

SONGKLANAGARIND
MEDICAL
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Official Journal Health Science

2017

INTERNATIONAL CONFERENCE

The 11th Postgraduate Forum on Health Systems and Policy

Integrated Health Systems and Policy

for Sustainable Development Goals



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The 11th Postgraduate Forum on Health Systems and Policy
Integrated Health Systems and Policy
for Sustainable Development Goals

20-21 July 2017

Faculty of Medicine, Prince of Songkla University, Thailand

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Welcome Address

Assoc. Prof. Dr. Chusak Limsakul

President, Prince of Songkla University



On behalf of Prince of Songkla University (PSU), I would like to express our great honor and privilege to welcome you all to the 11th Postgraduate Forum on Health Systems and Policy 2017: Integrated Health Systems and Policy for Sustainable Development Goals, here at PSU.

Also, I would like to extend my appreciation to our cooperative partners from Universitas Gadjah Mada (UGM), Indonesia, and Universiti Kebangsaan Malaysia (UKM), from Malaysia for their cooperation at this international conference. And thank you to all other participants from their respective countries.

It is our belief that this will be a great opportunity to exchange both ideas and shared knowledge amongst experts concerning to the various health systems and policies from these universities and backgrounds. Additionally, it is our sincere hope that this conference will allow us to better understand the concepts and skills required to further develop research in the management of the health system in line with the goals of sustainable development.

I trust that all participants will enjoy the events of this conference, and with your active participation help it to be a great success whilst gaining various updated information.

Again please let me welcome you, on behalf of Prince of Songkla University, and personally welcome you to Hat Yai, Songkhla, Thailand.

Welcome Address

Assoc. Prof. Puttisak Puttawibul

Dean, Faculty of Medicine, Prince of Songkla University



I would like to take this opportunity to express my greatest pleasure to hold the 11th Postgraduate Forum on Health Systems and Policy 2017: Integrated Health Systems and Policy for Sustainable Development Goals, in collaboration with Universitas Gadjah Mada (UGM) in Indonesia and Universiti Kebangsaan Malaysia (UKM).

The conference was established under the name of the “Networking Project for International Postgraduate Forum Health Systems and Policy among Three Universities in Indonesia, Malaysia and Thailand.” We share the same goal of an “Integrated Health Systems and Policy for Sustainable Development”. Achieving universal health coverage and providing safe and high quality healthcare using appropriate evidence-based technology are the challenges that face the health systems in all countries. That is the reason why it is essential to bring everyone’s attention to sustainable development goals. I trust that this international conference will provide the greatest benefits for all participants and for our communities.

In conclusion, I would also like to express my deepest gratitude to all of our distinguished guest speakers and all participants. I hope that you will have a pleasant stay and all it has to offer. I trust that this conference will be a great success and I look forward to our constant collaboration in the future. Again, thank you for your attendance.

Welcome Address

Assoc. Prof. Dr. Tippawan Liabsuetrakul

**Head, Epidemiology Unit, Faculty of Medicine,
Prince of Songkla University**



Postgraduate education is an important mechanism for the enrichment of human resources to enable research of the highest quality to be conducted, serving national and international needs. The Faculties of Medicine from three leading universities in Southeast Asia, Universiti Kabangsaan Malaysia in Malaysia, Universitas Gadjah Madah in Indonesia and Prince of Songkla University in Thailand, have postgraduate programmes in which one of them is related to health systems and policy. Therefore, a network of postgraduate programmes on health systems and policy has been established among these three universities, culminating in the 11th annual postgraduate forum on health systems and policy 2017 in Hat Yai, Thailand.

In September 2015, the official agenda of the Sustainable Development Goals was agreed upon by 194 countries of the UN General Assembly on transforming our world: the 2030 agenda for sustainable development, to be completed by 2030. “Good Health and Well-being”, the third goal, was coined to ensure healthy lives and to promote the well-being for all at all ages. The Faculty of Medicine, Prince of Songkla University, Thailand, has been given the responsibility for organizing a network conference in July of 2017. Health systems and policy is one of the essential components of improving people’s health. Therefore, “Integrated Health Systems and Policy for Sustainable Development Goals” has been set as the theme for this international conference: the 11th Postgraduate Forum on Health Systems and Policy in 2017. This conference will encourage the exchange of ideas among experts and graduate students in health system and policy from various universities and institutes and strengthen the cooperation among educational institutions in national and international networks.

This conference is funded by the Faculty of Medicine, Prince of Songkla University and the China Medical Board, through the project of Epidemiology Unit entitled “A second collaborative program to improve the health research capacity of western medical universities in China and Prince of Songkla University”. The conference also acknowledges the supports of Dr. Suwit Wibulpolprasert, Vice Chair of the International Health Policy Program Foundation (IHPF) and Health Intervention and Technology Assessment Foundation (HITAF) and the honorable speakers from the World Health Organization Southeast Asia Regional Office and Thailand Country Office, International Health Policy Program (Thailand), National Health Security Office (Thailand), Centre for Health Equity Monitoring Foundation (Thailand), Liverpool School of Tropical Medicine (United Kingdom), Universiti Kabangsaan Malaysia (Malaysia), Universitas Gadjah Madah (Indonesia), and Prince of Songkla University, Thailand. Finally, I would like to thank the organizing committee and all supporting staff in the Faculty of Medicine, Prince of Songkla University, for organizing and facilitating this conference.

Advisory and Organizing Committee

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Assoc. Prof. Supaporn Tengtrisorn	Vice Dean for Postgraduate Training, Faculty of Medicine, Prince of Songkla University, Thailand

Chairperson of Organizing Committee

Assoc. Prof. Tippawan Liabsuetrakul	Head, Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand
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Prof. Laksono Trisnantoro	Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia
Prof. Dato' Dr. Syed Mohamed Aljunid	International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia

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Prof. Sawitri Assanangkornchai	Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand
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Chairperson of Conference Ceremony Committee

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Prof. Laksono Trisnantoro	Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia

“The 11th Postgraduate Forum on Health Systems and Policy 2017: Integrated Health Systems and Policy for Sustainable Development Goals”

Date: 20–21 July 2017

Place: Faculty of Medicine, Prince of Songkla University, Thailand

Background

Achieving universal health coverage and providing safe and high quality healthcare using appropriate evidence-based technology are the challenges facing health systems in all countries. The core components of a well-established health system are infrastructure, human resources, finance and well-organized and properly-managed facilities. In order to accomplish an efficient and cost-effective health system, the World Health Organization recommends monitoring health systems in terms of (1) provision of healthcare services, (2) investment of equipment and facilities and training of health personnel, (3) health finance, and (4) monitoring and evaluation. The indicators of this monitoring process are the health of people, equity of access to health-care, health system responsiveness, responsibility of people on their health, and financial burdens among socio-economic gradients. Strengthening health systems and policies is crucial for all countries in order to improve people's health. The Millennium Development Goals include eight goals in which all 189 United Nations member states agreed to try to achieve by 2015. Although the success of these goals has been seen across many countries, some countries fell short. The eight Millennium Development Goals are now being transitioned into 17 Sustainable Development Goals, to be completed by 2030. “Ensuring healthy lives and promoting well-being for all at all ages” is the third goal. The essential components of these goals need to be brought to everyone's attention so that all countries can integrate them into their health systems and policies. For this reason, it has been decided that “Integrated Health System and Policy for Sustainable Development Goal” is set to be the theme for the 11th Postgraduate Forum on Health Systems and Policy in 2017.

Aims

1. To disseminate the findings of research in universal health coverage, health workforce and finance, primary health care, health equity, policy integration for sustainable development, health systems for sustainable development, health in sustainable development goals of graduate students, faculty members and researchers both at national and international levels.
2. To understand the concept and skills on how to develop research in the management of the health system in line with the goals of sustainable development.
3. To exchange ideas among experts in health system and policy from various universities and institutes.
4. To strengthen cooperation among educational institutions in the national and international network.

Activities

1. Keynote lecture/Plenary sessions/Symposiums
2. Oral presentations
3. Poster presentations
4. Presentation of awards

“The 11th Postgraduate Forum on Health Systems and Policy 2017: Integrated Health Systems and Policy for Sustainable Development Goals”

Date: 20–21 July 2017

Place: Faculty of Medicine, Prince of Songkla University, Thailand

Oral presentation		
A-OP1	<p>Feedback intervention to doctors improves patient satisfaction among outpatients in Inner Mongolia Autonomous Region, China</p> <p><u>Tingting Qiao</u>^{1,2}, Alan F Geater¹, Virasakdi Chongsuvivatwong¹, Yancun Fan², Zhihua Guo³</p> <p>¹Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand. ²Faculty of Health Management, Inner Mongolia Medical University, China. ³Hohhot First Hospital, Inner Mongolia, China.</p>	P23
A-OP2	<p>Building capacity for implementation research on national health insurance in Indonesia</p> <p><u>Shita Dewi</u>¹, Laksono Trisnantoro^{1,2}, Muhamad Faozi Kurniawan¹, Likke Prawidya Putri^{1,2}, Yanti Leosari¹, Budi Eko Siswoyo¹, Christa Dewi¹</p> <p>¹Center for Health Policy and Management, Universitas Gadjah Mada, Indonesia. ²Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P24
A-OP3	<p>Universal health coverage of breast cancer management: accessibility to subsidised mammogram screening program in Malaysia</p> <p><u>Aidalina Mahmud</u>¹, Syed Mohamed Aljunid^{2,3}</p> <p>¹Universiti Kebangsaan Malaysia, Malaysia. ²International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia. ³Department of Health Policy & Management, Faculty of Public Health, Kuwait University, Kuwait.</p>	P25
A-OP4	<p>Capitation in Indonesia National Health Insurance: potentials and cautions</p> <p><u>Muhamad Faozi Kurniawan</u>¹, Budi Eko Siswoyo¹, Faisal Mansur¹, Wan Aisyah², Welly Gadistina²</p> <p>¹Center for Health Policy and Management, Universitas Gadjah Mada, Indonesia. ²BPJS Kesehatan Indonesia, Indonesia.</p>	P26

A-OP5	<p>Implementation of Aceh Health Insurance: transforming the universal health coverage system from fee for services to casemix system</p> <p><u>Irwan Saputra</u>¹, Syed Mohamed Aljunid^{2,3}, Amrizal Muhammad Nur²</p> <p>¹Universiti Kebangsaan Malaysia, Malaysia.</p> <p>²International Centre for Casemix and Clinical Coding UKM, Malaysia.</p> <p>³Department of Health Policy and Management, Kuwait University, Kuwait.</p>	P27
A-OP6	<p>Is holding national health insurance associated with inappropriate referrals in primary health care? a case study in Indonesia</p> <p><u>Suci Melati Wulandari</u></p> <p>The Australian National University, Indonesia.</p>	P28
A-OP7	<p>Post universal health coverage trend and geographical inequalities of mortality in Thailand</p> <p><u>Suchunya Aungkulanon</u>¹, Viroj Tangcharoensathien¹, Virasakdi Chongsuvivatwong²</p> <p>¹International Health Policy Program, Ministry of Public Health, Thailand.</p> <p>²Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand.</p>	P29
A-OP8	<p>Adoption of national regulation on capitation fund utilization by sub-national government: case study of universal health coverage implementation in a decentralized nation</p> <p><u>Yanti Leosari</u>¹, Likke Prawidya Putri^{1,2}, Laksono Trisnantoro^{1,2}, Shita Dewi¹, Muhamad Faozi Kurniawan¹, Budi Eko Siswoyo¹</p> <p>¹Center for Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p> <p>²Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P30
A-OP9	<p>Low use of health facility in rural and remote areas: problems in implementation or policy?</p> <p><u>Faisal Mansur</u>¹, Mubasysyir Hasanbasri², Nopryan Ekadinata¹</p> <p>¹Center for Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p> <p>²Department of Biostatistics, Epidemiology and Population Health, Universitas Gadjah Mada, Indonesia.</p>	P31
A-OP10	<p>Disparity in utilization and expectation of community-based maternal health care services among women in Myanmar: a cross-sectional study</p> <p><u>Thida</u>¹, Tippawan Liabsuetrakul², Edward McNeil²</p> <p>¹Department of Medical Research (Pyin Oo Lwin Branch), Ministry of Health and Sports, Pyin Oo Lwin, Myanmar.</p> <p>²Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand.</p>	P32

A-OP11	Lessons learnt: contribution free primary care service to poor people (non assistance recipients from governance) in Indonesia <u>Dwi Endah</u> Public Health Graduate Program, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.	P33
A-OP12	Evaluation of quality dimensions of tuberculosis services: a survey in primary health centers in Samarinda municipality, East Kalimantan, Indonesia <u>Rahmat Bakhtiar</u> Faculty of Medicine, Universitas Mulawarman, Indonesia.	P34
A-OP13	Perceived acceptability of capitation payment systems in primary health care in Indonesia <u>Likke Prawidya Putri</u> ^{1,2} , Yanti Leosari ² , Shita Listyadewi ² , Muhamad Faozi Kurniawan ² , Budi Eko Siswoyo ² , Laksono Trisnantoro ^{1,2} ¹ Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia. ² Center for Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.	P35
A-OP14	Utilization of rehabilitation services and influencing factors among psychotic patients in rural communities of Guangxi, China <u>Hongye Luo</u> ^{1,2} , Sawitri Assanangkornchai ¹ , Virasakdi Chongsuvivatwong ¹ , Viroj Tangcharoensathien ³ , Qiming Feng ² , Edward McNeil ¹ ¹ Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand. ² Information and management school, Guangxi Medical University, Guangxi Zhuang Autonomous Region, China. ³ International Health Policy Program, Ministry of Public Health, Thailand.	P36
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B-OP2	Continuum of care policy for private midwives to support Indonesia Sehat <u>Alifa Candra Puriastuti</u> ¹ , Erni Rosita Dewi ² ¹ Reproductive Health Science, Airlangga University, Indonesia. ² Airlangga University, Indonesia.	P38
B-OP3	SDGs, opportunities or challenges in HIV-AIDS? (policy analysis on HIV-AIDS in the SDGs through universal health coverage in Indonesia) <u>Ratna Kusumasari Purbani</u> , Achmad Djunawan, Nurlia Yusuf Public Health Graduate Program, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.	P39

B-OP4	<p>Evaluation of a model demonstration program for the control of cervical cancer in rural China</p> <p><u>Jun Zhao</u>¹, Hucha Sriplung¹, Xiaohui Gong²</p> <p>¹Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand.</p> <p>²Maternal and Child Health Hospital, Zhushan, Hubei, China.</p>	P40
B-OP5	<p>Current public health policies for the poor during Basuki administration in Jakarta capital city of Indonesia</p> <p><u>Mubasysyir Hasanbasri</u></p> <p>Department of Biostatistics, Epidemiology and Population Health, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P41
B-OP6	<p>Implementation of an activity-based costing approach for analysing cost of community-based rehabilitation activities for disabled children</p> <p><u>Haliza Hasan</u>¹, Syed Mohamed Aljunid^{2,3}, Sharifa Ezat Wan Puteh⁴, Aznidah Firzah Abd Aziz⁵, Amrizal Mohd Nur⁶, Azlin Mohd Nordin⁷, Nurul Anisah Jaafar⁷</p> <p>¹Universiti Kebangsaan Malaysia, Malaysia.</p> <p>²Department of Health Policy & Management, Faculty of Public Health, Kuwait University, Kuwait.</p> <p>³Health Economics and Public Health Medicine International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>⁴HEJIM (Community and Industry Liason Office), Universiti Kebangsaan Malaysia, Malaysia.</p> <p>⁵Department of Family Medicine, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>⁶International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>⁷School of Rehabilitation, Faculty of Health Science, Universiti Kebangsaan Malaysia, Malaysia.</p>	P42
B-OP7	<p>Implementing region's policy as a strategy for public support smoke-free laws in Kulonprogo district, Indonesia</p> <p><u>Kurnia Widyastuti</u>, Yuditha Nindya Kartika Rizqi</p> <p>Public Health Graduate Program, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P43
B-OP8	<p>Conflicts in Yemen exacerbate lost to follow-up rates of people living with HIV</p> <p><u>Mayada Faisal</u>¹, Sharifa Ezat WP², Amrizal M Nur²</p> <p>¹Universiti Kebangsaan Malaysia, Malaysia.</p> <p>²International Centre for Casemix and Clinical Coding (ITCC), Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p>	P44

B-OP9	<p>Determinants of effectiveness of assisted reproductive technology: analysis of outcomes in a private hospital in Saudi Arabia</p> <p><u>Faisal Almaslami</u>¹, Syed Mohamed Aljunid^{2,3}</p> <p>¹Universiti of Kebangsaan Malaysia, Malaysia.</p> <p>²International Centre for Casemix and Clinical Coding, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>³Department of Health Policy and Management, Faculty of Public Health, Kuwait University, Kuwait.</p>	P45
B-OP10	<p>Comparison of expectation and perception among patients attending health care among Traditional Mongolian, Traditional Chinese and Western Medicine in Inner Mongolia of China</p> <p><u>Li Min</u>¹, Virasakdi Chongsuvivatwong¹, Fan Yancun², Edward McNeil¹</p> <p>¹Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand.</p> <p>²Faculty of Health Management, Inner Mongolia Medical University, China.</p>	P46
B-OP11	<p>Evaluation of Middle-East respiratory syndrome preparedness and response in Qatar</p> <p><u>Shafik Al-mahbashi</u></p> <p>Universiti Kebangsaan Malaysia, Malaysia.</p>	P47
B-OP12	<p>Work team programs supporting expanding maternal and neonatal survival in reducing maternal mortality rate in Banyumas district, Central Java, Indonesia</p> <p><u>Yuditha Nindya Kartika Rizqi</u>, Kurnia Widyastuti</p> <p>Public Health Graduate Program, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P48
B-OP13	<p>Profile of e-cigarette users among university students and health related issues</p> <p><u>Izzah Syazwani Ahmad</u>¹, Sharifa Ezat Wan Puteh², Roslina Abdul Manaf³, Tidi Maharani Hassan³, Fariza Md Sham⁴, Ahmad Irdha Mokhtar⁴, Mohd Zaliman Mohd Yusoff⁵, Suthahar Ariaratnam⁶, Amer Siddiq Amer Nordin⁷, Andrea Ban Yu Lin³, Soo Chun Ian³, Lee Jing⁸, Rashidi Mohamed Pakri Mohamad⁹, Hazli Zakaria⁶, Idayu Badilla Idris²</p> <p>¹Universiti Kebangsaan Malaysia (UKM) Medical Centre, (UKMMC), Malaysia.</p> <p>²Department of Community Health, Faculty of Medicine, UKMMC, Malaysia.</p> <p>³Respiratory Unit, Faculty of Medicine, UKMMC, Malaysia.</p> <p>⁴Department Da'wah and Leadership Studies, Faculty of Islamic Studies, UKM, Malaysia.</p> <p>⁵Department of Software Engineering, College of Information Technology, Universiti Tenaga Nasional, Malaysia.</p> <p>⁶Department of Psychiatry, Faculty of Medicine, Universiti Teknologi MARA (UiTM), Malaysia.</p> <p>⁷Department of Psychological Medicine, Faculty of Medicine, Universiti of Malaya, Malaysia.</p> <p>⁸Institute for Environment and Development (LESTARI), UKM, Malaysia.</p> <p>⁹Department of Family Medicine, Faculty of Medicine, UKMMC, Malaysia.</p>	P49

<p>C-OP1</p>	<p>Predictors of internalized and personal stigma among HIV and non-HIV patients in healthcare settings in the South of China <u>Jing Li</u>¹, Sawitri Assanangkornchai², Lin Lu³, Virasakdi Chongsuvivatwong² ¹Kunming Medical University, China. ²Epidemiology Unit, Faculty of Medicine, Prince of Songkla University, Thailand. ³Health and Family Planning Commission of Yunnan Province, China.</p>	<p>P50</p>
<p>C-OP2</p>	<p>Strengthening maternal and perinatal referral systems using information technology <u>Guardian Yoki Sanjaya</u>¹, Hendri Kurniawan Prakosa², Muhammad Harrdhantyo Puspwardoyo³, Nanik Sri Wahyuni⁴ ¹Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia. ²Health Information Systems Laboratory, Faculty of Medicine, Universitas Gadjah Mada, Indonesia. ³Center for Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia. ⁴Graduate Program of Public Health, Universitas Gadjah Mada, Indonesia.</p>	<p>P51</p>
<p>C-OP3</p>	<p>Effect of implementation of a casemix system on severity level and length of stay of patients in selected hospitals in West Sumatera province, Indonesia <u>Kamal Kasra</u>¹, Amrizal M. Nur², Syed Mohamed Aljunid³ ¹Universiti Kebangsaan Malaysia, Malaysia. ²International Centre for Casemix and Clinical Coding, Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia. ³Department of Health Policy and Management, Faculty of Public Health, Kuwait University, Kuwait.</p>	<p>P52</p>
<p>C-OP4</p>	<p>Functional health information system (HIS) to support health system: a perspective from health workers <u>Lutfan Lazuardi</u>, Guardian Yoki Sanjaya, Annisa Ristya Rahmanti Department of Health Policy and Management, Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	<p>P53</p>

C-OP5	<p>Comparing rates of unnecessary admissions among patients reimbursed on casemix system and fee-for-service in a teaching hospital in Indonesia</p> <p><u>Eka Yoshida Syukri</u>^{1,2,3}, Syed Mohamed Aljunid^{4,5}, Amrizal Bin Muhammad Nur⁴</p> <p>¹Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>²United Nations University-International Institute for Global Health, Malaysia.</p> <p>³The Cipto Mangunkusumo National Referral Hospital, Jakarta, Indonesia.</p> <p>⁴International Centre for Case-Mix and Clinical Coding (ITCC), Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia.</p> <p>⁵Department of Health Policy and Management, Faculty of Public Health, Kuwait University, Kuwait.</p>	P54
C-OP6	<p>Integrating lay health resources into the health system: challenges to the new national health insurance scheme</p> <p><u>Retna Siwi Padmawati</u></p> <p>Faculty of Medicine, Universitas Gadjah Mada, Indonesia.</p>	P55
C-OP7	<p>Evaluation on disability weight of diabetes mellitus in China</p> <p>Tian Miao, Chen Xiaping, Li Li, <u>Zhou Shangcheng</u></p> <p>Hubei University of Medicine, Shiyan, Hubei, China.</p>	P56
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Abstract of Oral Presentation

*The 11th Postgraduate Forum on Health Systems and Policy 2017:
Integrated Health Systems and Policy for Sustainable Development Goals*

Feedback intervention to doctors improves patient satisfaction among outpatients in Inner Mongolia Autonomous Region, China

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Objectives: This study aimed to evaluate the effect on patient satisfaction of providing individualized feedback to doctors regarding outpatients' perception of the quality of service received during their consultation.

Methods: A non-randomized controlled pre-post study was conducted in a tertiary general hospital in Hohhot, Inner Mongolia of China. Surgical physicians were provided real-time individualized patient feedback regarding their perception of quality of service received every day over a period of two weeks while internal medicine physicians followed the usual routine. The effect of the intervention was evaluated using a Short-Form Patient Satisfaction Questionnaire among patients attending the clinics before and after the intervention period in both groups of clinics. Questionnaires were returned by 190 and 189 physicians in the control and intervention groups, respectively at the pre-intervention period and by 200 and 190 physicians, respectively at the post-intervention period. Independent sample t-tests, Chi-square tests, and mixed effects random-intercept linear regression models were used to analyse the data in this study.

Results: The intervention group had on average 0.245 (95% CI 0.086–0.403) higher composite scores of patient satisfaction compared to the control group on a scale of increasing satisfaction of 1 to 5. Significant effects of the intervention were also seen in the domains of general satisfaction (coefficient, 0.426; 95% CI 0.068–0.539), technical quality (coefficient, 0.194; 95% CI 0.011–0.377), communication (coefficient, 0.303; 95% CI 0.086–0.403), and accessibility and convenience (coefficient, 0.230; 95% CI 0.029–0.432).

Conclusions: Real-time feedback to doctors of patients' perception of quality of care received can be used to improve outpatient satisfaction in a Chinese hospital.

Keywords: feedback intervention, patient satisfaction

Building capacity for implementation research on national health insurance in Indonesia

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Background: We need to better understand, explain, and address problems associated with translating explicit and implicit political intentions into desired changes. Research into implementation can generate knowledge to close or reduce these gaps. This is particularly important for a nation-wide policy and sector reform such as National Health Insurance in Indonesia.

Objective: We work with key stakeholders of the National Health Insurance Policy and University partners to investigate and reduce the gaps between the policy and real-world implementation.

Methods: We use implementation research (IR) to help illuminate the implementation challenges of National Health Insurance at the primary care level. The study sites are 88 facilities in 5 districts in Indonesia. We partnered with Ministry of Health and 3 Universities.

Results: We found that the implementation of National Health Insurance policy has not reached their intended goals at local level. The practical orientation of IR, and the kinds of questions it asks, makes it necessary for decision makers to play an important role in the conceptualization, design and analysis of IR projects. Their involvement is imperative to ensure the acceptability of study result recommendation and to encourage them to take action and work on changing policy.

Conclusions: The IR capacity-building efforts for National Health Insurance help stakeholders to identify some key challenges in implementing National Health Insurance and proposed ways forward. Involving stakeholders and university partners is a way to build capacity for better monitoring and evaluation of implementing a policy at a local level.

Keywords: national health, insurance, implementation

Universal health coverage of breast cancer management: accessibility to subsidised mammogram screening program in Malaysia

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Objectives: To determine the spatial accessibility of subsidised mammogram screening in Malaysia.

Methods: To determine the availability, processes and distribution of mammogram screening programs we searched available databases; and estimated the distance and cost of travelling among breast cancer patients.

Results: In the central region the ratio of mammogram facility to the target population of women aged 40–74 years was approximately 1:4,500; it was 1: 18,000–1:20,000 in the western region and 1:30,000–1:80,000 in other parts of the country. To obtain one mammogram screen, the process generally involved four return trips to two facilities. The mean travel distance between residence of respondents and mammogram facility alone was 19.0 km (sd.=10.2, range 4–35 km) and the mean travel cost was RM 28.42 (sd.=15.74, range RM 5.60–49.00). However, because of the multiple trips, the overall travel distance increased to 107.7 km (sd.=63.3, range 32–268 km) and the travel cost to RM 75.34 (sd.=44.35, range RM 25.20–187.60).

Conclusions: The density of mammogram facilities was higher in the central and west coast regions compared to the rest of the country; the provider-to-population ratio was lower than the target of 1.2 mammogram facility to 10,000 target population; and the travel burden was found to be high (travelling more than 30 kilometres) to have a mammogram. The entire process involved multiple trips to two facilities, which resulted in increased travel distance and costs. In conclusion, spatial accessibility to mammogram screening facilities has not yet been achieved in this country.

Keywords: breast cancer, mammogram screening program, Malaysia

Capitation in Indonesia National Health Insurance: potentials and cautions

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Background: Indonesia introduced capitation payment for primary health care in 2014 coinciding with the National Health Insurance system (JKN). Previous research conducted main regulation in the district implementation of JKN and found patterns that were consistent with central government regulations, and also a lack of adequate and experienced capitation management. Therefore, in order to be possible monitoring and evaluation of capitation fund utilization in the subsequent years.

Objective: To describe the impact of the management and utilization of capitation fund in primary health centers (Puskesmas) under limited staff capability.

Methods: This is a descriptive study using quantitative and qualitative approaches. A total of 384 Puskesmas were selected using simple random sampling. Primary data were obtained via focus group discussions. Secondary data were obtained from financial documents and health care services between 2014 and 2015.

Results: Capitation has resulted in a higher income for Puskesmas. However, there was an increase in patient utilization. Most Puskesmas used Head of District decree/district regulation as the main legal basis for capitation fund management and utilization. Disconnection of policies between government agents has led to confusion at the Puskesmas to manage capitation funds. BPJS Kesehatan, as a purchaser of JKN, does not contribute in capitation planning in Puskesmas. Therefore, it is less effective in the monitoring and evaluation of capitation fund utilization.

Conclusions: Primary health centers (Puskesmas) are the main primary care providers for local government. Nevertheless, Puskesmas has guidelines as well as standard operating procedures to implement a capitation fund. Staff shortages and lack of skills are causing bottlenecks in the operation of Puskesmas operational in the JKN era.

Keywords: capitation payment, management, primary health center, Puskesmas

Implementation of Aceh Health Insurance: transforming the universal health coverage system from fee for services to casemix system

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Background: Aceh is a province in Indonesia which has established the Aceh health insurance (JKA) to cover the entire population. JKA was implemented in 2006 based on a fee for service and has not only led to an increase of health expenditure, but has created an increasing dependence of hospitals on government subsidies due to lower rates of health insurance. It is thus important to identify areas for reform in order to provide better quality health services.

Objective: To evaluate the financial situation after implementation of the JKA and compare between JKA payments based on a fee for service and the casemix system.

Methods: A qualitative approach was used to evaluate the current reimbursement system in JKA. The study sample included all stakeholders involved in the program. A quantitative study was also conducted to assess hospital incomes due to casemix system.

Results: The Aceh government has adequate commitment in ensuring the JKA finance. However, implementation of the program based on fee for service has decreased the quality of other health programs due to the amount of budget allocated to JKA. In addition, there were many complaints toward delivery of hospital services. From a tariff perspective, there was a significant increase in hospital incomes when the casemix system was used as the provider payment. Eventually, the government was able to decrease the hospital subsidies and increase support for other health programs.

Conclusions: The casemix system made a positive impact for both the Aceh government and the hospitals. Hence, the government is highly motivated to maintain the casemix system as the JKA financing method in ensuring the sustainability of universal health coverage for the Aceh population.

Keywords: implementation, Aceh health insurance, casemix system

Is holding national health insurance associated with inappropriate referrals in primary health care? a case study in Indonesia

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Objectives: This study aimed to investigate the association between the appropriateness of referrals from Community Health Centers (CHCs) to hospitals and patients' characteristics, including age, gender, National Health Insurance (NHI) status and residential area (urban/rural).

Methods: A cross-sectional method was employed to analyze secondary data of individual referrals as recorded by CHCs at Yogyakarta Province, Indonesia, from June 2014 to June 2015. Inappropriate referrals were defined as cases which were included in the Ministry of Health's standard of competence for general practitioners and treatable at CHCs.

Results: Of total of 11,579 referrals (Urban N=5,009, Rural N=6,570), 38% were inappropriate and 62% were appropriate. After adjustments for age group, gender and urban status, patients with unsubsidised NHI and non-NHI were 16% (95% CI 5%–28%, $p=0.02$) and 12% (95% CI 1%–25%, $p=0.034$) more likely to receive inappropriate referrals than patients with subsidised NHI. Further, there was significant gradient effect in the age groups of 0–9, 10–19, 20–29 and 40–49 compared to those aged 70 or above (OR 2.28, 95% CI 1.92–2.72; OR 1.58, 95% CI 1.32–1.89; OR 1.33, 95% CI 1.12–1.58; OR 1.17, 95% CI 1.01–1.37, respectively). Moreover, the likelihood of being referred inappropriately was 1.5 times higher in urban than in rural areas (95% CI 1.38–1.63, $p<0.001$).

Conclusions: Inappropriate referrals were significantly associated with holding NHI, less likely received by older patients, and occurred more frequent in urban areas. These results may assist policymakers to increase the efficiency and effectivity of NHI policies in Indonesia.

Keywords: national health insurance, health insurance, primary health care

Post universal health coverage trend and geographical inequalities of mortality in Thailand

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Objective: This study aimed to determine the trends of geographical inequalities in disease-specific mortality in Thailand after the country achieved universal health coverage (UHC).

Methods: National vital registration data from 2001 to 2014 were used to calculate age-adjusted mortality rate and standardized mortality ratio (SMR). Geographical mortality inequality among super-districts was measured by the coefficient of variation. Time-series cluster analysis was used to group causes of death based on their 14-year mortality profiles.

Results: The overall SMR steadily declined from 1.2 in 2001 to 0.9 in 2014. The upper north and upper northeast regions had higher SMR whereas Greater Bangkok achieved the lowest SMR. Decreases in SMR were mostly seen in Greater Bangkok and the upper northern region. Coefficient of variation of SMR rapidly decreased from 20.0 in 2001 to 12.5 in 2007 and remained stable. A declining trend in inequality of mortality was seen in almost all regions except Greater Bangkok where the inequality in SMR remained high throughout the study period. The time-series cluster analysis supports the theory of epidemiological transition. Diseases of poverty, infectious diseases such as HIV, and assault are declining whereas degenerative diseases such as cancer, cardiovascular disease, and cerebrovascular disease are increasing.

Conclusion: A decline in the adult mortality inequality across almost all regions of Thailand followed UHC. Despite overall reduction of mortality disparity, inequalities in child mortality rates and inequality of mortality among residents of Greater Bangkok need further exploration.

Keywords: universal health coverage, mortality

Adoption of national regulation on capitation fund utilization by sub-national government: case study of universal health coverage implementation in a decentralized nation

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Objective: Following the Act of National Social Security System in 2004, many regulations have been issued related to the design and implementation of National Health Insurance (NHI) by the executive body, technical ministries and local government. However, in a decentralized system, little is known about the process by which local governments adjust and comply with regulations at the national level. This study aims to understand how national regulation is adopted by local government as well as the challenges faced during implementation.

Methods: Review of the literature and NHI-related regulations issued by the legislature, executive, ministries and local government between 2004 and 2014 was undertaken. Then, individual and group interviews with stakeholders at both national and sub-national level were conducted to understand the constraints that occur in the adoption process.

Results: President Regulation 32/2014 was first established to regulate the use of capitation fund. Minister of Health Regulation 19/2014 came right after as its derivative, containing specific expenditure items on which the fund may be used. The result of this study indicates that each stakeholder may have its own interpretation on the regulation, thus causing various problems in implementation.

Conclusions: In the decentralization context, adaptation of national regulations by local government is challenging, particularly in a heterogeneous setting like Indonesia. Limited communication leads to lack of information flow and creates a wider gap between central and local government, which in turn ends up in partial and incomplete adoption of national regulations.

Keywords: national regulation, adoption, fund utilization, universal health coverage

Low use of health facility in rural and remote areas: problems in implementation or policy?

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Background: Jaminan Kesehatan Nasional (JKN) is social health insurance for all people in Indonesia that was launched in 2014. JKN's program aims to reduce financial barriers and improve access to a health facility. In reality, there are many problems in implementation, especially regarding access to health facilities in rural and remote areas.

Objective: To evaluate whether low JKN use of health facilities stems from problems in policy implementation or in policy making.

Methods: This research uses qualitative approach with case study design. The informants comprised beneficiaries of JKN, providers, and district health officers. This research was conducted in Tidore, which consists of 12 primary care units, which are distributed in 5 different islands.

Results: The research revealed the lack of availability of physicians in a majority of primary health care units. The government at district and national level have conducted a program for contracting physicians. On the other hand, physician turn-over is high, because physicians tend to use the contract with this program to obtain the medical doctor license. The main reasons for the physicians not to stay long in remote areas are low incentive, geographical condition, lack of health facility, and culture gaps.

Conclusions: Local and national policies have provided support through the contracting program in remote areas. However, the implementation program has not reached expectations. Local government needs new policy to improve the management of physician retention.

Keywords: health facility, rural and remote area, implementation, policy

Disparity in utilization and expectation of community-based maternal health care services among women in Myanmar: a cross-sectional study

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Background: To assess women's utilization and expectation of community-based antenatal and delivery care services in Myanmar and determine associated factors for disparity of services received with services women expected.

Methods: A cross-sectional survey was conducted among six-month postpartum women in three townships of Myanmar having high maternal mortality from hypertension and postpartum hemorrhage during 2016. Associated factors for the services with disparity were identified using multinomial regression models.

Results: Of 1,743 women, percentages of antenatal care attended by a skilled provider, at least four antenatal care visits and early antenatal care were 89%, 60% and 36%, respectively. The percentage of non-facility delivery was 65% and many antenatal care services received and expected were lower than 80%. Services with disparity included blood hemoglobin and urinary protein testing, and iron supplementation. Associated factors for the services with disparity were low utilization of antenatal care, women's socio-economic status, pregnancy and delivery complications, and out-of-pocket cost.

Conclusions: Utilization and expectation of community-based antenatal care services and facility delivery is low in Myanmar. Disparities of the services received with the services women expected to receive were common in antenatal care. The disparity detected was associated with social determinants of health which are challenges that policy makers need to overcome.

Keywords: maternal health services, community-based maternal health services, utilization

Lessons learnt: contribution free primary care service to poor people (non assistance recipients from governance) in Indonesia

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Background: There are a number of poor people in Indonesia who do not have access to universal health coverage (UHC). There is a need for more cooperation to ensure that the poor have access to health services free of charge. Rumah Zakat is a non-governmental organization dedicated to providing services for disadvantaged communities spread across nine cities in Indonesia.

Objective: To estimate the extent of the contribution of Rumah Zakat Indonesia to provide free services to the poor people.

Methods: This is a quantitative research study with a cross-sectional design. The unit of analysis is the community services users by purposive sampling of 120 people. Data was collected by observation of the 2016 annual report.

Results: Among 95,707 services, there were 901 for childbirth, 24,680 for antenatal care, family planning and child care, and 70,126 for general medical services. A total of 48% of service provided is of poor patients. Most (94%) poor patients came from clinics located in Sumatra province. The operational budget was reported at 1.7 billion. The patients reviewed showed that 70% do not have health insurance though they are indigent, and 30% have universal health coverage. Among those who have universal health coverage, 76% had assistance from governance and 24% paid out-of-pocket. This 24% is the potential beneficiaries of Rumah Zakat.

Conclusions: Free primary care services have contributed by offering free services to the poor non assistance recipients.

Keywords: lessons learnt, contribution, primary care service, poor people

Evaluation of quality dimensions of tuberculosis services: a survey in primary health centers in Samarinda municipality, East Kalimantan, Indonesia

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Background: A WHO report in 2016 indicated that Indonesia had the second highest number of tuberculosis cases in the world. Treatment success rates for tuberculosis patients in Samarinda, East Kalimantan province in 2014 was 75.3%, below the national target of 90%. Although default rates are low (2.6%), treatment interruptions regularly occur and the number of multidrug resistant suspects are increasing. The aim of this study is to describe the quality of tuberculosis services in primary health care centers.

Methods: We performed interviews with the tuberculosis patients and health workers of the 22 Primary Health Care centers of Samarinda municipality to obtain information about quality of care. 104 tuberculosis patients aged ≥ 18 years who were on treatment in 2016 participated in this study. Interviewers were not involved in the direct care of respondents. Seven factors were used in the measurement, namely availability of services; affordability of services; information; inter-personal communication; infrastructure; professional competence; and stigma.

Results: The ranking of seven factors associated with quality dimensions of tuberculosis care were as follows: inter-personal communication; information; professional competence; availability of services; affordability of services; infrastructure; and stigma.

Conclusions: Interpersonal communication and information are important elements for improving compliance and treatment success rates. Increasing awareness of inter-personal communication and information are important in the delivery of high-quality tuberculosis care.

Keywords: treatment success rate, quality of tuberculosis services, primary health care

Perceived acceptability of capitation payment systems in primary health care in Indonesia

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Objectives: In the Indonesian universal health coverage (UHC), capitation is being applied as provider payment system at primary health care (PHC) facilities. The study aimed to uncover perceived acceptability of current capitation systems to PHC providers and offer recommendations to improve its implementation.

Methods: Consolidated framework for implementation research was employed to understand the acceptability of capitation payment. The elements assessed included: (1) organizational characteristics, (2) implementation climate, (3) implementation readiness, and (4) staff perception on capitation systems. Eighty primary care providers, both public and private-owned, were involved in a series of individual and group interview sessions. Thematic analysis was applied to classify qualitative information into the above-mentioned categories.

Results: The non-autonomous organization structure of public PHC facilities experienced significant challenges in managing and utilizing capitation fund. Coordination and communication between district health office (DHO) as health manager at district level and BPJS Kesehatan as fund-pooling agency have a significant impact on the implementation climate at the district level. Strong commitment from the head of DHO determines the level of engagement with other cross-sectorial offices, such as the office of district revenue and assets and the district planning agency. Knowledgeable primary care facility leaders tend to be more innovative thus leading to better utilization of capitation payment.

Conclusion: The quality of leaders, both at district and PHC level, is one of important contributing factors to a good implementation climate. Technical direction or regulation should be formulated to clarify the role of each cross-sectorial office, and thus improve implementation readiness.

Keywords: payment systems, primary health care

Utilization of rehabilitation services and influencing factors among psychotic patients in rural communities of Guangxi, China

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Objectives: To identify predictors of utilization of rehabilitation services among psychotic patients in rural communities of Guangxi.

Study design: A cross-sectional survey was conducted among individuals aged over 15 years with schizophrenia or other psychoses and their care-givers in three counties of Guangxi province, China. Trained village doctors identified individuals known to them or suspected as having schizophrenia or other psychoses and recruited them into the study. Data on demographic characteristics, clinical symptoms, treatment history and reasons for not utilizing the mental health service were elicited. Psychiatrists conducted clinical interview to evaluate the patient's condition by using the Positive and Negative Syndrome Scale (PANSS).

Results: A total of 424 psychotic patients (60.6% male) and 319 caregivers were interviewed. The mean age of the patients was 41.4 (sd.=13.0) years. Most were Zhuang ethnicity (72.4%) and completed elementary school (76.1%) or above. The median disease duration was 13.4 years. The median scores of positive, negative and general symptoms of the PANSS were 12, 16 and 26, respectively. 83.0% of psychotic patients never utilized rehabilitation services. Higher utilization of rehabilitation services was associated with non-organic disorder (OR 11.6, 95% CI 1.6–86.0) and having a caregiver (OR 2.4, 95% CI 1.1–5.4). The top three reasons for not utilizing rehabilitation services were: lack of awareness (57.1%), cost (14.2%) and unnecessariness (12.8%).

Conclusions: There is a high unmet need for rehabilitation services in Guangxi. Lack of awareness is the most important reason for the low utilization rate. Strategies are needed to these reduce barriers.

Keywords: utilization of rehabilitation services, psychotic patients, rehabilitation

How medical and government policies meet? a case study on the implementation of HIV/AIDS program in Indonesia decentralized system

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Objective: To evaluate the implementation of HIV/AIDS programs in districts in Indonesia in the context of the decentralized system.

Methods: This was an operational research. Data were collected through a series of focus group discussions (FGDs) and document analysis, from August to December 2016. FGDs involved Sub-directorate of HIV/AIDS and STI of the Ministry of Health, National AIDS Commission (NAC), HIV NGOs, academicians, UNAIDS, and WHO. Documents that were reviewed included Laws on Local Governance and several Ministry of Health Regulations.

Results: Despite the widespread HIV infection throughout Indonesia, not all provinces and districts implement and allocate funds for HIV–AIDS programs and activities. This condition is due to the improper implementation of Ministerial Regulation number 922 Year 2008 on the division of authority between central, provincial, and district governmental level. In addition, HIV was not stated in the document of Minimum Service Standards for Health (Ministerial Regulation number 741 Year 2008). The Ministerial Regulation number 21 Year 2013 also did not follow the guidance provided in the Law of Local Governance.

Conclusions: The available HIV regulation (Ministerial regulation number 21 Year 2013 on HIV/AIDS control) cannot be implemented at local government level. In the Indonesian decentralized system, medical policies should follow the governmental law and system, in order to be used by local governments (more than 500 districts and cities).

Keywords: medical policies, government policies, HIV/AIDS program, implementation

Continuum of care policy for private midwives to support Indonesia Sehat

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Objectives: Indonesia Sehat is main program in RENSTRA (Strategic Planning) of Indonesia's Health Ministry, which is the pillar reinforcing health services following a continuum of care approach. Indonesia's failure to reach Mother Mortality Rate in MDGs showed the low quality of Mother and Child Health (MCH) services. Health providers comprise public and private sectors. Private midwives are first-line health provider, but there is no policy about authority for their involvement in continuum of care. Therefore, in-depth discussion of problems related to the strengthening of health services, especially continuum of care by private midwives, is required.

Methods: Literature review and observation conducted on 23 respondents who had postpartum home-care (HC), 23 respondents with non-postpartum home-care (NHC) and seven private midwives.

Results: Among the respondents, 84.8% said home-care is important. The compliance with newborn visits KN1-KN3 among HC respondents was 91.3% and among NHC respondents 43.5%. The compliance with postpartum visits KF1-KF3 among HC respondents was 91.3% and among NHC respondents 39.1%. The compliance with Vit-A consumption among HC respondents was 100% and among NHC respondents 82.6%. The interview results showed that 71.2% of midwives did not give HC services because they were afraid about home-care policy.

Conclusions: Low continuum of care will decrease the quality of MCH services. There is a need to strengthen the continuum of care approach by private midwives with legal protection for patients and midwives to ensure the success of Indonesia Sehat.

Keywords: care policy, private midwives

SDGs, opportunities or challenges in HIV–AIDS? (policy analysis on HIV–AIDS in the SDGs through universal health coverage in Indonesia)

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Background: Sustainable Development Goals (SDGs), contain 17 main objectives to build a better world with no one left behind. Based on reports of the Indonesian Minister of Health, the number of Indonesian HIV–AIDS cases in March 2016 reached 191,073 (HIV) and 77,940 (AIDS). Despite programs for the prevention of HIV–AIDS, cases are still rising. The SDGs have no specific points such as the MDGs that clearly state one of its goals in point 6. The universal goal of SDGs is to achieve health and well-being for all people (the 3rd purpose). It is feared that this will have an impact on HIV–AIDS program, turning it to global health, so that the HIV–AIDS program will be abandoned.

Objective: To analyze how the development of policies and programs on HIV–AIDS in the SDGs era can support universal health coverage.

Methods: This descriptive research with qualitative approach. The sources of data were a research literature, interviews, observation.

Results: The results showed that SDGs provide an opportunity to develop policies and programs of HIV–AIDS according the needs and situation of the country, but this must be balanced with the commitment of the stakeholders and community participation through better integration.

Conclusions: Universal health coverage and responses to HIV in general have a lot of goals in common that revolve around fairness, non-discrimination, upholding dignity and social justice.

Keywords: SDGs, HIV–AIDS

Evaluation of a model demonstration program for the control of cervical cancer in rural China

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Objective: To evaluate a demonstration screening program in rural China with a special focus on the coverage and outcome impact to facilitate the development of the comprehensive guidelines for quality assurance for cervical cancer screening in rural China.

Methods: An organized cervical cancer screening program in Zhushan county was evaluated for both ongoing activities and outcome impact from 2009 through 2014. A descriptive analysis of performance indicators and outcome measures related to screening was conducted. The individual screening information was extracted from the screening institution in Zhushan county. Patients' information was collected from two county-level hospitals and three tertiary hospitals.

Results: Of the 73,847 pap smears performed between 2009 and 2014, 93.6% were in the target age group (25–64 years). The screening coverage rates by township ranged between 10% and 30% in each 2-year screening round. About half of eligible women underwent at least one pap smear over the six-year period. The recall rates for the second and third period were 11.3% and 17.2%, respectively. The annual truncated age standardized incidence rate varied among the first four years after the initiation of the organized screening program and dropped in the later two years.

Conclusions: The cervical cancer screening program in Zhushan county was successful in terms of decreasing the cervical cancer burden. Participation in organized screening programs and further expansion of the national-based screening programs should be encouraged. There is an urgent need to develop the comprehensive national guideline for quality assurance for cervical cancer screening utilizing the important findings of this study.

Keywords: evaluation, model demonstration program, cervical cancer

Current public health policies for the poor during Basuki administration in Jakarta capital city of Indonesia

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Objective: This study evaluates the political support for pro-poor public health policies implemented during Basuki Administration from 2013 until the present. It includes resettlement of the poor from river bank slum squatters and community outreach programs.

Methods: Review of official document archives and content analysis of Jakarta-based online news during 2014–2016. Stakeholder analysis approach was used to analyse the underlying pros and cons of interested groups.

Results: The city administration's public health policy movement has gained increasing support from Jakarta people. Basuki leadership in the newly brave policy actions toward urban poor people has created public discussion and debate in social media and online news. The new public health actions have been successful due to strong governor leadership, new public orientation in public service, civil society movement for Jakarta Baru, and support from top rank police department (who traditionally back up informal economy activities of the poor). At the current election time, this new policy community is now challenged.

Conclusions: The strong leadership of governor has been able to stimulate a coalition of parties that support new public health policies for the poor people of Jakarta.

Keywords: public health policies, health policies for the poor

Implementation of an activity-based costing approach for analysing cost of community-based rehabilitation activities for disabled children

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Objective: To estimate costs of all activities in a community-based rehabilitation (CBR) program for disabled children.

Methods: The time motion study was conducted from March 2015 to April 2016. A costing form was used to impute cost of CBR activities. Activity-based costing (ABC) is a method to estimate costs by time motion activity run by the assigned staff. The total annual gross income of assigned staff was divided by 22 days/month, then 6 hours or 8 hours to calculate cost per minute for each activity.

Results: The total cost for CBR activities in the 12-months program was RM 39.4 million with mean RM 218,933 (range: RM 0–977,675). The highest cost of routine CBR activity was “fardhu ain” with mean of RM 72,036 (range: RM 0–62,836) and the lowest mean cost of CBR routine activity was RM 491 (range: RM 0–1,745). The highest mean cost for support team activities was for medical team with mean of RM 1,336 (range: RM 0–3,225) and the lowest mean cost was an assessor panel from Department of Education RM 3 (range: RM 0–280).

Conclusions: Cost of CBR activities can feasibly be determined using the ABC approach. All data obtained can be evaluated for future financial planning by the policy maker to enhance CBR programs in future.

Keywords: activity-based costing, community-based rehabilitation, disabled children

Implementing region's policy as a strategy for public support smoke-free laws in Kulonprogo district, Indonesia

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Objectives: Smoking is a world-wide problem including Indonesia. The number of smokers has continued to increase in the productive age. In Indonesia, there are some regulations regarding smoke-free air law as a strategy for smoking cessation. These regulations have influenced the local government in Kulonprogo to implement the region's policy of smoke-free laws as a specific action tackling the cigarette problem. This study aimed to explain some of the impacts of that region's policy.

Methods: Secondary data analysis was undertaken from Indonesia's basic health data research and health profile documents of Kulonprogo. Qualitative data were collected from focus discussion with experts.

Results: Smoke-free region's policy has had an impact in some parts for better condition. This was mostly evident in public advertisements since this became the priority of the policy. Health department and schools have good obedience. "Smoking room" areas as the strategy for giving a place of smokers are still being set up with the collaboration of all departments. There is also a supervisor chosen from its departments to be the controller of policy implementation.

Conclusions: The region's policy of smoke-free air laws has made good impact in smoking cessation in Kulonprogo. This strategy could be a good role model for other regions in Indonesia for strengthening the smoke-free law. Other beneficial aspects will arise when the strategy is fully and effectively implemented in all targets and supported by large numbers of participants.

Keywords: smoke-free laws, region's policy

Conflicts in Yemen exacerbate lost to follow-up rates of people living with HIV

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Objective: To examine demographic data of people living with HIV (PLHIV) who are lost to follow-up (LTFU) during HIV treatment and care in order to develop rapid and effective interventions to improve access to services in Yemen.

Methods: A retrospective descriptive study of health service data was implemented in all sites providing HIV treatment and care services between 2007 and 2012. The study population was 1,586 PLHIV registered at pre-antiretroviral therapy (pre-ART) clinics and 995 under antiretroviral therapy (ART) clinics with exclusion of transfers and deaths.

Results: Most LTFU cases at pre-ART and ART clinics occurred during the conflict period (2011–2012) and among males aged 25–49 years, especially from governorates where the services existed. The first 3 years showed higher rates of LTFU; 90% and 81% were among Yemenis and 68% and 65% among young males at pre-ART and ART, respectively. Sana'a governorate had the highest rate of LTFU among females at pre-ART, while Aden experienced the highest rates of LTFU among females under ART.

Conclusions: The conflict in Yemen was associated with an increase in the rate of LTFU among Yemeni young males, especially at governorates that experienced political conflicts. In-depth studies on LTFU are needed and improved counseling methods and patient tracking systems are recommended.

Keywords: lost to follow-up of PLHIV, Yemen conflicts, retention in care, antiretroviral therapy.

Determinants of effectiveness of assisted reproductive technology: analysis of outcomes in a private hospital in Saudi Arabia

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Objective: To determine associated factors of successful assisted reproductive technology (ART).

Methods: A retrospective analysis of infertile couples seeking ART services between January 2014 and December 2016 at a private hospital in Saudi Arabia was conducted. Information was extracted from medical records of the in vitro fertilization unit. The outcome measure was the number of successful pregnancies.

Results: For females aged less than 36 years, 37.8% became pregnant compared to 32.3% of those aged 36–40 years and 12.9% among women aged 41–45 years. There was no successful pregnancy for women aged above 45 years. Single year analysis showed the highest pregnancy rate among those aged 30 years. The pregnancy rates for poly cystic ovary, unexplained, endometriosis, and age-related indications were 51.3%, 39.5%, 11.1% and 9.0%, respectively. Across all ages and causes, 43% of women became pregnant when 16–25 oocytes were retrieved compared with 22.9% of women when ≤ 5 oocytes were retrieved. For sperm source, when fresh semen was used, the pregnancy rate was 35.2% compared with 24.3% when a frozen sample was used.

Conclusions: Successful ART outcomes are multifactorial and associated with female age, underlying cause of infertility, ovarian reserve and quality of semen. These data would be valuable in planning subfertility treatment and predicting the success rate of ART treatment cycles in individual couples.

Keywords: assisted reproductive technology, private hospital

Comparison of expectation and perception among patients attending health care among Traditional Mongolian, Traditional Chinese and Western Medicine in Inner Mongolia of China

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Objectives: To evaluate the health system performance by comparison of patients' expectation with their perception of the service they received from Mongolian Medicine (TMM), Traditional Chinese Medicine (TCM) and Western Medicine (WM) hospitals in Inner Mongolia of China.

Methods: An outpatient survey was conducted in 4 departments of eight TMM, TCM and WM hospitals at three levels of two cities of Inner Mongolia, China, from September 2015 to August 2016.

Results: There were 1,348 outpatients' data collected. Patients in TMM hospitals tended to be older, with high proportion of Mongolian people, lower level of education, and pasturing area register residents. Compare among different medicine types, the outpatients' expectation on WM hospitals was higher than that on TCM and TMM hospitals, but gave generally lower perception scores. The negative gap scores between perception and expectation indicated that patients were not satisfied. From result of the general linear model, the outpatients' expectation mainly affected by the type of medicine, the level of hospitals and other six factors. Similar but more factors affected their perception and gap. The outpatients of TMM and WM hospitals were more likely to have higher expectation than that of TCM hospitals. WM hospitals got lowest level of service perception, which was perceived as providing worst service crudely and after adjusted for confounders.

Conclusions: The outpatients' expectation and perception of health service received from WM, TCM and TMM hospitals were different, and are mainly affected by medicine type and hospital level.

Keywords: performance, health care, Traditional Mongolian Medicine, Traditional Chinese Medicine

Evaluation of Middle–East respiratory syndrome preparedness and response in Qatar

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Background: Middle–East respiratory syndrome Coronavirus (MERS–CoV) has become a global concern, especially in the Middle East. National health systems should be prepared to detect and to manage MERS cases.

Objectives: To review the epidemiological profile of MERS–CoV, assess the current measures to control MERS–CoV outbreaks, and to draft recommendations to improve MERS–CoV control measures, preparedness and response in Qatar.

Methods: We collected information from the literature and interviewed key decision makers working for health authorities in Qatar. We also conducted field visits to assess efforts to control MERS–CoV outbreaks in Qatar.

Results: Deficiencies exist in terms of surveillance and technology, preparedness by health care personnel, the community, laboratory staff and communication, particularly regarding information sharing. Active surveillance activities were limited at airports and camel farms. There was a lack of local guidelines for health care professionals. There was a knowledge gap at the community level regarding MERS, especially in camel farms. Governmental sectors have differing perceptions and knowledge on the current MERS–CoV situation in Qatar.

Conclusions: Health care workers need more education to be vigilant against MERS. Cooperation between camel farmers is needed to report suspected cases. A passive surveillance system and active surveillance needs to be improved. Misperceptions about MERS need to be corrected.

Keywords: evaluation, Middle–East respiratory syndrome, Qatar

Work team programs supporting expanding maternal and neonatal survival in reducing maternal mortality rate in Banyumas district, Central Java, Indonesia

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Objectives: Expanding Maternal and Neonatal Survival (EMAS) is a cooperation program of the Indonesian Ministry of Health and USAID, which has been conducted to accelerate the decrease in maternal and neonatal mortality rate in Indonesia. Although EMAS program has successfully decreased the maternal mortality rate overall, in several regions some supporting programs might be needed to assist the effectiveness of EMAS program. Banyumas is one of the districts where the work-team (POKJA) program has been implemented as an additional effort to reduce maternal mortality rate.

Methods: This is a qualitative study using in-depth interview and secondary data from basic health data research of Indonesia for analysis.

Results: The work-team programs have been shown to reduce maternal mortality rate at some regions in Banyumas where the EMAS program had implemented. The work-team programs comprised the emergency work-team, the reference work-team, the IT work-team, and the public empowerment work-team. These four have successfully worked in order to reduce maternal mortality rate to 87 per 100,000 live births in 2016. Although EMAS program had already closed in 2016, the work-team programs continued to operate until now providing support for maternal and neonatal health.

Conclusions: The work-team programs were supporting program of the EMAS and have proved successful in reducing maternal mortality rate in Banyumas. The work-teams program not only previously supported the main program, but also continue to help maintain the health of both mothers and their babies. This implemented program could be a role model for other regions in Indonesia for strengthening the maternal and neonatal health program.

Keywords: work team programs, neonatal survival, maternal mortality

Profile of e-cigarette users among university students and health related issues

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Objectives: To provide information regarding vape (vapour from an electronic cigarette) use among public and private university students.

Methods: This cross-sectional study was conducted among six Malaysian universities between August and December 2016. Questionnaires were distributed to a total of 1,302 students who were either a smoker/vaper or ex-smoker/ex-vaper.

Results: Male students predominated (94.8%) and the mean age of respondents was 21.2±2.6 years. The majority were Malays (75.2%), single (98.0%) and devoid of any health problems (92.1%). Most (74.9%) respondents had ever tried inhaling vape but only 51.9% owned a vape device. Students found to be exposed into vape culture through friends (57.5%) and easily get the source of vape at stores (37.9%). About a third of respondents (30.5%) believed that e-cigarettes were safer than conventional cigarettes. In addition, 34.4% of students perceived that e-cigarettes did not pose any health threat nor symptoms such as dizziness (14.4%), coughing (14.1%) and headaches (12.4%).

Conclusions: About 58% of university students use vape as a smoking cessation tool. Vapers consider e-cigarettes as a tool to improve self-image, reduce stress or boredom, or as a fun activity to satisfy themselves. Further action needs to be taken to provide precise information about vape in order to prevent vaping become a more popular habit.

Keywords: electronic cigarettes, vape, university student, smoker

Predictors of internalized and personal stigma among HIV and non-HIV patients in healthcare settings in the South of China

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Background: HIV/AIDS-related stigma is a major barrier for equal access to healthcare service.

Objectives: To explore associated factors with internalized and personal stigma.

Methods: A cross-sectional study was conducted from January to September 2015 in Kunming, China. The parallel scales included two factors: guilt/blaming and being refused/refusing service, and were used among HIV and non-HIV patients, respectively. Internalized and personal stigma was ranked from 1 “strongly disagree” to 4 “strongly agree”, and the responses were summed to obtain two total scores. Additionally, each latent factor was summed to obtain a total score. Separate multiple linear regression models were used to explore associations between the two types of stigma and socio-economic factors.

Results: Age, ethnic group, marital status and occupation were significantly associated with internalized stigma among HIV patients. Ethnic group, marital status and household income were associated with feeling “refused”, while gender, marital status, occupation and education were associated with feeling “guilty”. Among non-HIV patients, religious affiliation, marital status and education were significantly associated with personal stigma. Marital status and education were associated with “refusing”, while religious affiliation, marital status, education and household income were significantly associated with “blaming”. Those who were single HIV patients had lower internalized stigma, while those who were single non-HIV patients had lower personal stigma towards HIV patients. Those having a higher education were less likely to blame HIV patients and more likely to share the same care service with HIV patients equally.

Conclusions: Marital status and education level were the stronger predictors for reduction of HIV/AIDS stigma toward favorable service equality.

Keywords: predictors of internalized, personal stigma, HIV and non-HIV patients, healthcare settings

Strengthening maternal and perinatal referral systems using information technology

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Objectives: This study aims to improve high risk maternal and perinatal services in Balikpapan Municipality Indonesia, using referral decision support system (Ref-DSS) tool amongst midwives and primary health care providers.

Methods: Decision tree model is used to develop Ref-DSS using routinely maternal and perinatal recorded data. We studied literature, maternal and perinatal referral guideline that has been approved and conducted focus group discussion with 11 midwives to determine the health facility referral of high risk maternal and perinatal cases.

Results: Ref-DSS is processing 2 stage of decision: grouping of maternal and neonatal risk factors based on diagnosis and status of perinatal emergency condition. The system automatically interpret data using rule-based decision tree classification and recommend alternative of referral health facilities based on its competence. The Google Maps service Distance Matrix API is used to show the nearest health facility from user location.

Conclusions: Ref-DSS can assist midwives and primary health care providers to select more precisely referral destinations for high risk maternal and perinatal service. It is also simultaneously distribute maternal and perinatal care in the region.

Keywords: strengthening, maternal, perinatal referral systems

Effect of implementation of a casemix system on severity level and length of stay of patients in selected hospitals in West Sumatera province, Indonesia

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Background: In 2009, the Indonesian government implemented a casemix system called INA-CBG as a provider payment method in the national social health insurance programme. The system has been used in many countries worldwide as a tool to improve the quality and efficiency of health care services.

Objective: To assess the change in the length of stay and severity levels of patients after the implementation of a casemix system in selected hospitals in Western Province of Sumatera.

Methods: This study was conducted at two type B public hospitals in Western Province of Indonesia: National Stroke Centre Hospital (NSCH) and Achmad Mochtar Hospital (AMH). Information was obtained from patients' medical records. 244 in-patients in 2008 and 559 in 2012 from NSCH were included in the study. There were 390 in-patients from AMH for both years of 2008 and 2012. Length of stay was classified as the percent of patients whose length of stay in hospital was considered to be "abnormally high" (i.e. an outlier).

Results: In NSCH the proportions of patients in Severity Level I decreased from 86.9% in 2008 to 67.8% in 2012 while the proportion of patients in Severity Level II increased from 0.4% to 25.9%. During the same period in AMH, there was a slight increase in the proportion of cases in Severity Level I from 93.1% to 97.4% and a slight decrease in the proportion of cases in Severity Level II from 5.9% to 2.3%. The percent of abnormally high length of stay in NSCH decreased from 3.7% to 3.4% but increased from 1.5% to 2.6% in AMH.

Conclusions: The implementation of casemix system has significant impact on the assignment of cases on severity level and the length of stay.

Keywords: casemix system, length of stay of patients, West Sumatera province

Functional health information system (HIS) to support health system: a perspective from health workers

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Background: Health information system (HIS) is the foundation of public health. Strong health information systems are the backbone of strong health systems that can support the action to achieve better health outcomes. HIS is one of the six building blocks essential for health system strengthening. Health management information system is defined as a data collection system specifically designed to support planning, management, and decision-making in health facilities and organizations. In the effort to strengthening the health system, it is necessary to assess the strengths and weaknesses of the HIS for further improvement.

Objective: To assess components and activities of the health management information system in term of inputs, processes and outputs based on the perspective of health workers.

Methods: The data was collected using online questionnaire. A total number of 92 respondents participated in this study. All respondents were staff at district health offices in Indonesia.

Results: The results indicate that human resources responsible for health information at the district level in Indonesia are not yet adequate. Only 12.5% respondents perceived that health offices have sufficient persons responsible for managing the health information system while the rest have lack of such human resources. It was also found that only 19% respondents perceived that the district health office have sufficient capacity to perform complete data collection, analysis and interpretation. Interestingly, 40% of respondents reported that they already used the information for routine decision-making process, health planning, and also advocacy.

Conclusions: Most respondents perceived that HIS is important to facilitate the health system.

Keywords: health information system, health system

Comparing rates of unnecessary admissions among patients reimbursed on casemix system and fee-for-service in a teaching hospital in Indonesia

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Background: Casemix System has been fully implemented in Indonesia as a provider payment method under the Social Insurance Scheme of Indonesia, called Jaminan Kesehatan Nasional, since January 2014. The Indonesian version of casemix system is called INA-CBG (Indonesia Case-Based Group) which is based on UNU-CBG casemix grouper. Currently the coverage of JKN is around 85%. However, doctors providing patients covered by other health insurance programmes are still being reimbursed using fee-for-Service.

Objective: To compare the rates of unnecessary admissions among patients reimbursed using casemix system and fee-for-service.

Methods: This study was conducted in the main teaching and referral hospital in Jakarta with 1001 beds. Unnecessary admission was defined as a case admitted for one day and discharged well and not referred out to other facilities. The sampling frame was the list of patients that were reimbursed using fee-for-services and casemix with one day of length of stay in emergency unit or in wards and discharged well, but excluding those who died or were referred out during 2011. Data were extracted from patients' medical records

Results: The rates of unnecessary admission among patients on fee-for-service was 71.9% (257/357) compared to only 38.6% (157/407) for patients reimbursed using the casemix system. Mean tariff of casemix cases was IDR 2,967,423 (sd.=1,262,052), which was lower than that of fee-for-service (IDR 5,724,753; sd.=1,040,245). However, the difference in mean tariff was not statistically significant.

Conclusions: Casemix patients have lower rate of unnecessary admissions than fee-for-service. It is likely that casemix system can enhance the efficiency of services provided by the teaching hospital.

Keywords: unnecessary admissions rate, patient reimbursement, service fee

Integrating lay health resources into the health system: challenges to the new national health insurance scheme

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Objective: This study explored the utilization of lay health resources and medical pluralism for primary care by people in the urban poor neighborhoods in Yogyakarta in the context of two health insurance schemes.

Methods: This study used mixed methods with concurrent strategy, combining qualitative focused ethnography and quantitative (panel survey) information. The sample for the quantitative part was 220 households and that for the qualitative study was 25 households.

Results: All participants were freely entitled to the old social security and the new national health insurance schemes. Although health centers and private clinics were consulted during the two periods, OTC was still used by 40–65% of the participants in the two points of time. The use of national health insurance was less than 20% while the use of lay health resources along with the use of biomedicines was prevalent. Due to the limited health facilities in the poor neighborhood, the pluralistic health resources, and the lack of trust in the government scheme, the poor were left at the hand of the lay health resources.

Conclusions: There are gaps remaining in terms of the knowledge of social context, patients' needs, priorities and expectations, and the implementation of public health policy. There is a need to find an appropriate channel and to tailor the policy of the poor into the mainstream health care system.

Keywords: health resources, health system, national health insurance scheme

Evaluation on disability weight of diabetes mellitus in China

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Objective: To evaluate the disability weights of diabetes in China under NSFC (71273083) funding.

Methods: Based on the criteria of the Six-class Disability Classification version of the Global Burden of Disease (GBD), 16 clinical experts in diabetes research field were invited to evaluate the disability weight of diabetes with five complications. We investigated the health status of patients by self-regulating consultation questionnaire according to EQ-5D+C instrument. The scores of EQ VAS were given by the patients. Then we calculated the disability weights by a special formula. Finally, investigators assessed the disability weights from the patients.

Results: The median disability weight from experts for uncomplicated diabetes mellitus was 0.090, diabetes with neuropathy 0.400, diabetic foot 0.600, amputation was (no cases), and moderate vision impairment 0.800. The median disability weight from VAS for uncomplicated diabetes mellitus was 0.250, neuropathy 0.367, diabetic foot 0.500, and moderate vision impairment 0.421. The median disability weight from investigators for uncomplicated diabetes mellitus was 0.096, diabetes with neuropathy 0.200, diabetic foot 0.400, and moderate vision impairment 0.358.

Conclusions: Differences were found between the results of this study and GBD. We suggest that locally-estimated disability weight should be used in local disease burden measurement.

Keywords: evaluation, disability weight, diabetes mellitus

Cost of diagnostics laboratory services using activity-based costing at Universiti Kebangsaan Malaysia Medical Centre

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Background: Since the Universiti Kebangsaan Malaysia Medical Centre (UKMCC) began its operations, the actual cost of each service in this particular department has never been studied. Hence, it is important to determine the actual cost in preparation for future autonomous university governance, particularly budgeting.

Objective: To determine the costs of diagnostic laboratory services in UKMCC using the Activity-Based Costing (ABC) method.

Methods: In 2011, a total of 2.7 million diagnostic laboratory services were carried out in the Department of Diagnostic Laboratory Services of UKMMC. A cross-sectional study was conducted from January to December 2013 in all units and ABC costing was used to calculate the cost of diagnostic laboratory services provided. Using a costing form, information from 239 services was collected, which included seven cost components, namely human resources, consumables, equipment, reagents, administration, maintenance and utilities.

Results: Units with the highest mean costs for services were in the Cytogenetic Unit (RM 846; sd.=246), followed by the Molecular Genetic Unit (RM 473; sd.=76) and the Specialized Hemostasis Unit (RM 302; sd.=196). Components from individual Units with high percentages of costs were human resources (89.6%–Molecular Genetic Unit), reagents (68.0%–Specialized Hemostasis Unit), consumables (34.8%–Tissue Culture Unit) and equipment (25.3%–Cytogenetic Unit).

Conclusions: An accurate and reliable cost of diagnostic laboratory services was determined. Upper management from each Unit should take appropriate steps to reduce unnecessary wastage of resources in the various components identified from this study.

Keywords: activity-based costing, diagnostic laboratory, cost components

Health equity monitoring through index of multiple deprivation: a pilot study in Phitsanulok, Thailand

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Background: Inequity in health is linked to multiple social phenomenon. The objective of this work is to develop a health inequity monitoring index in Phitsanulok province of Thailand where demographical and geographical differences are known to exist.

Methods: The Index of Multiple Deprivation (IMD) was derived in the district and sub-district levels using the 2010 census data, Basic Minimum Needs, and crime and road accident data from the National Statistical Office, Community Development Department, and the Royal Thai Police. The index contained six domains, namely Income, Employment, Education, Health, Social and Environment, and Crime, which was displayed as the percentage of underprivileged population in the interested area. Factor analysis was adopted to define the weighted score of indicators in the domain and normal distribution adjusted by using the shrinkage estimation method.

Results: The highest IMD score was found in the municipality area (0.1422) among nine districts, and the lowest score was found in Chatrakan district (0.1199). Higher IMD scores correlated with areas containing higher deprived populations.

Conclusions: The municipality area of Phitsanulok province contains a high density of underprivileged persons. Nevertheless, considering each domain separately, a relatively high unemployment rate resulted in a high IMD score in the city.

Keywords: health equity, multiple deprivation index

The development of cost and nursing service weights for Malaysia Diagnosis Related Groups in Universiti Kebangsaan Malaysia Medical Centre

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Objective: To develop nursing costs and service weights for Malaysia Diagnosis Related Groups (MY-DRG) Universiti Kebangsaan Malaysia Medical Centre (UKMMC) using casemix system.

Methods: A cross sectional study was conducted in UKMMC. All discharges from 2009 to 2012 were obtained from the casemix database. Hospital costing methods used a combination of top down costing and activity-based costing. The hospital data were obtained from five departments, namely Finance, Human Resources, Nursing Management, Maintenance and Health Information. Total costs of nursing services for each group of MY-DRG was calculated and the costing data was trimmed using L3H3.

Results: A total of 80,542 discharges were classified into 704 groups. The highest discipline was from medical (58%), surgical (22%), obstetric & gynecology (19%) and paediatrics (1%). Most (56%) of the cases were from severity level one (mild), while 30% were from severity level two (moderate) and 14% from severity level three (severe). The result of the study shows that the highest nursing service weight was G-1-11-III (ventricular shunt with severity level three, RM 9,694; 7.8880). Multiple linear regression analysis showed that cost of nursing was significantly related to length of stay ($\beta=0.987$, $p<0.05$), adult age ($\beta=0.064$, $p<0.05$), severity level three ($\beta=0.058$, $p<0.05$), sex ($\beta=-0.49$, $p<0.05$), severity level one ($\beta=-0.38$), $p<0.05$) and elderly age ($\beta=0.005$, $p<0.05$). There was variation of nursing service weights across MY-DRG.

Conclusions: Nursing care is a significant component for inpatients. The outcome of this study can be used for fair reimbursement for nursing services in future social health insurance programme in the country.

Keywords: cost and nursing service, development

Unutilized capitation: how should Puskesmas manage that fund?

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Background: During the implementation of National Health Insurance (JKN), there was no clear regulation about management of unutilized capitation. District-level financial management has not been integrated with unutilized capitation and has become a challenge for public primary care (Puskesmas) to accommodate the requirements of service.

Objective: To analyze the management of unutilized capitation of JKN at Puskesmas and identify the determinant factors.

Methods: This case study of cross sectional design used an implementation research approach. A sample of 492 subjects in 13 regions were selected using multistage random sampling. Data were collected through FGDs, series of interviews, database of Puskesmas and BPJS Kesehatan (Health Social Security). Qualitative data were analysed using thematic approach and quantitative data were analysed descriptively and analytically using tests for comparison and correlation.

Results: Allocation of capitation, distribution of membership, geographical parameters, service time, ratio of doctors and participants, contact rate and total revenue have a correlation with unutilized capitation and performance indicators. Planning, budgeting, and disbursement of unutilized capitation follow the APBD mechanism, using either the early budget document or the mid-year budget document; so unutilized capitation cannot be used directly by the Puskesmas without submission, reconciliation, and approval from the district government. Nevertheless, a majority of Puskesmas do not manage unutilized capitation because there are no clear guidelines.

Conclusions: Intervention should consider the variables that have significant correlation value, both with unutilized capitation and with performance indicators. It is necessary not only to evaluate the fund channeling but also to strengthen the regulations, so that the role of BPJS Kesehatan, Health Office, and other stakeholders in implementing the strategic purchasing concept can be optimized.

Keywords: unutilized fund, capitation, JKN

Are Malaysian people willing to pay more for their health care?

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Background: Health care services are not often accessible and available for all people in a country for many reasons such as geographical barriers and affordability. The aim of this study was to determine the willingness to pay (WTP) for healthcare services among the Malaysian population and determine influencing factors for WTP.

Methods: Structured interviews were conducted among 774 households in four representative states of Peninsular Malaysia. Validated questionnaires with open ended questions followed by bidding games were applied to elicit the maximum amount of money people were willing to pay for health care. Data are presented descriptively and associated factors of WTP are assessed using multivariate linear regression models to adjust for potential confounding factors.

Results: More than half of respondents were willing to pay more than MYR 1.00 for the outpatient registration fee at government clinics and the mean (standard deviation) amount was MYR 2.76 (2.54). Half of the respondents were willing to pay extra for other government health care services. The majority of respondents were willing to pay more than they usually paid for all treatment charges at private clinics. Factors that were significantly associated with willingness to pay for public and private healthcare services were education, income, choice of operation and inpatient healthcare services, and having health insurance.

Conclusions: Malaysian people are willing to pay more for health care services.

Keywords: Malaysian people, willingness to pay, health care

Accessibility to recombinant tissue plasminogen activator (rtPA) for ischemic stroke in Thailand: geographic inequity and impact on mortality

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Objective: To investigate trend of using rtPA in ischemic stroke patients under the universal health coverage scheme between 2011 and 2014 and explore the effect of rtPA use on clinical outcome among patients who received and did not receive rtPA.

Methods: This analysis used 2 datasets comprising the inpatient database of the universal coverage (UC) from National Health Security Office and the Civil Registration database from the Ministry of Interior. Patients with ischemic stroke were retrieved based on the ICD10 code of I63. The 30-day case fatality was identified by using the date of death from the Civil Registration database. Logistic regression was performed to compare 30-day case fatality between patients who received and did not receive rtPA adjusted by sex age, Charlson comorbidity index and fiscal year.

Results: The proportion of patients receiving thrombolytic treatment increased from 1.6% in 2011 to 3.8% in 2013. The percentage receiving rtPA among males and females did not differ. The use group were of slightly younger age while Charlson comorbidity index did not differ. The geographic inequity of rtPA treatment gradually decreased over time. Patients who were treated with rtPA had an increasing 30-day case fatality rate of 11% (OR 1.11, 95% CI 1.03–1.21) compared to those without rtPA after adjustment for various variables.

Conclusions: The rate of using rtPA increased during the study period but remained low. More detailed data collection is needed in the future to evaluate the benefit of rtPA use in Thailand.

Keywords: ischemic stroke, thrombolytic therapy, recombinant tissue plasminogen activator

Abstract of Poster Presentation

*The 11th Postgraduate Forum on Health Systems and Policy 2017:
Integrated Health Systems and Policy for Sustainable Development Goals*

Equity in antenatal and delivery care in Yangon Region, Myanmar

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Background: To achieve universal health coverage, equity of access and utilization of healthcare across socio-economic groups is important. Although the equity of maternal healthcare services is improving worldwide, there is limited evidence in Myanmar.

Objective: To identify equity in utilization of antenatal and delivery care in Yangon Region, Myanmar.

Methods: A community-based cross-sectional survey was conducted from October to November 2016. A multistage sampling technique was used and 762 married women aged 18–49 years who had previously given birth in past 12 months were included. The equity in healthcare utilization focusing on the number and early initiation of antenatal care (ANC), delivery by skilled birth attendants (SBA) and cesarean section (CS) was analyzed against wealth quintiles. The concentration curves and concentration index was used to measure equity.

Results: The concentration curve for utilization of antenatal care by wealth quintiles lied close to the diagonal line and concentration index approached zero showing an evidence of equity. The inequity of early initiation of ANC among women <20 years was found with a concentration index of 0.07. The concentration curve of delivery by SBA and CS was disproportionately to the rich people which the concentration index was 0.05 and 0.14, respectively. Delivery by CS among women aged <20 years and women with higher education than middle school was substantially different between the richest and the poorest.

Conclusion: The equity in utilization of ANC was confirmed; however, the inequity to utilize early initiation of ANC was shown in women aged <20 years. Inequity was consistently shown for delivery by CS and SBA. Women aged <20 years could be a target group to reduce inequity in early initiation of ANC.

Keywords: equity, utilize to antenatal and delivery care, Yangon, Myanmar

The implementation of Indonesian Case-Based Groups (INA CBG's) of cesarean section patients in poor family health payment assurance in Undata hospital of Central Sulawesi, Indonesia

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Background: Indonesian case-based groups is a health-care payment system for cesarean section patients with an indication of pregnancy or labor complication or case-mix complication based on disease group. The payment includes a DRG type fee-for-service package and a prospective payment system in which the government provides those in poverty with health insurance. The study aimed at finding the patients action, unit cost paid by the government, the merits and advantages, and the implication of the policy on the implementation of Indonesian case-based groups.

Methods: An epidemiological non-experimental design was used to examine the correlation of the risk factor and the effect of disease in pregnancy among 62 respondents in Undata Hospital of Central Sulawesi Province Indonesia.

Results: There were two indications for emergency type and effectiveness of cesarean section, namely maternal indication, and infant indication. Maternal indications comprised the larger percentage (66.7%), comprising pre-eclampsia (43.5%) and placenta previa (27.7%), while infant indication (33.3%) were mostly high-risk infants (66.7%).

Conclusions: The implementation of the government policy on Indonesian case-based groups should avoid over-utilization, unplanned and missed utilization so that health costs for those in poverty would be better controlled and the quality of the health care for health of mother and child would be improved in the future.

Keywords: cesarean section, Indonesia case based groups, health system, payment assurance

The capitation and its adequacy perception at primary health care under national health insurance: case study at Kutasari public health center, Purbalingga district

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Objectives: Payment system under National Health Insurance for primary health care is based on capitation. Capitation method is the amount of payments based on the number beneficiaries without considering the type and volume of services. Capitation adequacy is influenced by utilization and unit cost of services. Kutasari Public Health Center has the largest number beneficiaries and highest utilization. The purpose of this study was to analyze the adequacy of capitation at Kutasari Public Health Center under National Health Insurance.

Methods: This was a quantitative and qualitative study. For the quantitative part, secondary data were collected for analyzing the adequacy of capitation. For the qualitative part, in-depth interviews were conducted to identify the perceptions of health and non-health staff at Kutasari Public Health Center.

Results: Based on calculation, the amount of capitation was IDR 3,100. Moreover, health and non-health staff of Kutasari PHC had a positive perception toward the amount of capitation.

Conclusions: It could be concluded that the amount of capitation was adequate for both overhead costs and health-care professionals' incentive. It is suggested to optimize the amount of capitation by increasing preventive and promotive actions.

Keywords: capitation, adequacy perception, primary health care

Are local government policies effective in making general practitioners available in remote public health centers of Eastern Indonesia?

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Objectives: To review current local government policies in making general practitioners available in remote health centers in Halmahera Selatan District in Eastern Indonesia.

Methods: In-depth interviews of local government stakeholders

Results: The Halmahera Selatan Local Government faces continuous barriers in making physicians and other health workers available to work in remote health centers. Regarding the provision of general practitioners in remote public health centers, local government has introduced the local government-based contract, special local incentives, regular public servant mechanism, and medical school fellowship for local people. Contrary to our expectation, ongoing lack of effective deployment strategies have been aggravated further by the restriction imposed by the National Health Insurance Body for remote public health centers.

Conclusions: Disrupted availability of general practitioners in remote health centers has been constrained by the lack of local government management capacity, as well as the rapid changes in national health workforce and health insurance policies.

Keywords: local government policies, remote public health centers, public health centers

Review of economic evaluation studies to support evidence-based policies in Malaysia

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Background: Economic evaluation is an important tool in forming health policies to decide the affordability and availability of a government to procure new health technologies or sustain existing health programs. There are six types of economic evaluations, namely cost analysis, cost-effectiveness analysis (CEA), cost-utility analysis (CUA), cost-benefit analysis (CBA), cost-minimization analysis (CMA) and cost-consequence analysis (CCA).

Objective: To provide an overview for local economic evaluations done in Malaysia from December 2010 to December 2016.

Methods: A review of published articles in Malaysia for various economic analyses was conducted using Google Scholar and PubMed and were limited to articles written in English. All relevant publications during the period of December 2010 – December 2016 were identified. Searches were conducted using various combinations of the following search terms ‘cost utility analysis’ OR ‘cost effectiveness analysis’ OR ‘cost benefit analysis’ OR ‘cost minimization analysis’ OR ‘cost consequence analysis’ AND ‘Malaysia’.

Results: A total of 138 articles were identified. Of these, 26 articles were identified as related to economic evaluations conducted in Malaysia. From these 26 articles, four were on the use of vaccines, five were related to the cost of dengue and two were related to the cost of heroin dependence treatment. Eleven articles concerned cost analysis while seven concerned cost-effectiveness analysis.

Conclusions: Local economic evaluation articles are important in providing feedback for policy makers in deciding the appropriate value based programs to be implemented nationally.

Keywords: economic evaluation, support evidence-based policy, Malaysia

Health services based on governance in the public health center: case study of public services in the Jayapura Regency, Papua province, Indonesia

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Background: Poor governance in Papua has some influence to public service received by the poor people. Health centers are not maximized in applying the principles of good governance.

Objective: To measure and describe to what extent the public services of health sector apply good governance principles in three health centers in Jayapura regency.

Methods: The study adopted a mixed methods research approach, based on the philosophy of pragmatism. This type of research is sequentially explanatory. Data were collected from March to August 2016. The first phase of the survey used a sample 54–55 obtained by time–clustered random sampling. The second phase consisted of key informant interviews, including key stakeholders; and focus–group discussion with the key figures.

Results: The gradation index indicated low community participation in the health centers of Sentani (67.95), Dosay (68.90) and Depapre (70.12). Gradation of the transparency index revealed low levels in the health centers of Depapre (74.55), Sentani (74.70) and Dosay (75.00), a classified either (62.51 to 81.25). There is no blueprint for the application of the principles of good governance in health centers. The multiple–stakeholder forum of the regency and the district is a forum for community participation and needs to further involve the representatives of indigenous peoples. Health centers need to implement e–governance. Reward and punishment mechanism has not been fully implemented. No committee/ad hoc mandate (exit strategy) was found.

Conclusions: Application of the principles of good governance in the health centers is not maximized. Indigenous perspective is necessary for the implementation of e–governance that is participatory and molded to provide a succession mandate (exit strategy).

Keywords: public health center services, e–governance, multi–stakeholder forum, approach indigenous perspective, exit strategy

Government Collaborative Partnership and Community Based Organization to Reach Out Transgender Community in HIV–AIDS Prevention Program (Case Study: Kebaya Community–Based Organization Yogyakarta)

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Background: Transgender is one of the vulnerable key population of HIV–AIDS infection and inaccessible. Therefore, the HIV–AIDS prevention program needs to involve all government stakeholders include civil society and community–based organization (CBO) with regards to HIV–AIDS.

Objective: To explore the work of Kebaya CBO and its contribution to the Provincial HIV–AIDS programs.

Methods: The study used a qualitative method with in–depth interview data collection techniques from 12 informants.

Results: Kebaya CBO has conducted outreach work to transgender community in the province. Despite the importance and good work of Kebaya in reach out of transgender community, Kebaya CBO did not receive the regular supporting funds but received occasionally from various sources e.g Hivos, Global Fund (as part of implementing unit), and mostly come from personal out–of–pocket payment. The relationship between Kebaya CBO and AIDS Commission was limited to coordinate and report the use of condom and lubricants supplied. City Health Office facilitated the access to health insurance in coordination with Social Welfare Office. Social Welfare Office coordinated with Labor and Transmigration Office for transgender data collection and developing economic empowerment while the Health Office facilitated the recommendation letter to access health services.

Conclusions: CBO should be seen and included in the whole of health program and system in the province.

Keywords: HIV–AIDS prevention program, transgender

Evaluation of interior design quality of inpatient units in public hospitals in Klang valley, Malaysia

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Background: Design has a significant impact on building operation. Apart from accommodating specific needs of various end users, hospital building is one of the most complex building types.

Objective: To assess the quality of interior design focusing on inpatient units of public hospitals located in Klang Valley of Malaysia.

Methods: This study employs both qualitative and quantitative methods. Five out of 13 public hospitals located in Klang Valley were randomly selected for this study. The researcher visited the hospitals to conduct participants' observations to assess the interior environment. Staff, patients and visitors were selected for in-depth interviews. For the quantitative method, a validated specific Post-Occupancy Evaluation Questionnaire was used in face-to-face interviews with selected respondents in the hospitals.

Results: In the preliminary visits to the hospitals, most of these facilities suffered from faulty design. This is most probably due to poor planning of the hospital at the designing and construction stage. There was gross lack of privacy in the wards that might affect patients comfort. Space planning and flow of human traffic need to be further improved. Lighting in most hospitals was poor and the use of natural light was limited.

Conclusions: This study confirmed that quality of interior design of the inpatients units of the hospitals needs major improvement. There is need for a comprehensive planning in designing and building hospitals in Malaysia.

Keywords: quality, interior design, hospitals, in-patient

Characteristics of patients requiring intensive care in a teaching hospital in Malaysia

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Objective: Intensive care constitutes a major service component in hospital. This study aimed to compare the characteristics of patients discharged from intensive care units (ICUs) and non-ICUs at Hospital Canselor Tuanku Muhriz (HCTM).

Methods: A cross sectional study was conducted among patients discharged from HCTM from 2013 to 2015 using the casemix database. Types of case based groups, severity, and length of stay were compared between patients discharged from ICUs and non-ICUs.

Results: At HCTM, nine units provide intensive services. A total of 118,087 cases were discharged in three years; 4.4% being from ICUs. ICU cases included only those directly discharged from ICUs, not from other units regardless of their usage of ICU. 63.4% of paediatric cases and 23.1% of cardiac cases were discharged directly from ICUs. A higher percentage of males were admitted to (57%) and discharged from (64.8%) hospital. The percent of patients with severity level III was higher among cases discharged from an ICU compared to a non-ICU (30.8% vs 14.3%). The average length of stay for ICU cases was 13.1 days, which was 6.23 days higher than among non-ICU cases. Less than 5% of medical and surgical cases were discharged from ICUs in contrast to 63.4% of paediatric cases.

Conclusions: Non-inclusion of discharged cases from other units regardless of their usage of ICU services in ICU cases capture partial usage of ICU services at the HCTM. Regardless, it is noticeable that two thirds of paediatric cases required intensive services. The longer hospital stay of ICU signifies that the patient having intensive care requires not just special equipment but also other resources.

Keywords: intensive care, teaching hospital

ICare – Mommies Program: the pregnant mother caring to improve mother's quality of life in independent and healthy through mentoring and empowerment

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Objectives: To provide suitable caring for pregnant mothers' needs through the Student Creativity Week of Community Service program, and to develop a module for the pregnant mother's reading activity.

Methods: Data were collected from a door-to-door survey of pregnant mothers and by a focused checkup for them. Pregnant mothers who had entered ≥ 36 weeks of pregnancy age were provided with a pregnancy exercise. This program was aimed not only at pregnant mothers but also at the husband. The husband received education to make them more well prepared in case of any possible incident.

Results: The activity was undertaken over 4 weeks. In the beginning, data were collected from 20 pregnant mothers, followed by a physical checkup for vital signs, head-to-toe, and hemoglobin level. The husbands participated in the form of the "alert husband" role. They received education about the important of pregnancy checkup and having labor in a medical facility so that they could accompany their wife until the birth process. Pregnant mothers were given much information about pregnancy, labor, and how to treat the baby.

Conclusions: This activity shows the midwife's role in contributing towards pregnant mothers' nurture and providing suitable caring for their needs to improve the independent and healthy pregnant mothers' quality of life.

Keywords: ICare – Mommies Program, mother care, mother's life quality

Effect of occupation on the exercise of housewife for fitness and prevention of non-communicable diseases in Samarinda, Indonesia

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Background: Non-communicable diseases (NCDs) such as cancer, diabetes, stroke are the common diseases that are currently discussed. NCDs are one of the ten highest ranking diseases in Samarinda, East Kalimantan, Indonesia. The age of patients with NCDs are becoming younger than in the past; this means more patients have been exposed earlier to NCDs risk factors. Prevention of NCDs can be done through several efforts such as healthy lifestyles and routine exercise every week. However, there are various reasons why many people do not exercise regularly, such as being busy at work, not having the time etc.

Objective: To determine the factors of occupation, education and age on the level of exercise undertaken by weekly exercise by housewives for fitness and prevention of NCDs.

Methods: This was an analytical observational study. The respondents were 203 housewives selected by purposive sampling. The instrument used was a questionnaire. The data were processed using multinomial logistic regression.

Results: The occupation have strong correlation with the level of weekly exercise undertaken by housewives for fitness and prevention of NCDs. There was no association between educational attainment and the level of regular weekly exercise undertaken by housewives for fitness and prevention of NCDs ($p=0.159$ and $p=0.558$).

Conclusions: The types of occupation such as civil servants, self-employment or as housewife has an effect on regular weekly exercise performed by housewives for fitness and prevention of NCDs.

Keywords: occupation, physical activity, non-communicable diseases

Why should physicians need competency management: learning from physicians' experiences working in disadvantages areas in Indonesia

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Objective: To identify doctor's perceptions regarding the needs of competency management among doctors working in underdeveloped areas in Indonesia.

Methods: This was a mixed method study with sequential exploratory strategy. A qualitative study was conducted among general practitioners in West Nusa Tenggara province, while a quantitative study was conducted among general practitioners in eight provinces of Indonesia (West Sumatera, Banten, East Java, West Kalimantan, South East Sulawesi, West Nusa Tenggara, West Papua and Papua).

Results: The geographical challenges, lack of health facilities and lack of access in underdeveloped areas impacted health services. On community's perspective, competency management was required due to a) people were under informed, b) people relied on community public services, c) doctor dealt with crisis state of emergency, and d) belief of traditional values in the community. From the doctor's perspective, competency management was required because a) a doctor should perform multitasking role, b) doctors always learn by experience, and c) doctor should be a creative individual. The top five competency management areas most needed while on duty in underdeveloped areas were leadership, problem solving, team building, health care management, and decision making.

Conclusions: Competency management was gained through learning by doing and then required while on duty in underdeveloped areas. Challenges to work in underdeveloped areas and people's expectations on the quality of care require doctors who have competency management skills.

Keywords: management, competency, doctor, underdeveloped areas

The human resources crisis in primary health care in Eastern Indonesia: area data analysis of the Indonesia Family Life Survey East 2012

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Background: Beginning in the 1980s, the Indonesian Ministry of Health has used several approaches to determine staffing needs. Using projections based on public health status, demographic changes and health programs that exist, the health service delivery obtained is not optimal due to some health centers shortage of health workers. This study describes the distribution gap of the health workforce in eastern Indonesia.

Methods: This is a quantitative research study using secondary data from the Indonesia Family Life Survey East 2012. The data of this survey was chosen because the eastern Indonesia is an area of hard to reach which the distribution of health workers is important to be planned.

Results: There is a big gap in equity of the health workforce in primary health care in eastern Indonesia. This is evident from the imbalance of doctors and midwives by primary care centers located in high and low poverty areas.

Conclusions: High vacancy rates of health workers in primary health care suggest that health promotion and prevention may be limited. The Ministry of Health should focus on helping local governments improve the health budget for areas that are not able to pay and recruit health workers for themselves.

Keywords: health workforce, primary health care.

Improving program management competencies through a five-week community placement for undergraduate public health students: experience from Universitas Diponegoro, Indonesia

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Objective: To assess the fitness of a required community placement to public health professional identity for undergraduate students.

Methods: Content analysis of student assignment reports and an in-depth interview of 19 students and teachers who had completed a 5-week field work program, from the undergraduate public health students of Universitas Diponegoro, Semarang.

Results: Community placement gave students more exposure to community-driven activities than implementation of programs directly managed by the health center. Students learned a lot on the activities of community participation rather than the specific roles of health workers in ensuring program effectiveness. Students lacked the opportunity to review and to observe public health management program at the health centers and district health office levels. Rather than having experience working in health centers and district health office, where they will work in the future, students were more engaged with independent health programs run by the community.

Conclusions: The five-week community placement provided good chance for students to learn community health activities. Students, however, had a lack of opportunity to learn the work processes and real implementation from the public health officer perspective. Because of various problems in program implementation, health workers feel uncomfortable telling students of the things not generally expected. To improve the sense of program management in the field, the university needs to have a stronger collaboration with health centers or district health office.

Keywords: community placement, implementation, public health

Identification of the current preventive and curative services by general practitioners in Malaysia

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Background: Casemix for primary care services in Malaysia is still under established. As such, prior to the introduction of a national health financing system in the country, it is imperative that this structure is properly developed.

Objective: To identify the current preventive and curative services by Malaysian general practitioners and estimate the costs of the various services.

Methods: This cross-sectional survey was conducted using structured questionnaires and face-to-face interviews with 20 randomly selected general practitioner clinics in various urban and rural locations in Malaysia. Preventive services assessed included immunisations, health education, and lifestyle changes. Curative services encompassed medical treatment of various diseases with emphasis on chronic diseases such as diabetes, hypertension, asthma, infectious diseases such as dengue fever, and various investigative and minor surgical procedures. Defining the costs of treatment of the various illnesses will enable the development of specific tariffs of the various casemix groups for provider payment. Variations in treatment costs are considered for rural and urban locations.

Results: The findings indicate a wide variation in the types of services provided with costs varying between urban and rural locations.

Conclusions: Tariffs for the services provided will need to consider several factors, one of which is the urban /rural distribution.

Keywords: current preventive, curative services, general practitioners

Evaluation of primary health centers' integrated health information system in Cirebon Municipal Health Office, Indonesia

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Background: One of the efforts made in the strategic planning of health development is to increase health information. Development of integration systems in Primary Health Centers of the Cirebon Municipal Health Office (CMHO) has been completed; however, problems remain such as untimely data reporting, limited development of funds, double posting of health information personnel and low utilization of data and information generated.

Objective: To evaluate the implementation of the integrated health information system in primary health centers of CMHO, from the aspect of input, process and output.

Methods: This was a descriptive–evaluative case study design with qualitative component. The informants were the officers in the primary health centers of CMHO, purposively selected. The study used primary and secondary data.

Results: In terms of inputs, all officers had double job posts. Not all health centers performed an analysis of process and data quality checking. Feedback was done by holding a monthly mini workshop and or evaluation every three months. In terms output, use and dissemination of information were limited to internal purposes of the health office and it had not been widely disseminated to the public.

Conclusions: Implementation of Primary Health Centers' Integrated Health Information System has been completed but a lot of problems remain, both in terms of input, process and output.

Keywords: primary health centers, health information system

Analysis of primary health care conditions and development in Indonesia

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Background: There are many health problems that must be resolved in Indonesia. Increased access to and quality of health services is needed, both at the primary and referral levels. One way to improve public access to health care facilities is through the construction of health centers and the improvement of facilities, infrastructure and tools.

Objectives: To assess and analyze primary health care conditions and development in Indonesia.

Methods: This research is a descriptive study using literature searches and secondary data.

Results: Since the enactment of the National Health Insurance program in 2014, health centers have spearheaded public health services at the primary level. Indonesia has at least 9,731 health centers of which 9,488 are equipped with facilities and proper medical equipment and has a medical staff that is ready to serve the community without having to give referrals to a larger hospital.

Conclusions: From a variety of efforts to tackle health problems in Indonesia, one of the keys to success is through health services at the primary level. The basic program of health service delivery across sectors is important for the development of health centers.

Keywords: primary health care, development

The life experience of midwifery students: how community services are provided in rural areas

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Background: In general, midwifery students pursue their studies with the background of urban culture; as a consequence, these students lack understanding of the problems of obstetric services in rural areas, which have different social and cultural backgrounds.

Objective: To determine the diversity of obstetric services within different social and cultural backgrounds in Indonesia.

Methods: Community service is one activity in which midwifery students have a contact with people from many places with different socio-cultural backgrounds. The location chosen for this community service was Lubuk Pabrik province in the Bangka Belitung Islands of Indonesia. During the community services, students were expected to adapt to the culture and the people's routines in Lubuk Pabrik and to communicate with the local people.

Results: From their interactions with the midwives in these rural areas, the students uncovered differences in the levels of people's awareness of their health and the obstetric services. Through the socio-cultural approach, students gave a briefing to the shaman on the importance of the midwife's presence in the delivery process to prevent possible problems from occurring. Shamans should have collaborations with midwives to keep pregnant women healthy.

Conclusions: Through community services, the level of understanding on the need for labor safety and healthy pregnancy can be increased in Lubuk Pabrik.

Keywords: midwifery services, community, socio-cultural background

Disparity in the assignment of Malaysia Diagnosis Related Group (MY-DRG[®]) codes due to clinical coding errors and the impact on reimbursement of a teaching hospital in Malaysia

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Background: As the health industry is moving towards payments based on outcomes, accuracy in clinical coding is essential. Error in the assignment of clinical coding could lead to far-reaching consequences, especially when the entity is using the Casemix System in their reimbursement programme.

Objective: To evaluate disparity in the assignment of MY-DRG[®] codes due to clinical coding errors and its impact on hospital reimbursement.

Methods: This is a cross-sectional study design where a clinical coding audit was conducted by an independent reviewer in 464 randomly selected patient medical records. New codes by reviewer were examined and verified by a casemix expert before being accepted and re-grouped using the MY-DRG[®] grouper software.

Results: Post audit data showed that 89.4% (415/464) of the patient medical records contained at least one error. Of these, 60.5% (251/415) led to changes in the assignment of the MY-DRG[®] code. The level of agreement between the original MY-DRG[®] code and the new MY-DRG[®] code was the highest at the casemix group level with a kappa coefficient of 0.826 and was the lowest in the assignment of severity level with a kappa coefficient of 0.284. Variance income pre and post audit was reported as RM 666,461 (p=0.009).

Conclusions: An extensive potential loss of income was due to the wrong assignment of MY-DRG[®]. This potential loss could be decreased by embarking programmes to improve coding quality to ensure MY-DRG[®] codes are assigned accurately.

Keywords: disparity, Malaysia Diagnosis Related Group, coding errors

The importance of patient safety procedures standardization in public health center

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Background: “Patient–Centered Care” is a principle that must be implemented by health facilities to improve the quality of health care, and patient safety is one of main indicators. Until now, there are no definite details of standard for implementation of patient safety in public health center as in hospitals.

Objective: To observe the implementation of patient safety in public health center X at Kediri, East Java, Indonesia.

Methods: This study was descriptive research. The subject of research evaluation was the components of the patient safety implementation system. The members of the quality management unit were the respondents. Information was collected through interviews and observation.

Results: Patient safety in public health center X, Kediri, was the responsibility of Quality Improvement and Patient Safety Team. Communication between health workers with patients occurs only if a patient actively inquires about health care information that they need. Concrete action from the implementation of patient safety focused only on environment and facilities improvement. The performance of Standard Operating Procedures for patient safety must be tested over a long period before they are implemented.

Conclusions: Procedures for patient safety implementation in public health center X, Kediri, do not follow a definite standard because of the absence of written regulations that clearly specify patient safety procedures for public health center, both from the central and from regional government. The governments should immediately establish a consensus regarding patient safety standards for public health center, and establish specific regulations regarding patient safety procedures, thereby creating a standard that can be implemented at public health center in Indonesia.

Keywords: patient safety implementation, procedures standarization, quality management, Puskesmas

7-weeks student community services based on home care program: case study in a very remote island of Indonesia

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Objectives: To show an example of compulsory student community service in strengthening local maternal health system by visiting pregnant mothers who cannot come to check their health status at the health provider.

Methods: Participation observation for two weeks and indirect interview of 20 people, namely the head of public health office, head of community health center, headman, midwives, health cadres, and pregnant mothers.

Results: A group of midwifery, dental, and pharmacy students organized themselves as home visitors to 7 pregnant mothers in every week for 7 weeks in Te Bole Village, South Rote District, Rote Ndao Regency, East Nusa Tenggara, Indonesia. This activity provided antenatal care for pregnant mothers, gave some information about drugs and their effects on pregnancy, and educated mothers about the relationship between pregnancy and periodontal disease. The visitors not only provided for the clinical needs of the mothers but also were able to tell them about the importance of checking their pregnancy at the health provider as long as they were capable of going to the integrated service post.

Conclusions: This experience has shown that midwifery, dental, and pharmacy students' compulsory community service has a significant contribution to restoring the recommended antenatal care.

Keywords: home care program

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Songklanagarind Medical Journal

Owner: Prince of Songkla University

Aims and scope: Songklanagarind Medical Journal is an online, quarterly peer reviewed scientific journal published by Prince of Songkla University. This journal aims to publish original research article, review article, case reports in all aspects of basic and applied medical and health sciences. Manuscripts submitted to Songklanagarind Medical Journal will be accepted on the understanding that the author must not have previously submitted the paper to another journal or have published the material elsewhere. The journal does not charge for submission, processing or publication of manuscripts and even for color reproduction of photographs.

Language: Fulltext and Abstract in English

Abstracting and Indexing Information: Thai citation index (TCI), Asean citation index (ACI) and Google scholar

Thai–Journal Impact Factor: 0.139 average since 2015

Frequency: 4 issues per year (Jan–Mar, Apr–Jun, Jul–Sep and Oct–Dec)

Editorial office: Songklanagarind Medical Journal Unit, Faculty of Medicine, Prince of Songkla University,
Hat Yai, Songkhla 90110, Thailand.
Tel: (+66) 074–451159 Fax (+66) 074–212900
E–mail: skamolth@medicine.psu.ac.th
Website: <http://smj.medicine.psu.ac.th/index.php/smj>

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1. Editorial

They are invited by Editor-in-Chief of Songklanagarind Medical Journal and should be written in English and structured as follows: Introduction, Main text, Conclusion, and References. Editorial should not be less than 2,000 and cannot exceed 3,000 words total (counting from Introduction to Conclusion), and should keep references to a minimum.

2. Special article

These articles are invited by Editor-in-Chief of Songklanagarind Medical Journal. They should be written in English and structured as follows: Abstract, Introduction, Main text, Conclusion, and References. Abstract should be less than 250 words. Special articles should not be less than 2,000 and cannot exceed 3,000 words total (counting from Introduction to Conclusion).

3. Original article

These form the large majority of papers published by the Songklanagarind Medical Journal. There is 3,500 words and 40 references limit while efforts should be made to keep manuscripts as succinct as possible. Full reports should include separate sections entitled Abstract, Introduction, Materials and Methods, Results, Discussion and Conclusion. The abstract should contain no more than 250 words. The following sections should be included after the text: Acknowledgments, Financial Support, and Disclosures regarding real or perceived conflicts of interest.

4. Case report

This format can be used for submission of important preliminary observations, technique modifications, or data that do not warrant publication as a full paper. Short reports should contain no sub-headings, and be no more than 2000 words in length, with no more than 100 words in the abstract, 2 tables and/or figures, and 15 references.

5. Review article

The Songklanagarind Medical Journal will consider reviews on relevant topics in medicine, medical education, medical innovation and related areas. Typically reviews will be submitted by leading authorities in a field. We encourage mini-reviews, providing concise reviews of focused topics in no more than 3,000 words 6 tables and/or figures and no limit reference. The abstract should contain no more than 250 words. The larger reviews will be considered.

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Cover Letter and Signatures

All manuscripts should be accompanied by a cover letter with the following information:

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4. Written disclosure of any relationships or support which might be perceived as constituting a conflict of interest
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There is no limit to the number of authors that may be listed.

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1. Spacing: The text should be in 11 or 12 point type, fully double-spaced, leaving a margin of 1 inch on all sides. Continuous line numbers (NOT restarting with each page) should be included throughout the manuscript and pages should be numbered consecutively.

2. Title page: This should include, in the following sequence, the title, a list of all authors, and author institutions, identified by superscripts in Arabic numerals. The corresponding author should be denoted by an asterisk, with address, e-mail, and phone number in a

footnote. The running title should be limited with 40 words. The key words should be at least of 3 words.

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8. Tables: Tables should be serially numbered in Arabic numerals and cited in the text. Each table should be placed on a separate page at the appropriate point in the text or at the end of the manuscript.

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Examples of references

1. Journal

- Lewy H, Rotstein A, Kahana E, Marrosu MG, Cocco E, Laron Z. Juvenile multiple sclerosis similar to type I diabetes mellitus has a seasonality of month of birth which differs from that in the general population. *J Pediatr Endocrinol Metab* 2008; 21: 473 – 7.
- Rose ME, Huerbin MB, Melick J, Marion DW, Palmer AM, Schiding JK, et al. Regulation of interstitial excitatory amino acid concentrations after cortical contusion injury. *Brain Res* 2002; 935: 40 – 6.

2. Supplement

- Lofwall MR, Strain EC, Brooner RK, Kindborn KA, Bigelow GE. Characteristics of older methadone maintenance (MM) patients [abstract]. *Drug Alcohol Depend.* 2002; 66 (Suppl 1): S105.

3. Book

- Fealy S, Sperlino JW, Warren RF, Craig EV. *Shoulder arthroplasty: complex issues in the primary and revision setting.* New York: Thieme; 2008.

4. Chapter

- Waltzman SB, Shapiro WH. Cochlear implants in adults. In: Valente M, Hosford-Dunn H, Roeser RJ, editors. *Audiology treatment.* 2nd ed. New York: Thieme; 2008; p.361 – 9.

5. Patent

- Tintara H, inventor; Prince of Songkla University, assignee. Amniotomy training model. Thai petty patent 7488. September 18, 2012.

6. Journal article on the Internet

- Sanders GD, Bayoumi AM, Holodniy M, Owens DK. Cost-effectiveness of HIV screening in patients older than 55 year of age. *Ann Intern Med* [serial on the Internet]. 2008 Jun [cited 2008 Oct 7]; 148(12). Available from: <http://www.annals.org/cgi/reprint/148/12/889.pdf>

7. Monograph on the Internet

- Field MJ, Behrman RE. *Where children die: improving palliative and end-of-life care for children and their families* [monograph on the Internet]. Washington: National Academy Press; 2003 [cited 2008 Sep 26]. Available from: http://nap.edu/openbook.php?record_id=10390&page=1

8. Homepage/Web site

- Cancer-Pain.org [homepage on the Internet]. New York: Association of Cancer Online Resources, Inc.; c2000-01 [cited 2008 Oct 3]. Available from: <http://www.cancer-pain.org/>

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Other websites

Thai Journals Online: <https://www.tci-thaijo.org/index.php/smj>

Thai Health Science Journals: <http://thailand.digitaljournals.org/index.php/SOMJ>

