How Indonesia Reforms Medical and Health Education System to Provide Access of Health Services to All of the 240 Million Indonesian People

Purpose: Information
Submitted by: Indonesia
Innovation in Higher Education Delivery Modalities and Strategies Focusing on Science and Technology Programs in Health System: How Indonesia Reforms Medical and Health Education System to Provide Access of Health Services to All of the 240 Million Indonesian People

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Indonesia today (i)...

Indonesia is a large populous, multicultural, economically and socially-diverse economy ➔ challenges to keep its economic development momentum
Indonesia today (ii)...

16th largest economy in the world

240 million people

1.9 million km² Area Land

17,000 island

108th (0.684) HDI

US$ 2.84 trillion GDP (PPP)

US$ 3,511 GDP (Nominal) Per capita

Challenges (i)

Indonesia’s Health System Performances

- Health Regulation Reform
- Risky Health Hazards (infectious and emerging diseases and epidemic)
- Changing of environment (Demographic and epidemiological transition)
Challenges (ii)

Healthcare Infrastructure needs to be continuously improved: i.e. access to clean water

- There is still a gap in health service access between rural and urban area, as well as the lack of water safety and available purified/clean water in remote areas which may result in a risk of diarrhea (to mention some of the problems).
- Thus, improving access to safe water and sanitation is a key priority, due to the severe consequences of poor sanitation infrastructure on public health, the economy, and the environment.
- Of the four most important causes of under-5 mortality in Indonesia, two—diarrhea and typhoid—are fecal-borne illnesses directly linked to inadequate water supply, sanitation and hygiene issues.

Since 1998, PAMSIMAS (Penyediaan Air Minum dan Sanitasi ber basis Masyarakat), a World Bank project for providing clean water and improving sanitation have started in Indonesia until now.

Challenges (iii)

Healthcare Infrastructure needs to be continuously improved: All Indonesians must have access to clean water by 2019

- In 2014, the Government of Indonesia claimed that Indonesia needed more than Rp 660 trillion (US$57.2 billion) within the next five years in a bid to provide all Indonesians with access to clean water and sanitation by 2019.
- According to the National Mid-Term Development Plan (RPJMN), clean water infrastructure will need Rp 274.8 trillion while sanitation projects will take Rp 385.3 trillion.
- Various programs for accelerating access to clean water by 2019 are including a program to increase drinking water access for low-income people, as well as a program to further develop water-saving.
### Challenges (iv): Facts

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth male/female (m/f) (2013)</td>
<td>69/73</td>
</tr>
<tr>
<td>Probability of dying between 15 and 60 years m/f (per 1,000 population, 2013)</td>
<td>176/121</td>
</tr>
<tr>
<td>Total expenditure on health per capita (Intl $, 2013)</td>
<td>293</td>
</tr>
<tr>
<td>Total expenditure on health as % of GDP (2013)</td>
<td>3.1</td>
</tr>
<tr>
<td>Total fertility rate (per woman) (2013)</td>
<td>2.3</td>
</tr>
<tr>
<td>Number of live births (thousands) (2013)</td>
<td>4690.6</td>
</tr>
<tr>
<td>Number of deaths (thousands) (2013)</td>
<td>1561.2</td>
</tr>
</tbody>
</table>

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**Indonesia: WHO statistical profile**

**Top 10 causes of death**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Number of deaths (000s), 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke (21.2%)</td>
<td>328.5</td>
</tr>
<tr>
<td>Ischaemic heart disease (6.9%)</td>
<td>138.4</td>
</tr>
<tr>
<td>Diabetes mellitus (6.6%)</td>
<td>100.4</td>
</tr>
<tr>
<td>Lower respiratory infections (5.2%)</td>
<td>81.1</td>
</tr>
<tr>
<td>Tuberculosis (4.3%)</td>
<td>66.7</td>
</tr>
<tr>
<td>Cirrhosis of the liver (3.2%)</td>
<td>48.9</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (3.1%)</td>
<td>48.1</td>
</tr>
<tr>
<td>Road injury (2.9%)</td>
<td>44.6</td>
</tr>
<tr>
<td>Hypertensive heart disease (2.7%)</td>
<td>42.2</td>
</tr>
<tr>
<td>Kidney diseases (2.6%)</td>
<td>41.0</td>
</tr>
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**Burden of disease, 2012**

Disability-adjusted life years (DALYs) are the sum of years of life lost due to premature mortality (YLL) and years of healthy life lost due to disability (YLD).

Disability-adjusted life years (DALYs) and YLL and YLD by broad cause group:

- Cardiovascular diseases and diabetes
- Cerebrovascular disease
- Maternal, neonatal, nutritional
- Neuro-psychiatric conditions
- Other infectious diseases**
- Cancers
- Unintentional injuries
- HIV, TB, malaria
- Chronic respiratory diseases
- Accidental injuries
- Musculoskeletal diseases
- Diabetic, endocrine and blood

**Other noncommunicable diseases (NCDs) including non-malignant neoplasms; endocrine, blood and immune disorders; sensory organ, digestive, endocrine, and skin diseases; and conditions and injuries; fatal anomalies;**

**Infectious diseases other than acute respiratory diseases, HIV, TB and malaria.**

[Graph showing DALYs, YLL and YLD by broad cause group]
Programs

A. REGULATION REFORM

B. INTEGRATION OF UNIVERSITY, FACULTY OF MEDICINE AND THE TEACHING HOSPITAL

C. IMPROVING RESEARCH, DEVELOPMENT IN HEALTH

Innovation in Higher Education Delivery Modalities and Strategies Focusing on Science and Technology Programs in Health System

A. REGULATION REFORM (i)

- Act 40/2004 on National Social Insurance System (SJSN)
- Act 24/2011 on the National Agency for managing Social Insurance (BPJS)
- Act No 12/2012 Higher Education
- Act No 20/2013 Health/Medical Education
- Act No 36/2014 Healthcare employees and Nursing
HE President Joko Widodo distributed the Indonesian Healthy Card (Kartu Indonesia Sehat – KIS), a medical insurance card, to the Indonesian society, so the people can claim to BPJS the National Agency for managing Social Insurance (BPJS).


All Indonesians have Indonesian Healthy Card (KIS) and access to BPJS


A. REGULATION REFORM (iii)

Evaluating health education system and addressing health workforce issues ➔ Primary Care Doctors of Indonesia as the Gate Keepers

The National Board of Primary Care Doctors’ highlights:
1) The standards for competence of the ‘Primary Care Doctor’, equal to Family Medicine Specialist,
2) Educational standards,
3) Upskilling program for the existing doctors as well as for newly graduated doctors, and
4) Teacher training program as well as a benchmarking study.

http://www.tanjungpinangpos.co.id/2014/8/16/pengabdian-dokter-muda-di-daerah-perbatasan/
http://lantamal9.koarmatim.tni.id/BERITA/tabid/63/articleType/ArticleView/articleId/375/Default It.aspx
B. INTEGRATION OF UNIVERSITY, FACULTY OF MEDICINE AND THE TEACHING HOSPITAL (i)

Quality of Education  
Quality of Services  
Quality of Research  

Hospital network  
Research Institute  
Other Faculty  

THE TEACHING HOSPITAL  
Faculty of Medicine  
University  
Industry  
Other utility of health

19 TEACHING HOSPITALS IN INDONESIA
B. INTEGRATION OF UNIVERSITY, FACULTY OF MEDICINE AND THE TEACHING HOSPITAL (ii):
Establishing networking in APEC regional framework, an example

C. RESEARCH AND DEVELOPMENT IN HEALTH (iii)

FUNDING

- Ministry of Research, Technology and Higher Education
- Indonesia Endowment Fund for Education
- Ministry of Health

SUBJECT
- HEALTH
- TROPICAL DISEASES
- NUTRITION
- MEDICINE

2015: US$ 15 million
C. RESEARCH AND DEVELOPMENT IN HEALTH (ii) → supporting the whole National Innovation System

**Users:**
1. Industries
2. Public services
3. National Security

**Symphony (harmonization) in National Policies, which relates to:**
1. Economy
2. Social Infrastructure development
3. Education
4. Labors
5. Financial and Economy
6. Science and Technology

C. RESEARCH AND DEVELOPMENT IN HEALTH (iii): Tropical (Infectious) Diseases

**Tuberculosis Vaccine Development**

Establishing research consortia to solve certain health problems, collaborating with international partners

Indonesia – Japan Infectious Diseases Collaborative programs, funded by SATREPS: Science and Technology Research Partnership for Sustainable Development and the Government of Indonesia

C. RESEARCH AND DEVELOPMENT IN HEALTH (iv):
Medicine, ie National Forum on Vaccine Research

- National Forum on Vaccine Research in Indonesia have five (5) research consortia and 8 working groups. Those 5 research consortia are conducting research on Hepatitis B, Tuberculosis, Dengue, HIV dan Eritropoetin (EPO), and technology platform which is equal to vaccine.
- The other 7 (seventh) working groups are conducting research on Stem Cell, Rotavirus, Pneumococcus, Malaria, Influenza, and HPV (cervix cancer), as well as study on the healthy policy which related to vaccine management, acceleration of research into vaccine business incubators.
- Those five consortium are funded by the Ministry of Research, Technology and Higher Education, the Ministry of Health, and Bio Farma company, while HIV and EPO vaccines are supported by the University of Indonesia.

Identification of common health problems areas and research interests to develop joint research regional consortium

Expanding the national health research areas into regional (APEC) joint collaborative areas

Identifying funding resources, emphasizing on national commitments in APEC regional forum
**RECOMMENDATIONS FOR REGIONAL APEC HEALTH COOPERATION (ii)**

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<tr>
<th>Recommendations</th>
<th>Details</th>
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<tr>
<td>Continuously developing health system reformation in each of APEC Economies.</td>
<td>Improving all actors and infrastructures in health reformation system: (i) human resources, (ii) institutions (RD centers, universities), inviting private sectors to be parts of health reformation development.</td>
</tr>
<tr>
<td>Establishing regional (APEC) health system improvement collaboration</td>
<td>➔ forming a Task Working Group or a Special Steering and Technical Committees, in order to implement the agreed programs.</td>
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