup>*

1. Japan International Cooperation Agency (JICA), Tokyo, Japan
2. JICA Expert Team for the ARCH Project, Bangkok, Thailand
3. Chulabhorn Hospital, Bangkok, Thailand
4. Thai Task Force for the ARCH Project, Bangkok, Thailand
5. Division of Public Health Emergency Management, Office of the Permanent Secretary, Ministry of Public Health, Nonthaburi, Thailand
6. Senri Critical Care Medical Center, Saiseikai Senri Hospital, Suita, Japan
7. Japan Advisory Committee for the ARCH Project, Tokyo, Japan
8. DMAT Secretariat, Headquarters National Hospital Organization, Tokyo, Japan
9. Hakuu-kai Shirai Hospital, Sennan, Japan

**Introduction:** Knowledge management on Disaster Health Management (DHM) is one of the priority areas in the Plan of Action to implement the ASEAN Leaders' Declaration on DHM (POA/ ALD DHM) (2019–2025). The Japan International Cooperation Agency (JICA) has been implementing the Project for Strengthening the ASEAN Regional Capacity on Disaster Health Management (ARCH Project) since 2016 to assist the ASEAN region in strengthening coordination capacity on DHM. A regional training course on DHM for ASEAN member states (AMS) in Japan was proposed to be implemented in 2022 as a JICA's Knowledge Co-creation Program (KCCP).

**Method:** The training curriculum of the KCCP included emergency and disaster medicine in Japan, international trends on DHM, and underwent reviews by AMS representatives of the ARCH Project. Prior to the training, participants were required to prepare country reports (CRs) outlining information on legislation, system and structure related to emergency and