Medical Devices Indonesian current market and onward.

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Republic of Indonesia (RI) consist of approximately 17,000 islands, located between Asia and Australia.

Number of provinces 33 with 497 districts/cities (399 districts and 98 municipalities),

Population living in poverty dropped dramatically from estimated 16.6%.

Government commitments to work towards the attainment of the United Nations (UN) Millennium Development Goals (MDGs) are reflected in the national development plan (Propenas) and in national strategies to reduce poverty.

Indonesia is prone to natural disasters, landslide, floods and volcano eruptions.

WHO data & updated
Country Data

- Total population 252,965,000 inhabitants.
- Gross national income per capita USD 4610 moving to USD 6000 in the 2016.
- Life expectancy at birth m/f (years) 66/71 → 71/73 2016
- Probability of dying under five years of age 39 per 1000 life birth
- Probability of dying between 15 and 60 years m/f (per 1000 population) 234/143
- Total expenditure on health per capita USD 99
- Total expenditure on health as 2.9 % of GDP.

Min. Of health - WHO data & updated.
**Health Development Direction (2005-2024)**

- **RPJMN I** 2005-2009: **Curative effort**
- **RPJMN II** 2010-2014: **Preventif, Promotif effort**
- **RPJMN III** 2015-2019: **supportive**
- **RPJMN IV** 2020-2024: **supportive**

**Vision: Achieving Society Health SelfStanding & Balancing.**

The direction of health human resources development was linier toward the development of the health services. From the curative effort to the preventive. These was adjusted as according the field requirement.

Kadin data
11 Priorities National development program (RPJMN 2005 – 2019)

1. Reformation on Bureaucracy & Country Operational management
2. Education.
3. Health
4. Poverty handling.
5. Food Durability
6. Infrastructure
8. Energy
9. Environment & Disaster management.
10. Rural Area development and under develop area.
11. Creativity, technology innovation, Culture acceleration.

Menko Kesra data.
### Hospital data in Indonesia

<table>
<thead>
<tr>
<th>Category</th>
<th>Ownership</th>
<th>General Hospital</th>
<th>Specialities</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td><strong>Public</strong></td>
<td>Government</td>
<td>771</td>
<td>89</td>
<td>860</td>
</tr>
<tr>
<td></td>
<td>Minister of Health</td>
<td>14</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Provincial</td>
<td>52</td>
<td>47</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Municipal</td>
<td>457</td>
<td>5</td>
<td>462</td>
</tr>
<tr>
<td></td>
<td>Regency</td>
<td>82</td>
<td>11</td>
<td>93</td>
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<tr>
<td></td>
<td>Others Minister</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Army</td>
<td>119</td>
<td>5</td>
<td>124</td>
</tr>
<tr>
<td></td>
<td>Police</td>
<td>42</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td><strong>Private</strong></td>
<td>Non Profit</td>
<td>531</td>
<td>174</td>
<td>705</td>
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<tr>
<td></td>
<td>Private Corp</td>
<td>499</td>
<td>255</td>
<td>354</td>
</tr>
<tr>
<td></td>
<td>State CoY</td>
<td>56</td>
<td>7</td>
<td>63</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1857</td>
<td>525</td>
<td>2382</td>
</tr>
</tbody>
</table>
Health Services data

- **Number of Hospital (2015)** 2382 hospitals
- **Number of bed (2014)** 297,410
  - Ratio 1 hospital bed served 850 inhabitants → disparity in area spreading
  - Attempted to ratio 1 hospital bed served 500 inhabitants.
- **Number of Med. Doctors (2014)** = 63,601 persons
  - Ratio 1 Medical Doctors served 3,978 inhabitants.
- **Numbers of Nurse (2014)** 179,273 persons
  - Ratio 1 Nurse served 1,411 inhabitants.
- **Number of Midwife (2014)** 33,960 persons
  - Ratio 1 midwife served 4,100 ladies.

Indonesian Health Mini - BUK – data
Challenge of Health services 2015

- Health Quality Services as a whole.
- Disparity health status among the region/territory.
- Good Medical drugs distribution in affordable price and sustainable stock.
- Need more competent Heathcare Professionals (HCP).
- Healthcare services related to any kind disasters.
- A cross the border on Healthcare service development → Adoption of new medical knowledge and medical engineering as well.

The Obstacle (1/3)

1. Healthcare facilities
   - Spreading.
   - Number of facilities
   - Quality of service.
     - Building.
     - Management of services
   - Quality of support.

2. The number of Professional HCP.
   - Spreading.
   - Updating Knowledge.
   - Production.

The Obstacle (2/3)

3. Support Resources
   - Budget.
   - Resources support.
     - Power.
     - Water.
     - Infrastructure

4. Medical treatment methodology
   - Knowledge & Skill
   - Utilizing available Facilities → service competitiveness
   - Tariff Management.
The Obstacle (3/3)

5. IT Utilization.
   - IT diagnoses & Treatment.
   - Digitalized data

6. E-Planning & Budgetting.
   - Treatment Management Monitoring (Sipermon & ASPAK etc.
   - E-Planning.
   - E-Budgeting.
   - E-Procurement
The Popular diseases among the Society

1. Chronic diseases related with Hypertension, Arteriosclerotic, obesitas, cardiac and others related.
2. Diabetes mellitus type I & II
3. Geriatric-related diseases due raised up number of population (2010 = 18,1 mio \( \rightarrow \) 9,6% total population).
4. Renal terminated diseases \( \rightarrow \) Haemodialysa and Peritonal Dyalisa.
5. Immunosuppressive diseases in relation with
   - HIV.
   - Hepatitis B & C

BP – Research Data
Top 10 Causes of Death in Indonesia (2010)

- Tuberculosis 7%
- Cancer 6%
- Road Injuries 5%
- Diarrheal Diseases 4%
- Ischemic Heart Disease 4%
- Diabetes 3%
- Major Depressive Disorder 3%
- Lower Back Pain 3%
- Lower Respiratory Infections 3%

WHO – report data 2010
Goal Health leading focus
2015 on ward

1. Revitalization of health services.
   - Improvement of health facilities of Government local hospital Type C → 805 Hospitals
   - To build 3,000 Poskesdes (Vilages Health Services Post).
   - Improvement of the 8,737 Puskesmas (Front line General Public Health Clinic).
   - Re-enforcement on MDG program.
     - Poned & Ponek
       - Death mortality of baby from 34 to 23 per 1000 birth.
       - Death mortality of woman delivery from 44 to 32 per 1000 delivery
     - Re-empowerment of Pokesdes (The Villages health services acceleration).

Menko kesra data
2. Strengthening the role of Front Line health services (Puskesmas) to do more in the prevention & Curative diseases.

- Raising up the number puskesmas with bed from 3320 to 6000 within the next 5 years.
- Improving the MDG performance in health aspect through all aspect related.
  - Improve the child nutrient.
  - Reduced baby post delivery death.
  - Reduced Mothers death post partum.
3. Setting Up the **Pratama Hospital** (the Hospital with number of bed +/- 50 beds with facilities better than Puskesmas).

4. Strengthening the Role of Hospital Refference (C type hospital reserved with more complete Facilities in term of Medical Doctors specialist and facilities related).

5. Setting up the regional Hospital refferencies in the appointed region. (hospital B Type with more comprehansive services).

Menko kesra data
6. Empowerment the A Class Hospital with more advance specialities:
   b. Research and education.
   c. Teaching Hospital.
   d. New Medical Knowledge's adoption. (HTA – Adoption)

7. Empowerment of Family Planning services.

8. Empowerment on Endemic and epidemic public diseases eradication programs I.e
   a. Tuberculosis.
   b. Malaria (dengue Haemorrhagic fever).
   c. HIV / immunosuppressive diseases.
   d. Typhoid.
   e. Cholera.
   f. Upper respiratory infection.

Menko kesra data
Health Human Resources distribution & improvement

- Establishment of *temporary Health human resources* to be the *Government Permanent employee*:
  - Medical Doctor = 3,626 persons
  - Dentist = 1,070 persons
  - Mid wife = 28,682 persons.
- Re alignment of the health human resources distribution.
- Providing incentive to the HCP in perifer area.
Hospital support facilities (1/2)

- Most area especially outside of java island, the electric power remain insufficient and not in sustainable supply. Hospital couldn’t able good treatment service without sufficient in Power supply.
  - Solar Power and others new energy development almost expected with economic operation.
  - Water management is the others valuable things that need to be deeply improved.
  - Waste management and its knowledge.
  - Cleaning management of Hospital facilities and chemical in use.
Hospital support facilities (2/2)

- Hospital lay out design, covering the Treatment flow processes, Human Flow and equipment supply and so on. The less risk factors and nosocomial prevention aspect seem mandatory to be implemented.

- Many hospital support facilities has been designed not in the proper manner. This improper design will create difficulties in the implementation of good governance treatment. Humidity factors, bacterial invasion, fungus spreading, toxic painting & chemicals used and much more need to be reconsidered.
Human resources

- Number of Healthcare Professional (HCP) need to be increased within the short period.
- The Professionality and Quality level of HCP need to be strengthening.
- Spreading of HCP should be done in immediate time especially in East of Indonesian Province.
- The Number of Main Specialities (Ped, Obgyn, Surgeon, Internist + Anesthesiologist, Radiologist and Clin Path urgently should be raised up.

Menko kesra data
Medical treatment methodology

- Diseases management handling remain not reach to the determined fixed tariff as what has been done by others hospital in neighbor country.
- The unit cost calculation involving depreciation of medical equipment and the calculation of Diagnosis Related Group in the case mix cost calculation and others.
Indonesian health Financing situation.

- 2014 = US $ 3,484.
- **Health expenditure**
  - Rp 214,9 T → US $ 180 mio → 2.9% GDP
  - Per capita health expenditure → US$ 101.00
  - 72% of population → covered by Insurance on various schemes.
  - 28% of population → Covered poor income people which now covered by BPJS.

Min. Of health data & updated.
Health Spending Budget Summary

- **Individual private sector.**
  - Income per capita by now is USD 3484 → spending health budget USD 101.
  - When Income per capita raised up to USD 5000 the spending health budget will be 2 x.
  - Its mean 202 x 253 mio = USD 51,106 mio. (captive Market).

- **Government spending budget for health**
  - 2015 Total GOI budget for health = IDR 47,429.8 T → APBNP IDR = 51,277.3.
  - Medical devices = ?
  - Pharmaceuticals = ?
  - Healthcare infrastructure = ?
1. Health facilities services begin from the front line health services and moved up through referal system → Re- strengthening the service position of the front line side.

2. Budget re-structuring → Government focus to premier health services and and their facilities.

3. Regulations

4. Human resources & capacity building

5. Strengthening and re-positioning the role Pharmaceutical & medical devices Industries.

6. Socialization & advocacy

Min of health spoken on BPJS preparation seminar.
World class healthcare Standardization

- By end of 2015 has been targeted 90% of Hospitals should be standardized through NEW KARS Standardization Methodology.
- New KARS (Komite Akreditation Rumah Sakit - The Committee of Indonesian Hospital Standardization). The new Standard of KARS is indenitc to Joint Commission Standardization Accreditation).

Menko kesra data/RJPN BidKes
Medical devices

- Indonesian has joined in the agreement of Asean Medical devices regulation trough ACCSQ. The MRA remain in process.
- Indonesian Minister Of health has re-enforce to the implementation of Standarization Equipment Facilities at the Goverment Healthcare facilities (Permenkes 56 – 2014, Permenkes 75 – 2014 & etc).
- The Monitoring and evaluation of the utilization of the availability medical equipment has been strengthening through availability Sipermon & ASPAK program (Aplikasi Sarana Prasarana Alat Kesehatan).
- Implemnting E - Planning in the Purchase Planning Program of Medical Devices at the every healthcare facilities.
Indonesia Medical devices
Market size

- 2010 = 20.4 T (assumption size) → 2015 = ?
- Market Growth = 10 – 12 %.
- Domestic Industrial = 4 % (Rp 816 billion = 82.5 Million USD)
  - Majority
    - Class I (Non Electro Medic)
    - Class II a (Semi Electro medic)
    - Disposable sterile & non Sterile
    - Family health product (PKRT).

Business Indo Data
Us aid data & Up dated
Country competitiveness of Medical Devices Business

- Country Growth economic > 6% constantly every years.
- Aggressive health service program attempted to good Public Insurance execution (SJSN execution).
- Current market size has already reach 20.4 T (2010) → it will grow linier with budget reserved.
- Country Health budget 2.8% from GDP in 2012 mandatory by Low 5% country spending budget → 2017 to be 7-8%.

Usaid data
Current Government focused to improve health services among addressed to the poor & medium poor inhabitants (covered 94 million inhabitants through Massive Health Insurance (BPJS).
## Preparations and action plan toward roadmap on health services of Indonesia MOH

<table>
<thead>
<tr>
<th>Task force</th>
<th>Tasks</th>
</tr>
</thead>
</table>
| 1. Health facilities, referral system, and infrastructure | ✓ Preparation of health care providers  
✓ Strengthening of referral system by regionalization  
✓ Procurement of medical devices |

**TOTAL POPULATION = 253 mio.**

Ratio:
- Medical doctor : 40/100.000
- Dentist : 11/100.000
- Midwives : 75/100.000: 4/PHC
- Nurses : 158/100.000: 6/PHC

Total hospital : 2.382 hospitals  
Total bed : 297,410 beds  
1 hospi Bed Ratio : 851 inhabitants.
Example Regionalisation Hospital Reference System West Java Province

- **BANTEN province**
  - Area: Purwasuka
  - 4.3 mio inhabitants

- **Area Bogor, Sukabumi, Cianjur**
  - 6.5 mio inhabitants

- **Bandung, Cimahi Area**
  - 7.5 mio inhabitants

- **Priangan Timur Area**
  - 7.8 mio inhabitants

- **Central Java Province**
  - Area: Ciayumaja Kunung
  - 6.6 mio inhabitants

Sources: Dinkesjabar
Solution through Remote IT support /diagnosis

Specialist med Doctors/ Engineering Expertist

Municipal hospital
Front line health clinic (puskesmas)
Internet Link
Preparations and action plan toward roadmap on health services of Indonesia MOH

<table>
<thead>
<tr>
<th>Task Force</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Pharmaceutical and medical devices</td>
<td>• Setting <strong>formularies</strong> for drugs and medical devices&lt;br&gt;• Developing e-catalogue and lead the procurement system through it’s.&lt;br&gt;• Forming <strong>Health Technology Assessment</strong> (HTA) <strong>team</strong> and their tasks</td>
</tr>
<tr>
<td>3. Infrastructure</td>
<td>• Strengthening IT system Utilization being use for remote diagnose.</td>
</tr>
</tbody>
</table>
German Medical devices manufacture that exist business in Indonesia

- Siemens Medical.
- B Braun.
- Fresenius Kabi.
- Zimmer
- Kodak
- Leica
- Olympus
- Dragger Medical
- Litmann
- Seca
- Karl Kaps
- Martin

- Barmux Medical Supplies.
- Stiegemeyer.
- Solingen Instrument
- MTG GmbH.
- Defibtech
- Belmont
- Novo
- Nova – Reister.
- Dornick
- Sartoriuos
- Storz
- Biomed
Medical devices Item potential manufactured in Indonesia

- Class I.
  - Refer to data enclosed.

- Class II a
  - Refer to data enclosed.

- Disposable Sterile.
  - Refer to data enclosed
I. Comply to the Indonesian medical devices regulation:
   • Official registered in MOH with all related regulation. The manufacturer should be responsible to the product performance as long as product remain in the curve of warranty. However, the scheduled control and Calibration requirement.
   • Product performance control should be done in the period of product’s life cycle.
   • The calibration should be performed on schedule as recommended.
2. Willingness to do product commissioning as required.
3. Warranty minimal 1 year with full service
4. Guaranty availability Sparepart up to 5 years
5. Willing to be bounded in services contract including the readiness of related sparepart.
6. Guaranty on training to the user up to “Competent Operational “ with certificate.
7. Guaranty training to the Hospital technical team especially for emergency trouble (down).
8. Detail Life cycle services → cost per time used
9. E- Catalog registration.
Conclusion

- Healthcare market sectors is evergreen business especially in Indonesia. None market segment that able to grow 5 times within next 3 years coming.
- Since Indonesia area was so wide, utilizing local distributors as Representative much more worthy rather than full operate under single office.
- Spreading the medical – engineering on product related knowledge is the best way to build market foundation in the Indonesia market.
- Hospital Power availability and sustainable supply is remain becoming the big problem.
- HCP Spreading
- Education in all healthcare aspect related.
Thank You