The 33rd Annual Meeting of the Japan Association for International Health

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Oral presentation

O-1 Current status of postpartum hemorrhage at a local hospital in Zambia YASUHIRO MIYOSHI
O-2 The Importance of Safe Abortion Care (SAC) in Developing Countries and the Challenges to ensure it MARINA KOJIMA
O-3 The results on humanized maternity care projects of JICA YUKO TAKAHASHI
O-4 Factors related to practice labor pain relief care for Moroccan midwife YASUKO TAMURA
O-5 How was the WHO new guideline on normal childbirth perceived among health professionals in El Salvador? EMI SASAGAWA
O-6 A mix-method study on associated factors that influence the provision of evidence-based intrapartum care at tertiary hospital in Davao, the Philippines CHISATO MASUDA
O-7 The role of communication supporters to improve health literacy among elderly people from culturally and linguistically diverse backgrounds YOKO AIHARA
O-8 Religious consideration, during the health services of the foreigner residents KHALED RESHAD
O-9 Consideration about foreign patients in a travel clinic in the rural area MASAHIKO SAKAMOTO
O-10 Validity and reliability of a scale on cross-culturally receptive attitudes among Japanese nurses SHIGEMI IRIYAMA
O-11 The work burden of Culturally and Linguistically Diverse (CALD) patients’ nursing care: results from a Tuberculosis ward Nursing staff questionnaire survey AKANE FUTAMI
O-12 Innovative Health Insurance System and Private Midwife Clinic in Kenya TOMOHIKO SUGISHITA
O-13 Current situation and challenges of Community Health Insurance Scheme towards UHC in Senegal TAKESHI NOMAGUCHI
O-14 Toward better universal access to health services in Kenya: from a chronological perspective TAKUJI DATE
O-15 Results Report of Kaizen Pilot Activities in King Fahad Medical City (KFMC), Kingdom of Saudi Arabia KODAI TATENO
O-16 How to Encourage Hospitals’ Initiative for Quality Improvement Activity? : A Case of Introduction of Hospital Quality Criteria and Self-Evaluation in JICA Project for Improving Quality of Health Care (QHC) in Lao PDR SHINSUKE MURAI
O-17 Introduction of Hospital Quality Criteria for Encouragement of Quality Improvement Activities for Health Care Services: A Case from Nursing Committee in Four Southern Provincial Hospitals in Lao PDR AKI HASHIZUME
O-18 Associations between the incidence of and recovery from depressive symptoms and social ties with neighbors -JAGES 2010-13-16 longitudinal data analysis- YURI SASAKI
O-19 End of life care in Bhutan in the context of rapid social changes and the cultural value of happiness HIROMI SEGAWA
| O-20 | Improvement of the Capabilities of Health Volunteers Providing Elder Care in Community in Thailand through JICA Japanese Technical Cooperation Partnership Program | YOSHIKO TSUKADA |
| O-21 | Health policy related to elderly care and its implementation in Lombok island, Indonesia | JUN KOBAYASHI |
| O-22 | Study: Culturally sensitive home care services for Japanese people living in Canada | YUKO ABEYAMA |
| O-23 | Comparison of duration of untreated psychosis between Phnom Penh and Siem Reap in Cambodia | AKIHIRO NISHIO |
| O-24 | The causality of mental health problems in Japanese international students during overseas; a prospective cohort study with stratified analysis for gender | JIRO TAKEUCHI |
| O-26 | Impact of tobacco cessation intervention among tuberculosis patients; a qualitative study | AURORA QUERRI |
| O-27 | Substance use and perceptions among young people in Palau: a nationwide school-based survey | CHIFA CHIANG |
| O-28 | The differences of Primary health care between Saku region and Leyte Island. | SHOKO KITAZAWA |
| O-29 | Influence of organized breast cancer screening on understanding and promotion of mammography screening among the target population in Serbia | KANAKO TANIGAKI |
| O-30 | Can home medical care contribute to the community? | KOTARO ONISHI |
| O-31 | Mechanism of the women’s network, formed in the civil war, working for improvement in maternal and child health in Lao PDR | ATSUO SATO |
| O-32 | Analysis of characteristics of health personnel working for Global Health and Domestic Rural Health | TADASHI YASUDA |
| O-33 | Report on health education activities from the project for improving women’s health of female factory workers focusing on cervical cancer in Cambodia | MIWA KANDA |
| O-34 | Comparison of Perceived Control in Patients with Acute Coronary Syndrome in Japan and the US A Pilot Study | AKIKO KONDO |
| O-35 | Factors associated with glycemic control among patients with type II diabetes mellitus in the poor urban areas of Cambodia: a cross-sectional study | AKIYO TSUJI |
| O-36 | Risk factors of hypertension among poor urban residents in Dhaka, Bangladesh | ABUBAKR AHMED ABDULLAH AL-SHOAIBI |
| O-37 | Assessment of School Health program for non-communicable disease prevention in Pohnpei State of the Federated State of Micronesia | FUSAYO KOBAYASHI |
| O-38 | Risk factors of diabetes and prediabetes among public employees in northern Ethiopia | YUPENG HE |
| O-40 | Tobacco use and smoke-free home status among tuberculosis patients in an urban setting in the Philippines | AKIHIRO OHKADO |
| O-41 | A study on cross-border referral system for tuberculosis patients | LISA KAWATSU |
| O-42 | Activity of Japan Disaster Relief Infectious Diseases Response for 2018 Ebola outbreak in Democratic Republic of Congo | MASATARO NORIZUKI |
Bottom-up approach to strengthen malaria control: A mixed methods study among microscopists and their patients in Palawan island, the Philippines

MATSUMOTO-TAKAHASHI EMILIE

Seroprevalence of Mumps before the Introduction of Mumps Vaccine and Effectiveness of the Rubella Vaccine Assed by Comparing Mumps and Rubella Seroprevalence in Lao PDR

HIRONORI OKABAYASHI

High-risk groups of mothers prone to delayed initiation of breastfeeding in a community child healthcare program in rural Niger

NAOKO HORII

Factors associated with caesarean section in Darkhan-Uul Province, Mongolia: A prospective cohort study

NAOKO HIKITA

Initiatives to provide comprehensive continuum of care in Northern Zambia: Maternal, Newborn and Child Health One Stop Service Project

AMANE FUNABASHI

A study using Three delays model on the factor in mothers' access to health facility in Nepal

SAIKIKO KUNII

Modernization in Paradox Regarding Infant and Young Children Faeces Management as well as Child Growth in the Urban Slum, Indonesia

LINA AGESTIKA

Experience on introduction of Immediate Newborn Care (INC) in rural Cambodia

AZUSA IWAMOTO

Work for International health and lifework balance - Promoting work style reforms

MAI FUJII

Let's share the bread! -Experience of active learning for Japanese undergraduate students to understand equity in healthcare rationing-

YUMIKO NISHIMURA

Difficulties experienced by foreign nurse/foreign nurse candidates who are working in Japan: a literature review

RENAGULI ABULIEZI

Preparing for global health elective

MANABU SAITO

Cultural Competence Recognized by Nurses who had Experienced International Activities and its Acquiring Process

MASUMI MORIYAMA

Training for clinical nursing instructors in Vietnam: Approaches and Challenges

MEGUMI IKARASHI

Socioeconomic status and living conditions of victims and non-victims with disability affected by armed conflicts living in local conflicted municipalities, Granada and El Carmen de Chucuri, in Republic of Columbia

TAKUYA YAMADA

Report of medical assistance activities at the Rohingya refugee camp

KAZUMI YANO

Reproductive status of Syrian refugee living in rural Jordan and effects of the technical cooperation project for strengthening health centers on reproductive behaviors

MAKIKO KOMASAWA

Reintegration challenge for the Survivors of Incest: A Qualitative study in selected safe homes in Nepal

JANUKA KHATIWADA

Do ultrasound examinations during antenatal contacts in rural communities with a portable device improve the accuracy of estimating gestational age of the newborn infants at birth? A case study in El Paraíso and Lempira provinces, the Republic of Honduras.

YUICHI KODAIRA

Validity of Introducing and strategy of spreading digital radiography system (CR) to Provincial area of Cambodia

KAZUFUMI UCHIDA

Electronic HIV patient registration system development using biometric technology - Introduction of electronic health system in 3 HIV treatment sites in Egypt - NAP_Egy

TAREK NUMAIR
O-65 Medical equipments' maintenance project for 10 French speaking countries in Africa: midterm evaluation
SALIOU DIONE

O-66 Bibliometrics of literature related to maternal and child health handbook
SUSUMU TANIMURA

O-67 Exploration of influential factors to retention of secondary midwives (SMWs) in rural Cambodia: important influential factors to young SMWs - result from the final year study
KIMIKO ABE

O-68 A health system view of hospital construction by Japan's Grant Aid.
MITSUAKI MATSUI

O-69 Key factors for school health policy implementation in Thailand
SACHI TOMOKAWA

O-70 Evaluation of activities for strengthening health facility management capacities in JICA's Technical Cooperation Project for Reinforcement of Health Systems Management in Senegal
KANAE GOUGIS

O-71 Feasibility of Maternal and Child Health Handbook (MCH) in rural Bangladesh: findings of a qualitative analysis alongside a cluster RCT
RUOYAN GAI

O-72 The G20 Summit as an Area for Global Health Diplomacy: From the 2017 G20 Hamburg Summit to the 2019 G20 Osaka Summit
YASUSHI KATSUMA

Poster presentation

P-1 Community Orientation: Literature Review
SACHIKO TANABE

P-2 Working experience of subnational health administration in Japan for global health cooperation
HIROKO KIKUCHI

P-3 Survey on attendance rate of Maternal and Child Health services at Chisankane area, Kafue District, Republic of Zambia
MICHIKO ARIHARA

P-4 Report of the visit rehabilitation in Thailand rural areas
SHOHEI KUNIYA

P-5 Descriptive report on General Health Condition of residents in Vientiane prefecture, Lao PDR
TOMOKO KOMAGATA

P-6 The healthcare for the people with disabilities in an area without rehabilitation professionals in Lombok Island, Indonesia
SAYAKO YANAGISAWA

P-7 Survey on satisfaction level of Maternal and Child Health services at Chisankane area, Kafue District, Republic of Zambia
DAISUKE KANAMORI

P-8 Understanding the decision-making process of a Japanese mother in taking her child to a doctor in Bangalore, India
MIHO ADACHI

P-9 The host family notices the problem of health management in homestay.
KATSUKO TAKADA

P-10 Factors associated with overweight and overweight with dental caries among foreigners in Aichi prefecture
ASAKO YOSHINO

P-11 Hopes regarding medical care decisions and end-of-life care among foreign residents living in Shizuoka Prefecture: A questionnaire study
RYUUTAROH MAENO

P-12 Literature review of health literacy among immigrants
WATARU ITO

P-13 Relationship between length of residence and health of foreign national residents in Japan
EIKO KOBORI

P-14 Health behavior and Sociocultural Adaption of Foreign Students with Focus on Hepatitis B
IRIE MARIKO

P-15 Recognition of social capital of children in Nepal and Lao PDR prior to the development of school health activities utilizing children's health club
SHOHEI KOKUDO

P-16 A Pilot Study on Awareness and Attitudes of Parents/Guardians and their Children toward Smoking and Drinking in Vanuatu
EMI NAKASEKO
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-17</td>
<td>Developing school health record system for government school students in Nepalese villages</td>
<td>MIRE SUGINO</td>
</tr>
<tr>
<td>P-18</td>
<td>Quality of hand-washing water research by water sources at elementary schools in the Kandal Province, Cambodia</td>
<td>TAKESHI YODA</td>
</tr>
<tr>
<td>P-19</td>
<td>Medical history and its health seeking behaviors among children less than one year old in rural Cambodia</td>
<td>ASUKA MIYAZAKI</td>
</tr>
<tr>
<td>P-20</td>
<td>Activities and assessment of them in The Student Society of University of Toyama for International Health (KIK)</td>
<td>TOMOKAZU SEKI</td>
</tr>
<tr>
<td>P-21</td>
<td>The competency required by nurses of the Japan Overseas Cooperation Volunteers in community nursing activities in developing countries</td>
<td>MIWA KUSHIMA</td>
</tr>
<tr>
<td>P-22</td>
<td>The international training program for health professions from the Department of Pharmacy</td>
<td>LYNN YOSHIDA</td>
</tr>
<tr>
<td>P-23</td>
<td>Online Questionnaire Survey on Consciousness of Female NGO Workers' Career Choice in Developing Countries</td>
<td>MAYO KOBAYASHI</td>
</tr>
<tr>
<td>P-25</td>
<td>Factors related to cross-culturally receptive attitudes among Japanese nurses</td>
<td>NAOMI WAKAZONO</td>
</tr>
<tr>
<td>P-26</td>
<td>Toward Establishing an Educational Vision in the Field of International Health at University: Intercultural Receptive Attitudes of Nursing Students</td>
<td>YUKI IGAWA</td>
</tr>
<tr>
<td>P-27</td>
<td>Health System of the Philippines - From the experience of the field trip from 4th to 17th March 2018</td>
<td>SAYAKA DOI</td>
</tr>
<tr>
<td>P-28</td>
<td>Community Health in the Philippines - From the experience of the field trip from 4th to 17th March 2018</td>
<td>AKARI KOBAYASHI</td>
</tr>
<tr>
<td>P-29</td>
<td>Study on world suicide rates and factors associated with happiness-related indices</td>
<td>KAYAKO SAKISAKA</td>
</tr>
<tr>
<td>P-30</td>
<td>Analyzing the relationship between mental health and living conditions of people in Indonesian urban slum</td>
<td>SHOKO YABUGISHI</td>
</tr>
<tr>
<td>P-31</td>
<td>What is vulnerable? -Social Ties in older single men-</td>
<td>NAHOKO OKAMOTO</td>
</tr>
<tr>
<td>P-32</td>
<td>The situation of Syrian refugee disabled in Jordan.</td>
<td>HARUKA ONO</td>
</tr>
<tr>
<td>P-33</td>
<td>Cost analysis of treatment for breast cancer in the northeast Thailand; a study at Khon Kaen Hospital</td>
<td>SUMIE SAKURAI</td>
</tr>
<tr>
<td>P-34</td>
<td>The Analysis of Causes of Death among Neonate and Child Cases of Dead on Arrival and Bought in Dead at Referral Health Facilities in Zambia</td>
<td>YUTA YOKOBORI</td>
</tr>
<tr>
<td>P-35</td>
<td>The assessment of maternal referral system at Lusaka district in Zambia</td>
<td>HIROKI AKABA</td>
</tr>
<tr>
<td>P-36</td>
<td>Current situation and challenges of Free Health Care Initiatives Scheme towards UHC in Senegal</td>
<td>KAINA HOMMA</td>
</tr>
<tr>
<td>P-37</td>
<td>A Survey on Using State of Mechanical Ventilator and Onset of Ventilator Associated Pneumonia at Emergency and Critical Care Center in Cambodia</td>
<td>RYUICHI KATO</td>
</tr>
<tr>
<td>P-38</td>
<td>Emergency medical service in Mongolia</td>
<td>TUMENDEMBEREL OCHIRBAT</td>
</tr>
<tr>
<td>P-39</td>
<td>The achievements and obstacles of the EPI in a rural area of Afghanistan</td>
<td>HAJIME KIKIMA</td>
</tr>
<tr>
<td>P-40</td>
<td>Expanded Programme on Immunization - Vaccination coverage and measles outbreaks in the Philippines</td>
<td>THOMAS KWASI AWUNI</td>
</tr>
<tr>
<td>P-41</td>
<td>Operational research of pilot introduction for TB laboratory information system in Myanmar: a 1-year evaluation</td>
<td>KAZUKI MIYAZAKI</td>
</tr>
<tr>
<td>P-42</td>
<td>The IgG seroprevalence survey on measles, rubella, mumps, and varicella among adults in Khanh Hoa Province, the Socialist Republic of Viet Nam</td>
<td>MINSOO LEE-YOSHIMOTO</td>
</tr>
</tbody>
</table>
P-43 Analysis of demographic change among Japanese language school students, in connection to the trend of foreign-born TB and HIV TAKASHI SAWADA

P-44 Prevalence of gynecological symptoms among Cambodian women with goiter in Kaoh Chreng Island YUKI SHIMOTAKE

P-46 Family guidance for acute stroke patient is effective to prevent Deep Vein Thrombosis in Lao PDR MASAKI NISHIO

P-47 Risk factors for pitching injuries in developing baseball countries: a review of the English literature KOKI ORIMOTO

P-48 Association between use of internet/social media and sexual awareness among youths living in urban areas in Tanzania. MIKA NISHIHARA

P-49 One Strategy of Lifestyle-Related Diseases Prevention and Weight Control for Pacific Island Countries YUI YANUKI
Oral Presentations

O-1 Current status of postpartum hemorrhage at a local hospital in Zambia

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BACKGROUND: Postpartum hemorrhage (PPH) is the leading cause of maternal mortality. Most of the maternal deaths due to PPH happen in developing countries. To reduce them in Zambia, it is important to survey the status of PPH. The aim of this study was to evaluate the current status of PPH at a resource-poor district hospital.

METHODS: All deliveries in 2017 at Zimba Mission Hospital were enrolled. Data was obtained from the birth registers for patients who had a diagnosis of PPH. The demographic, clinical and outcome data were gathered. Blood loss was estimated after delivery by the attending clinician.

RESULTS: Among the 1,712 deliveries, 1,408 (82.2%) were vaginal delivery and 304 (17.8%) were Cesarean sections. 110 women (6.4%) were complicated with PPH. 78 cases (70.9%) had an identifiable risk factor for developing PPH. All the patients who had massive PPH (estimated blood loss>1500ml) had an identifiable risk factor. The most identifiable risk factor was grand multiparity (35.5%) followed by prolonged labor (18.1%) and assisted vaginal delivery (12.7%). Oxytocin was given to all cases. Misoprostol was also given in some cases. Balloon tamponade was done in 7 cases (6.3%) with success. B-Lynch suture was done in 2 cases (1.8%) with success. Hysterecotmy was done in 10 cases (9.1%) but 2 patients (1.8%) died after the operation.

CONCLUSIONS: The incidence, risk factors and outcomes of PPH were analyzed. This study is considered to help in prevention and management of PPH in a resource-poor setting.

O-2 The Importance of Safe Abortion Care (SAC) in Developing Countries and the Challenges to ensure it

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Medicines Sans Frontier Japan Association SAC working group

Purpose: Medecins Sans Frontieres (MSF) describes the actual situation of "unsafe abortion" in countries where access to medical care is difficult for many women and the challenges it faces as a medical humanitarian organization to ensure SAC. The provision of SAC should be recognized and addressed as a global health priority.

Progress: In developing countries, maternal mortality due to unsafe abortion ranges from 4.7% to 13.2%. Studies show that 56% of them can be prevented by providing SAC. Since 2004, MSF has committed to ensure SAC based on medical needs is available in its missions. However, implementing the commitments and providing SAC has not proceeded as well. As maternal deaths that could have been prevented by access to SAC is yet to be seen, MSF has confirmed that is a medical priority.

Results: Currently, internal discussions progress in providing SAC and reduce maternal mortality rates are reactivated. With 25 to 35% of projects where SAC is not yet implemented, there is still a challenge ahead.

Discussion: The need to tackle social barriers and difficulties to access health care, and thus reduce death preventable by SAC has been highlighted. Many women with unwanted pregnancies may face cultural, social and religious barriers to access SAC, but for them it is actually a matter of life and death. SAC needs to be recognized as a life-saving activity and it is fundamental it is universally implemented. It is necessary to continue to tackle the problem, without looking at abortion as a taboo.
O-3 The results on humanized maternity care projects of JICA
Yuko TAKAHASHI, Etsuko NAKAMURA
Human Development Department, JICA

JICA has implemented the Project for improving midwifery capacity so called humanized maternity care across seven countries, Brazil, Bolivia, Armenia, Madagascar, Benin, Cambodia and Senegal. This literature review revealed common results among seven projects. First, the recommended evidence based maternity cares were increased and not recommended cares were decreased between before-after project implementation. Second, internal transformation among midwives and medical staff was achieved by introducing midwifery philosophy and competency. Third, women were empowered through respected maternity care.

O-4 Factors related to practice labor pain relief care for Moroccan midwife
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This study was aimed to clarify factors related to practice labor pain relief care for Moroccan midwife who participated in labor pain relief care education program. Quasi - experimental study design and an intervention study was held to evaluate the effect before and after intervention of the education program with questionnaires, interview and participation observation method. The data collection period is from October 2015 to December 2016, subjects are 23 Moroccan midwives. This study obtained approval from the research ethical committee of Kobe Women’s University. The average age of the midwife was 29.8 years (SD & plusmn; 4.6), the average midwifery experienced age was 7.5 years (SD & plusmn; 3.3), 6 midwives work at university hospitals, 10 prefectural hospitals, 10 health centers with delivery facilities. The practical situation one year after the program confirmed through observation and interview, the midwife who practiced well (9 people) and those who did not practice so much (14 people). The former includes seven midwives at health centers, one prefectural hospital, one university hospital, the latter with 9 prefectural hospitals, 5 university hospitals. The Care practice suggested that there is an association between the characteristics and care culture of the care practicing community to which the midwife belongs and the way it is deemed desirable when becoming a member of the group rather than individuals. This research was received with the grant of Grant-in-Aid for Scientific Research (assignment number 26463441).

O-5 How was the WHO new guideline on normal childbirth perceived among health professionals in El Salvador?
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2 Department of International and Cultural Studies, Tsuda College, Tokyo, Japan

Background: The World Health Organization (WHO) revised the guideline on normal childbirth in 2018. The new guideline is consisted of 56 recommendations based on scientific evidences targeting on all normal childbirths in both developed and developing countries. This study aimed to understand the perception toward the new guideline among health professionals in El Salvador.

Methods: Self-administered questionnaire was filled out by healthcare authorities in the field of obstetrics.
Perceptions of 56 recommendations for the introduction into the clinical setting were examined, using Likert scale (Strongly agree, Agree, Neither agree nor disagree, Disagree or Strongly disagree).

**Results:** In June 2018, a total of 8 completed questionnaires were obtained. Of 56 recommendations, 32 items (57.1%) indicated that all respondents selected "Strongly agree" or "Agree". Among 16 items (28.6%) which at least one selected "Disagree" or "Strongly disagree" or did not reply, items for which fewer people agreed were: "Midwife-led continuity-of-care are recommended", "Routine vaginal cleansing with chlorhexidine is not recommended", "Routine sustained uterine massage is not recommended", and "Routine neonatal suctioning should not be performed".

**Conclusion:** In El Salvador, midwife has not existed. This fact could be the reason for the non-acceptance of the recommendation for continuous midwifery care. Moreover, vaginal disinfection, postpartum uterus massage, and neonatal suctioning are the recommended practices by the Ministry of Health. Therefore, non-compliance of the recommended cares might be felt difficult to accept for Salvadorian health professionals. The new guideline should be introduced carefully considering the actual situation in El Salvador.

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**O-6 A mix-method study on associated factors that influence the provision of evidence-based intrapartum care at tertiary hospital in Davao, the Philippines**

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Objectives: There are still gaps between the evidence-based guidelines and practice in delivery care. This study aimed to describe the care and medical interventions during delivery, to identify associated factors on performing potentially harmful practices (episiotomy and fundal pressure), and to know perceptions of health care providers on the practices.

Methods: A mix-method study was conducted from May to June 2018 at a tertiary hospital in Davao City, the Philippines. Direct observation of intrapartum care during the 2nd and 3rd stages, and semi-structured interview and focus group discussion with doctors, midwives and nurses were conducted.

Results: A total of 170 deliveries were observed. Fetal heart rate during the 2nd stage was not monitored in 57.1% of deliveries. Oxytocin was improperly used for 12.4% of women at the 2nd stage. Episiotomy was conducted for 92.1% of primiparas, and 31.2% of women received fundal pressure. Third and fourth degrees of perineal lacerations occurred in 17% of all deliveries. Birth weight, episiotomy and instrumental delivery with fundal pressure were associated with the severe laceration. Primiparity and longer duration of the 2nd stage associated with the decision to conduct episiotomy and fundal pressure. The health care providers recognize that primiparas without episiotomy are at risk for severe laceration.

Conclusion: Empirical knowledge influenced the practice rather than the scientific evidence. Established evidence should be interpreted correctly, and the harmful effect of unnecessary practices must be more highlighted in order to eliminate potentially harmful and unnecessary practices. It will also contribute to decrease severe perineal lacerations.
O-7 The role of communication supporters to improve health literacy among elderly people from culturally and linguistically diverse backgrounds

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In Japan, foreigners living in Japan also have right to use long-term care insurance (LTCI) services. However, due to low proficiency of Japanese, elderly people from culturally and linguistically diverse (CALD) backgrounds may difficult to use LTCI services. This study aimed to explore how to improve patient-decision making for aged care for elderly people from CALD through interviewing communication supporters (CSs) in Kobe city, Japan. In total 6 CSs who interpret Korean, Chinese or Vietnamese language are individually interviewed. Interviewing was held 60 minutes for each CSs, and they were asked about 'what is the key role of CS' and 'how to improve autonomy of decision making among minority elderly people.' Inductive qualitative analysis was applied. The research protocol was approved by the institutional ethical committee. To improve health literacy among minority elderlies, CSs has role of 'gate keeper'. Most minority elderlies get care information from minority community. As CSs are also members of minority community, they easy to approach elderlies and give care information in their own languages. CSs also have role of 'mediator' to make good relationships between care workers and minority elderlies. In addition, they support to improve health literacy through giving multiple choices of LTCI services and involving family members. Demands and needs of interpreter services in aged care is growing in the areas where the aging rate of people from CALD increasing. To improve quality of aged care for minority elderly people, language accessibility and organizational supports for culturally competence in LTCI system are important.

O-8 Religious consideration, during the health services of the foreigner residents

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While the population of the foreigner residents is increasing day-by-day, consideration concerning the life style, language and the religious behavior are essential elements in the community. Some of the religious limitations restrict the medical examination in ladies and small children during the health check. Relatives and friends could be the key-person through the visits to the medical clinics, and professional translators can help the medical staff during the examination. This study will evaluate these items and present some cases.

O-9 Consideration about foreign patients in a travel clinic in the rural area

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[Introduction] We have managed travel clinic since 2015. Not only Japanese but some foreign residents visited our clinic. This study considered details of travel about 19 foreign patients who had visited our clinic for the past 3 years. [Outline] Between May 2015 and May 2018, 19 foreign residents (7 male and 12 female) visited our travel clinic. Median age at first visit was 19 years old, and average number of visit was 2.0 (range 1-4). Purpose of visit(multiple answers allowed) was 18 patients for vaccination, and 7 for documents. The breakdown by document is 6 certificate of vaccination and 5 health certificate.
Most purpose of visit was study (8 patients) and most destination of travel was United States. Details of vaccination was rabies (11 shots), Japanese encephalitis (8 shots) and Hepatitis type B (7 shots) etc. [Discussion] We discuss about 2 health issue on this discussion. First, most foreign patients who visited our travel clinic were students of international school or wealthy people. Most foreign patients in this area might not be vaccinated when they visit their home countries. On the other hand, they are called 'VFR (Visiting Friends and Relatives) who have significant health risk in travel medicine. Second, some foreign students of international school haven’t completed vaccination in their childhood, which may bring with Japan disease overseas. Nevertheless, schools are at the sole discretion of vaccination requirement. [Conclusion] We considered of foreign patients who had visited our travel clinic for the past 3 years and discussed about their health issues.

O-10 Validity and reliability of a scale on cross-culturally receptive attitudes among Japanese nurses

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Background: Japanese nurses ought to have cross-culturally receptive attitudes to handle the increasing numbers of foreign patients and migrant nurses from the Philippines, Indonesia, and Vietnam. This study aimed to examine the validity and reliability of scale on cross-culturally receptive attitude among Japanese nurses.

Methods: We conducted an anonymous self-reported questionnaire survey from November 2017 to July 2018 at three hospitals located in central Japan after obtaining approval from the ethics committee of Nagoya University (approval number: 2017-0134). The questionnaire included age, gender, types of nursing specialties, years of nursing experience, and level of cross-culturally receptive attitudes.

Results: Of the 800 distributed questionnaire, 386 individuals responded (response rate: 48.3%) and the effective response was 385 (effective response rate: 99.7%). An exploratory factor analysis revealed that the 17 items of the cross-culturally receptive attitudes scale comprised four factors: "Negative attitude to foreigners", "Tension with foreigners", "Personal indifference toward cultural issues", and "Positive attitude toward cross-cultural issues". The total sub-scale scores for the four factors significantly correlated with each subscale score (rs from 0.50 to 0.76). The scale on cross-culturally receptive attitude showed good internal consistency, with a Cronbach’s α coefficient of 0.83.

Conclusion: This study suggests that a scale on cross-culturally receptive attitudes with 17 items comprising four factors exhibited optimal validity and reliability among Japanese nurses. The scale on cross-culturally receptive attitude could be useful for evaluating competency in a cross-cultural nursing among Japanese nurses. This study was funded by "Kitano Foundation of Lifelong Integrated Education".
O-11  The work burden of Culturally and Linguistically Diverse (CALD) patients’ nursing care: results from a Tuberculosis ward Nursing staff questionnaire survey

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Introduction: The purpose of this study was to investigate how nursing care for culturally and linguistically diverse (CALD) patients imposes a considerable burden on TB Nurses. We hypothesized that CALD patient’s communication barrier and social support impose a burden on TB nurses during out of business hours without support from coordinator nurses.

Methods: A questionnaire survey was conducted on TB ward nurses. We categorized 30 nursing skills in the TB ward and analyzed the work burden rate.

Results: The response rate was 95.8% (10/24). The burden rate increased especially when nurses needed to communicate with non-Japanese speakers. A hundred percent of the nurses (n=10) had difficulty in providing care to CALD patients. When communication was difficult, 80.0% (n=8) asked for help from other staffs, 50.0% (n=5) consulted a telephone interpreter, 50.0% (n=5) used an interpretation application in their mobile phones, and 40.0% (n=4) sought interpretation from patients’ family or friends. Discussion: CALD patients’ care is a large burden in TB Words. The hospital has to assign Language and social support staffs during out of business hour. Particularly, nurses with lesser experience a larger work burden rate. To reduce the burden in CALD patient care, we must provide information on the support device, how to use the telephone interpreter, and provide opportunities for Cultural Competency training and establish the conditions of devoting nursing work.

O-12  Innovative Health Insurance System and Private Midwife Clinic in Kenya

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In Kenya, due to free access to perinatal services, the number of c-section is rapidly increased, and medical modernization became challenge in urban areas. National Hospital Insurance Fund launched Linda Mama initiative to ensure free delivery services using ICT devices and technical standardization since 2016. While the insurance system became more innovative, the new environment enables midwives to own their private clinic to meet the diverse demands from urban career women. Eva’s Mama Midwife Clinic and FreMo Birth and Medical Center were explored more details in this session. In the era of UHC, health systems took a serious concern to deliver tailor-made services to pregnant mothers to meet their diverse needs and preferences. The new challenge to achieve UHC is that the health systems should meet the demands not only from the vulnerable people but also from the entire population with cultural and social inclusion.
O-13  Current situation and challenges of Community Health Insurance Scheme towards UHC in Senegal

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Introduction The government of Senegal is accelerating the Universal Healthcare Coverage (UHC). The UHC agency (ACMU) was established in 2015 to develop a community health insurance system through the community-based health insurance organizations (Mutuelle de Sante: MS) and strengthen the free health care initiatives. In such a circumstance, Japan International Corporation Agency launched the project for strengthening capacity of community health insurance system and free health care initiatives, named Doleel CMU. The project started in three pilot regions for three years form October 2017. Prior to the intervention, the project conducted the baseline survey for related organizations. The objective of the survey is to identify training and equipment needs and analyze the operational capacity of related organizations. This presentation will provide some results about the MS. Methodology The survey was conducted during 9 weeks from January 2018. The target was all 206 MS in these regions. The investigators interviewed each MS, using a paper questionnaire developed by the project. Results 78% of MS do not have any computers in their office. More than 70% of the person in charge of medical reimbursement has a low level of education (lower than the graduates of junior high school). In addition, 91% of the person did not take any training within the past year. Conclusion Since the baseline survey identify the scarcity of human and material resources in the MS, to move forward to professional organization and UHC especially, it is necessity for the provision of office equipment and practical training intervention.

O-14  Toward better universal access to health services in Kenya: from a chronological perspective

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The aim of this study is to assess the current state of Kenya’s health services. This is a descriptive study reviewing the literature and interviewing key informants at central administrative offices about health services and social protection in Kenya. Key health policies are chronologically summarized and qualitatively analyzed to examine the state of Kenya’s health services. The Kenyan government is initiating various policies and strategies to improve universal access to healthcare. In 2004, the government decided that national social health insurance will build on the existing National Hospital Insurance Fund (NHIF). Consequently, NHIF is expected to cover individuals who are particularly poor and without access to health insurance. NHIF announced that although they had covered approximately half of the population at the end of 2017, they recognized the need to recruit more members from the informal sector. The Constitution of Kenya of 2010 states that every person has the right to receive the highest attainable standard of healthcare services. In order to achieve this, the government decentralized the country into autonomous 47 counties. However, the proportion of the total budget devoted to healthcare in counties varied from 15 to 37 % in 2017, and the health service coverage and geographic distribution of health facilities varied across counties.In conclusion, one of the most crucial factors is the coverage of the NHIF, particularly for the working poor in the informal sector. Accountability for the quality of health services and health financing could be foundational to establishing universal access to healthcare in Kenya.
O-15 Results Report of Kaizen Pilot Activities in King Fahad Medical City (KFMC), Kingdom of Saudi Arabia

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[Introduction] The Government of Saudi Arabia has tried to improve productivities in public institutions as one of important objectives of "Vision 2030", the strategy for optimizing national finances and modernizing its economy. To support this effort, JICA conducted "Data Collection Survey for Promoting Kaizen Activity in Public Institutions in Saudi Arabia" in King Fahad Medical City (KFMC) which is one of the pilot institutions. [Outline] From August 2017 till March 2018, the survey team supported KFMC to establish Kaizen implementation system, provide various trainings, and monitor Kaizen activities implemented on site etc. This presentation will report the achievements by Kaizen as well as identified possible successful factors and lessons. [Discussion] KFMC established Kaizen Steering Committee (KSC) and 13 working groups. 10 out of 13 groups practiced QC Story. In comparison with situation before Kaizen, all groups improved their situation; shortening the average of Door-to-Balloon Time for ST elevation Myocardial Infarction by 32.3%, increasing the number of incident report by 35%, reducing the percentage of the patients developing bedsore by almost half etc. Moreover, 333 Kaizen-teian of 342 proposed Kaizen-teian were practiced. Through this project, we elicited possible successful factors; "Commitment by top management on Kaizen", "Acceptance and understanding of Kaizen among staff as practical method", "Establishment of structure for practicing and supporting Kaizen", "Train KSC members as facilitators and supervisors", "Voluntarily information and experiences sharing to other areas by staff". [Conclusion] This project tells us lessons for introducing and implementing Kaizen in other healthcare facilities in Saudi Arabia.

O-16 How to Encourage Hospitals' Initiative for Quality Improvement Activity? : A Case of Introduction of Hospital Quality Criteria and Self-Evaluation in JICA Project for Improving Quality of Health Care (QHC) in Lao PDR

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Background
Hospitals' selection of improvement opportunities encourages continuous quality improvement (CQI). However, three difficulties are in this approach such as (1) staff cannot express improvement opportunities under strong top-down leadership; (2) a team cannot solve a problem due to selection of a topic beyond their responsibility; (3) result of quality improvement activity is rarely tracked due to many CQI with wide variety of topics.

Methods
The QHC project introduced Hospital Quality Criteria (HQC) and Self-evaluation. HQC is a set of standards that defines good or bad in quality of services provided by hospitals. Since February 2017, the QHC project has developed four HQCs participatory with staff in four provinces. Quality requirements of HQC were categorized in five grades according to difficulty. Self-evaluation has been conducted every quarter. Results of self-evaluation were shared with achievement of each hospital and hospital ranking.

Result
Four provincial hospitals conducted self-evaluation three times (November 2016, January 2017 and March & April 2017) for toilet, reception of OPD, Eclampsia and Post-Partum Hemorrhage. The median grade in four provincial hospitals improved from one to two. However, difference of the best grade and the worst grade widened from two to five. Two provin-
Hospitals could not maintain their achievement in the past.

Discussion
HQC contributed resolving the known difficulties by enabling (1) discussion in work venue by showing the ideal state of services in a documented form; (2) hospital staffs to select and tackle on improvement opportunities within their responsibility; and (3) tracking the result of CQI by self-evaluation of hospitals.

O-17 Introduction of Hospital Quality Criteria for Encouragement of Quality Improvement Activities for Health Care Services: A Case from Nursing Committee in Four Southern Provinces in Lao PDR

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[Background]
To improve quality of hospital services, improvement of nurses' skills of continuous quality improvement (CQI) is essential. However, the nurses in four Southern Provinces faced difficulties in making plan into practice of CQI. We report our experience of smooth implementation of CQI by introduction of Hospital Quality Criteria (HQC).

[Activities]
HQC is a set of standards to judge good or bad of quality of healthcare services. HQC has developed HQC with staff in four Southern provinces including nurses. Each provincial hospital regularly conducts self-evaluation, finds improvement opportunities, and is supposed to conduct CQI.

[Output]
Before HQC, nursing committee raised challenges such as lack of human resources, inadequate nursing education and lack of ethics. However, their solutions relied on other people such as "discuss with the board of directors" and "ask central level to conduct training". After HQC, "nurses' impolite attitude to patients", "insufficient guidance" and "unclear patients' prioritization" were raised then the next actions were taken for "conduct a training for reception skill", "put maps for guidance" and "indicate priority of patients".

[Discussion]
Before HQC, nominated challenges were unclear and beyond the nursing committee's responsibility so that they could not conduct CQI. Nurses may have difficulty to conduct CQI because their responsibility is limited. HQC enabled nurses to focus on their daily work which were manageable by themselves. Moreover, HQC brought hospital-wide regular activity. HQC seemed enabling nurses to conduct CQI because it is easy to gain approval from the board of directors now.
O-18  Associations between the incidence of and recovery from depressive symptoms and social ties with neighbors -JAGES 2010-13-16 longitudinal data analysis-

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Objective:
Although older people face special mental health challenges, it has been still unclear about the degree of older people who can be depressed and recover by using three point longitudinal data. The objective was to investigate the incidence of depressive symptoms and the degree of their recovery in Japan focusing on the change of neighborhood ties.

Method:
Participants comprised 28,067 individuals aged 65 years and older. We analyzed individuals who were physically and cognitively independent. The Geriatric Depression Scale (GDS-15) was used with a cut-off value of score five. The onset of depressive symptoms was defined on which GDS puts less than five in both 2010 and 2013, and five or more in 2016. The recovery was defined by the same way. Change of neighborhood tie was measured by asking the kind of interactions the participants have with their neighborhood in 2010 and 2013. The responses were categorized as keeping no tie (reference), keeping, increasing, or decreasing tie. Adjusting to age and sex, Poisson regression analysis was adopted.

Results:
Around 7% (746/10,826) newly reported depression, while around 30% (528/1,847) recovered during 2013 and 2016. Any changes of neighborhood tie did not predict the onset of depressive symptoms, while keeping neighborhood tie predicted the recovery (Adjusted rate ratio: 1.38, 95% confidence interval: 1.14-1.67).

Conclusion:
Keeping neighborhood tie is important for recovering from depressive symptoms. The long-term effects of neighborhood tie should be considered in strategic planning for the recovery among older people.

O-19  End of life care in Bhutan in the context of rapid social changes and the cultural value of happiness

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Background: Bhutan’s national development guidelines are based on the philosophy of Gross National Happiness including health as one of its nine domains. Bhutan has been experiencing rapid social changes and increasing burden of non-communicable diseases (NCDs) associated with recent economic growth. Bhutanese life expectancy is expanding and more people have become to live with chronic disorders, having potential impact on the end of life care, which however has never been investigated in Bhutan. The
aim of this study is to explore qualitatively the situation and people's perception toward the end of life care in the context of rapid social changes and the cultural value of happiness among people in Bhutan.  

Methods: The study was conducted in Phuntholing and Rangaytung, Bhutan from June to September 2017 among 79 participants of both genders, aged 18 and older, recruited using purposive and theoretical sampling procedures. Data were collected by in-depth interviews and participatory observation. We used thematic analysis as a qualitative approach.

Results/Discussion: We found (1) that health was regarded as an important factor constituting happiness, (2) that health behaviors were still under the influence of traditional customs and values such as religious beliefs and strong social connections, and (3) that although primary health care is available free in Bhutan, disparity in the access of end of life care is expanding due to economic inequality growing in Bhutan's society. However, regardless of economic status there was a common value that "it is a virtue to remain happy despite of any situation of life".

O-20 Improvement of the Capabilities of Health Volunteers Providing Elder Care in Community in Thailand through JICA Japanese Technical Cooperation Partnership Program

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Objectives: A Community-based Elder Care Project by Saku City and Saku University has been implemented from 2016 through 2018 in Saen Suk, Chonburi Province, Thailand. The municipality's population is about 50,000, the senior population (people aged 65 and over) ratio is 8.1% in 2015, and 440 seniors need support for ADL. Eight nurses provide care and support, but many seniors suffer from aftereffects of strokes after hospital discharge and need more continuing care. They want home-based care. Therefore 482 health volunteers (HVs) trained and supervised by the nurses and physical therapists from other institutions. The objectives of training are as follows: 1. Nursing and helper care training for HVs 2. Rehabilitation training for HVs

Method: Group training: Lectures and group work for 30-50 participants per session. Individual training: During home visits, HVs, patient and family learn about nursing care and rehabilitation from a nurse and a physical therapist. Training in Japan: After local training, suitable HVs were nominated to study in Japan. Repeating group and individual training, HVs' skills were evaluated by observation.

Results: Among HVs, 20% actively participated in training and 30% participated moderately; the remainder did not. Those who completed training visited clients' homes in small groups, frequency of visits increased and appropriate intervention was provided. HVs felt proud to provide elder care because families and patients trusted them.

Conclusion: After HVs visits, some clients’ conditions improved, and HVs helped develop new community programs and care equipment. Continued efforts are needed to increase the number of HVs and improve their skills.
O-21  Health policy related to elderly care and its implementation in Lombok island, Indonesia

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Aim and Background: Six percent of population in Indonesia has been already with an elderly person 65 years or older. Related policy has been formulated by Ministry of Health and Ministry of Society. Ministry of Society set bureau of the social rehabilitation involving in department of elderly care. The decentralization has been pushed forward in policy implementation in Indonesia, thus, in this study, we analyzed health policy related to elderly care and its implementation in Lombok Island, where the traditional culture was maintained, and faith of the Islam influenced.

Material and Methods: Conventional contents analysis was carried out for policy papers, report of implementation and interview’s scripts. Key informant interviews were conducted for staffs in public health facilities, hospital, health center and community.

Results and Discussion: The elderly care services was carried out on the basis of National health action plan (2016-9) for elderly people become basic. Midwives is one of member in elderly care team, and their activities was important for caring female elder people. This approach was developed for focusing on female-specific vulnerability. Local public security sector started for monitoring the wandering aged person, cooperated with community. In a future investigation, I clarify the role of the folk sector under the observation in community.

O-22  Study: Culturally sensitive home care services for Japanese people living in Canada

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Purpose and Methods: People living in Canada represents a world of nationalities and cultures. N Home Care provides culturally sensitive care to Japanese Canadians living in Vancouver. For this study, we interviewed 32 clients and their families. From this initial assessment we summarize client expectations about providing home care services outside of Japan.

Key findings:
- Targeted ages are from 70 to 101-years of age
- 60% of them are over 80 years old
- 70% were born in Japan
- 70% of inquiries were made by their children
- 70% of children communicate with their parents in English

Rationale: Reasons for seeking home care

- Improve quality of life
- Shortage of caregivers
- Fatigue of family caregiver
- Maintain clean environment
- Dementia

Expectations of Japanese caregivers

- Speak Japanese with seniors, loved one
- Prepare Japanese meals
- Assumption that Japanese caregivers are trustworthy and reliable

Conclusion: It is vital to respect people’s culture in home care in a multicultural setting like Canada. N home care acts as a role model in culturally-sensitive home care for Japanese and Japanese Canadians who live outside their home country.
O-23  Comparison of duration of untreated psychosis between Phnom Penh and Siem Reap in Cambodia

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[Background] The WHO reported the gap between need for psychiatric treatment and its provision is huge in low- and middle-income countries. It is estimated there are lots of burden to obtain treatment in these countries. This survey intended to compare the duration of their first visit to a psychiatric department in order to elucidate the difference of psychological or social burden between Phnom Penh (PP), capital and Siem Reap (SR), rural area in Cambodia. [Methods] Participants were 368, 488 Cambodian adults in PP and SR respectively, who had a psychiatric consultation. We compared gender, age, diagnosis, duration of untreated psychosis (DUP) and duration of untreated mental illness (DUM) between PP and SR. We divided the diagnosis to 6 categories: psychotic disorder, mood disorder, anxiety disorder, substance use, epilepsy and other. [Results] The percentage of diagnostic categories were following; 14.9%, 48.0%, 14.7%, 4.9%, 1.6% and 15.2% in psychotic disorder, mood disorder, anxiety disorder, substance use, epilepsy and other, respectively in PP and 12.7%, 26.8%, 37.7%, 6.4%, 1.8% and 14.5% in SR. The average DUP was 10.8 ± 25.2 months in PP and 52.8 ± 79.2 months in SR. The average DUM was 12.0 ± 27.6 months in PP and 51.6 ± 69.6 months in SR. The DUM and DUP in PP are significantly shorter than in SR. [Conclusion] The DUM and DUP were much shorter in PP. It is considered the psychological or geographic closeness to the psychiatric service and family’s economic status influenced their decision to go to psychiatric department.

O-24 The causality of mental health problems in Japanese international students during overseas; a prospective cohort study with stratified analysis for gender

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Objective We aim to clarify the causality of mental health problems among international students from Japanese during overseas study through the investigation before a voyage to after a voyage. Methods We performed a prospective cohort study. The target population comprised candidates of international students from 2012 to 2014 in a Japanese university. Self-administered questionnaires were used to assess gender, age, the number of experience studying abroad, length of their stay, general mental health status: The General Health Questionnaire 60 (GHQ-60), The Autism-Spectrum Quotient (AQ), and the Rosenberg Self Esteem Scale before and after a voyage. To begin with stratified analysis for gender, multiple regression analysis was used to estimate coefficient (coef.) for general mental health after a voyage after adjusting for the above factors. Results A total of 587 students were invited to participate, 507 (88.6%) of whom were enrolled. Male students with increasing GHQ-60 after a voyage increasing indicated increasing GHQ-60 before a voyage (coef. .24; 95% confidence interval [95%CI], .13 - .34) and length of their stay (coef. .07; 95%CI, .02 - .13). Female students with increasing GHQ-60 after a voyage increasing indicated increasing GHQ-60 before a voyage (coef. .24; 95%CI, .13 - .34) and increasing AQ (coef. .09; 95%CI, .01 - .16). Conclusion In this study, among international students, mental health problems could be caused with length of their stay in male students or autistic tendencies in female students, in addition mental health matter before a voyage.

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[Background] Viral hepatitis, such as HBV and HCV, and HIV co-infection affect the decision of treatment. Especially for People Who Inject Drugs (PWID), the risk of infection due to sharing needle higher than HIV. However data on HIV / HBV / HCV co-infection in Myanmar was not available. Therefore, based on the request of the Ministry of Health, we investigated HBV and HCV co-infection when Integrated Biological and Behavioral Survey and Population Size Estimates among People Who Inject Drugs (IBBS-PWID) was conducted in 2014. [Method] IBBS-PWID recruited participants using Respondent Driven Sampling method at 16 sites nationwide, where many PWID lived. Behavior survey by questionnaire and blood examination (HIV test) were conducted. In addition to this, we investigated the viral hepatitis co-infection using ABON and SD Bioline for HBV, SD Bioline and Tri Dot for HCV. [Results] Of 3,340 participants in IBBS-PWID, 3,301 specimens were examined, among which 1,103 (34.4%) were HIV antibody positive, 266 (8.2%) were HBs antigen positive, 1,880 (58.8%) were HCV antibody positive, 94 (2.8%) were HIV / HBV co-infection, 901 (27.3%) were HIV/HCV co-infection, and 917 (27.8%) were HIV/ HBV or HCV co-infection. [Conclusion] We found high co-infection rate of HIV and viral hepatitis among PWID in Myanmar, which suggest the need for taking measures. Since treat for viral hepatitis became available in Myanmar in recent years, it is important to investigate the viral hepatitis because target population of HIV and hepatitis are overlap.

O-26  Impact of tobacco cessation intervention among tuberculosis patients: a qualitative study

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Background
Smoking doubles the risk of tuberculosis (TB) disease and TB mortality. In the Philippines, smoking cessation intervention has not been fully implemented into TB program. This qualitative study was conducted as part of a larger project to implement and evaluate the impact of tobacco cessation intervention among TB patients in the two districts of Manila. 

Design/Methods
Twenty-five TB patients (N=13 smokers, N= 12 quitters) were purposively selected from those who were enrolled to the main project, to participate in the focus group discussion. Discussion areas included reasons/barriers to quitting, and perception towards smoking cessation intervention offered during treatment. Verbatim transcripts were analyzed using content analysis. 

Results
The tobacco quitters indicated that the reasons for quitting were mainly concerns for health, followed by healthcare workers’ advice, concerns for family members’ health and increase in cigarette costs. The smokers indicated that barriers to quitting were perceived physiological addiction; as a habit or daily routine; opinion that reducing cigarette consumption is safer than their usual consumption; and fear that more diseases will surface once they quit. Most of the quitters reported that smoking cessation advice facilitated quitting tobacco use while the smokers reported that there was limited information on the process of quitting which might have motivated them to quit.
Conclusion
The smoking cessation intervention offered among TB patients has a positive effect in assisting TB patients to quit smoking. However, improvements in key messages and a tailored-approach are needed to further motivate the smokers to quit smoking.

O-27 Substance use and perceptions among young people in Palau: a nationwide school-based survey

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Substance use among young people is a critical public health concern, and urgent measures are required in Palau. A cross-sectional survey targeting nationwide students in grades 6-12 and college was conducted by using a modified questionnaire of the Drug Free Community Core Measures. Totally 1641 valid samples were collected for analyses. To quantify the association between each substance use (outcome) and perceptions of its health risk, peer and parental disapprovals, age-adjusted coefficients of Somers’ D were calculated. High prevalence of current alcohol drinking (6%, 20%, 48%), smoking (17%, 29%, 39%), marijuana use (11%, 35%, 29%), and betel nut chewing (27%, 55%, 75%) were observed in elementary school (grades 6-8), high school (grades 9-12), and college. Approximately 47%, 41%, 56%, 33%, 25% of the overall students perceived daily alcohol drinking, binge drinking, daily smoking, marijuana use, and daily betel nut chewing to be a “great health risk”, respectively. The perceived health risks of daily alcohol drinking and binge drinking, and daily smoking had a weak or non-significant association with each substance use concerned in overall students. Except that of college students’ betel nut chewing, the perceived peer disapproval was associated with each substance use especially in high school students’ marijuana use (Somers’ D=-0.354). Perceived parental disapproval was associated with current smoking, marijuana use, and betel nut chewing across the three school levels, but not with alcohol drinking. Parental norms had a relatively stronger association with current betel nut chewing (high school: Somers’ D=-0.282), compared with those with smoking and marijuana use.

O-28 The differences of Primary health care between Saku region and Leyte Island.

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Saku Central Hospital

"Background/Purpose" School of Health Sciences (SHS) is a medical school in the Phillipine. When SHS was damaged by Super Typhoon Yoland on 2013, the Friends of SHS, with its office in Saku Hospital, provided assistance to SHS. Then Saku Hospital exchanged Memorandum of Understanding with SHS in 2015. Since 2016, Saku Hospital has been sending its residents to SHS as a training on global health. "Method" Four second-year residents in Saku Hospital received training in SHS for about 1 week in March 2018. We had some lectures, visited several villages, and joined the health promotion activity with students of SHS. The programs included visiting medical institutions, home visits, school health, and hygiene education. "Result" Although SHS students are dedicated to their own community and that is one of the triggers for their motivation, most of medical workers in Saku Hospital are from different area. Further more, the Saku Hospital Group has three types of hospitals which cooperate with each
other. In contrast, Leyte also has gradual phase hospitals where students and graduates of SHS work, along with other medical service workers. Thus their coordination was less than Saku Group. In addition, Saku Hospital and SHS were known for primary health care, but now both tend to focus only on primary care. "Conclusion" We could learn the basic educational philosophy. It was meaningful training for the residents in Saku to think how to maintain ideal community health.

**O-29 Influence of organized breast cancer screening on understanding and promotion of mammography screening among the target population in Serbia**

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[Purpose] The age-adjusted mortality rate for breast cancer in the Republic of Serbia is 31.5 per 100,000, the second highest in Europe (EUCAN, 2012). The Ministry of Health has introduced organized breast cancer screening in 2013, inviting women aged 50 to 59 by either mail or phone for increasing early detection of breast cancer. However, the screening rate in 2016 is only 9.7%. This survey investigated effects of the organized screening on increasing mammography screening rate.

[Method] The questionnaire survey was conducted among 1,204 women 50 to 69 years of age randomly selected in the entire country. Classification criteria were based on existence of the organized breast cancer screening program in their municipality of residence. Experiences and knowledge of breast cancer examination were compared between these two groups.

[Result] A total of 1,204 women aged 50 to 69 were enrolled either in the organized screening group (screening group: 638 cases) or in the group unaffected by the organized screening (unaffected group: 566 cases) in 2015. Mammography screening rate was significantly higher in screening group (336 cases, 52.7% of total) than in unaffected group (254 cases, 44.9%). The organized screening showed significant difference of understanding effectiveness, necessity and way of access to mammography screening between the both groups. Among women without screening experiences, there was no significant difference of willingness to receive screening between two groups.

[Conclusion] Introducing organized breast cancer screening is considered relating to appropriate knowledge and practice of mammography screening among the target population.

**O-30 Can home medical care contribute to the community?**

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Regional medical treatment is defined as social adaptation and practice of comprehensive medical care (disease prevention, disease treatment, rehabilitation, health guidance and rehabilitation medicine etc.), comprehensive welfare to local residents. The goal of community medicine is considered to be the pillar of integration of prevention and treatment, integration of medical and welfare, health guidance and care prevention. While moving from traditional hospital-ended medicine to region-inclusive care, roles that home medical care should play as one type of future medical care are not a few. The bed (so-called hospitalization facilities) plays a big role in home medical care. What conditions are necessary to promote consistent care across hospitalization, outpatient, and home. And what kind of goal setting is desired? In this presentation, I will discuss the function of home health care at medical institutions that
Many studies have documented positive associations between social capital and health outcomes. Few studies, however, have been conducted to examine how networks, as one of three features of social capital, that is, trust, norms and networks, have been formed historically and maintained in daily life. Lao PDR (Laos) has scarce resources for public administration and weak administrative functions. In this situation, however, Laos has achieved the first target of MDG5: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio (Target 5.A.). One reason for this is that the Lao Women's Union (formerly the Patriotic Lao Women's Association) network, which was formed during the civil war, worked for improvement in maternal and child health. The study was qualitatively conducted to investigate how the women's network with trust and norms has been accumulated and maintained toward MDGs achievement. In Laos, before 1975, when the current state was established, the right, neutral, and left parties had fought a civil war under the influence of the Vietnam War. During the civil war, the left (Lao People's Revolutionary Party), which is the current ruling party, attempted to attract women of the rural areas, including women of hill tribes. For this purpose, they provided health services for women and children in rural areas, using propaganda and mobilization. Even after the current government was established, this women's network was expanded and strengthened. The women's network has contributed to improvement in antenatal checkup, facility births, and immunization for children using techniques of propaganda and mobilization.

O-32 Analysis of characteristics of health personnel working for Global Health and Domestic Rural Health

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Introduction Global Health and Domestic Rural Health may share some commonality. In fact some people shift from one to the other. The biggest challenge for both is to ensure health situation with limited resources such as facilities, professional staff and transportation, but what are other common characteristics in terms motivation of staff, required skill set. The aim of this study is to understand the required skills and career development for both. Methods We conducted interviews to those who are working for either international health or rural health about their motivation, value, satisfaction and perceived need of knowledge and skills. Ten respondents were chosen among those working for global health and ten from those working under Rural Generalist Program Japan (RGPJ) and in-depth interviews were conducted based on the question guide through face-to-face meeting or via telephone. Results Some observed commonalities were to maximize the health benefit with limited resources, need to expand the response to non-health issues such as poverty and social barriers, focusing on the vulnerable, and the need to coordinate with stakeholders in other sectors. Perceived knowledge and skills requirement varied from those work for clinical activities to those for public health. For clinicians, comprehensive knowledge and skills as a general physician and basic public health skills were common. Discussion Global Health and Domestic Rural Health have many characteristics in common. Source of professional motiva-
O-33  Report on health education activities from the project for improving women's health of female factory workers focusing on cervical cancer in Cambodia

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[Background] Women’s health problems shifted from maternal mortality to non-communicable diseases in Cambodia. Cervical cancer is the leading cause of cancer death among women. However, cervical cancer screening system is not in place in Cambodia. Cambodian Society of Gynecology and Obstetrics (SCGO), in collaboration with Japan Society of Obstetrics and Gynecology (JSOG), started a project since 2015 to introduce a comprehensive approach for cervical cancer management targeted at factory workers. This report describes evaluate the process of health education activities and review of the effect. [Methods] The outcomes of the health education activities were assessed by reviewing activity reports and related documents, and the impact of the activities on the participants and implementers were evaluated via interviews in January to May 2018. [Result] From August 2016 to March 2018, We conducted health education to 3,792 women and a total of twice cervical cancer screening at factory. Among of the health education participants, targets of the cervical cancer screening (married and over 25 years) are approximately 681 peoples, and 128 peoples received the screening. The screening rate was 19%. The findings showed that female factory workers had little opportunity to receive health education so far. Factory managers saw that health education by experts were valuable opportunities for employee’s welfare benefits and strongly hoped to continue. [Conclusion] It is highly meaningful to continue health education at the factory. However, there are problems such as time constraints and literacy rate of workers. In order to continue, measures need to be considered.

O-34  Comparison of Perceived Control in Patients with Acute Coronary Syndrome in Japan and the US A Pilot Study

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This pilot study compares perceived control of patients with acute coronary syndrome (ACS) in Japan and the US. This cross-sectional comparative study compares patients from a university hospital in Tokyo, Japan and a level 1 trauma center in the US. Inclusion criteria of patients were patients 21 years or older, hospitalized for ACS, alert and oriented, and hemodynamically stable. Participants completed self-report instruments including the Control Attitudes Scale-Revised (perceived control) and Short Form-12 (health related quality of life) during the hospitalization. Welch’s t-test and Pearson’s correlational coefficients were used for the analyses. This study was approved by the Ethics Committee at each study site. Japanese patients (n=31)’ average age was 63.9 years old and 25 (80.6%) were male while US patients (n=10)’ average age was 53.6 years and 8 (80.0%) were male. Japanese patients reported higher levels of physical functioning (p=0.025) and social functioning (p=0.045) on the SF-12 than US patients. However, perceived control was significantly lower in Japanese patients (p=0.003). Among eight
SF-12 subscales, general health (p=0.001) and role emotional (p=0.044) in Japanese patients, and bodily pain (p=0.002), general health (p=0.036), and role emotional (p=0.004) in the US patients were significantly related with perceived control. Perceived control was significantly lower even though physical and social functioning were higher in Japanese patients than US patients, which can be related to cultural difference between countries. Further investigation in a larger sample is necessary to investigate whether perceived control is related to long-term outcomes in patients with ACS.

O-35 Factors associated with glycemic control among patients with type II diabetes mellitus in the poor urban areas of Cambodia: a cross-sectional study

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Background: In Cambodia, the age-standardized prevalence of diabetes mellitus (DM) has increased. The main objective of this study is to identify factors associated with fasting blood glucose (FBG) among patients with type2 DM in poor urban areas of Phnom Penh, Cambodia. Methods: A cross-sectional study was conducted in 2017 using a structured questionnaire for face-to-face interviews by trained interviewers. The participants were selected from a list of patients with type 2 DM who were the members of peer educator network and lived in the poor urban areas. FBG level, which was measured when the interview was taken, was classified into two groups: <126 mg/dl (normal) and 126< (high). Sociodemographic characteristics, medical history, accessibility to health services, state of health management, medication adherence, and knowledge, attitude, and practices related to type 2 DM were examined. A multiple logistic regression analysis was conducted to identify the factors independently associated with FBG, which were adjusted for sex and age. Results: Data from 648 patients who consented to this study and had no missing answers were included in the analysis. Of the total, 59.4% had high FBG. After adjustment, high FBG was associated with being an employee and insulin use (Adjusted odds ratio (AOR)=1.99, 95% confidence interval (CI)=1.16-3.42), employee (AOR=1.57, 95% CI=1.01-2.44). Conclusions: The proportion of participants with high FBG was more than half. High FBG was associated with being an employee and insulin use. Specific support for an employee and an insulin user would be effective for glycemic control.

O-36 Risk factors of hypertension among poor urban residents in Dhaka, Bangladesh

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Several population-based surveys in Bangladesh have reported an increasing prevalence of hypertension. However, the associations between hypertension and its potential risk factors among different age groups have not been fully investigated. We previously conducted a cross-sectional epidemiological survey in an urban slum in Dhaka. This study aims to examine the risk factors of hypertension and the trend of their
associations among younger and older adults. The epidemiological study targeted adults aged 18-64 years by using a standardized WHO procedure with slight modification. The data were stratified by age (18-34 years and 35-64 years) and sex for statistical analyses. Multivariable logistic regression was applied to examine the associations between hypertension and its potential risk factors. Restricted cubic splines were used to illustrate the associations between hypertension and obesity indices. The prevalence of hypertension was 7.5% and 9.1% in younger men and women; 32.5% and 28.1% in older men and women, respectively. Hypertension was significantly associated with three obesity indices (BMI, waist circumference, and waist-hip ratio), but not with blood glucose (HbA1c) and lipids independent of BMI consistently in the four age-sex strata. The associations between hypertension and the three obesity indices had a similar trend. Odds of hypertension increased markedly with the increase of obesity indices in the younger men group, compared with the women and older men groups.

O-37 Assessment of School Health program for non-communicable disease prevention in Pohnpei State of the Federated State of Micronesia

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NCD is one cause of death for over 10% for the adult overweight population of the world. Adult obesity is a pressing problem at Micronesia, Pohnpei State. Improvement of their lifestyle is not easy in adulthood, and a big outcome has not been seen up to now. I have been engaged in the NCD and school health program by the Division of Primary Health Care, Department of Health Services, Pohnpei State Government since 2001 and have studied regarding School Health Education about NCD at an elementary school. The present state and future’s problem will be reported in this paper.

O-38 Risk factors of diabetes and prediabetes among public employees in northern Ethiopia

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The increasing burden of diabetes mellitus is one of the major public health challenges in African countries, including Ethiopia. The aim of this study was to examine the prevalence and potential risk factors of diabetes and prediabetes among public employees living in a regional capital city in northern Ethiopia. We conducted a cross-sectional survey from October 2015 to February 2016, targeting public employees aged 25-64 years. Diagnostic thresholds for diabetes were fasting blood glucose (FBG) >126 mg/dL or glycated hemoglobin (HbA1c) >6.5%, and those for prediabetes were FBG =100-125 mg/dL or HbA1c =5.7-6.4%. Multinomial logistic regression models were applied to investigate the potential risk factors of diabetes or prediabetes. The overall age-standardized prevalence of diabetes and prediabetes were 10.2% (men: 11.8%; women: 10.9%) and 35.9% (men: 38.9%; women: 25.3%), respectively. The cut-off values of FBG for diabetes (126 mg/dL) and prediabetes (100 mg/dL) respectively corresponded to HbA1c levels of 6.6% and 5.7%, assuming their quadratic relation \( R^2=0.616 \). Increased body mass index, waist circumference and waist-to-hip ratio were associated with diabetes and prediabetes independent of age both in men and women. Triglycerides levels and religious fasting observance were associated with diabetes and prediabetes in men but not in women, while high-density lipoprotein (HDL) cholesterol was not associated in either sex. We concluded that measures of obesity, triglycerides and religious fasting observance
were significantly associated with prevalent diabetes and prediabetes in men while only obesity measures were in women in northern Ethiopian civil servants.

**O-39 Preliminary report of JICA Partnership Program: Introduction of weight control program for obesity prevention in Pohnpei, Federated States of Micronesia**

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**Purpose** In October 2017, we launched a Weight control for obesity prevention program in Pohnpei FSM, which consists of exercise and dietary modification as a JICA Partnership Program.

**Method** Targeting elementary school teachers at 3 areas in Pohnpei, 3-week weight loss competition was carried out in April and May, 2018. The program consisted of the guidance to understand risks of obesity, exercise and dietary modification. After the obesity risk guidance, exercise consumed 500kcal per day and dietary modification reduced 450kcal of energy intake per day, aiming 6 lb weight reduction and significant decrease of BP among the participants diagnosed as hypertensive.

**Results** The total number of the program partisans was 92 (Male 37 and Female 55). The mean of age was 38.7 (SD9.1)yrs. The BMI mean before the competition was 35.1 (SD14.4) kg/m² in male and 33.9 (SD7.9)kg/m² in female. The BP mean was SBP/DBP 122.7 SD17.2/82.3 SD11.12mmHg. A significant weight reduction among the program participants was identified at the end of the competition (p<0.05). On the other hand, it was 12.7% of the participants succeeded to reduce 6 lb of their weight. All the participants with SBP/DBP more than 140/90mmHg before the competition came to be normal BP level (p<0.001).

**Discussion** The results suggested effectiveness of the weight loss program. However, some participants gained their weight during the competition. The program should develop a certain tool to confirm completion of required menu of exercise and dietary modification.

**O-40 Tobacco use and smoke-free home status among tuberculosis patients in an urban setting in the Philippines**

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**Background** Tobacco use is the most significant single cause of death in the world. Tuberculosis (TB) is still one of the most important health burdens in the Philippines. This study aims to describe the present tobacco use and second-hand tobacco smoke status at home among TB patients in an urban setting in the Philippines.

**Design/Methods** It is a cross-sectional survey on tobacco use and second-hand smoke status at home among TB patients registered at health centers from April 2017 to February 2018 in the two districts in Manila in the Philippines. All newly diagnosed TB patients who were 18 years old and above were interviewed by health workers at health centers on their tobacco use and second-hand tobacco smoke status at home according to the ABC Smoking Cessation approach.
by the UNION.

Results
Among eligible 1,800 TB patients, 1,608 patients (mean age of 44 years, 63% of males), were enrolled in the study. The smoking rate among all TB patients indicated 30% (40% in males and 14% in females). Among 1,518 TB patients who informed of their second-hand smoke status at home, 43% of them claimed that they were exposed to tobacco smoke. Female TB patients claimed significantly high smoke exposure rate compared with that of males ($P = 0.03$).

Conclusion
The smoking rate among TB patients in an urban setting in the Philippines indicated relatively low level, while, 43% of them claimed to be exposed to tobacco smoke inside their home.

O-41  A study on cross-border referral system for tuberculosis patients
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Background: Approximately 10% of foreign-born patients transfer-out of Japan during treatment and their final treatment outcomes are unknown. We conducted a survey on the situation of cross-border referral systems for TB patients in other countries, as part of a preparation phase in our efforts to establishing such a system in Japan. Method: Literature review and E-survey to relevant persons from US, UK and Australia. The three main concerns were: 1. whether there was a standardized procedure for referring TB patients to another country, 2. whether the treatment outcome of such patients was being followed-up, and 3. how their treatment outcome was recorded in the national surveillance system. Results: There was no standardized procedure in UK and Australia. In UK, PHE contacted the national TB focal points to link the treating physician, but on case-by-case basis. In Australia, how international transfer-out patients are handled differed from one jurisdiction to another. In both counties, the final treatment outcome of such patients were evaluated as transferred out. In the US, there were two cross-border referral services, one provided as part of CDC, and another by an NGO. Within both services, treatment outcomes were followed up and the treatment completion rate of patients who had been referred through these services has reached almost 80%. Conclusion: Several countries have begun addressing the issue of cross-border referral for TB patients. Ensuring continuation of care for mobile population is essential, not just for the patients themselves but for preventing spread of secondary infection and antimicrobial resistance.

O-42  Activity of Japan Disaster Relief Infectious Diseases Response for 2018 Ebola outbreak in Democratic Republic of Congo

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Background  In response to the 2018 outbreak of Ebola virus disease (EVD) in Democratic Republic of the Congo (DRC), the Government of Japan dispatched the Japan Disaster Relief Infectious Diseases Response Team (JDR-IDRT) from 11 to 30 June, upon the request from the Government of the DRC. JDR-IDRT focused on strengthen the quarantine at point of entry (PoE) in Kinshasa.

Method  PNHF has established temporary PoE to scale up surveillance of EVD in Kinshasa with a view to prevent the capital city of the DRC from the spread of EVD. We supported PoE by providing essential materials to carry out effective quarantine. Applying all equipment, each step of quarantine was properly separated and easy to control the flow of the passengers. We also ensured how to deal with suspected cases, including isolation of patient.

Result  Collaboration with Ministry of Health, IOM
and other international partners, JDR-IDRT assisted to establish the model of temporary PoE to detect and isolate suspected EVD patients and share the appropriate information to passengers. During JDR activities, 23,500 passengers were screened at the PoE.

Discussion  DRC government declared the end of EVD outbreak on 24th July, 2018. JDR-IDRT contributed to strengthen the risk management and response capacity of the PoE in DRC. JDR activities was appreciated by MoH and other international partners by implementing the activities which meets the needs of MoH and respecting their ownerships. Furthermore, it is important to dispatch JDR-IDRT more proactively since the experience of JDR deployment will be utilized for the future health risk in Japan.

O-43 Bottom-up approach to strengthen malaria control: A mixed methods study among microscopists and their patients in Palawan island, the Philippines

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Background: Palawan is the highest malaria endemic provinces in the Philippines where health care services do not reach the vulnerable populations. To accelerate the efforts to eliminate malaria in Palawan, community-based malaria control program was established in 1999, which involved training microscopists. The present study analyzed the findings of the previous researches and proposed additional bottom-up strategies accelerating the elimination of malaria in Palawan.

Methods: Quantitative (questionnaires) and qualitative (focus group discussions/interviews) studies were conducted among 218 microscopists and 127 malaria patients. Quantitative data was analyzed using structural equation modeling, and qualitative data was analyzed using NVivo 10 software programme.

Results and Discussions: Strengthening microscopists’ awareness activities encouraged the implementation of effective prevention practices by the residents themselves and increased the likelihood that they would seek appropriate treatment. Strategies to improve social status of microscopists were also innovatively proposed. Particularly, specific minorities (poor, old, and ethnic minorities) were found to have higher satisfaction with the microscopists’ care. Microscopists were proved to have an important role to narrow the disparities in health care.

Conclusion: This novel malaria strategy could accelerate the efforts to achieve Sustainable Development Goals not only in the Philippines but also in other endemic regions.
Mumps vaccine is currently not a component of the national immunization schedule and the seroprevalence of anti-mumps antibody in the general population is unknown in Lao PDR. In 2011, Lao PDR conducted a nationwide supplemental immunization activity (SIA) using the measles-rubella (MR) vaccine and, in 2014, a nationwide multistage random cluster sampling survey was conducted, in which anti-measles and anti-rubella IgG was measured (2,135 samples). The results showed the seroprevalence of anti-measles IgG among target age groups of the SIA was not as high as expected, whereas that of anti-rubella was high enough among the same age groups. In the present study, anti-mumps IgG was measured in 2,058 serum samples remaining from the 2014 survey. The seroprevalence of anti-mumps IgG showed a gradual increase with increasing age and reached a plateau of around 80% in individuals older than 11-12 years. Compared with the results of previous studies conducted before introduction of the mumps vaccine in other countries, the increase with increasing age of anti-mumps seroprevalence is less marked and its plateau is lower. We attribute this result to low population density in Lao PDR. The previous studies showed anti-rubella IgG seroprevalence levels were similar to or lower than anti-mumps IgG seroprevalence levels in the same age groups. In the present study, age-specific seroprevalence of anti-rubella IgG was higher than that of anti-mumps IgG among the SIA target populations, and thus differences in seroprevalence levels between anti-rubella and anti-mumps IgG may indicate additional immuni-
yty attributable to the rubella vaccine component.

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Objective: This study aims to identify factors influencing the impact of a UNICEF-led behavior change communication program on early initiation of breastfeeding, an undeniable pathway to neonatal and child mortality reduction. It provides family and community perspectives to examine what impacts accessibility to the support and service provided by health and non-health workers trained by the program. Methods: This is a cross-sectional survey to evaluate the child healthcare promotion launched by the Ministry of Health of Niger in pilot rural areas since 2008. The study sample includes mothers aged 15-49 years with one child below 24 months (n=1,026) based on a post hoc constitution of two groups, exposed and unexposed to the program. Statistical analysis measured crude and adjusted odds ratios with multivariate logistic regression. Results: Early breastfeeding in the exposed group increased by 2.4 times that of the unexposed group without statistical significance (AOR 2.4; 95% CI 0.9, 6.2). Mothers involved in sales activities compared to household work with no direct income (AOR 7.7; 95% CI 1.3, 47.8), and mutual decision for harvest use (AOR 8.6; 95% CI 2.0, 36.8) were more likely to practice early breastfeeding. Koranic school education negatively influenced early initiation of breastfeeding. Antenatal care did not change the timing of initiating breastfeeding after birth. Conclusions: Deprived mothers are more likely to be excluded from the program and to be prone to delayed initiation of breastfeeding. Family and non-
health community actors' roles are subject to further investigations to address socio-economic exclusion in child healthcare promotion.

O-47 Factors associated with caesarean section in Darkhan-Uul Province, Mongolia: A prospective cohort study

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Aim: Caesarean section (CS) rates have been rising in Mongolia; it was 22.4% in 2012, and 25.4% in 2016. The aim of this study was to investigate the risk for CS in Darkhan-Uul Province, Mongolia. Methods: Pregnant women who visited public health facilities for antenatal health checkups were recruited from November 2015 to January 2016, and data were collected using self-administered questionnaires and medical records. Results: Among 508 pregnant women who participated in the study, 331 data were analyzed. Maternal age was 28.1 ± 5.8 years, 168 (50.7%) had graduated from a university. Gestational age at childbirth was 38.7 ± 1.6 weeks, body mass index (BMI) before childbirth was 28.5 ± 4.1 kg/m², and 48 (14.5%) of women had a CS. The result of multiple logistic regression analysis showed that higher maternal BMI before childbirth (Adjusted odds ratio [AOR] = 1.129, p = 0.004), less gestational age at childbirth (AOR = 0.648, p < 0.001), and larger baby's head circumference (AOR = 1.562, p = 0.008) were the risk factors for CS. Furthermore, compared to employed women, nomad women had higher odds of CS (AOR = 4.602, p = 0.045). Conclusion: This study was the first to reveal the factors associated with CS in Mongolia. These results should be provided to all medical personnel and policy makers in Mongolia.

O-48 Initiatives to provide comprehensive continuum of care in Northern Zambia: Maternal, Newborn and Child Health One Stop Service Project

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[Background] Supported by the Government of Japan, this project was implemented at ten sites in two districts in Northern Zambia from 2014 to 2017 with the aim to increase the utilization of quality perinatal and neonatal services. [Method] The project undertook the following activities: provided refresher training for midwives and nurses; trained and re-trained the Safe Motherhood Action Group (SMAG); trained youth peer educators; built a maternity ward, maternity waiting house, youth center, and housing for midwives within the premises of three health centers; and established and supported a Local Steering Committee (LSC) at ten project sites. [Results] Three health centers with new facilities have shown
the following improvements: the percentage of women who delivered at a health center increased from 37.1% in 2014 to 52.3% in 2017; the percentage of women who sought postnatal care within six days after delivery increased from 30.1% in 2013 to 52.6% in 2017; and the percentage of clients who newly accepted a contraceptive method increased from 13.1% in 2013 to 18.2% in 2017. [Discussion] The system to sustain the changes brought by the project have been put in place. For example, each LSC has initiated income generation activities on their own. In addition, the LSC of a health center took an initiative to convert an empty house into their own maternity waiting house. Furthermore, spin-off effects have been seen, such as three health centers with new facilities serving as a model facility or receiving student nurses/midwives for their training.

O-49 A study using Three delays model on the factor in mothers' access to health facility in Nepal

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[Introduction] We aim to go to health facility to give a birth by SBAs's support. Sustainable Development Goals promote it too. However, it is not clear the factor in the mothers' access to health facility or SBA. It is key issue for mothers not to access to health facility or SBA. The goal of this study is to clear this issue and show the solution to achieve there.

[Methods] Qualitative study and quantitative study with 35 mothers and 10 Female Community Health Volunteers in Kavre province, Nepal. The data was analyzed by IBM SPSS.

[Result] 70% mothers have given a birth at health facility because they have heard about the safety of birth at health facility and they have heard the information about safety birth from FCHV. From 80% to 90% of the mothers who know about the danger sign and nutrition food during pregnancy give a birth at health facility. And they have used FCHV before.

[Conclusion] By recent studies, it is clear that the knowledge on safety birth is important. In addition, it is important to prepare the health facility, to create the community to get the information and to connect health facility and mothers like FCHV.

O-50 Modernization in Paradox Regarding Infant and Young Children Faeces Management as well as Child Growth in the Urban Slum, Indonesia

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Disposable diaper which is user friendly and time-conscious, is one of the modern solutions that was developed to manage young children’s faeces efficiently. On the other hand, this development has led to sanitation and health challenges due to abundant diaper waste with faeces contaminants to the living environment. For some reasons, using disposable diaper for young children was considered hygienic and achieved safe management of faeces. To critically analyze the concepts, faeces management should be clearly understood from the defecation site until how the faeces are finally disposed. We investigated 134 pair infant and young children with their mothers as caretakers in the urban slum area in Indonesia. We targeted under-five children from over populated and low income household, with improper sanitation facilities. We assumed faeces management of those as factors which affect their growth. Our study was conducted using a quantitative and qualitative approach by measuring child’s body weight, length and conducted an in-depth interview with mothers regarding their child’s faeces management. experience
on disease and household sanitation facilities. Our finding showed that mothers tend to minimize total diapers for a day, and directly throwing both diaper waste and child faeces into the river or waste disposal that considered unsafe. Consequently, this behavior leads to diseases such as severe diarrhoea. Through this recent study, we found that children who use disposable diapers when staying outside of home significantly correlated with child stunting and most mothers who use disposable diapers tend to practice unsafe faeces disposal.

O-51 Experience on introduction of Immediate Newborn Care (INC) in rural Cambodia
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[Background] In Cambodia, the ‘Five-year Action Plan for Newborn Care’ was developed in 2015, based on the guideline for Early Essential Newborn Care (EENC) by WHO. As one of approaches of EENC, two days coaching session of Immediate Newborn Care (INC) has been conducted. The JICA IIneoC Project has been supported this activity.
[Objective] We aimed to describe the knowledge in the participants of INC coaching in Svay Rieng province.
[Method] The project conducted pre- and post-coaching assessments based on the WHO (2016) EENC Module 2 (12 questions, full score: 18 points).
[Results] 209 qualified staff joined the INC coaching sessions from March 2017 to February 2018. 97%, 82% and 75% of the participants correctly answered to the questions: ‘fundal pressure as non-effective means of supporting labor’, ‘criterion of bag-and-mask ventilation’, and ‘appearance of feeding cues for breastfeeding’, respectively. On the other hand, 14%, 36% and 44% of them could list up the necessary points for ‘improvement of bag-and-mask ventilation’, ‘good attachment to the breast’ and ‘suction’, respectively. Median total score was increased from 9 to 17 after the session. However, the percentage of correct answers for the necessary points for ventilation and suction remain low.
[Conclusion] Almost all participants rarely experienced the resuscitation of newborn infants. This fact might lead the difficulty to answer the issues for bag-and-mask ventilation clearly. Regular practices for bag-and-mask ventilation is necessary to maintain the skill and knowledge.

O-52 Work for International health and lifework balance - Promoting work style reforms
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Many people engage in the area of International health with eagerness such as tackling with global issue or saving the world. There are many variations on job types; some conduct volunteer activities or do something on daily basis, and some jump into foreign environment for a couple of years by having leave of absence from work. On the other hand, there is not enough environment ready for people to have this area as lifework. Social acceptance for those manpower is not well prepared, whereas many faces future possible various life events such as marriage, delivery, caring for children or elderlies. In addition, there are common issues on international level work such as short-term contract or international relocation. There is no enough information how to deal with those various kinds of issues to continue work. For
example, to run the project in foreign countries as Japan’s aid, it is quite a common fact that un-paid overwork or peoples’ volunteer activities contribute greatly. In fact, in the area of international health, there are large number of high level professionals, with holding high degrees with strong technical area and fine language skill. In this presentation, it will propose the discussion topic on how we can work in the area of international health with stable manner in terms of labor related law, stats, and cases. Woman will be focus based on the aim of this Society.

O-53  Let’s share the bread! -Experience of active learning for Japanese undergraduate students to understand equity in healthcare rationing-

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Background: No poverty and reduced inequalities are included in the Sustainable Development Goals (SDGs). The 2018 SDGs report indicates that 783 million people still live below the extreme poverty threshold, which means living on less than $1.90 per person a day. For Japanese students, it is not easy to imagine such extreme poverty and global inequalities.

Objectives: The goal was to encourage Japanese undergraduate students to be aware of and understand global poverty and inequalities through participatory coursework focusing on equity in healthcare rationing.

Methods: The coursework was organized as follows: (1) equitably sharing a bun within a group, (2) lecture on equity in healthcare rationing, (3) lecture on global extreme poverty and resource allocation, and (4) testimony from the author of Anpanman. The reactions of students in the class and their reflective comments were analyzed to assess the effects of this coursework. Results: The coursework was part of a course entitled “Health and Human Rights” for undergraduate students in nursing. Almost 400 students enrolled in the course from 2013 to 2017. Students’ comments varied: “we divided the bun using a ruler”; “we decided who eats first by rock-paper-scissors”; “first, we asked ourselves if we want the bun or not.”

Discussion: The group work provided students an opportunity to reflect on uneven distribution of resources, the fight for rare resources, and allocation depending on need, and ultimately to realize the justice principle of bioethics. Moreover, a bun costing almost $1.90 gave students a real glimpse into extreme poverty.

O-54 Difficulties experienced by foreign nurse/foreign nurse candidates who are working in Japan: a literature review

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The objective of this study is to conduct a literature review to understand the current situation and the challenges that foreign nurses and nurse candidates under various Economic Partnership Agreements (EPA) experience in Japan. A literature search from 2012 to 2017 was conducted across three databases, including Japan Medical Abstract Society (JMAS), CiNii and PubMed. Two sets of Japanese keywords "Nurse, EPA" and "Nurse, Economic Partnership Agreements" were used for the Japanese databases, JMAS and CiNii. A search formula of "Foreign nurse [Title/Abstract] OR Economic partnership agreements" was used for the PubMed. The inclusion criteria were research papers that examined the difficulties experienced by foreign nurses and nurse candidates in Japan from their perspective, and were written in Japanese or English. The exclusion criteria were studies that investigated from the viewpoint of Japanese staff who accepted foreign nurses. Sixteen studies were selected for the review. There were 11 Japanese and 5 English articles, of which 6 were quantitative and 10 were qualitative research. The themes generated included: 1) Language and communication barrier; 2) Low passing rate of national
qualification exam; 3) Low workplace, social and environmental adaptation (food, religious, culture, working as a nursing assistant, interpersonal relationship, geographic location); and 4) Poor psychological status (low self-esteem, lack of confidence, fear of losing identity, low job satisfaction and social adaptation, loneliness). Language barrier is the most challenging experience for EPA nurse/nurse candidates. In addition, extra support is needed in the workplace and society in order to improve their mental health status.

O-55 Preparing for global health elective

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Medical students are likely having a dream to spend time abroad during their medical careers, working as clinicians in both high and low-to-middle income countries. With progressive globalization, there is an increasing interest in rural medicine and global health training. Given these circumstances and the dynamic role of the GP within the context of recent health reform, it may now appear reasonable to question whether global health work experience is an appropriate use of time and whether it is of value to Japanese GPs. Since 2015 GENEPRO has started to develop a new program for rural medicine training called 'Rural Generalist Program Japan' which aims to recruit and retention of rural workforce and help medical students and young doctors dreams come true to have experiences in rural and remote area with resource-limited. Since 2017 April, this program has started with 18 registrars including 6 graduates in four different rural and remote hospital in Japan, 12 month for domestic training and 3 month for global elective program in rural area, such as in Australia, Nepal, Mongolia, Norway, etc. To some extent, defining the skill-set is necessary for global health work vary according to the varying medical needs and health systems in different parts of the world. Focusing on ambulatory and preventive medicine skills as well as hospital medicine, complex obstetrics and gynecology, expanded surgical skills, and public health/community medicine, we try to figure it out to list up skill-set in rural and global health elective for trainees.

O-56 Cultural Competence Recognized by Nurses who had Experienced International Activities and its Acquiring Process

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Objective The purpose of this study was to reveal cultural competence recognized by nurses who had experienced international activities and its acquiring process. Method This study was designed as a qualitative descriptive research and conducted during April and May 2017. The participants of this study were nurses. Informed consent was obtained from the participants, and semi-structured interviews were conducted using an interview guide. Results The participants included 8 nurses with the mean age of 51.6 years. The mean duration of the international experiences was 15 years. The cultural competence that they had recognized included <knowledge related to the background for cultural differences>, <recognition of cultural differences between self and others>, <attitudes and behaviors showing respect to other people's culture and values>, <behaviors to resolve issues which are likely to develop due to cultural differences> and <ability to communicate well with others using verbal and non-verbal methods>. The process of acquiring such cultural competence included <learning experience of liberal arts>, <opportunities to improve sensitiveness for differences with others>, <clinical nursing practice in Japan>, <experiences of living abroad>, <understanding differences in behaviors and values through active.
questioning and discussions>, <accepting what they learned from people from different cultures and understanding cultural differences> and <understanding cultural differences while working in a different culture>. Discussion We also believe that it is effective to organize a system which can promote active learning of liberal arts as well as interactions or activities with others who have different cultural backgrounds in order for them to acquire cultural competence.

O-57 Training for clinical nursing instructors in Vietnam: Approaches and Challenges

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[Objective] To examine the training system for nursing clinical instructors based on the result of evaluation of training effect in order to develop the clinical training system for new graduated nurses in Vietnam. [Methods] We discussed about the training system to strengthen capacity of nursing clinical instructors based on the result of the training and the seminar with Ministry of Health, Vietnam (MOHV). [Result] (1) Training of instructor: Lecturer could give the lecture based on the objectives of clinical training for new graduated nurses. However practice part were difficult for them. The score of Posttest is higher than Pretest. According to this result, participants deepened their understanding of clinical training system, knowledge and skills of clinical nursing instructor by training. It showed that the training is effective for them. (2) Seminar for strengthening capacity of instructor: The seminar was held in order to improve practical teaching skills. It was found that the practice using role-play was acceptable for Vietnamese. However, it was difficult for instructors to guide the learner to consider the reason of nursing skill and to assess the patient. (3) Direction of clinical training: MOHV is implementing health professions education reform. In the decree was issued in November 2017, strengthening collaboration between hospitals and nursing schools, requirement of clinical instructors, etc were described. MOHV started to make guideline for training of clinical instructors based on the evaluation result. [Conclusion] MOHV started to strengthen the clinical training, it is recognized that the development of nursing clinical instructors an important.

O-58 Socioeconomic status and living conditions of victims and non-victims with disability affected by armed conflicts living in local conflicted municipalities, Granada and El Carmen de Chucuri, in Republic of Colombia

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Background The government of the Republic of Columbia (Columbia) has engaged in efforts for many years to terminate conflicts with anti-government guerrillas. The Columbian government has conducted post-conflict programs to reconstruct the areas affected by armed conflicts and to relieve victims. The post-conflict program target for Persons with Disabilities (PwDs) in local municipalities affected by armed conflicts, nevertheless yet their socioeconomic status and living conditions did not sufficiently describe. Objectives The purpose of this study is to identify the socioeconomic status, living conditions and associated factors of PwDs in two local municipalities affected by armed conflicts, Granada and El Carmen.
de Chucuri (ECC) in Columbia. Methods This study analyzed results of structured questionnaire with face-to-face interviews administered by the JICA Project for Social Inclusion of Conflict Victims with Disabilities, which was started in 2015. Results A total of 514 PwDs in Granada and 412 PwDs in ECC participated. 486 PwDs in Granada and 186 PwDs in ECC were identified as victims affected by armed conflicts. However, only 64 in Granada and 17 in ECC, respectively, identified the direct cause of their disabilities as armed conflict. Furthermore, 43% of PwDs living in Granada and 85% of those living in ECC lived in rural villages in mountainous areas. In addition, the monthly family’s income of 593 PwDs (62%) in total was less than about 100 US dollars. Conclusion This study identified PwDs in local municipalities affected by armed conflicts were significantly poor, and in difficult situation to access necessary information and services.

O-59 Report of medical assistance activities at the Rohingya refugee camp

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HuMA (Humanitarian Medical Assistance) dispatched a medical team to Cox’s Bazaar in Bangladesh to offer medical assistance to Rohingya refugees for 3 months beginning on the 10th of December. HuMA members provided medical care to refugees in cooperation with the Dhaka Community Hospital Trust (DCHT), the local medical team that had been providing medical care to both Rohingya refugees and the local Bangladeshi host community. DCHT received financial support from the Japanese NPO Peace Winds Japan (PWJ). HuMA’s primary activities were 1) providing medical care, 2) advice regarding the control of Diphtheria with limited space and equipment, 3) maternal and child health care such as health checkups for pregnant women by using ultrasonography and training local staff to proper handle emergency cases. In addition to medical performance, HuMA analyzed other medical facilities near the DCHT clinic with PWJ members in order to create a data map of medical information for smooth referral of patients. HuMA tried to build an efficient coordination system between the DCHT clinic and other medical organizations by attending the ISCG (Inter Sector Coordination Group) health meeting to share the information regarding refugee health situation. Finally, it is essential to maintain the health of host communities when managing refugee health. Local medical teams have the responsibility for not only the health of Myanmar refugees but also for the host community. It is an important role for a small foreign medical NGO such as HuMA to act as a mediator between local medical sectors and international medical organizations.
O-60 Reproductive status of Syrian refugee living in rural Jordan and effects of the technical cooperation project for strengthening health centers on reproductive behaviors

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<Aim>
Jordan has received a massive influx of Syrian refugees since 2011 and it is projected those refugees might stay in Jordan permanently. Therefore, Japan International Cooperation Agency implemented a project to support to restructure the health system in Jordan. The project aimed to expand village health centers (VHCs) in order to delivery better reproductive health (RH) services in rural villages in Irbid. This study analyzed the status of Syrian refugees and estimated the project impacts by using data from the baseline and endline surveys.

<Method>
The project provided training for VHC staff, basic equipment and IEC material and conducted supervision. In addition, the project introduced health promotion programs in communities. Baseline and endline surveys were conducted in ten villages in Irbid governorate, interviewing about 1000 married women of reproductive age (15-49 years).

<Result>
Valid samples collected were 1019 for baseline, including 43 Syrian. Syrian women were 4.1 year younger than their Jordanian counterparts, 3.8 year shorter in schooling, 1.8 year younger in age of first delivery. Length of current residence was 1.5 years. Means of number of household members and number of living children were similar with Jordanian. After 13-month-interventions, knowledge of modern contraceptives and modern contraceptive prevalence rates improved. Recognition of VHCs and use of VHCs also increased.

<Conclusion>
Although the limited number of Syrian samples, this study highlighted RH status of Syrian women in rural Jordan and suggested expanding service delivery for VHCs might improve refugees' RH situations.

O-61 Reintegration challenge for the Survivors of Incest: A Qualitative study in selected safe homes in Nepal

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Background Incest is defined as a sexual relationship between the closely related members which prevalent in all over the world. Incest in Nepal is an alarming issue although, it is considered as a crime. The survivors of incest sheltered in safe homes for a certain period reintegrate following their rehabilitation. The aim of the research was to assess how incestuous abuse survivors reintegrate to their family and the factors influencing on the reintegration.

Methods This is a qualitative study conducted in three districts of Nepal. Fourteen survivors of incest, 5 managers of safe homes and 22 community people were selected purposefully applying theory of saturation. Semi-structured interview was administered to collect the data and was coded and analyzed using grounded theory approach. Result The result indicates the significance of the reintegration, as staying at a safe home may not be the long-term solution. However, it seems challenging unless the acceptance of family and the community, readiness of the survi-
vors and agreement of the safe homes. The major challenges accountable for inhibiting the successful reintegration extracted from the interviews are family fragmentation, socio-economic barriers, denial of the family, threats of the perpetrator, victim-blaming practice, interferences of the community, submissive status of the women and negative perception of the community people. Conclusion The factors associated with impeding the reintegration found in this study are within the family, survivors, and community. The creation of supportive environment and mutual understanding between these three stakeholders could address the barriers of the reintegration.

O-62 Do ultrasound examinations during antenatal contacts in rural communities with a portable device improve the accuracy of estimating gestational age of the newborn infants at birth? A case study in El Paraíso and Lempira provinces, the Republic of Honduras.

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Objective: One of the leading causes for neonatal mortality is prematurity in developing countries. However it is frequently difficult to know exact gestational ages (GAs) of the newborn infants. We have introduced a portable ultrasound device to improve accuracy of expected date of delivery (EDD) and GA of the newborn infants. The objective of the study was to evaluate accuracy of GA estimated by the portable ultrasound device in relation to their birth weights. Methods: Retrospective observational study was performed on women who had received ultrasound examinations with the portable device from August 2017 to January 2018. In order to compare the accuracy of EDDs, we used the cases whose birth weights could be considered to be compatible with corresponding GAs. The cases whose birth weights were between 2.5 and 97.5 percentile of the growth curves developed by World Health Organization (WHO) were considered to be compatible. We compared the numbers of the compatible cases with GAs determined from EDD originally recorded in antenatal cards with the cases from EDD determined by ultrasound. GAs beyond 42 weeks were considered to be incompatible. Fisher exact test was used and p value <0.05 is considered to be significant. Results: 91 cases were identified. Median maternal age was 25. The number of compatible cases with birth weights and GAs from original EDDs was 58 (73.4%) while the number of those from ultrasound-determined EDDs was 81 (90.1%) (p<0.01). Conclusion: EDD can be more accurately determined by ultrasound examinations with the portable device.

O-63 Validity of Introducing and strategy of spreading digital radiography system (CR) to Provincial area of Cambodia

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The number of facilities introducing CR has been increasing in the capital area in Cambodia. However, in the provinces, analog system is still mainstream. Even in the provincial hospitals where CR has been introduced, there are not fully utilized due to various problems. In this study, we clarified the promoting and inhibiting factors of CR dissemination in the provincial hospitals. We examined the quality of chest X-ray films using a densitometer at the 4 provincial hospitals. The concentrations in the standard region of interest of chest X-rays were measured in each system. We also conducted an interview
survey with questionnaire to X-ray technicians for factor analysis. Then we considered the validity of introducing CR. As a result, CR was more stable than the analog system with proper concentration. Also, CR was superior in terms of the cost of processing and the expense. Meantime as a factor impeding the spread of CR, we found that dry films are more expensive than screen films, and CR itself was not utilized sufficiently. There are problems of technical and management factors in the analog system. On the other hand, stable images can be obtained with CR even by engineers with inadequate experience. Dissemination of CR to provincial areas is beneficial thanks to reduction of expendables and simplification of image processing. Further cost reduction can be expected by shifting from dry films to display diagnosing. In conclusion, our study suggested that CR introduction is valid by improving current problems in the provincial hospitals in Cambodia.

O-64  Electronic HIV patient registration system development using biometric technology - Introduction of electronic health system in 3 HIV treatment sites in Egypt - NAP_Egy

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We designed an electronic registration system for People Living with HIV/AIDS (PLHA) in Egypt using biometric identification device, named NAP_Egy system to explore the feasibility and limitations of implementation. Evaluation included key informant interviews (KIIs) with system users (SUs), a focus group discussion (FGD) with decision makers (DMs), and statistical analysis of data. Alexandria, Giza, and Gharbia treatment sites in Egypt were the selected sites for this pilot. SUs reported acceptability to use NAP_Egy system while PLHA didn't show resistance for using NAP_Egy system. DMs focused on sustainability as major pillar for implementing the system on a national scale. Statistical Analysis shows that males represented 69.7% while females represented 30.3% with increased risk of having infection with HIV in singles males) 17 times more than females (P-value: 0.001 95% CI: 5-58) and nine times in widowed females more than males (P-value: 0.001, 95% CI: 2-33). KIIs elaborated advantages of introducing NAP_Egy system is monitoring ART for newly registered PLHA despite of spending more time to enter data for the first time. FGD highlighted the importance of building infrastructure, information technology (IT), human resources (HR), and presence of sustainable fund to ensure NAP_Egy system sustainability. Statistical analysis raises the demand for more researches to explore the marital status of PLHA in Egypt. NAP_Egy system using biometric identification was accepted to be used by SUs, DMs and PLHA with more need to develop statistical functions and upload all data of PLHA registered in National AIDS Program (NAP) paper registries.
O-65 Medical equipments' maintenance project for 10 French speaking countries in Africa: midterm evaluation

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Background
Investment for medical devices in West and Central Africa is increasing with double burden in disease patterns. However, the rate of non-functionality of medical devices is still quite high in West and Central Africa where the institutes for medical equipment technicians are still limited and poorly equipped. The previous trainings only for technicians had limited the results. CNFTMH has started the Project with the JICA and MSAS in 2015 targeting 48 public hospitals' directors and technicians in 10 countries.

Methods
To evaluate the midterm impact, 29 hospitals in 10 countries were surveyed in 2015-2016 and 24 hospitals in 2017-2018 with the standard grid. The grid composes the administrative, financial and technical aspects of hospital maintenance. After refilling out by the directors, chief financial and administrative Officers and the heads of maintenance department, the team visited the hospitals and verified the questionnaire responses.

Results
The existence of maintenance planning and preventing maintenance has improved from 45% to 67%. The availability of the computer-assisted maintenance management system (CMMS) is improved from 21% to 33%. The maintenance policy papers are available from 10% to 21%. 10 hospitals have increased and 9 hospitals decreased the annual maintenance budget. 5 hospitals have increased and 5 hospitals decreased the number of medical equipment technicians.

Conclusion
The implication with directors for the maintenance issues shows some positive impact despite limited interventions. However the improvement of budget and qualified staffing might be influenced with other factors such as changing directors and national governments supports.

O-66 Bibliometrics of literature related to maternal and child health handbook

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[Background] A maternal and child health (MCH) handbook born in Japan has been introduced widely in developing countries to improve their MCH. Since the academic trend of their evaluation is unknown, we examined it with bibliometric approach.

[Methods] In the database "Web of Science Core Collection", topic search was executed using search formula "maternal AND handbook" over whole period (from 1992 to present, search date: May 25, 2018). The bibliographic data was downloaded with 21 items (e.g., titles, authors, and sources). A variety of basic bibliometrics were computed including citation frequency. With co-occurrence of keywords from KeyWordsPlus, which is superior to authors' keywords, the conceptual structure of studies involved in MCH handbook was visualized.

[Results] In the present study, 83 papers were obtained, which has increased rapidly since 2009. The most productive author was Yokoyama, while the most cited author was Milgrom. The country-based analysis resulted authors in Japan is most productive and cited. Citation network analysis showed some subnetworks. The keyword co-occurrence were classified into three: (1) health management of children and risk factors, (2) fetal development in gestational age and child growth, (3) health management of
mother and child during pregnancy and childbirth.

**Conclusion** Papers related on MCH handbook are on an increasing trend, with majority being from Japan. Keyword co-occurrence analysis revealed that there are three dimensions in the research trend.

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**O-67** Exploration of influential factors to retention of secondary midwives (SMWs) in rural Cambodia: important influential factors to young SMWs - result from the final year study

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Cambodia has reduced largely maternal mortality ratios (MMR) in the last 15 years and this reduction was contributed by largely the increase in the number of facility delivery and by having at least one primary midwife at every Health Center (HC). To further reduce the MMR, deploying secondary midwives (SMWs) to every HC has been pursued by the Ministry of Health. Retaining the deployed SMWs at rural HCs is crucial. This study explored important influential factors to the SMW retention.

We conducted two-stage qualitative interviews. In the first stage, we identified key informants for the SMW retention (e.g., HC Chiefs, government staff) (N=27), based on the ‘House Model’ and interviewed them and the women who gave a birth at HCs, asking them about possible influential factors which were derived from grey literature and studies including those about experiences by public nurses and midwives deployed to remote rural areas in Japan. The key informants viewed that security issues and salaries were highly important influential factors. In the second stage, using the first stage result, we conducted in-depth interviews with the SMWs who were deployed to rural HCs (N=10). We also asked them to rank influential factors which were identified in the first stage interviews or mentioned by the SMWs. Influential factors which could be associated with gender norms had higher significance than salaries and superiors’ advice. They were SMWs’ living with their parents or husband after deployment, accommodation fulfilling gender norms, and security issues despite that they rarely happened.

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**O-68** A health system view of hospital construction by Japan’s Grant Aid.

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[Background and Objective] A tertiary level referral hospital was constructed by Japan’s Grant Aid in Kampong Cham Province in Cambodia in the year 2011. Since its maternity ward is always overcrowded, we aim to investigate the utilisation of the ward in order to find possible solutions.

[Methods] Hospital statistics in the year 2017, which includes address, date of admission and discharge, number of foetus and mode of delivery for each individual, was obtained and analysed.

[Results] A total of 5,497 deliveries were conducted in the hospital. Number (⋅) and average length of hospital stay were 3,672 (66.8%) and 2.88 days, 37 (0.7%) and 3.68 days, 232 (4.2%) and 3.29 days, and 1,556 (28.3%) and 8.05 days for normal singleton vaginal deliveries, singleton dystocia deliveries, multiple vaginal deliveries and cesarean sections, respectively. Cumulative total lengths of stay was 23,989 days, which was equivalent to 219% of bed occupancy rate. 31%, 17% and 12% of estimated number of
deliveries in Kampong Siem district (where the hospital located) and two adjacent districts were conducted in the hospital.

[Conclusion] Principle role of the tertiary hospital is to provide timely and appropriate care to mothers and babies with complications. However, the hospital serves as a first-line health facility to the people living nearby. It inflates the bed-occupancy rate. A construction of referral hospital should be with formulation of first-line facilities and technical support to optimise access to and utilisation of the services. Otherwise mere construction contributes to deteriorate the local health system.

O-69 Key factors for school health policy implementation in Thailand

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Introduction
Thailand formulated a National School Health Policy (NSHP) in 1998, and it has been widely implemented but has not been evaluated.

Objective
This case study aimed to identify factors that have influenced the implementation of NSHP in Thailand.

Methods
We conducted a document review and key informant interviews. We selected key interviewees, from NSHP implementers at national, provincial and school levels in four geographical areas. We adopted a content analysis method, using a framework of 12 influential components of successful policy implementation and triangular policy framework.

Results
This study showed that NSHP was well-disseminated and implemented at whole country. We identified seven positive factors influencing NSHP implementation, namely matching with ongoing educational strategy, competition and encouragement by an awarding system, sustainable human capacity building at school level, participation of multiple stakeholders, sufficient understanding and acceptance of school health concepts, sharing information and collaboration among schools in the same clusters and functional fund raising activities. In addition, we identified three negative factors, namely lack of institutional sustainability, vague role of provincial officers and diverse health problems among Thai children. The government should clarify the role of provincial level and set up institutionalized capacity-building system as measures to strengthen monitoring and evaluation activities.
O-70 Evaluation of activities for strengthening health facility management capacities in JICA’s Technical Cooperation Project for Reinforcement of Health Systems Management in Senegal

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Senegal has 105 health centers and 1,488 health posts headed by nationally certified medical doctors and chief nurses who are responsible for making and implementing action plans, preparing multiple reports, and managing health information, human resources, and medicines. Thus, the doctors and the chief nurses must implement efficient and effective management to provide and maintain high-quality health services. However, a major issue is that their opportunities to receive management training are limited. The Project for Reinforcement of Health Systems Management Phase 2 (PARSS2), a technical cooperation project of the Japan International Cooperation Agency (JICA), has developed a package of management tools called OGRIS (Outils de Gestion des Ressources et de l’Information Sanitaire) that has been approved as a national document of Senegal. The project will implement OGRIS in eight among the 14 regions of Senegal. In addition, the Government of Senegal has asked the project to make proposals for expanding OGRIS to the entire country. Accordingly, the project will conduct a survey before and after implementing OGRIS to evaluate how the OGRIS training and its supervision will affect the health facilities, health care workers, and communities around them. This time, the project will present the research protocol.

O-71 Feasibility of Maternal and Child Health Handbook (MCH) in rural Bangladesh: findings of a qualitative analysis alongside a cluster RCT

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Background: A cluster randomized controlled trial is ongoing to assess the effectiveness of an enhanced MCH program by mobile platform on maternal and neonatal health outcomes. Methods: Alongside the trial, a qualitative study targeting pregnant women and their families living at the intervention settings of two Upazilas. In-depth interviews and focus group discussions were performed by the trained health staffs working at the community and research team members during the full study period. Components of the interview and the discussion as well as the observation were recorded and subject to content analysis. Results: The participants and community people showed positive attitudes to the handbook. Based on their viewpoint, the primary role of MCH handbook is to provide information for mother and baby. Those expecting her first baby especially showed their interests to this book. Most women shared the book with their family members to seek supports. With a strong social cohesion in the rural community, the handbook also boosted the communications between pregnant women and community health workers, between family members and neighborhoods, and among pregnant women themselves. It is potentially served as a good material for health promotion activities. Most participants preferred private hospitals to governmental one because of better quality of care they conceived. The handbook was rarely brought to seeking services at upper-level. Discussion: With interests widely raised from the community, the MCH handbook is expected to play an essential role for health promotion at the primary level. The large-scale application requires a strengthened health system.
The G20 Summit as an Area for Global Health Diplomacy: From the 2017 G20 Hamburg Summit to the 2019 G20 Osaka Summit

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[Background] At the 2017 G20 Hamburg Summit, the G20 leaders discussed global health for the first time. As Japan will host the 2019 G20 Osaka Summit, it is important to ask on what global health issues that G20 members can reach consensus. [Objective] It intends to clarify how the G20 Summit is different from the traditional arenas for global health diplomacy, such as the World Health Assembly, UN General Assembly and the G7 Summit. [Methods] First, what was agreed and what was not agreed at the 2017 G20 Hamburg Summit will be reviewed. Second, like-minded groups within the G20 members will be analyzed to understand the dynamics over the disagreements. [Results] The first group within the G20 members is the G7 industrialized countries (France, US, UK, Germany, Japan, Italy and Canada) that have been proactive in promoting global health as donors. However, recently, the US has become less committed to development assistance, and cracks have appeared in the G7 coalition. The second group is the OECD/DAC members. Among the 30 DAC members, 10 (G7 plus Australia, South Korea and the EU) are also G20 members, sharing DAC New Development Strategy as traditional donors. The third group, emerging donors represented by the BRICS (Brazil, Russia, India, China and South Africa), cooperates in establishing the New Development Bank. [Implications] As Japan explores global health issues that G20 members can agree, consensus-building among the 10 DAC members will be the foundation. At the same time, dialogues with the BRICS will be essential.

Poster Presentations

P.1 Community Orientation: Literature Review

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This article aimed to review concepts and structures, measurement instruments, and related factors and outcomes in regard to community orientation. Twenty articles were analysed after being retrieved from the CINHAL Plus with Full Text database by using the keywords; community orientation and community health orientation. There were two definitions on community orientation. One applied the concept of market orientation and another was derived from community-oriented primary care by Institute of Medicine US. Both were developed in the US that stressed importance of considering not only individuals and families but also communities to promote and maintain health. Both definitions also stressed understanding community health needs and involvement of community people. Although the original concepts targeted facilities, services providers, and clients of hospitals in US, articles published recently applied community orientation to primary healthcare settings such as primary healthcare and health promotion activities in other countries. There were two instruments to measure community orientation: Primary Care Assessment Tool, and annual survey of the American Hospital Association. Factors analysis mainly focused on systems and structures of hospitals in United States, but not details about health personals. The concept of community orientation should be applicable to primary health care providers who provide both treatment and health promotion activities in communities. Further research is required to identify comprehensive structures and measurement instruments of community orientation for primary healthcare settings.
P-2 Working experience of subnational health administration in Japan for global health cooperation

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The Bureau of International Health Cooperation, National Center for Global Health and Medicine began dispatching technical staff, who are expected to work for subnational health administration in low or lower-middle income countries (LICs/LMICs), to Okayama Prefecture and Miyazaki City in April 2016. A physician was dispatched to the prefectural government and the public health center in Okayama, where she learned about regional health administration through implementing policies concerning regional medical care reform. In Miyazaki city, a midwife and a public health nurse were dispatched to the maternal and child health department of municipality. We found two distinct points of Japanese public health administrative officials that are useful for global health cooperation. First, subnational administration is required to act as catalysts. It is necessary to identify and connect many stakeholders to smoothly implement national policies in prefectures and municipalities. This experience cultivated our facilitation skills as global health experts. Second, they are always considering equity and equality. Article 15 of the Japanese Constitution states that ”All public officials are servants of the whole community and not of any group thereof.” Although, in the sustainable development goals (SDGs), the third goal describes ”health and welfare for all people,” and ”equity” is main agenda, it is a challenge for health officials in LICs/LMICs to adhere to these aims. We could have a role model of health officials in the SDGs era. In conclusion, working experience of subnational health administration is useful for strengthening the capability of experts in global health cooperation.

P-3 Survey on attendance rate of Maternal and Child Health services at Chisankane area, Kafue District, Republic of Zambia

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Background: February 2016, Association for Aid and Relief Japan (AAR Japan) started to implement MCH project in Kafue District in Zambia. This area is the lowest rate for attendance of 1st ANC and health facility delivery. The objective of this survey is follow-up the number of attendance at the target area. Method: Target of this survey is pregnant women who attended ANC, children aged under 5 years old, and pregnant women delivered at health facility at target area. Data collection has been done at Chisankane health center, Old Kabweza health post, 4 Outreach sites (Old Kabweza, Nankanga, Chifwema, Kanyanja) at Kafue District in Lusaka Province from February 2016 to December 2017. Results: Average of monthly attendance for 1st ANC visit was 40, U/5 children clinic was 884, institutional deliveries was 10 for 1st phase and 34, 918, 17 for 2nd phase. Regarding to average of monthly attendance at only outreach site, they increased at both 1st ANC and U/5 clinic, from 4.3 to 6.8 and from 295.1 to 375.9. Conclusion: The number of health facility deliveries has increased due to the project intervention, yet the number of 1st ANC visit and U/5 children are relatively stable. It is inferred that this project is showing a certain effect of the increase of 1st ANC visit and U/5 children at the outreach sites.
P-4  Report of the visit rehabilitation in Thailand rural areas

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For two years from July 2015, I was dispatched to General Hospital in Photharam District, Ratchaburi Province, Thailand as a JICA (Japan International Cooperation Agency) Volunteer and Occupational Therapist. While dispatching, we visited elderly residents in Photharam District and conducted activities to teach rehabilitation. I will report the problems of the area obtained by this visiting activity and the activities that have been carried out after that.

P-5  Descriptive report on General Health Condition of residents in Vientiane prefecture, Lao PDR

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BACKGROUND: In Lao PDR, non-communicable diseases are increasing. However, the health condition of general urban residents, which related to non-communicable diseases such as hypertension, diabetes and cardiovascular diseases is not clear. Creative Act conducted health check-up and collected data in 11 villages in Vientiane prefecture, Lao PDR during 2011 to 2017.

OBJECTIVE: This study was conducted to describe the health condition of general urban residents.

METHOD: The health check-up data collected by Creative Act were analyzed descriptively. The Ethical approval was obtained by Ethical review board, Tokyo Medical and Dental University.

RESULTS: In total, 929 person’s data were included to analyze. Check-up contents were age, sex, systolic and diastolic blood pressure, height and weight, BMI, abdominal size, blood glucose, urine glucose, urine protein and blood. An overall average height and weight were 157cm/61kg in male and 153cm/61kg in females. Average BMI was 24.6 in male and 25.5 in female. High SBP (140 over) was 30% in male and 36% in female. High DBP (80 over) was 43% for both. And the high blood glucose (126 over) was 20% for male and 17% for female.

DISCUSSION: There were no serious obesity nor underweight, but the average was around 25; obesity level 1. It is a potential risk to be developed serious obesity, which affect to cardiovascular function. The rate of high blood pressure was same as Japan, and high blood glucose was twice of Japanese one. Continuous observation and data collection for dietary pattern, and health instruction are required.
P-6 The healthcare for the people with disabilities in an area without rehabilitation professionals in Lombok Island, Indonesia

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**Introduction**
One of the speakers was dispatched to the Health Department of Central Lombok Province, the Republic of Indonesia as a member of JICA Volunteer. The present situation of the area without physical therapists and rehabilitation care for a bedridden patient are reported. **Outline**
The number of physical therapists per population in Indonesia is less than 1% than that of Japan. In Lombok Island, many physical therapists are working in urban areas and a very few in rural areas. It is very difficult for patients living in rural areas to go to hospitals to get rehabilitation care regularly. **Activities**
A 60-year-old women in rural area became bedridden because she had never gotten rehabilitation after a lower limb amputation of gangrene due to diabetes mellitus. Nurses of local health center understood the necessity of rehabilitation, but they could not take action for rehabilitation because of lack of knowledge and skills. After a JICA volunteer visited patient’s home once a week to strengthen her muscles, the patient got better to keep standing about 5 minutes with little help. However, most of people with disabilities could not get rehabilitation in remote area. **Conclusion**
It might be very difficult to encourage local health professionals to learn the rehabilitation skills. Community-based Rehabilitation (CBR) is one of the innovative health programs to promote social development with existing local health volunteers for improving access of people with disabilities to rehabilitation even in remote area.

P-7 Survey on satisfaction level of Maternal and Child Health services at Chisankane area, Kafue District, Republic of Zambia

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**Background:** Needs for maternal and child health in Zambia is quite high. Since February 2016, Association for Aid and Relief Japan (AAR Japan) started to implement Maternal and Child health project in Kafue District in Zambia. This area is the lowest rate for attendance of 1st ANC and institutional delivery, however, there is only one health facility at the target site. Regular outreach services are assisting the people living far from the health facility. The objective of this survey is to investigate the satisfaction level of Maternal and Child Health services at the project site before starting to implement the project. **Method:** This survey was conducted at 8 villages (Shantumbu, Mwaliteta, Mwachilenga, Kakote, Mahopo, Chifwema, Old Kabweza, Nankanga) which have outreach programmes in March, 2016.184 women were involved this survey and answered the satisfaction level of MCH services. **Results:** Satisfaction levels were follows "Access to the health facilities (HF)" 38.3% (Very high, high), 12.2% (Average), 49.4% (Not satisfied), "Privacy during treatment at HF" 83.3%, 5.6%, 10.2%, ”MCH services at HF” 78.2%, 11.3%, 9.7%, "Waiting time during outreach" 48.3%, 12.6%, 39.1%, "Privacy during treatment at outreach" 62.9%, 11.9%, 25.2%, ”Time and attention that you receive during outreach” 65.5%, 14.2%, 16.2%. **Conclusion:** Satisfaction level of the access to the HF and waiting time at outreach site is relatively low. Comparing to the satisfaction level of privacy during treatment at HF and that at outreach site, situation at outreach site is much lower. It is suggested that improvement of the quality at outreach site is necessary.
P-8 Understanding the decision-making process of a Japanese mother in taking her child to a doctor in Bangalore, India

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Background: With rapid globalization, more Japanese companies are sending employee overseas with their family. In this situation of a change in environment, language, cuisine, culture and medical system overseas, the role of the mother is critical when it comes to protecting their children’s health. The purpose of this research is to study the steps taken by Japanese mothers to determine whether their child be taken to a doctor for any medical situation.

Methods: We conducted a cross-sectional study of Japanese mothers by a questionnaire at a Japanese supplementary school in Bangalore, India in March 2018. The contents of this study were individual level factors for the use of medical services and on-site consultation behavior. The scales were GHQ12 and HLS-14.

Results: We got replies from 75 (88%) mothers. The top three common medical conditions were; fever (91%), diarrhea (59%) and cough (54%). 83% of mothers had medical treatment. Among those who went to the hospital, 71% of mothers had difficulty in receiving medical examination due to diagnosing the urgency (70%) language barrier (30%) and choosing hospital (16%). Overall, 87% of mothers replied that they needed some assistance and 97% required more support.

Interpretation: This research shows that mothers with children who had experienced medical cases were high (91%) but yet, had hesitation in going to hospitals for treatment because of the medical level, hygiene and language barriers. The concerns they had was obvious and showed that additional support was needed for families living in developing countries.

P-9 The host family notices the problem of health management in homestay.

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Background There are some merits in national exchange. A person can see the world widely, feel kindness from other people, and know each culture. However, there are some hidden problems in this exchange. For example, there are mental and health problems between visitors and host families. If they know how to keep safe and healthy in a homestay, they can communicate with each other well. Purpose In Japan, host families think about themselves and find solutions to improve their situations with visitors. Host families reconsider their mental and health awareness to improve their situations with visitors. Method The participatory action research was conducted by twenty host families. Moreover, we also conducted questionnaires to fifty-four peoplefrom these questionnaires. Result Host families discussed health management issues and found mental problems and physical problems that occurred after the acceptance of these issues. Members got three recognitions of health management: the importance of preparatory preparations, change in consciousness and coping with potential problems. Conclusion It is necessary to create systems that can provide appropriate information to host families. In order to raise awareness of infections of both host families and visitors, it is important that each person participates in health examinations and vaccines. During homestay, people should take care of themselves as well. In case of illness, people must see doctors as soon as possible. We think that well-communication with guests and consultation with their colleagues are significant.
**P-10** Factors associated with overweight and overweight with dental caries among foreigners in Aichi prefecture

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Objective The aims of this study were to investigate associations between overweight and overweight with dental caries and lifestyles among participants who attend free monthly health consultations provided in Aichi prefecture. Method Secondary data analyses were conducted using the NPO dataset from 2012 to 2016. Data on 549 men and women aged 18 years or older were extracted. Firstly, a descriptive analysis was conducted. Outcome variables were overweight (BMI 25kg/m\(^2\)) and overweight with caries. Explanatory variables were lifestyles (alcohol intake, exercise, smoking, frequency of meals per day), and participant attributes were age, sex, region, job, and years of living in Japan. Bivariant analyses and multivariable analyses adjusted by participant attributes were performed. Results Vietnamese (n=123, 20%), Filipino (n=113, 18%), Brazilian (n=105, 17%) comprised 60% of the study population and 93 (15%) were construction workers. Factors associated with overweight were frequency of meals per day, age, region and job. Factors associated with overweight with caries were frequency of meals and region. Adjusted odds ratio of overweight for appropriate frequency of meals compared to inappropriate frequency of meals was 0.30 (95% CI: 0.14-0.64). Likewise, adjusted odds ratio of overweight with caries for frequency of meals was 0.25 (95% CI: 0.10-0.62). Odds of overweight as well as overweight with caries among people of Vietnamese nationality was significantly less than Brazilian nationality. Conclusion As frequency of meals per day was associated with overweight as well as overweight with caries, providing advice on diet will be helpful for foreigners with irregular eating habits.

**P-11** Hopes regarding medical care decisions and end-of-life care among foreign residents living in Shizuoka Prefecture: A questionnaire study

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(Purpose) To clarify the hopes for medical care decisions and life at the terminal stage among foreign residents living in Shizuoka prefecture. (Method) 114 foreign residents over 20 years old. Questionnaire survey in 7 languages. Survey items: Nationality, age, gender, religion, medical insurance, and hope for medical decisions and life were assessed. Descriptive statistics. (Result) Valid responses; 93 people (81.6%). The subjects: 17 nationalities, with 37 from the Western Pacific, 28 from Southeast Asia, and 18 the Americas. Mean age of 37.1; 28 male and 64 female. 41 Christians, 16 Buddhists, 12 Muslims, 7 others. Medical insurance was available for only 77 subjects. 30 subjects; Making decisions with family when considering terminal care. 49 subjects were in favor of written documentation of their intentions. For 47 subjects, spouses were the designated decision makers of medical care. 69 subjects reported wanting notification of the diagnosed disease. A place of EOL; 56 subjects: their home country, and 74 subjects at home. 49 subjects worried about medical expenses. 55 subjects reported wanting their funeral in their home country. 60 subjects wanted to be buried in their home country. (Conclusion) More than half of subjects desired medical treatment in their home countries. Considering that patients require consider-
able physical strength to return to their home countries, medical staff must communicate with patients and family in advance, including at the time of announcement. It may be necessary for medical staff, supporters, patients, and families to discuss the theme of end-of-life care.

P-12 Literature review of health literacy among immigrants

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Background: Although the number of immigrants is steadily increasing, they fail to utilize health services effectively due to lack of information or lack of understanding of the language, culture and health systems. Therefore, we conducted a literature review of health literacy (HL) among immigrants.

Method: PubMed and the Igaku-chuo-zasshi databases were searched for articles in the last decade by using keywords like [immigrant] and [health literacy]. Forty-nine articles were analyzed for this study.

Result: Of the total articles considered, 28 studies were conducted in the USA, 11 in Canada, and 4 in Taiwan. In terms of ethnicity, 11 studies were of Chinese ethnicity, 9 were Latin and Hispanic, and 7 were Somari. The articles' contents were categorized into 1. HL and health status, 2. HL and utilization of health services, 3. HL and language and culture, and 4. Intervention for improving HL. Immigrants with low HL have high risks of diseases as they could not obtain reliable health information due to their low understanding of health services and low utilization. Moreover, their perceptions of health care, diseases, and treatment were affected by language and culture. To manage this, HL was combined with language education and bilingual gatekeeper to serve as an effective intervention.

Conclusion: Low HL is associated with the health status of immigrants. Interventions considering the immigrants' culture and language are required for better health status and utilization and understanding of health services.

P-13 Relationship between length of residence and health of foreign national residents in Japan

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Although lower mortality rates of foreign residents (20-59 years old, 2010) were found in Japan, previous studies have indicated that this health advantage declines over time. We examined the relationship between the length of residence and the health of foreign national residents.

Data obtained in 2015-2016 from female Thai national residents were analyzed. Health outcomes were compared in terms of rate ratios, treating the prevalence of participants who had resided in Japan for less than 10 years as the denominator.

Data for 407 women were analyzed. The prevalence of overweight or obese status was 1.6- (20-39 years old) or 1.1- (40 years old or over) fold higher in those who had resided for 10 to less than 20 years, and it was 2.3-fold higher (40 or over) in those who had resided for more than 20 years. The prevalence of self-reported symptoms was 2.0- (20-39) or 0.8- (40 or over) fold higher in those who had resided for 10 to less than 20 years, and 1.1-fold higher (40 or over) in those who had resided for more than 20 years. The prevalence of negative self-rated health was 0.7- or 0.8-fold higher in those who had resided for 10 to less than 20 years and for more than 20 years (40 or over in both), respectively.

The relationship between length of residence and health depends on health outcomes in female Thai national residents in Japan. Additional studies with larger samples sizes are necessary.
P-14 Health behavior and Sociocultural Adaption of Foreign Students with Focus on Hepatitis B

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Background: Many of increasing migrants are international students from countries where screening of infectious diseases in the country of their origin is not sufficient.

Objective: This research is to clarify the impact of socio-cultural adaptation on health behavior of students at Japanese language school and to promote appropriate social and cultural intervention on hepatitis B.

Method: This study conducted a questionnaire survey and implemented in December 2017. The target population is students in the first and second Grade (250 people) at Japanese Language School. Data analysis was used SAS 9.4

Outcome: Collection rate was 100%. 32.4% of students understand English which is important when accessing medical information. More than half have had education on hepatitis B before. Information sources were from schools, doctors, and families. In correlation between socio-cultural adaptation / behavior and knowledge of hepatitis B, there was a significant difference about the accessibility to hepatitis B knowledge in the comparison of the average score. The way to get medical information in Japan was mostly from the Internet, then it was from a friend.

Evaluation: In Japan, free hepatitis examinations are being conducted at public health centers. The treatment cost of hepatitis B is subsidized by National Health Insurance. Most of international students have National Health Insurance, but it is not clear whether they can access information such as prevention, examination, treatment, medicine etc. This study will be the basis of the health education among international students in Japanese language school and the key to access health care and information.

P-15 Recognition of social capital of children in Nepal and Lao PDR prior to the development of school health activities utilizing children’s health club

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OBJECTIVES The purpose of this study was to report the situation of social capital in target schools where health activities will be conducted by children’s health clubs in Nepal and Lao PDR.

METHOD We selected 4 secondary schools in Nepal in March 2017, 4 primary schools in Laos in August 2017. A baseline survey was conducted in April in Nepal (510 children of 4-9th grade) and in September in Laos (502 children of 4-5th grade). The survey included lifestyle, recognition of school health activities, and social capital; recognition of human relations, self-esteem, sociability, and seeking social support. RESULTS and DISCUSSION Regarding human-relations, 80% of 4-5th graders answered that they have good relationships between friends, teachers, and neighbors in both Nepal and Laos, but a lower rate of trusting other students, about 75% in Nepal and about 65% in Laos. Approximately 80% of 6-9th graders trust teachers in Nepal, however 50-60% of them trust students or neighbors. Nepal children have lower
self-esteem than Laos children in 4-5th grade, but it becomes better as the grade increased. About 80-90% of children show good sociability in both Nepal and Laos. Regarding social support seeking, more than 90% children are able to consult with friends if there was a problem in Nepal, but it is only 60-70% in 4-5th graders in Laos. We will investigate how social capital of children changes and leads to sustainable development through the child health club activities.

P-16 A Pilot Study on Awareness and Attitudes of Parents/Guardians and their Children toward Smoking and Drinking in Vanuatu

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Underage drinking and smoking is one of the major health problems in Vanuatu. However, little research has been done on the awareness and attitudes of parents/guardians toward smoking and drinking. The purpose of this pilot study is to investigate this awareness. We conducted a self-administrated questionnaire survey with sixth grade students attending a primary school in the suburbs of the capital of Vanuatu and their parents/guardians. Descriptive statistics were used for data analysis. A total of 31 students and 11 parents/guardians participated in the research; both total and valid response rates were 100%. In the group of students whose parents/guardians participated in the survey, nobody smoked or drank alcohol, and 80% of them answered that their parents usually understand their problems, offer them advice, and have open communication with them. On the other hand, in the group where only students participated, two smoked or drank, while 50% answered positively for the questions about family relationships. Although all of the parents/guardians answered that they do not agree with their children participating in underage smoking and drinking, in actuality, four of them made their children buy tobacco for them and two of them made their children buy them alcoholic drinks. From the results of the survey, it can be presumed that parents/guardians who were willing to complete the survey are more receptive and supportive toward their children. In order to clarify their awareness and attitude toward smoking and drinking, continuous and further research of the parents/guardians-child relationships should be conducted.
P-17  Developing school health record system for government school students in Nepalese villages

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Background Keeping health records including health measurement is essential for school-age children to evaluate their physical development and health status. Basic physical measurement such as weight and height of students are hardly conducted at government school in Nepal, due to the lack of standardized protocol for physical measure. This study aims at developing health management system for students in government schools in Nepalese villages through implementing health record program at schools.

Method Health data input program was developed to keep health record in school’s computers. School teachers were trained to measure weight, height and eye vision. Students’ measurement data were put in the program and body mass index was calculated. The data was kept in school computer to evaluate their physical development and health status.

Result Physical measurements were conducted in two government schools in village area of Makwonpur district and one government school in a village on the outskirts of Kathmandu, Nepal, between 2017 August and 2018 August. Physical measure data were put in the program and kept in school computer and network server. Students learned how to access their own personal health record as apart of computer class.

Conclusion By conducting physical measurement, school teachers and school children recognized importance of physical measurement and developing personal health management skill. Research team intervention is needed until these government schools can schedule physical measurement regularly and conduct measurement and data input by themselves.

P-18  Quality of hand-washing water research by water sources at elementary schools in the Kandal Province, Cambodia

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There are deficiency of toilets and handwashing equipment at elementary schools in the rural areas of Cambodia. Some NPOs made these equipment for some rural area’s elementary schools, but they didn’t enough check the qualities of handwashing water. Therefore, we investigated the quality of handwashing water on elementary schools in Kandal Stueng District, Kandal Province, Cambodia. Seven schools
were selected randomly from school list, and all selected schools were already constructed both toilets and handwashing equipment. We tested below items for each schools handwashing water; pH, nitrite nitrogen, nitrate nitrogen, iron, total mineral balances, total alkaline balances, arsenic, and density of normal bacteria and E. coli. There were no nitrite nitrogen and nitrate nitrogen in the tested water. Bacteria and E.coli were only found at schools using shallow wells. Tap water and rainfall water were totally clean and considerable for good to drink. Arsenic was found from the water of shallow wells. We consider the water from shallow wells are available for handwashing only. We caution about these findings for pupils and teachers in these elementary schools.

P-19 Medical history and its health seeking behaviors among children less than one year old in rural Cambodia

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Background
Infectious disease is an important contributing factors for child malnutrition. Although the increase in age had an association with undernutrition were shown in our previous study in rural Cambodia, the obvious cause has not been identified. We explored incidence of the child illness and health seeking behavior, which are potential causes of undernutrition, in the same population.

Objective
To describe the incidence of reported illness episode and their health-seeking behaviour in rural Cambodia.

Methods
This study is 11 weeks follow-up study, from April to July in 2017, in rural villages in Kampong Cham. Children aged 4-8 month were enrolled. Trained field workers visited the child’s main care-giver every 2 weeks and interviewed with a structured questionnaire.

Result and Conclusion
Out of forty-seven children enrolled, 44 experienced at least one episode of diarrhoea, fever or cough (94%). There were 140 reported episodes of those illness during three months of follow-up. The most common reported illness was fever only (34%) followed by fever and cough (24%). 26 in 31 episodes reported as treated with antibiotics was illness with fever. The most common health seeking behaviour during the episodes was to seek advice or treatment in the private residence of a government nurse or midwife (49%). This was also the most common behaviour associated with episodes with antibiotics use (52%). Further study is required to investigate the relationship with child nutritional status by considering those findings for identifying a risk factor and a potential cause of child malnutrition.

P-20 Activities and assessment of them in The Student Society of University of Toyama for International Health (KIK)

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Introduction: KIK is a club comprised of medical students, nursing students and pharmacy students and they learn various themes actively. They are interested especially in international health however this field is insufficient in a school curriculum. I obtained information by means of questionnaires
from all members and put a study tour in Thailand into practice and examined needed matters for students' demand. Result: I sent out description-style questionnaires about demand, expectation, and obstacles in studying international health to 56 club members and got 12 answers (The response rate was 21.4 %). As a result, many students hoped to broaden their horizons, compare medicine in other countries with that of Japan, and support developing countries in the future. However they wasn't able to carry out their intention because of Language abilities, traveling expenses, and crowded class schedules. Considering them, we ourselves planned a study tour in Thailand in August, 2018. We're going to make field trips to project sites supported by JICA in Chonburi and hospitals in Bangkok. Discussion: It's first time for KIK to connect with JICA so I met unexpected difficulties in making required documents. We understood the necessity of establishing connections with people we met this time in order for our junior in KIK to make the most of our experiences. In this congress, we're going to add the discussion on the reasons why students are interested in medicine in developing countries. Because of the low response rate, there're limitations to apply this result to all students.

P-21 The competency required by nurses of the Japan Overseas Cooperation Volunteers in community nursing activities in developing countries

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Purpose
The aim was to clarify the competency required by nurses of the Japan Overseas Cooperation Volunteers in community nursing activities in developing countries.

Methods
Semi-structured interview was carried out on eight persons who were dispatched as nurses of the Japan Overseas Cooperation Volunteers and had experience in community nursing activities in developing countries.

Results
Nurses of the Japan Overseas Cooperation Volunteers have [individual characteristics] and, on that basis, to do regional nursing activities, [to build relationships with local staff and residents], and from there [information on regional characteristics collecting], [to clarify regional health problems], [to support local people]. In order to implement support for local people, it is essential to [cooperate with local stakeholders and related organizations]. In addition to that, they were doing [to get cooperation from stakeholders other than the site]. They also kept in mind that [to support local staff to act on their own initiative]. Furthermore, they were doing [to evaluate activities], [to understand and to grow themselves].

Conclusions
Nine areas were drawn out as a competency required by nurses of the Japan Overseas Cooperation Volunteers in community nursing activities in developing countries. As a foundation of nine competencies, the characteristics of individuals of the Japan Overseas Cooperation Volunteer Nurse were derived. In order to acquire these competencies and utilize it in community nursing activities in developing countries, we need to clarify concrete goal, educational content and learning outcomes, and further support system to acquire these competencies was suggested.
P-22  The international training program for health professions from the Department of Pharmacy

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[Background] As a result of the rapid globalization, the importance of training of the multi-national health professionals has recently come to prominence. We have developed a training program, in which international students work together. [Methods] In our University, we invite international students every summer. As an internationalization program, groups of five to seven students each from several Asian countries sit together at a table. A common theme is given to them, and a small group discussion (SDG) is conducted to discuss the problems. Any language could be used to communicate with students from other countries. After the program, questionnaires were given to the students, and the results were analyzed. [Results] On average, 95% said that the program was enjoyable. 85% said that it helped to understand the medical problems in the world, and 74% said that they could work with those who do not speak their mother tongue. [Discussion] SDG is an effective way to provide a global atmosphere by arranging students from multiple countries on the same table. Participants are expected to develop communication skills, and problem solving ability by hearing diverse opinions in the world. This program gives students the opportunity to learn about the world while being based in the country of their origin. Therefore, it will be useful for nurturing health professionals with global mindset. We are considering making a more comprehensive program so that we can continue to produce health professionals who not only work in Japan but also in other countries.

P-23  Online Questionnaire Survey on Consciousness of Female NGO Workers’ Career Choice in Developing Countries

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Background: NGO workers positively choose to work in the developing countries where there are various hardships with relatively lower salary range, regardless of their high educational level and language skills. The authors occasionally encountered female NGO workers in the developing countries leaving their positions shortly or changing their base to Japan due to childbirth or child rearing. The observation led to the idea that gender role or working environment may influence on career choice of female NGO workers. Objective: The aim of the survey was to describe consciousness of female NGO workers of Japan-based NGOs about their career choice in the developing countries. Method: Online questionnaire survey was answered by the targeted Japanese female NGO workers invited through the mailing-lists of Japanese NGO and individual networks, and personal connections. Result: Overall, 35 people at the age of 25 to 45 years answered the questionnaire. 65.7% of the participants answered "satisfied" or "very satisfied" working overseas for NGOs and "feeling rewarded" was the most common reason. Furthermore, 97.1% of the participants "expect to work overseas after marriage" and 94.7% "expect to work overseas after childbirth". Whereas, 69.2% of the participants desired to change their current job and none of them chose to work for NGOs in developing countries as their future career. Consequently, choices to work overseas was not influenced by marriage or childbirth, however, it was revealed most female NGO workers tended to exclude choices to work overseas for the Japanese NGO as their future career.
P-25  Factors related to cross-culturally receptive attitudes among Japanese nurses

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Background: People from many countries often move to other countries for business, sightseeing, or migration. Providing cross-cultural nursing care is an important issue in Japan. Many Japanese nurses have not studied intercultural nursing and have inadequate understanding of nursing for foreign patients. In this research, we aimed to clarify the factors related to cross-culturally receptive attitudes among Japanese nurses.

Methods: We conducted an anonymous self-reported questionnaire survey from November 2017 to July 2018 at Japanese hospitals after obtaining approval from the ethics committee of Nagoya University. The questionnaire included age, gender, types of nursing specialties, years of nursing experience, level of cross-culturally receptive attitudes, self-understanding, and understanding of others.

Results: Of the 800 questionnaires distributed, 386 individuals responded (response rate: 48.3%) and the effective response was 385 (99.7%). Cross-culturally receptive attitudes in nurses were positively correlated with high levels of self-understanding (rs = 0.20, p< 0.001), and with understanding of others (rs = 0.22, p< 0.001). Nurses with experience of staying in a foreign country were more likely to have high levels of cross-culturally receptive attitudes.

Conclusion: The results of this study revealed that understanding of others and self-understanding were related to cross-culturally receptive attitudes. To improve cross-culturally receptive attitudes for nurses working in clinical settings, we should provide education that develops their self-understanding and understanding of others. This study was funded by “Kitano Foundation of Lifelong Integrated Education”.

P-26  Toward Establishing an Educational Vision in the Field of International Health at University: Intercultural Receptive Attitudes of Nursing Students

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Introduction
The purpose of this study is to get suggestions on nursing education through clarifying the intercultural receptive attitudes of nursing students, who will be responsible for a part of global health in the future.

Method
A questionnaire survey on intercultural receptive attitudes and intercultural cooperation skills was conducted to university-level nursing students: 406 were distributed, 374 collected and the response rate was 92.1%.

Results
184 students (49.2%) are interested in the global education courses; 168 (45.0%) have had certain kinds of intercultural experiences. Students in lower years tend to feel stressed when talking with a foreigner although they would like to communicate with people from other cultures or races. Students with intercultural experiences and interest in the global education courses have scored higher in the receptive attitudes. As to intercultural cooperation skills, the following 6 categories are found: receptive attitudes based on ethical values; understanding and self-disclosure for mutual improvement; cross-cultural nursing practice; leadership; communication skills; and autonomy to sustain the receptive attitudes.

Discussion & Conclusion
Intercultural receptive attitudes are related to the year students belong to, and the stronger interests in intercultural experiences and/or global education courses they have, the higher intercultural receptive attitudes they have. This suggests that appropriate placement of global education courses in accordance with their year, investigation into intrinsic factors that stimulate students to accept different cultures, and academically attaching significance to their intercultural experiences should be necessary.
P-27  Health System of the Philippines - From the experience of the field trip from 4th to 17th March 2018

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Introduction
The field trip was conducted by 14 Master of Public Health Students in March 2018. The course objective was to deepen students' insight and to enhance their understanding on the importance of the practical utilization of basic knowledge.

Components
To study the health system at each level and identify specific public health challenges and successful interventions, students visited 14 offices/organizations in health sectors (City/Rural Health Units, Barangay Health Stations, 2 local NGOs at the local level; Department of Health Regional Office VIII at the regional level; San Lazaro Hospital, Department of Health/DOH Philippines at the national level; and WHO/WPRO at the international level) in Manila and Tacloban, Leyte. In this poster, we summarized the characteristics of the Philippines's health system according to the six building blocks of the WHO Health System Framework, reflecting what we observed during the field trip.

Conclusion
The Philippines is moving forward to achieve universal health coverage by reducing out-of-pocket expense, strengthening human resources, and improving service provision. The Philippines has a decentralized health care system to cater for needs based on the local and geographical context. However, it has led to fragmentation of health care delivery because of the lack of resources, poor coordination, and weak governance in local settings. The referral system needs to be improved and strengthened to ensure the optimal function of the health facilities. Comprehensive and multi-sectional cooperation is crucial to improve sustainability and resilience of the health care system in the Philippines.

P-28  Community Health in the Philippines - From the experience of the field trip from 4th to 17th March 2018

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Introduction
The members of the field trip consisted of 14 Master of Public Health Students of Nagasaki University. The trip was from 4th to 17th, March 2018. The sites we visited ranged from the global, national level such as WHO regional office and Department of Health to community level. In this poster, we focus on community health in the Philippines. The settings were classified as rural health unit (RHU) and barangay health station (BHS). Our main objectives were to learn the role of primary health care in the country and understand the contribution by barangay health workers (BHWs) in the community.

Components
We visited two types of health facilities in two regions: national capital region, metropolitan Manila; Eastern Visayas Region, Province of Leyte. RHU oversees BHS and provides primary health care to the locals, including minor surgery and delivery. On the other hand, BHS, which is the smallest health facility unit, contributes to the essential health services. Although, the community health facility’s strength is that it is ownership free from the central government orders, its shortage of health professionals because of brain drain to other countries is one of the big challenges. To maximize BHWs’ capacity and increase the opportunity to train are pivotal to compensate for the shortage of such human resources.

Conclusion
The contribution of BHWs as frontline health provid-
ers is substantial to maintain the health of the local people. It is necessary to motivate them for the sustainability and effectiveness of primary health care services.

**P-29  Study on world suicide rates and factors associated with happiness-related indices**

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Objectives: (1) To describe world suicide rates, (2) To identify factors associated with happiness-related indices, (3) To examine lessons from countries with low suicide rates, particularly from selected Asian countries. Methods: We combined the latest WHO data on suicide rate per 1000 people and the World Happiness Report (2018) data to identify factors associated with world suicide rates. We conducted correlation analysis and multiple regression analysis using SPSS 25.0 for windows. Results: The average suicide rate (N=152) was 9.72 (SD 5.89), and the suicide rate in Japan was 18.5 (2017). A relatively high suicide rate was observed in developed countries. We identified the following significant factors with suicide rate: GDP per capita (r=0.323, p<0.001), social support (r=0.411, p<0.001), healthy life expectancy (r=0.256, p=0.001), and GINI coefficient (r=-0.279, p=0.001). We found that Asian countries with high generosity scores, such as the Philippines and Myanmar, had low suicide rates, although they are low-income countries. Conclusions: To reduce suicide rates, we should learn from good practices in developing countries with low suicide rates. In addition, we should consider the creation of a social system to collect suicide statistics in developing countries.

**P-30  Analyzing the relationship between mental health and living conditions of people in Indonesian urban slum**

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<Background> According to the trend of the world population by the United Nations in 2018, the population of developing countries will increase rapidly by 2050. And it’s also estimated that about 70% of the world’s population will live in cities. There is concern that this rapid population growth will consequently lead to expansion of urban slums in developing countries. Urban slums have poor infrastructure development and unsanitary waste management (disposal of garbage and sewage) because of low income. It is also reported that change in the living environment and economic status affects their mental health. Therefore, it is very important to investigate the mental health of the people in urban slums. <Objective> To understand the actual condition of QOL, mental health, subjective happiness of the people in the urban slum of Indonesia, and to analyze the relationship between them. <Participants> Approximately 160 adult men and women living in Kiaraccondong in Bandung City. <Method> We will explain about the study and carry out a questionnaire survey with the participants who gave consent. <Results> The respondents’ QOL scores were 14.33 ± 3.16 for physical, 13.90 ± 2.00 for psychological, 13.23 ± 2.32 for social relations and 12.56 ± 1.96 for environmental. The GHQ-12 score was 2.25 ± 2.19. One person exceeded the score of the GHQ-12 cutoff. QOL overall tended to be lower than the general citizens of Indonesia.
P-31 What is vulnerable? -Social Ties in older single men-

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We explore the difficulties with social connections the men who have experienced homelessness. We focused on two neighbourhoods, the first is the San'ya neighbourhood, the south of Arakawa ward, in Tokyo. The second is Airin-chiku in Osaka’s Nishinari ward. Face-to-face interviews with the respondents using semi-structured questionnaire collected details of past experience of homelessness, employment history, financial situation, health and disability, and contacts with family, friends and formal services. All clients who came into contact with the collaborating organization between August 2017 and February 2018 and met the inclusion criteria were invited to participate, and 7 respondents were interviewed. We extracted four categories describing the participants’ difficulties with social connections: [spending time alone], [loss of social role], [loss of family ties], and [no regular contact with others]. All the participants were laid off because of their age, and losing their job. Many of the participants had already lost their connections with their family and kin before reaching their present circumstances. The participants mentioned that they were living alone, with no regular interactions with others. Accordingly, to help elderly men in particular to maintain social connections, we must find some way of encouraging them to participate in local spaces of social interaction.

P-32 The situation of Syrian refugee disabled in Jordan.

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[Introduction] After the conflict broke out in Syria in 2011, about 5 million refugees fled from Syria abroad, of which approximately 600,000 refugees evacuated to Jordan. Among the Syrian refugees in Jordan, we report the current situation of disabled people. [Method] Visiting six households of Syrian refugees, we interviewed seven persons with disabilities and nine people with disabilities who consulted at hospitals. Before listening, I explain verbally the purpose of the survey and carried out the survey under the free will. [Results] A total of 17 people aged 7 to 51 years old were interviewed. Average age 25 years, of which 10 were disabled people due to conflict damage in Syria. 7 of them had lower-body paralysis and bladder rectal disorder due to spinal cord injury. There were 7 congenital intellectual and disabled people. 7 of the 17 participants were able to participate in some social activities and only 3 people worked or undertook charity activities. Their main problems were the lack of income sources and the withdrawal of support from many organizations. Because there are no transportation expenses or means to go out, there were some people with disabilities who were hardly involved in social participation, and others did not receive adequate medical services due to financial problems. [Summary] Because some of the people with disabilities in Jordan have problems of poverty and the lack of transportation method, the situation of being isolated from society.
P-33 Cost analysis of treatment for breast cancer in the northeast Thailand: a study at Khon Kaen Hospital

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Background: Morbidity and mortality of breast cancer have been rising in Thailand. Khon Kaen Hospital, a tertiary hospital in the northeast Thailand, started a breast cancer screening program in 2014.

Objectives: To estimate medical cost and survival rate of breast cancer patients by cancer stage.

Methods: A retrospective cohort study was conducted with the breast cancer patients who were diagnosed and registered at Cancer Registry of Khon Kaen Hospital in 2010. Two hundred fifteen patients were included in the study. For each patient, we collected stage of cancer at the time of diagnosis, direct medical cost of diagnosis and treatment until 2015, and treatment outcome in 5 years from medical record and database at Khon Kaen Hospital. We estimated the direct medical cost for five years from hospital perspective with a 5% discount rate. (1US$ = 32.874 Thai Baht).

Results: The 5-year survival rate by cancer stage 0/1,2,3,4 was 94.7%, 74.8%, 55.4%, 18.2%, respectively. As a cancer stage advanced, 5-year survival rate decreased. The median direct medical cost for 5 years from the date of diagnosis by cancer stage was $1,527.14 ($872.19-9,204.59), $1,993.92 ($887.01-15,933.13), $4,113.96 ($1,196.37-24,696.53), $6,750.43 ($543.98-72,710.77), respectively. The differences were statistically significant (p<0.001).

Conclusion: The study indicated that the survival rate of the patient rises and the possibility that the medical expenses will decrease by early detection of the breast cancer advancing in Khon Kaen Hospital. The results of the study is considered to be a basic data to evaluate the effectiveness of the on-going breast cancer screening program in Khon Kaen Hospital.

P-34 The Analysis of Causes of Death among Neonate and Child Cases of Dead on Arrival and Bought in Dead at Referral Health Facilities in Zambia

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[Background] The previous survey in our research revealed that the more than one third of death cases at health facilities took place as Dead on Arrival (DoA) or Brought in Dead (BiD) in Zambia and the most of BiD/DoA cases have not been analyzed the Cause of Deaths (CoDs) in details. Therefore, this study was designed to analyze CoD of DoA/BiD among neonatal and children cases at referral health facilities by using automated Verbal Autopsy (VA).

[Method] Target sites are 2nd level hospital and 3rd level hospital in capital city of the Republic of Zambia. All DoA/BiD among neonatal and children case at target health facilities from February to August, 2017 are included in this study and surveyors interviewed with their relatives by using tablet based on VA questionnaire developed by WHO. Then, the data was input into SmartVA program to calculate Cases Specific Mortality Fraction (CSMF) of each case and identify CoDs. [Result] Total 114 neonatal cases and 209 children cases are analyzed. The average age is 9.41 day old among newborns and 2.03 year old among children. The top 5 values of CSMF is Asphyxia, Still birth, Sepsis, Prematurity and Pneumonia among neonatal cases and Pneumonia, AIDS, Diarrhea, Malaria and Other infectious diseases among child cases. [Conclusion] SmartVA could contribute to identification of CoDs among neonate and children BiD/DoA. Since this study targeted only at urban situations, further investigation is necessary to be conducted at more diverse conditions in the future.
P-35 The assessment of maternal referral system at Lusaka district in Zambia

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1 Bureau of International Medical Cooperation, 2 JICA Project for Strengthening Basic Health Care Services Management for Universal Health Coverage in Zambia

[Background] One of the issues among maternal health in Zambia is the overpopulation in Lusaka district, the capital of Zambia. Therefore, it is serious that many patients are overcrowded in University Teaching Hospital (UTH). For this reason, the Ministry of Health (MOH) upgraded 5 health centers to the 1st level hospitals where cesarean sections could be performed, and published the National Maternal and Neonatal Referral guideline in 2017. We assessed if maternal referrals are actually compatible with the guideline. [Method] From February to April in 2018, UTH, three 1st level hospitals (Matero, Chilenje, and Chawama), and Mtendere Health Center were selected for assessment. We collected the data about referring cases, referred cases, and complication cases without a referral in these facilities and analyzed them. [Result] In 3 months, 702 cases have been referred at UTH and around 80 percent of them could be managed at 1st level hospitals. Main reasons for referrals are previous cesarean section 78 cases, cephalopelvic disproportion 64 cases, obstructed labor 36 cases, and preeclampsia 28 cases. 393 cases have been referred from three 1st level hospitals to UTH, on the other hand, 412 complication cases have been managed at 1st level hospitals. [Discussion] The assessment revealed that maternal referrals were not in accordance with the guideline. The main reason is considered that cesarean sections cannot be performed during night and holidays due to a lack of human resources. It is important to consider the way to strengthen the maternal referral system with limited resources.

P-36 Current situation and challenges of Free Health Care Initiatives Scheme towards UHC in Senegal

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Introduction The Senegalese Government is accelerating the Universal Healthcare Coverage (UHC). The UHC agency (ACMU) was established to expand a community health insurance system and reinforce free care initiatives. Under this circumstance, Japan International Cooperation Agency launched "the project for strengthening capacity of community health insurance system and free health care initiatives", alias "Doleel CMU". The project started in three pilot regions for three years from October 2017. Before the intervention, the project conducted the baseline survey. The main objective of the survey is to analyze the operational capacity of related organizations. This presentation provides findings about the Free Health Care Initiatives. Methodology The survey was conducted during 9 weeks from January 2018, targeting all 22 Health Centers and 52 sampled Health Posts in the three regions. Based on the 41 questions developed by the project, the investigators interviewed each facility. Results Among the 74 health facilities, 79% punctually send medical reimbursement invoices. However, 76% have not received the refund for more than six months, due to the lack of financial resources from the Government. Furthermore, practical training has not been conducted for more than a year, which led health facility staff having deficiencies in processing documents smoothly. Besides, the beneficiaries of Free Health Care received many unnecessary medical cares. Conclusion To solve the identified problems, securing financial resources is the most urgent. Then, capacitating the health staff for understanding the scheme and accurate documentation is necessary.
Moreover, review of the scheme will be critical in the future.

P-37 A Survey on Using State of Mechanical Ventilator and Onset of Ventilator Associated Pneumonia at Emergency and Critical Care Center in Cambodia

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[Objective]
A survey on using state of mechanical ventilator and onset of ventilator associated pneumonia was performed in advance of the establishment of respiratory care support team at emergency and critical care center in Cambodia.

[Subject]
The subjects were 36 patients (66.5 ± 18.2 year-old, 21 males, 15 females), using mechanical ventilator and getting physical therapy, out of 814 patients admitted to our hospital between 1st Oct., 2016 and 31st Jun., 2018. We excluded patients passing away and discharged to home during mechanical ventilation.

[Method]
We surveyed on diagnosis, status of surgery, reason of mechanical ventilation, number of days using mechanical ventilator, number of days between admission and physical therapy, number of onset of VAP and number of re-intubation retrospectively. Each particular item was performed simple tabulation.

[Results]
Diagnosis were cerebral infarction: 19% (7 cases), cerebral hemorrhage: 17% (6 cases), subarachnoid hemorrhage: 14% (5 cases), pneumonia: 19% (7 cases) and others: 31% (11%). The states of surgery were surgery case: 53% (19 cases (neuro surgery: 18 cases, abdominal surgery: 1 case)). The reason of mechanical ventilation were post-surgery: 47% (17 cases), pneumonia: 36% (13 cases) and others: 17% (6 cases). The number of days using mechanical ventilator were 10.6 ± 9.4 days. The number of days between admission and physical therapy were 4.0 ± 3.6 days. The number of onset of VAP were 11% (4 cases). The number of re-intubation were 6% (2 cases).

[Reference]
In light of this survey, we will work on establishment of respiratory care support team in future.

P-38 Emergency medical service in Mongolia

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Introduction: Emergency medical service (EMS) is a key component of Universal Health Coverage (UHC) as EMS provides basic medical needs to local people. UHC is considered to be achieved in Mongolia, however, little is known with regard to delivering EMS. Objectives: Elucidating current situations of EMS in Mongolia from UHC point of view. Methods: English web resources released within past five years were searched and reviewed using keywords Mongolia and emergency medical service. Mongolian specialists were also interviewed in order to obtain updated information. Result: Expense for emergency medical care including EMS is covered by social health insurance and government health budget fund. However, sufficiency and quality of the service are inadequate due to lack of health expenditure, lack of specialists, and difficulty of transportation. Emergency medical care is provided by mainly physicians with various specialties; however, they have less opportunity to be trained on emergency medical care. In addition, Ulaanbaatar capital city and five Regional Diagnostic and Treatment Centers have their own ambulance dispatch center. All of 16 provincial hospitals and some of 39 inter-soum hospitals and 273 soum clinics own an ambulance, however, ambulances equipped with basic emergency equipment are very few. Delayed or absent EMS care is due to imbalance of the supply and demand for emergency medical care; insufficient number of ambulances in remote area and burden of non-emergent calls in the city. Conclu-
There is room for improvement to deliver EMS in Mongolia in order to achieve adequate UHC.

P-39 The achievements and obstacles of the EPI in a rural area of Afghanistan

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In an unstable country like Afghanistan, the health and EPI activities are limited to the urban area. The achievement of the regular vaccination rate is reported to be 39–74%, higher in the urban area and lower in the provinces. The Karez’s daily activities are mainly carried out in the rural area of Knadahar privilege. In the past 15 years 111,595 children and 45,572 mothers were vaccinated at the clinic and 19,600 children, 2,205 mothers in the health posts in the villages. Still, a high number of patients with infectious diseases such as Malaria, Viral hepatitis, Diphtheria and Polio are seen in the area. Health education and information concerning the infection diseases and its protection by vaccination to the parents is of great value for an aggressive approach to the EPI.

P-40 Expanded Programme on Immunization - Vaccination coverage and measles outbreaks in the Philippines

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Introduction
Expanded Programme on Immunizations remains one of the most cost-effective approaches towards reducing vaccine-preventable diseases among infants worldwide. Over 640 million children vaccinated, 9 million future deaths averted, and more than $100 billion spent on averting illness globally. However, the Philippines has been experiencing measles outbreaks in addition to fluctuating measles vaccination coverage.

Vaccination situation
The Philippines considered EPI as a key indicator of quality health care. The programme has improved over the years by introducing new vaccines but with challenges. The regional coverages of fully immunized children range from 18% to 87% with a national average of 70% compared to 86% global coverage in 2017. Currently, measles vaccination coverage is low (80%) compared to 95% global target and as a result, there are sporadic measles outbreaks almost every year. Meanwhile, sustained coverage of greater than or equal to 90% prevents outbreaks. The low coverage could be attributable to the dengue vaccine scare, numerous islands that are hard to reach, human resources, in addition to vaccine supply management and distribution challenges.

Current strategies for immunization services
Department of health efforts include generating demand for immunization services and building up multi-sectoral support for national immunization programme whilst WHO country office supports the strengthening of vaccine-preventable disease surveillance, achieving elimination of measles, and developing mass media campaign messages to encourage caregivers to vaccinate their children.

Conclusion
Efforts towards improving measles vaccination coverage to reach the global target in the Philippines are being implemented and more efforts are needed to reduce outbreaks.
P-41 Operational research of pilot introduction for TB laboratory information system in Myanmar: a 1-year evaluation

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[Background] Due to the spread of Multi-drug resistant TB in Myanmar, new laboratory tests such as GeneXpert have introduced, and sharing patients’ information and specimens between facilities is now the issue. We developed the TB laboratory information system which intends to reduce the workload for data entry by using QR code and touch panel, and aligning its interface with the existing paper format, and have started pilot operation at TB facilities in Yangon. We will report the 1-year evaluation to clarify the achievement and challenges. [Method] We observed and interviewed details of existing workflows at five pilot sites, and summarized the list. Also, we evaluated the consistency of TB patients’ numbers on the quarterly reports between paper and system-based operation. [Results] Four out of five facilities almost timely input patients’ data to the system and shared information using QR code between clinics and laboratories. The operation would be improved by reviewing the installation locations and workflow lines. The consistency ratio of the number of patients in quarterly reports between the system and the paper list was improved from 91.0% to 97.9% as a result of getting accustomed and supported. Also, it took 4 hours and 18 minutes on average to create quarterly reports by counting the paper list, which indicates the system can contribute to the timeliness of reporting and the improvement of operational efficiency. [Conclusion] Electronic system developed by aligning existing paper format would be operated effectively and not necessarily needed human resources but improved by reviewing existing workflows.

P-42 The IgG seroprevalence survey on measles, rubella, mumps, and varicella among adults in Khanh Hoa Province, the Socialist Republic of Viet Nam

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Introduction: In Vietnam, measles-containing vaccine was introduced in 1982, and measles and rubella-containing vaccine was introduced in 2016, although mumps and varicella vaccines have not introduced as of 2018. IgG seroprevalence reflects virus circulation status, but reports are limited. Objective: To estimate IgG seroprevalence on measles, rubella, mumps, and varicella among adults in Khanh Hoa Province. Methods: We measured IgG of the 4 viruses by ELISA test using 362 residual blood samples among adults aged 20-70 which were collected in diabetes mellitus serosurvey based on 3 stages random cluster survey using probability proportional to size sampling in 2014. Results: Seroprevalence on measles was 89% in 20-24 years old and over 98% in 25-70 years old. Seroprevalence on rubella was 80-90% in 20-49 years old and over 90% in 50-70 years old. Seroprevalence on mumps was 70-80% in 20-29 years old and around 90% in 30-70 years old. Seroprevalence on varicella was approximately 50% in 20-29 years old and 70-100% in 30-70 years old. Discussion: The seroprevalences of this survey reflect mainly virus circulation status, except for measles among 20-32 years old born after vaccine introduction, although are affected by sample size calculation and antibodies titration method. Susceptible to rubella among 20% of women of child-bearing age is concerned. Acknowledgments: We thank Dr. Takayuki Shimizu and Dr. Masami Miyakawa for their sample collection and storage. This research was funded by Grant for International Health Research (26-4 and 28-1) from the Ministry of Health, Labour and Welfare, Japan.
P-43 Analysis of demographic change among Japanese language school students, in connection to the trend of foreign-born TB and HIV

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Objective Proportion of foreign-born cases among newly notified TB cases in Japan, is rapidly increasing since 2011. In Tokyo, the number of TB cases among Japanese language school students is remarkably increasing. A study of socio-economic background and health-related knowledge was done to find strategy of early testing.

Method A self-administered questionnaire survey was conducted from Sep. to Dec. 2017 at 17 Japanese language schools in Tokyo. 769 students from China, Vietnam and Nepal participated in this survey. Analysis was made in connection to the trend of foreign-born TB and HIV.

Results Proportion of students, who has part-time job, is higher among Nepali/Vietnamese 89.9%, compared with Chinese 49.4%. Majority of Nepali/Vietnamese students share their room with friends (84.2%), while only 35.5% of Chinese students share. 21.8% of Nepali/Vietnamese students sleep less than 6 hours, but 11.1% of Chinese students. The proportion of Nepali/Vietnamese students who feel very difficult to manage time to visit a medical doctor was 28.3% (Chinese 6.3%). 75.6% of Nepali/Vietnamese students need interpreters when they visit hospitals. Among them, the proportion of students, who didn’t know about TB treatment subsidization and appropriate facilities to have TB diagnosis/treatment were 88.2%, and 89.2%, respectively.

Discussion Recently majority of Japanese language school students are from developing countries in South and Southeast Asia. They have disadvantage in terms of socio-economic background, Japanese language proficiency and information accessibility. Considering with their disadvantage and the prevalence of TB and HIV in their home countries, provision of information and support to access testing / treatment are recommended.

P-44 Prevalence of gynecological symptoms among Cambodian women with goiter in Kaoh Chreng Island

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Background: Kaoh Chreng Island is located in the Kratie Province of Cambodia with a population of about 3000. Medical experts of the governmental health posts from the island reported health problems concerning women’s health. This study aims to investigate the prevalence of gynecological problems among women with a thyroid swelling from Kaoh Chreng Island. Materials and method: In 2017, a health survey was conducted on 160 women. Information on demographic characteristics and gynecological symptoms were collected through interviewer-administered questionnaires. We measured thyroid volume by using ultrasonography. We used Student t-test or Mann-Whitney U-test and Chi-square test or Fisher exact test for comparing between groups, appropriately. Pearson correlation test was used for assessed association between thyroid volume and age. A p-value of less than 0.05 was considered significant. Result: Thyroid swelling was observed in 71 (44.4%) women. The average age was older for women with thyroid swelling (mean and SD, 56.1 and 16.8 years vs 51.2 and 15.2 years). Average blood pressure was within normal range for all women. Thyroid volume was significantly and positively associated with age (r = 0.336, p =0.001). More women with thyroid swelling seeked gynecological consultation (16.7% vs 5.6%), reported longer menstruation (10% vs 1.4%), variation of menstrual volume every month (30% vs 8.5%).
severe menstrual pain (28.9% vs 12.7%), and fatigue (88.9% vs 73.2%). Conclusion: Women with thyroid swelling were more likely to have gynecological symptoms. The further study investigating the association between thyroid swelling and diets in the women of Kaoh Chreng Island was warranted.

P-46 Family guidance for acute stroke patient is effective to prevent Deep Vein Thrombosis in Lao PDR

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[Background] In Southeast Asia, families often become primary caregivers during hospitalization. In addition, rehabilitation has not been done often from the acute phase. In this study, we discuss about the effect of family guidance for stroke patients in Lao PDR.[Method]This study carried out a retrospective study of consecutive discharge to the Mittaphab Hospital in Lao PDR (n=42). Patients with Functional Ambulation Categories (FAC) less than 1 were excluded in the study. The following measures were extracted from clinical charts: age, sex, type of stroke, existence of DVT, Number of times of rehabilitation, Lower limb movement items of Stroke Impairment Assessment Set (SIAS), modified Rankin Scale (mRS), and Barthel Index gain (BI gain). The object was divided into 2 groups: A group not carrying out DVT prevention guidance (No intervention group, n=20), A group carrying out DVT prevention guidance (Intervention group, n=22). Between the 2 groups, basic information, existence of DVT and BI gain were compared. R for windows software was used for the analysis. For all statistical tests, P<0.05 was considered as significant. [Result] While the number of rehabilitation exercises was significantly small (p=0.006), the occurrence of DVT was significantly reduced after the DVT prevention guidance to the family (0.027). No significant difference was noted in the BI gain and the basic information. [Discussion]This time, family members became the primary caregivers and were accompanying 24 hours immediately after onset, so family guidance was considered effective. Even in a situation which rehabilitation is insufficient, there is a possibility that patient complications can be prevented by family guidance.

P-47 Risk factors for pitching injuries in developing baseball countries : a review of the English literature

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Background: Many reports on pitching injuries originate from developed baseball countries, and the present situation in developing baseball countries, where Japan is promoting dissemination activities, is unclear. In this study, we reviewed literature relating to risk and prevention of pitching injuries in developing baseball countries.

Method: A PubMed search was conducted by a research librarian using the terms "baseball," "shoulder," and "injury", along with "risk" or "prevention." We filtered the results using the titles and abstracts. Selection criteria were: reports published in English from 1990 to July 1, 2018 in which risk factors related to pitching injuries and prevention were stated. Exclusion criteria were: reports on specific diseases and occupations and those that included subjects ≥ 19 years of age.

Result: Twenty-two of the 249 cases found on PubMed matched our criteria. These included 17 observational studies, 5 interventional studies, and 0 literature reviews. Multiple observational studies reported risk factors for pitching injuries, including pitcher position, catcher position, concurrent pitcher and catcher positions, height, weight, and pitch number. The risk factors fall into three categories, namely, baseball-related factors, physical factors, and
environmental factors. To prevent pitching injuries, leaders must understand the environmental risk factors. However, almost all reports on risk factors originate from developed baseball countries, and no reports from developing baseball countries were identified.

Conclusion: In developed baseball countries, leaders' understanding of environmental risk factors contributes to the prevention of pitching injuries, and few studies have been conducted in developing baseball countries.

P-48 Association between use of internet/social media and sexual awareness among youths living in urban areas in Tanzania.

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Background The objective of this study was to examine the association between use of internet/social media and sexual awareness among youths in Sub-Saharan Africa. Methods An anonymous self-administered questionnaire survey was conducted among high school students in the urban area of Tanzania in August 2017. Informed consent was provided and completed questionnaires were collected from those who agreed to participate. The questionnaire included knowledge of HIV infection risk, frequency and time of internet/social media use, and 7 items of a game-playing approach to sexual relations taken from the Multidimensional Sexual Approach Questionnaire (MSAQ) to measure sexual awareness. MSAQ adopts a five-point scale, where higher scores indicate higher acceptance of game-playing sexual approach. The scores were divided by the median into two groups. A chi-square test was performed to analyze the association among factors and MSAQ. Results 233 questionnaires were collected, of which 145 were valid for analysis. The mean age of participants was 18.5 (SD: 1.07), 34.5% were male and 62.8% female; 66.9% Christian and 31.0% Muslim. The MSAQ high-scoring group was significantly associated with having a partner, answering incorrectly regarding HIV infection risk, and long use of internet/social media. Gender, age group, religion, frequency of internet use, and number of types of social networking services used were not significantly associated. Conclusions There was significant association between long usage of internet and sexual awareness. Findings suggest effectiveness of developing reproductive health strategies for youths through multiple channels of the internet/social media.

P-49 One Strategy of Lifestyle-Related Diseases Prevention and Weight Control for Pacific Island Countries

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INTRODUCTION

In recent years, lifestyle-related diseases have gradually become a serious concern in developing countries—arguably on a scale in par with infectious diseases. Especially worrisome, the prevalence rates have increased in pacific island countries—although prevention is merely a matter of changing lifestyle behaviors. Based on the experiences of Okinawa, which has a similar climate and geographical features, the lifestyle-related diseases prevention course was conducted with consideration of sustainability and feasibility.

SUBJECTS AND METHODS

The subjects were in total 16 JICA Young Leaders trainees who participated in the Program for Pacific Island Countries / Lifestyle-related Diseases Prevention. One of the trials consisted of checking body weight each morning after going to the restroom and
recording the data via a smartphone.

RESULTS AND DISCUSSION

Generally, it is difficult to maintain normal weight while being away from home. However, 2 out of the 16 participants were able to lose weight (2 and 5 kg, respectively), whereas 13 maintained their normal weight while 1 participant gained weight. The subjects themselves were surprised at the results and would pass along this method to family and the community after the training. The follow-up results will be presented at a conference.