## 33RD CONFEDERATION OF MEDICAL ASSOCIATIONS IN ASIA AND OCEANIA (CMAAO) GENERAL ASSEMBLY 4TH COUNCIL MEETING "The Path to Universal Health Coverage"

16TH TARO TAKEMI ORATION





#### "A tribute Dr Taro Takemi"

The late Dr. Takemi served as:

President of The Japanese Medical Association (JMA) for 25 years

He was the founder of CONFEDERATION OF MEDICAL ASSOCIATIONS OF ASIA AND OCEANIA (CMAAO) together with Dr Gonzales (PMA) in 1956, The first assembly of CMAAO was in Tokyo in 1959

Strengthening Health System of Japan Global health: exchange of ideas & sharing information Takemi Oration was established by JMA & his family in 1991



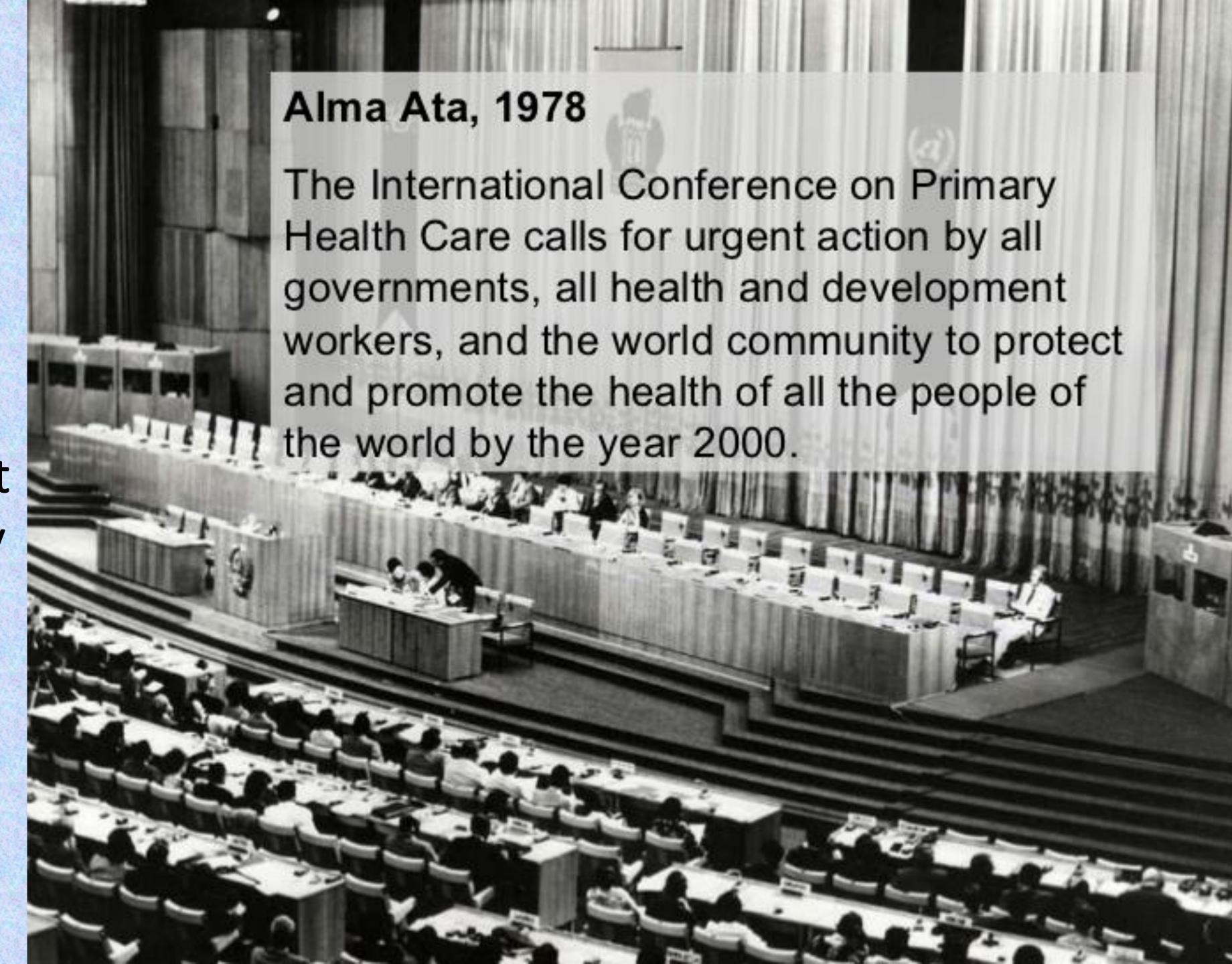
#### 16<sup>TH</sup> TARO TAKEMI ORATION

# UNIVERSAL HEALTH COVERAGE: Global Surgery an Important component of Public Health

Datuk Dr Noor Hisham Abdullah Director General of Health Malaysia

#### "Health for All"

A universal human right, whose fulfillment reduces human misery & suffering, advances equity, & safeguards human dignity







#### "Health is Wealth"

Healthy populations translate into productive and stable nations

Universal health care (UHC) is a pragmatic and ethical ideal approach to achieve productive nations closely linked to the <a href="mailto:social and economic progress">social and economic progress</a>,

#### Leaving no one behind

The minimum ideal is that no individual or family should suffer financial hardship because of accessing good-quality medical assistance





#### "Health for All"

UHC covers social systems that provide <u>medical and</u> nonmedical services and infrastructure that are vital to promoting public health

In addition, it highlighted the power of <u>primary health care</u> and <u>international cooperation</u> to advance the protection and promotion of health in <u>resource-constrained settings</u>





#### "No One Is Left Behind"

WHO & World Bank offer a relatively simple UHC service-coverage index that is useful for intercountry comparison.

This index focuses on <u>four categories</u> of health indicators:

Reproductive, maternal, and child health;

Infectious disease control;

Non-communicable diseases; and

Service capacity and access.



#### EQUALITY

The assumption is that everyone benefits from the same supports. This is equal treatment.



#### EQUITY

Everyone gets the supports they need, thus producing equity



#### JUSTICE

All 3 can see the game without supports or accommodations because the cause(s) of the inequity was addressed

The systemic barrier has been removed

HEALTH IN NO POVERTY THE SDG ERA 16 PEACE AND JUSTICE **MOBILIZING PARTNERS** PRIORITIZING TO MONITOR AND ATTAIN THE THE HEALTH NEEDS OF THE POOR **HEALTH-RELATED EMPOWERING STRONG** SDGs ADDRESSING QUALITY EDUCATION LOCAL INSTITUTIONS THE CAUSES TO DEVELOP, IMPLEMENT, AND CONSEQUENCES MONITOR AND ACCOUNT FOR OF ALL FORMS OF **AMBITIOUS NATIONAL** MALNUTRITION **SDG RESPONSES SUPPORTING** PROMOTING HEALTH **HIGH-QUALITY** AND PREVENTING **EDUCATION FOR DISEASE THROUGH ALL TO IMPROVE HEALTHY NATURAL GOOD HEALTH** HEALTH AND **ENVIRONMENTS HEALTH EQUITY AND WELL-BEING** LIFE BELOW WATER GENDER EQUALITY SUPPORTING THE FIGHTING GENDER **RESTORATION OF FISH INEQUITIES, INCLUDING** STOCKS TO IMPROVE VIOLENCE AGAINST SAFE AND DIVERSIFIED WOMEN **HEALTHY DIETS** PROTECTING HEALTH CLEAN WATER AND SANITATION PREVENTING DISEASE FROM CLIMATE RISKS, THROUGH SAFE AND PROMOTING HEALTH WATER AND SANITATION THROUGH LOW-CARBON **FOR ALL** DEVELOPMENT **ENSURE HEALTHY LIVES** AND PROMOTE WELL-BEING RESPONSIBLE ROMOTING SUSTAINABLE **CONSUMPTION OF FOR ALL AT ALL AGES ENERGY FOR HEALTHY** HOMES AND LIVES TO COMBAT ANTIBIOTIC AFFORDABLE AND CLEAN ENERGY FOSTERING HEALTHIER **CITIES THROUGH** PROMOTING HEALTH URBAN PLANNING FOR CLEANER AIR **EMPLOYMENT AS A DRIVER** OF INCLUSIVE ECONOMIC **ENSURING EQUITABLE** AND SAFER AND MORI GROWTH **ACCESS TO HEALTH** PROMOTING NATIONAL **ACTIVE LIVING R&D CAPACITY AND SERVICES THROUGH** MANUFACTURING OF **UNIVERSAL HEALTH** SUSTAINABLE CITIES AND COMMUNITIES DECENT WORK AND AFFORDABLE ESSENTIAL **COVERAGE BASED** MEDICAL PRODUCTS ON STRONGER **PRIMARY CARE** INDUSTRY, INNOVATION AND INFRASTRUCTURE World Health Organization SUSTAINABLE G ALS



## Malaysia's Health ... The Journey





# EVOLUTION OF PRIMARY HEALTHCARE IN MALAYSIA TOWARDS UHC

2000

Mother & child

Family planning

Outpatient

**Environmental** 

1980

1960

Mother & child Family planning Outpatient Environmental School Mother & child
Family planning
Outpatient
Environmental
School
Dental
Pharmacy
Lab

School
Dental
Pharmacy
Lab
Child with Special Need
Reproductive Clinic
Elderly Clinic
Diabetic Clinic
Adolescent
Occupational Health
Emergency
Health Informatics

#### 2010 Mother & child Family planning Outpatient Environmental School Dental **Pharmacy** Lab Child with Special Need Reproductive Clinic **Elderly Clinic** Diabetic Clinic Adolescent Occupational Health Emergency **Health Informatics Hypertension Rehabilitation Services HPV Needle Stick Exchange Program** Methadone STI/vice **PLKN Prison**

**Community Clinic** 

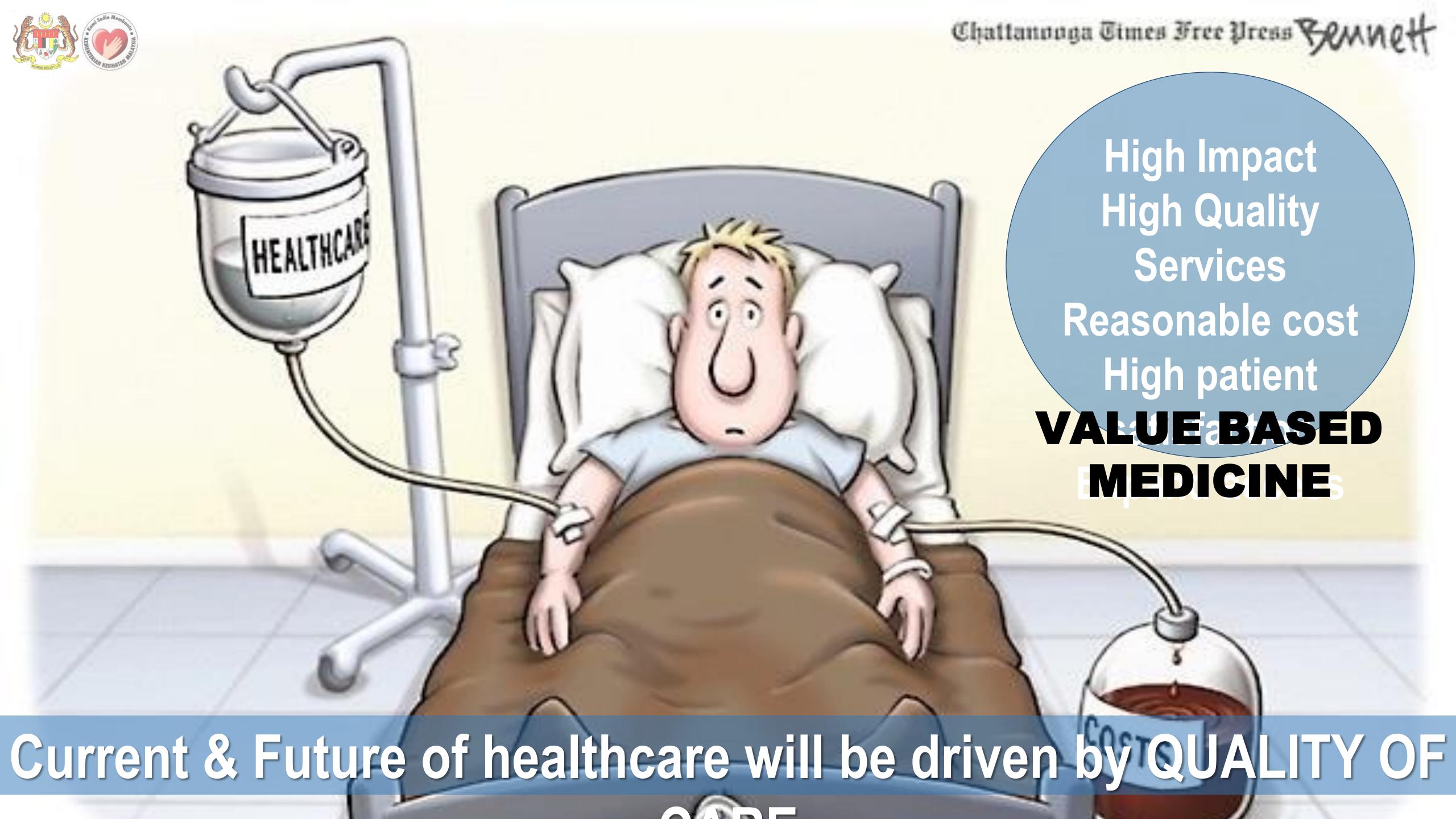
DTS

Malaysia has successfully managed to develop a modern, comprehensive and efficient healthcare system even though Malaysia spends only 4.6% of GDP on Health.

"Malaysians should realise how lucky they are to have such a very comprehensive system"

Dr Shin Young-soo, WHO Regional Director for Western Pacific Region









#### "Quality of Healthcare is An Investment"

Poor quality of healthcare was a major driver of excess mortality across conditions, from cardiovascular disease & injuries to neonatal and communicable disorders.

UHC for SDG conditions could <u>avert 8.6 million</u> (5mil receipt of poor quality care 3.6mil non-utilisation) deaths per year, only if expansion of service coverage is accompanied by <u>investments into high-quality health systems</u>.

### Public & Private Sector Resources and Workload (2014 & 2015)

Health clinics (with doctors)
(2014)

Outpatient visits (NHMS 2015)

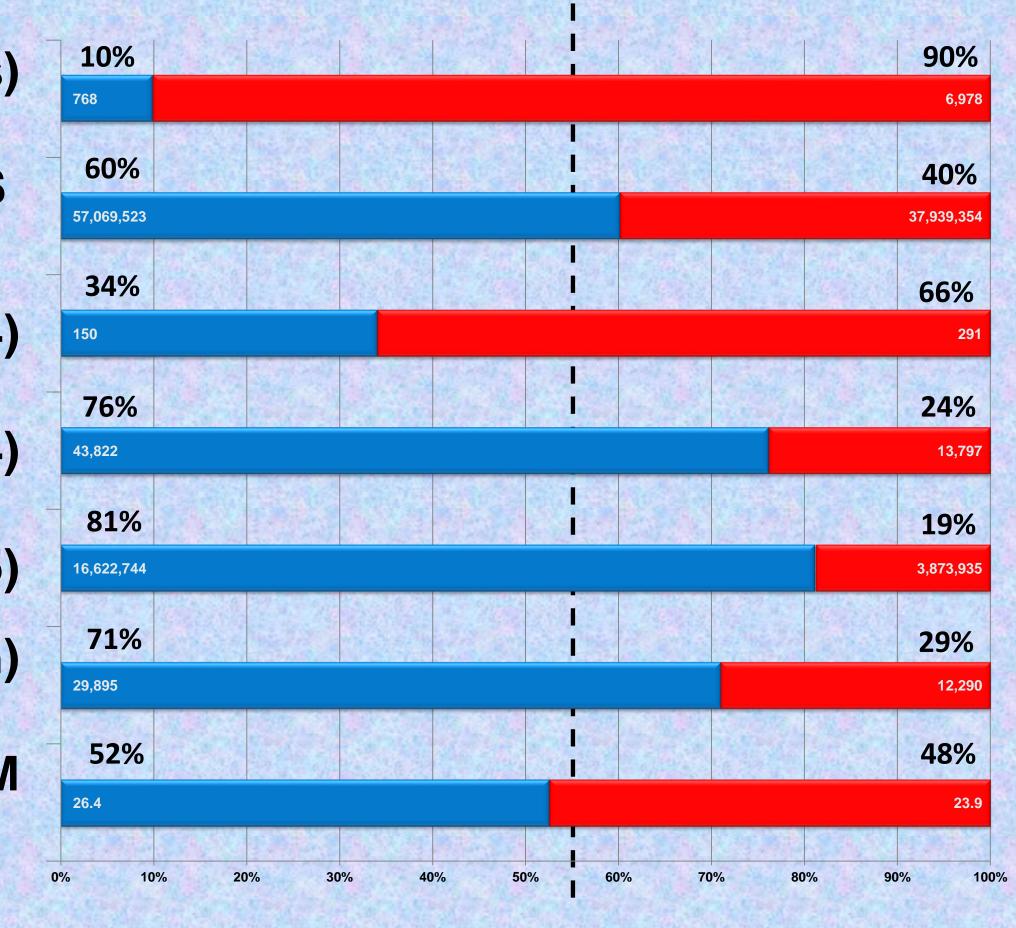
No. of Hospitals (2014)

Hospital Beds (2014)

Bed Days (NHMS 2015)

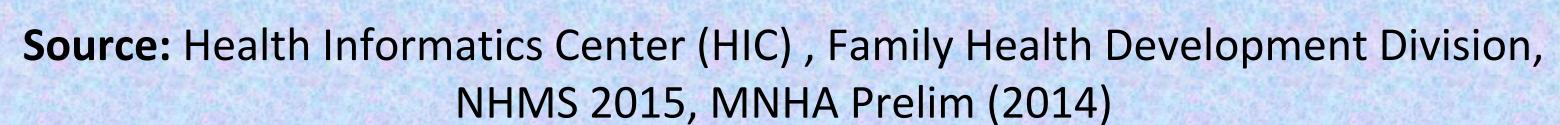
Doctors(excl. Houseman) (2014)

Health Expenditure RM Billion (2014)



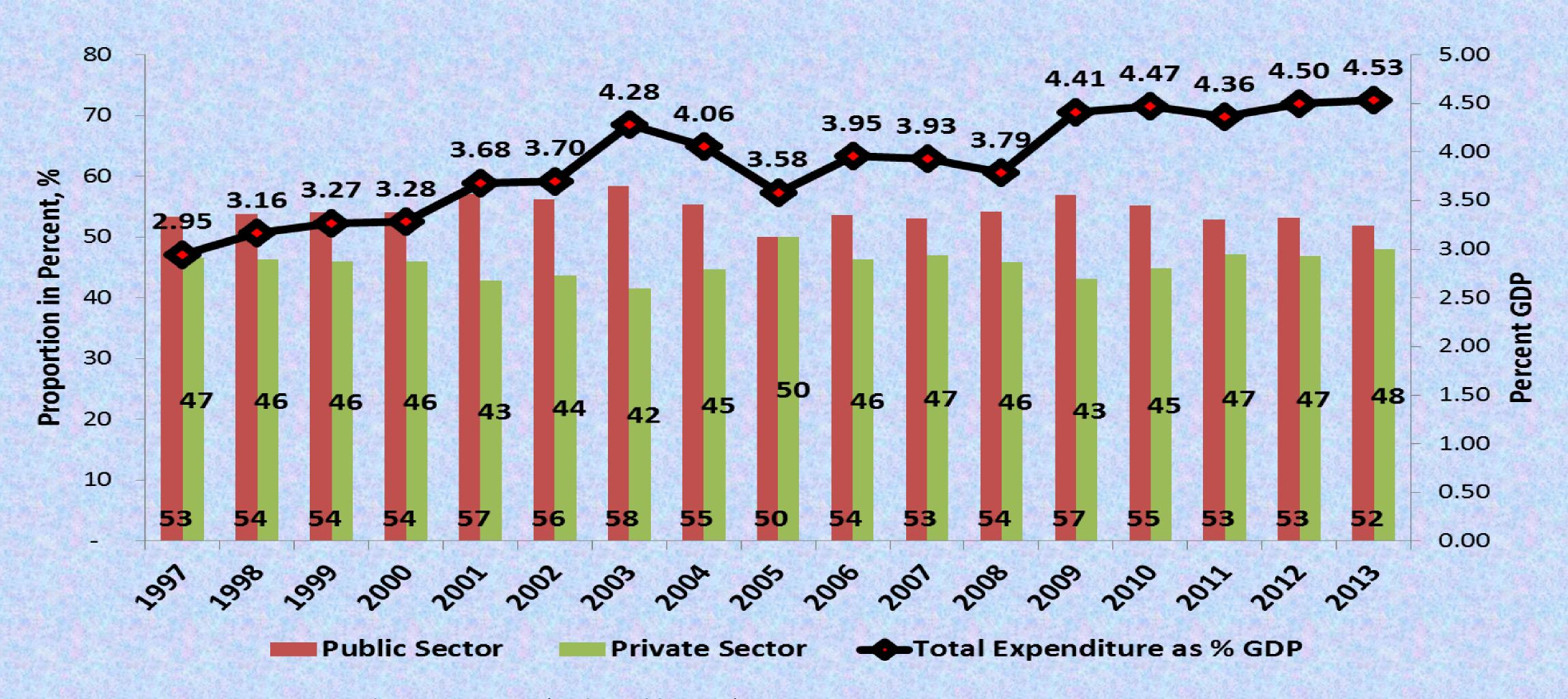






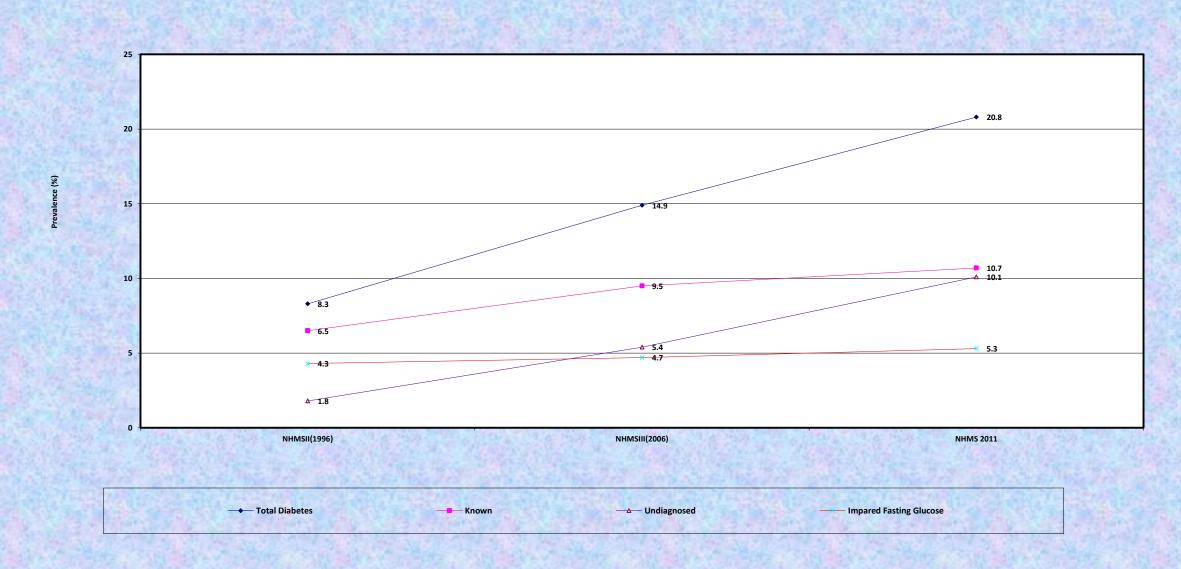


#### Total, Public & Private Sector Health Expenditure, 1997-2013

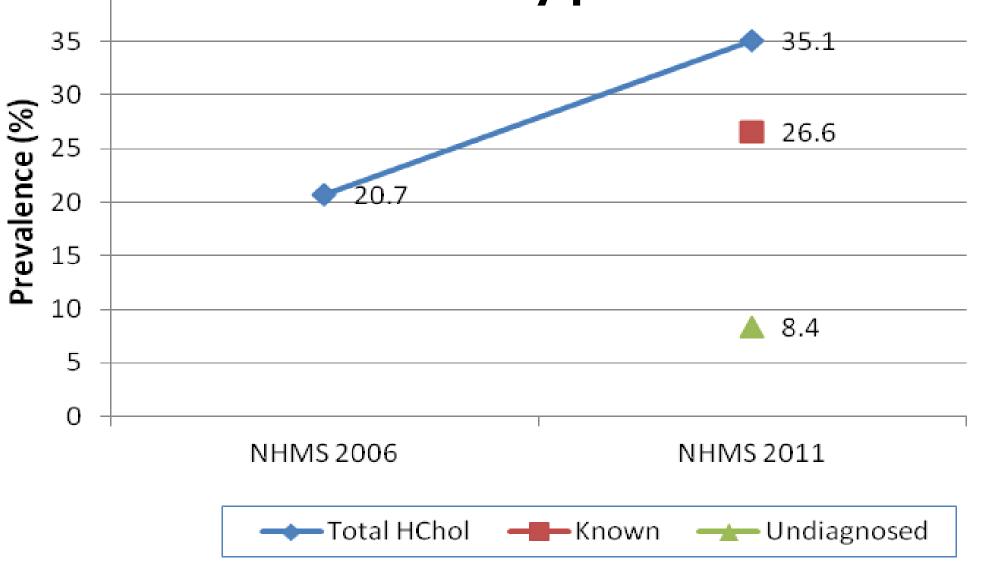


Source: MNHA Database 1997-2013 (under publication)

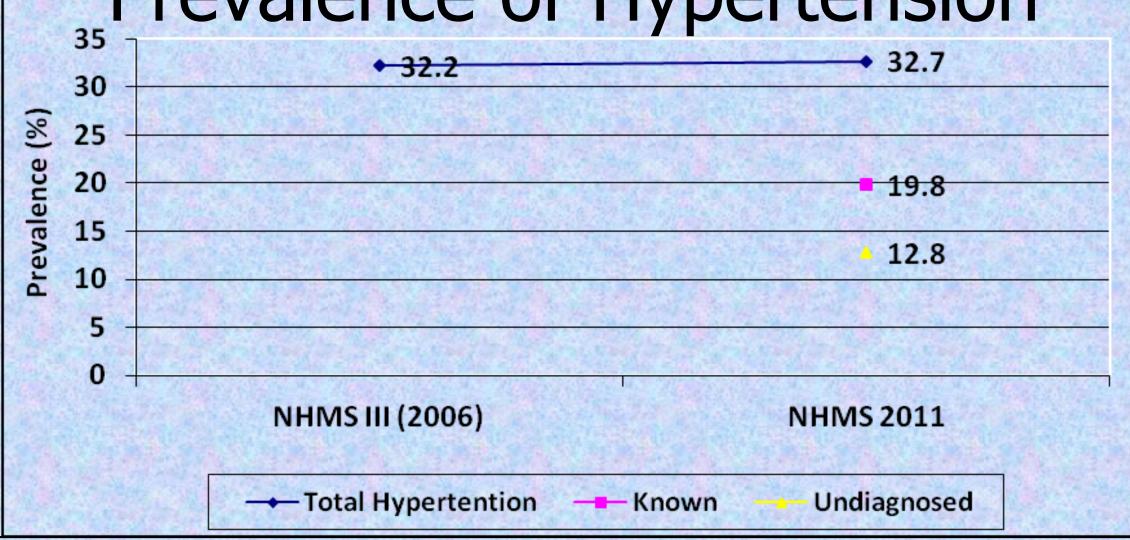
#### Prevalence of Diabetes Mellitus



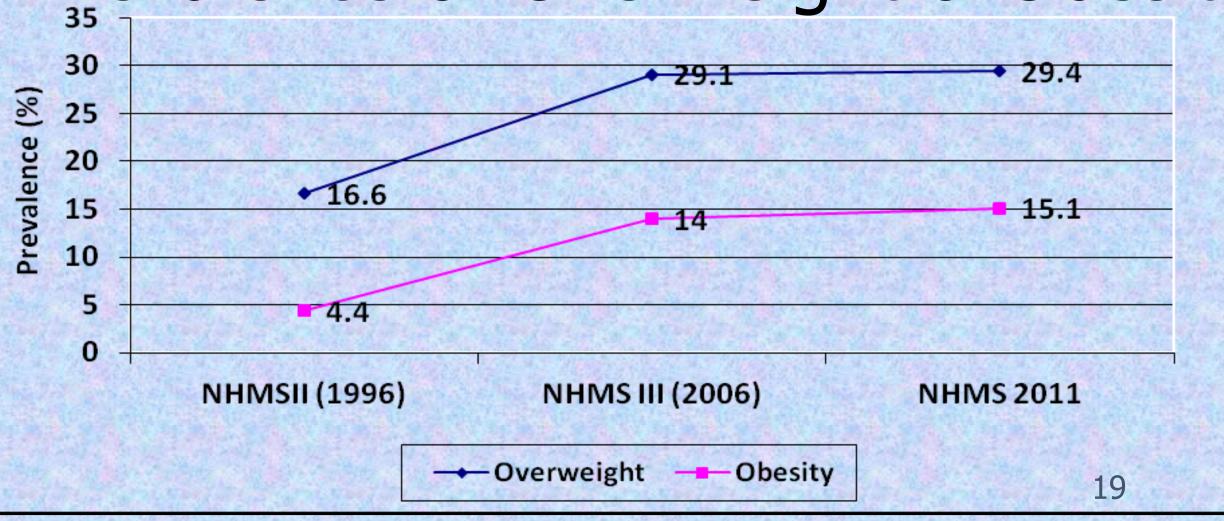
#### Prevalence of Hypercholesterolemia







#### Prevalence of Overweight & Obesity



1. Creating a healthy ecosystem towards healthy lifestyle and disease prevention

5. Health System Delivery & Work Process Re-engineering

2. Strengthening the Role of PHC

6. ICT Transformation for Health

3. HR & Organisational Capacity Development

7. Public-Private/Inter-agency Collaboration

4. Optimisation of Health Infrastructure & Development

8. Ensuring Health System's Financial Sustainability

8 Thrusts of Healthcare Transformation



## 1. Creating a Healthy Ecosystem Towards Healthy Lifestyle & Disease Prevention



#### HEALTH PROMOTION AND EMPOWERMENT

### 3 modifiable NCD risk factors: unhealthy diet, physical inactivity, smoking & alcohol











#### **HEALTH PROMOTION & EMPOWERMENT**





HEALTH











Strategy 1
KOSPEN

ERKASA NEGAP Strategy 2 KOSPEN Plus



Strategy 3

Information and Prevention Messages

Strategy 4

Obesity
Prevention at
Schools



Strategy 7

Non-smoking Areas/Zone

Strategy 5
Healthy
Eating in
Community



Strategy 6

Physical Activities at Localities



Strategy 8

NCD Risk Factor Screening



Strategy 9

Integrated NCD data system



Strategy 10

Family Doctor Concept







PENGUKUHAN PENJAGAAN KESIHATAN PRIMER (ENHANCED PRIMARY HEALTH CARE)
DI KLINIK KESIHATAN

Saya Sihat, Keluarga Bahagia

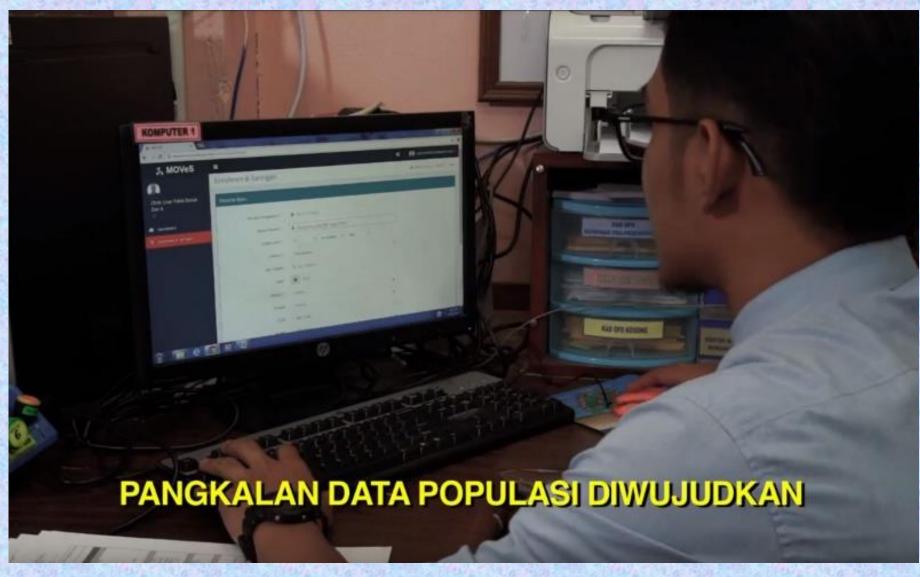
#### Faedah kepada saya dan keluarga:

- Mencegah, mengesan dan merawat penyakit lebih awal.
- Mendapat penjagaan kesihatan yang berterusan.









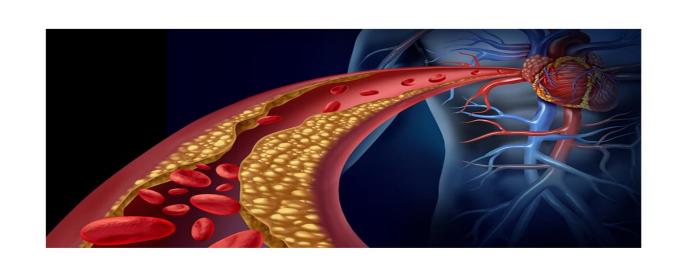


#### Enphc indicators ACHIEVEMENTS



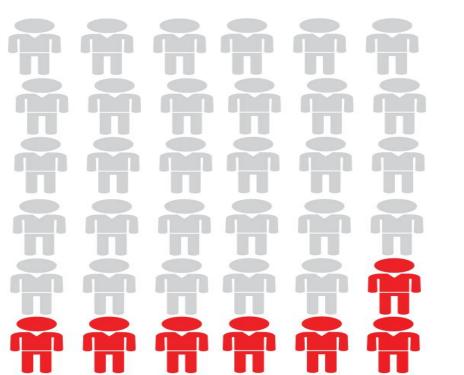
81.32%

Percentage of population enrolled



2,178

The numbers of newly diagnosed Dyslipidaemia



15.50%

Percentage of population screened



82.6%

Percentage of compliance to clinic appointment



2,213

The numbers of newly diagnosed DM



75.2 %

Percentage of compliance to hospital appointment



2,772

The numbers of newly diagnosed HPT



84.9%

Percentage of adherence to medication refill appointment

In 20 pilot clinics for EnPHC

\* As at 31<sup>st</sup> March 2018



### DOMICILIARY HEALTHCARE SERVICES

160 MOH Health Clinics

8,000 Patients benefited especially elderly patients



### BRINGING HEALTHCARE 2U @ COMMUNITY & HOME







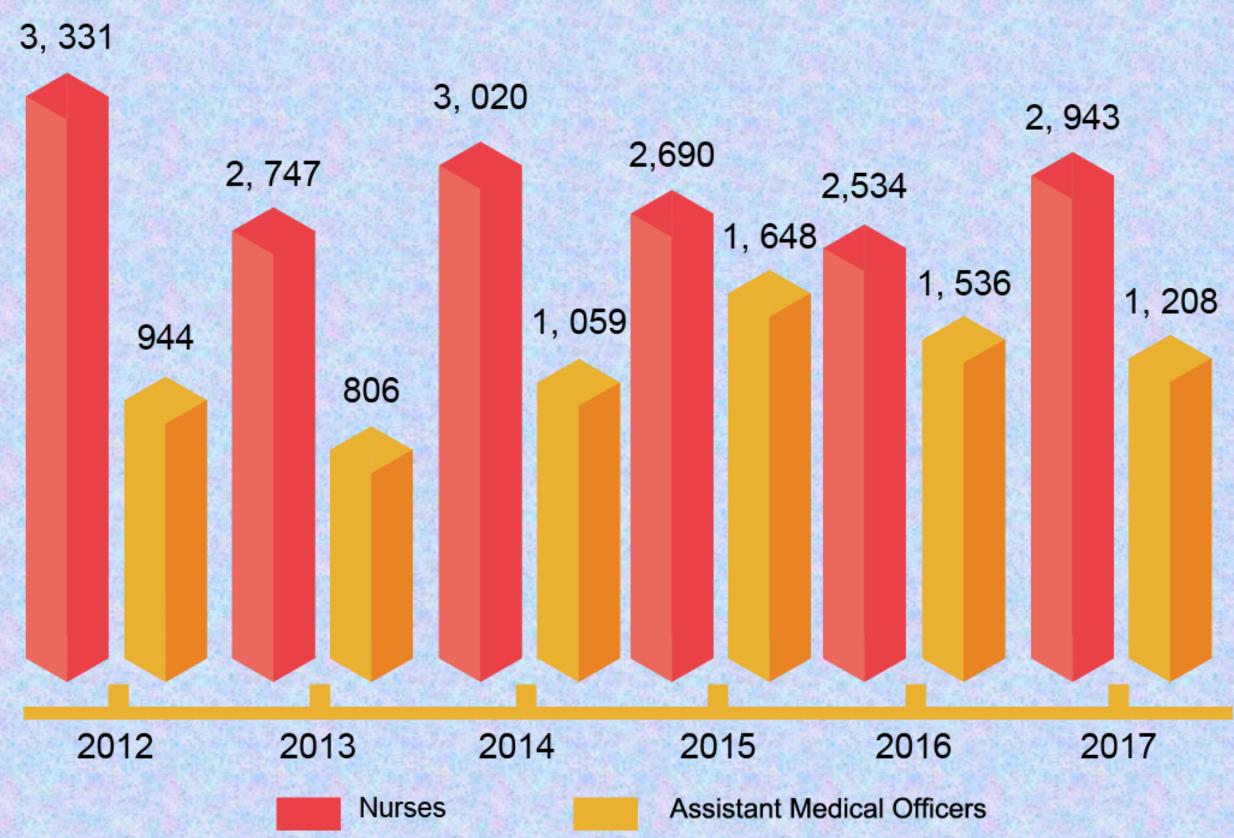




## 3. Human Resource & Organisational Capacity Development



### NURSES AND ASSISTANT MEDICAL OFFICERS TRAINED BY MOH



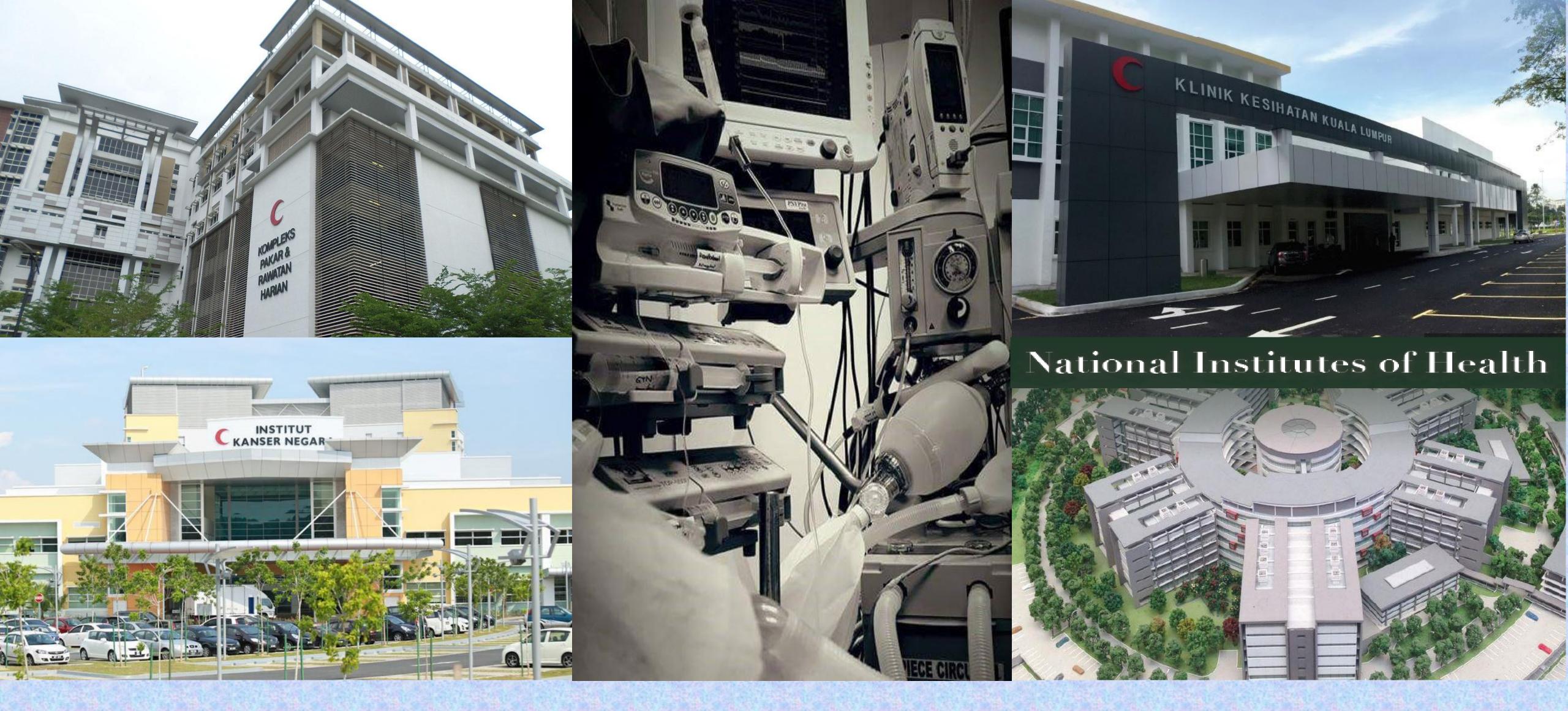


Number of Nurses and Assistant Medical Officers trained by MOH

\*As at 31<sup>st</sup> December 2017

#### CAREER PATHWAY FOR MEDICAL OFFICER





#### 4. Optimisation of Health Infrastructure











Hospital Cyberjaya





Muala Krai Hospital (268 Beds)
To Be Completed: March 2018

Rembau Hospital (76 Beds)
To Be Completed: June 2018

Dungun Hospital (110 Beds)
To Be Completed: February 2019

Bachok Hospital (76 Beds)
To Be Completed: September 2019

DE Petrajaya Hospital (300 Beds)
To Be Completed: June 2018

O 5 Sri Aman Hospital (108 Beds)
To Be Completed: August 2019

Tanjung Karang Hospital (150 Beds)
To Be Completed: November 2020

Cyberjaya Hospital (288 Beds)
To Be Completed: November 2020

Bera Hospital (40 Beds)
To Be Completed: March 2019



#### **Cheras Rehabilitation Hospital**



National Cancer Institute (IKN)



Institute of Respiratory Medicine (IPR)



Woman and Children Kuala Lumpur Hospital





Cardiology & Cardiothoracic Services, Serdang Hospital

## TERTIARY SPECIALISED CENTRES UNDER MOH

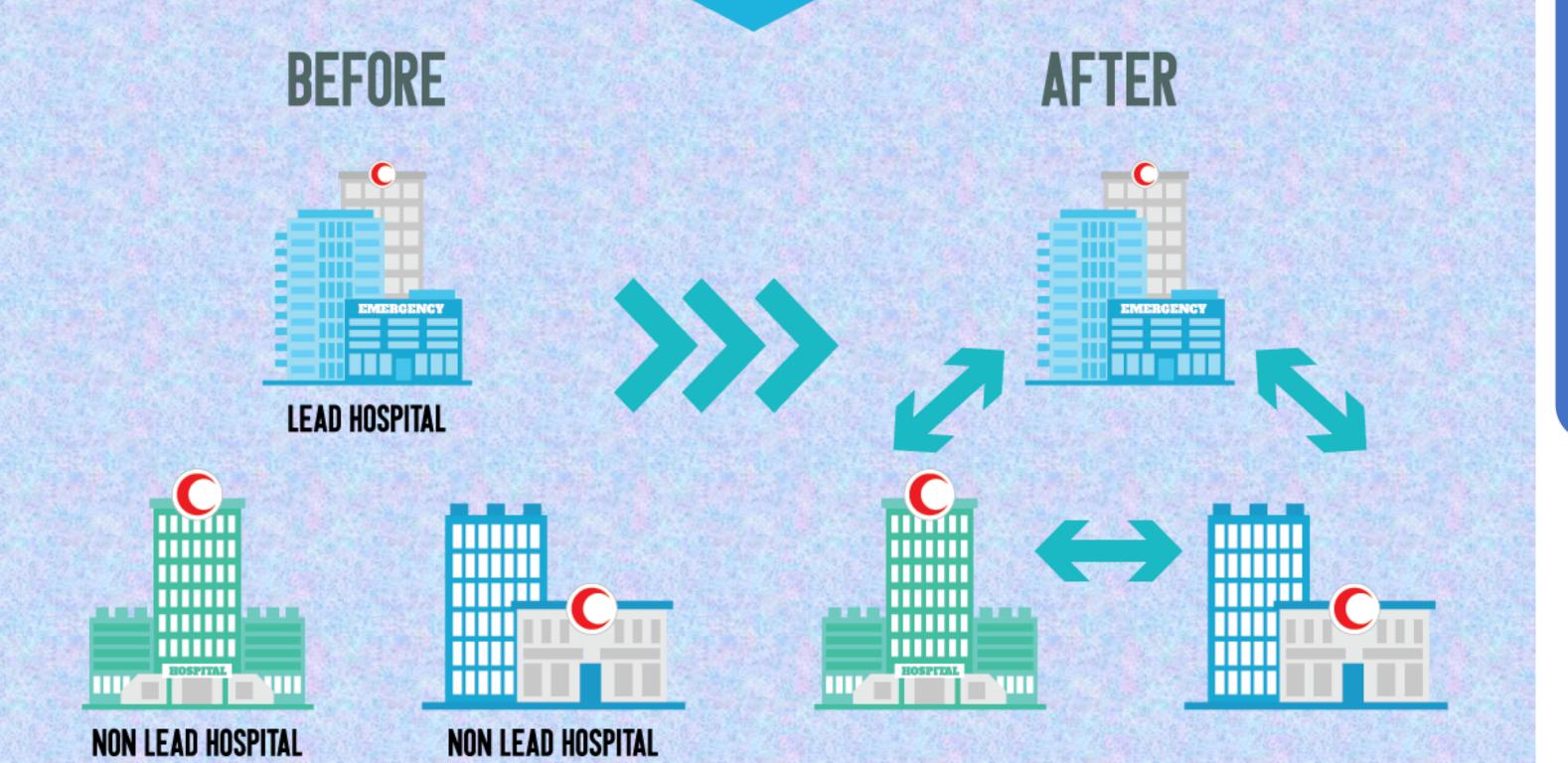


## 5. Health System Delivery & Work Process Re-engineering



# HEALTHCARE SERVICES CLUSTER HOSPITAL

### TRANSFORMING MALAYSIAN HEALTHCARE SERVICE DELIVERY





## 13 Clusters

46
Hospita
Is in
Malaysi
a

18 Specialist Hospitals

28 Non-Specialist Hospitals

- ✓ Improving <u>accessibility</u> of specialised care at Non Specialist Hospitals
- ✓ Bed Occupancy Rate (BOR) at nonspecialist hospital improved From 48.45% to 54.15%

- **✓** Eliminate waste
- ✓ Simpler, Faster, Cheaper, Safer and Friendlier
  - ✓ Implemented in 52 Hospitals

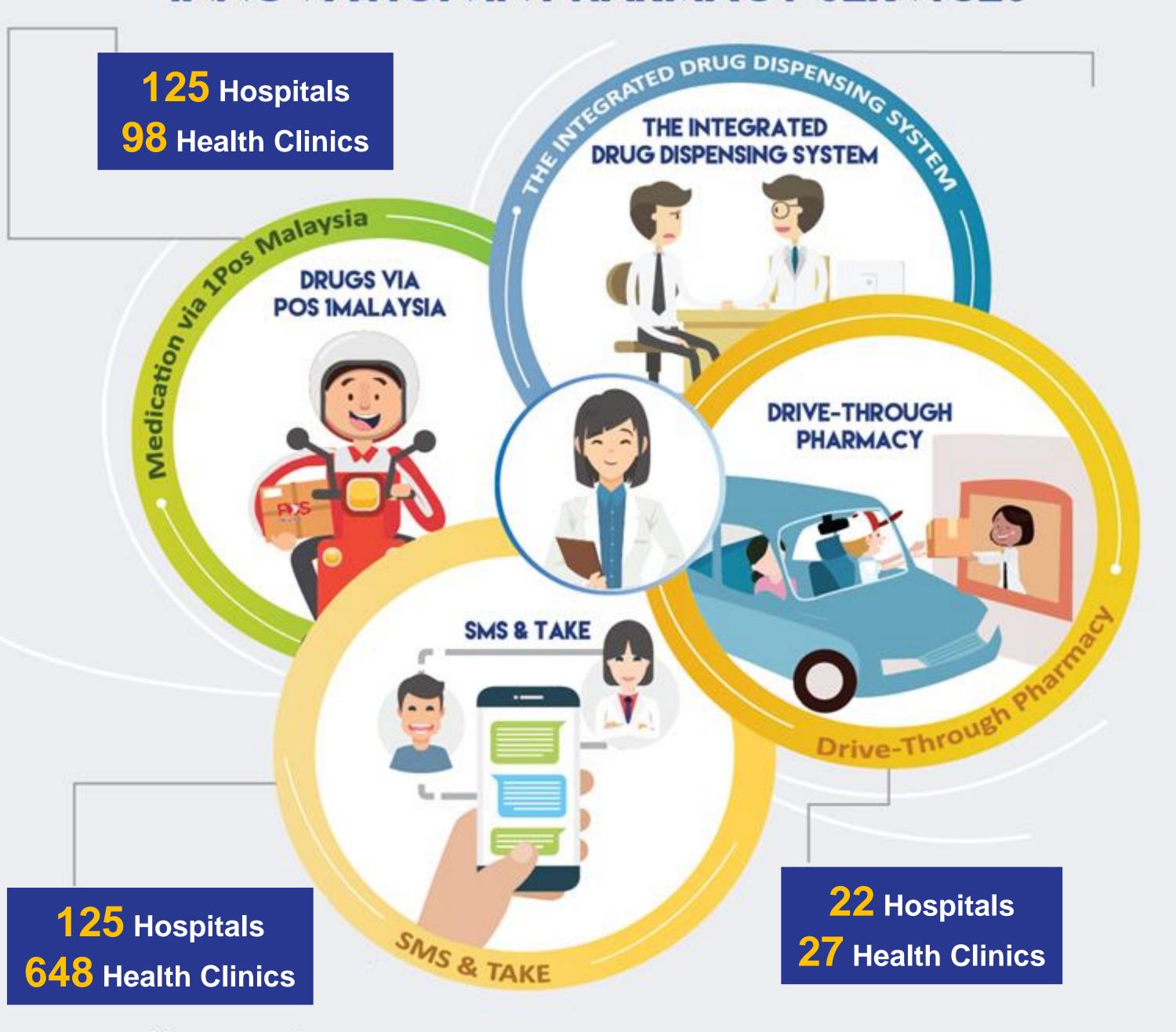
    33 Health Clinics

# LEAN HEALTHCARE





#### INNOVATION IN PHARMACY SERVICES



# PHARMACY VALUE ADDED SERVICES





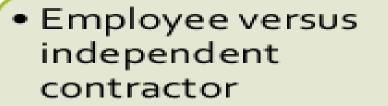


- Service at client's location
- Service that complies to 5 guiding principles

CLIENT

#### DIGITAL 🖵 **PLATFORM**

- Providers: Healthcare organization & IT company
- Service registration issue



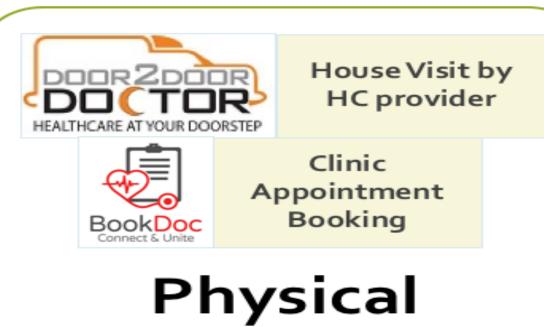
 Fitness to practice issue

> **HEALTHCARE PROFESSIONAL**



#### **5 Guiding Principles**

**Patient safety** Quality Confidentiality **Accountability Traceability** 



Services



**Physical & Virtual** Services

Service Spectrum



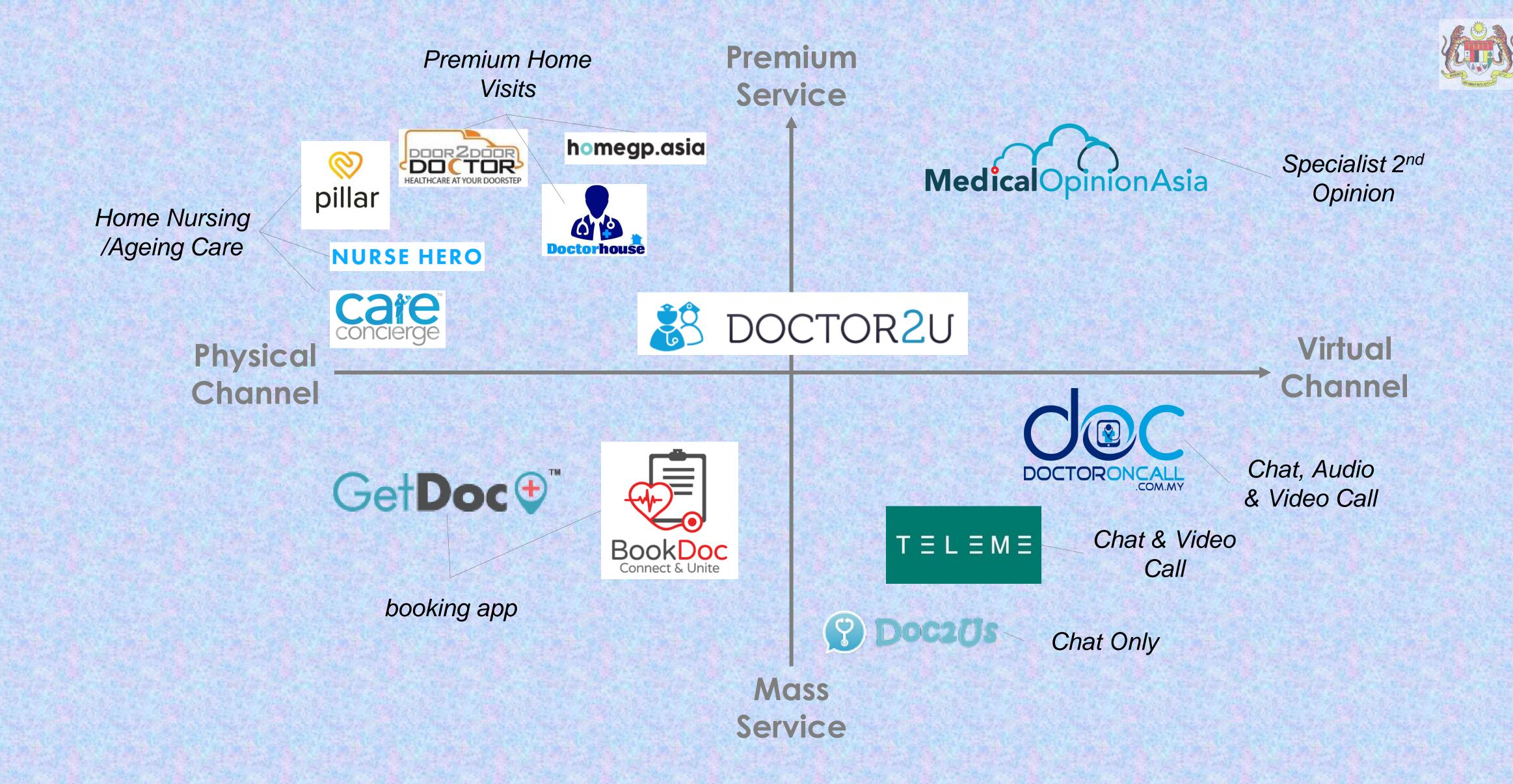
Clinical consultation via video/ phone call or text messaging

**Virtual** Services

"The conventional wisdom that the best care is delivered inperson by experienced caregivers may soon be overturned"

HBR, 2018

### Uberisation of Healthcare



# Uberisation of Healthcare: Malaysia's Landscape

Source: DoctorOnCall

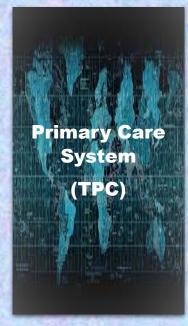


# 6. ICT Transformation for Health





### ICT TRANSFORMATION







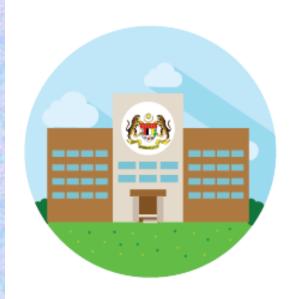




Malaysia Integrated
Healthcare Information
System (MyIHS) is a
platform to access for
a quality health data.

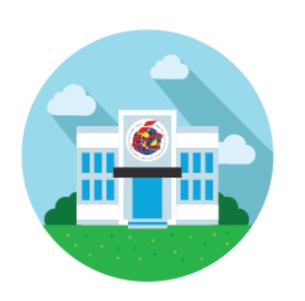
Status: The MyIHS contract is expected to be finalised in April 2018.

### MyHEALTH DATA WAREHOUSE (MyHDW)

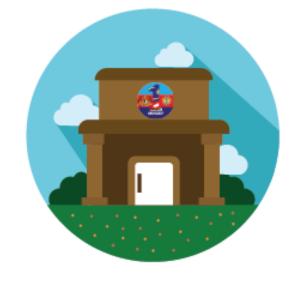


Ministry of Health Malaysia





Ministry of Higher Education (University Hospital)



Ministry of Defence Malaysia (Army Hospital)

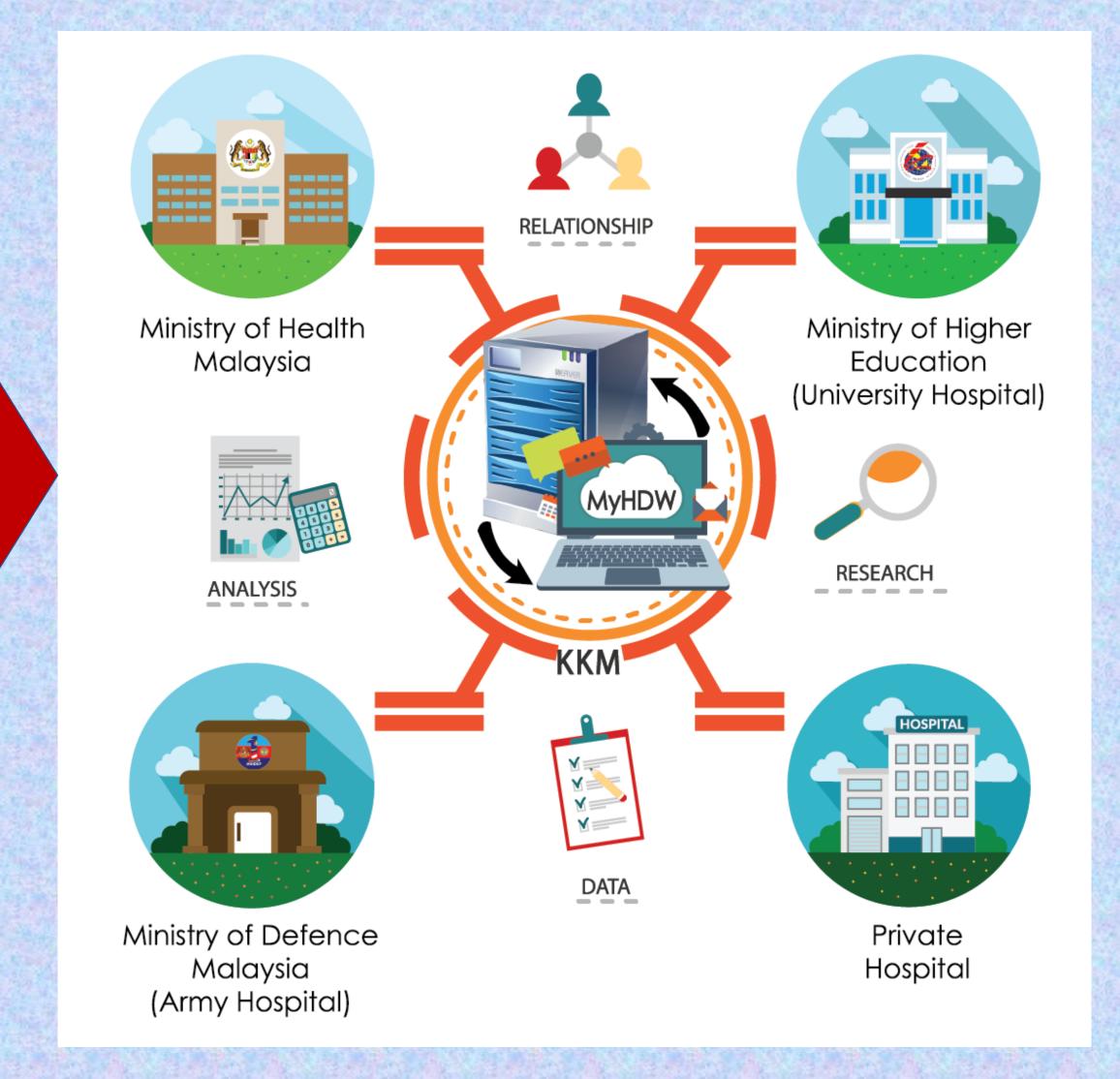


Private Hospital











# 7. Inter-agency Collaboration & Public-Private Partnership



### ESTABLISHMENT OF LOW-RISK BIRTHING CENTRE (LRBC)

 To provide an alternative quality anatenatal care and ensuring safe delivery for low risk pregnant mothers.

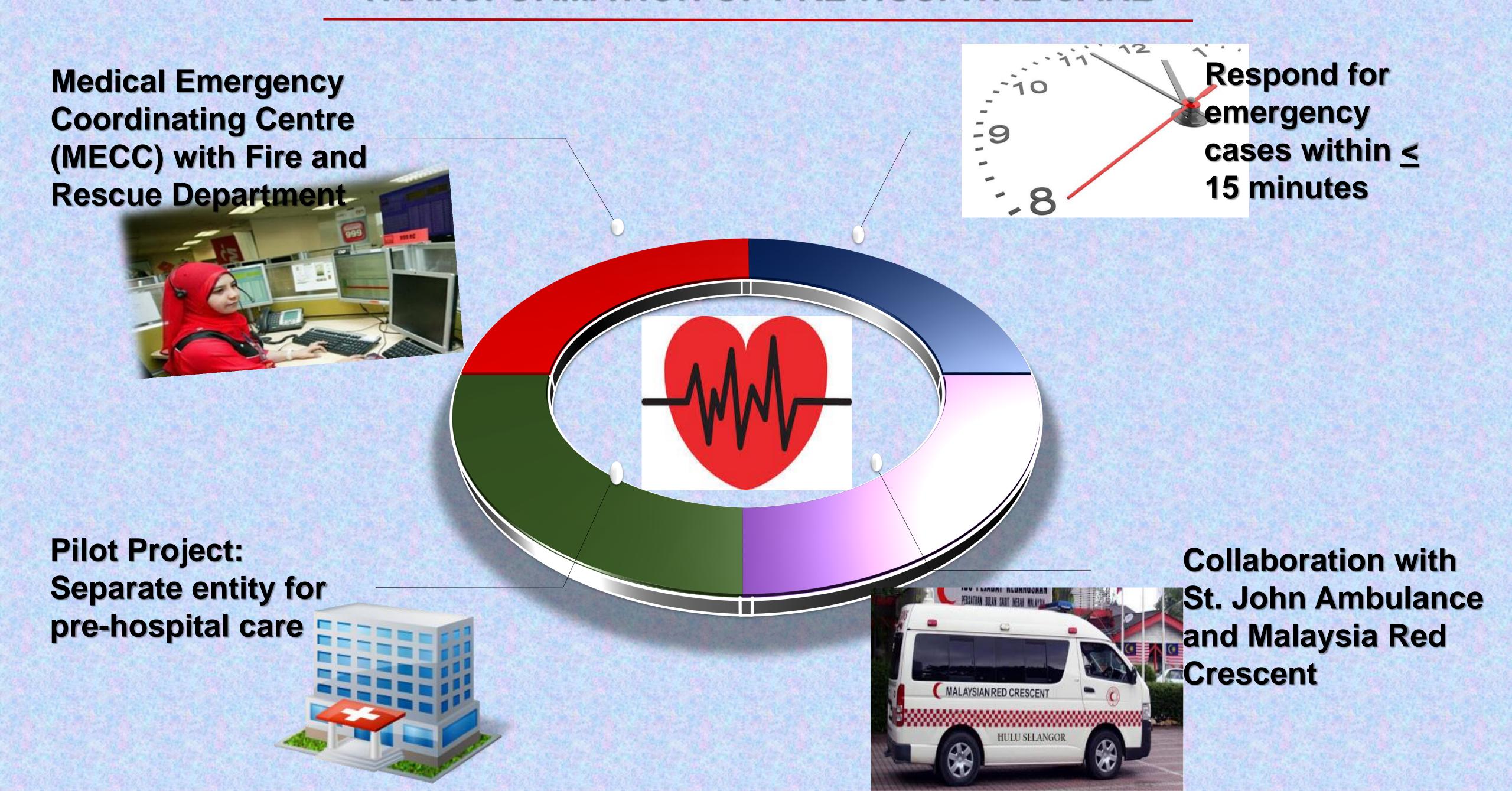
To reduce congestion in MOH hospitals.



- Hospital Alor Setar, Kedah
- Hospital Tuanku Ampuan Afzan, Kuantan
- Low—Risk Birthing Centre, Putrajaya



### TRANSFORMATION OF PRE-HOSPITAL CARE















TRANSFORMATION OF PRE-HOSPITAL CARE (EMERGENCY SERVICES)



**SCOPE OF SERVICES** 

#### PROMOTE AND SUPPORT NON-PROFIT ORGANIZATION



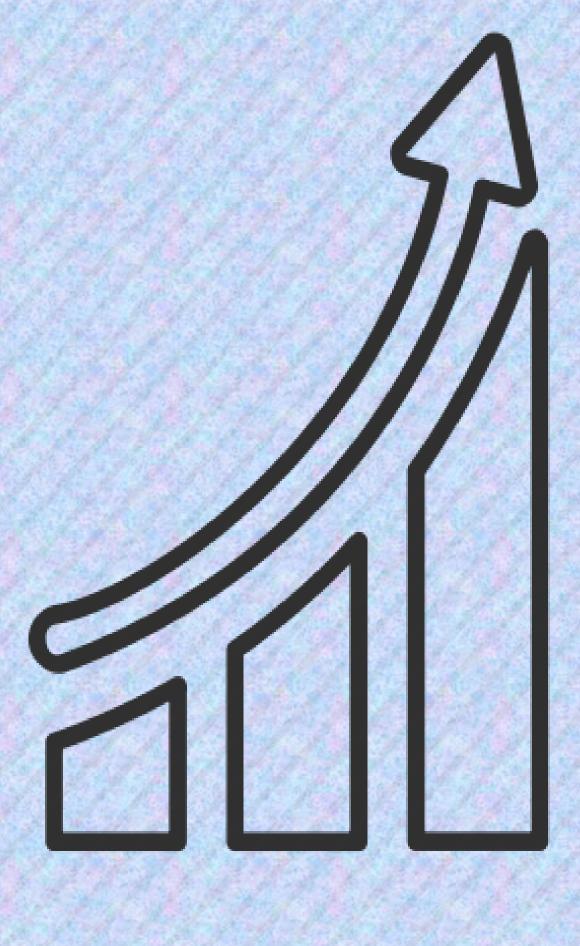
Collaboration with NGOs in providing palliative services

Soft loan application by non-profit charitable hospital

One-off grant application by the hemodialysis private center/ NGO

Collaboration with NGOs – grants endorsement to administer healthcare promotion programs





# 8. Ensuring Health System's Financial Sustainability





#### Megatrends are rapidly changing the the world we live in.....



#### Urbanization



- 80% of the world's & Malaysia's population will be living in urban areas in 2030
- Cities will be densely populated & rise of more 10 million population cities

#### Resource Scarcity



- Overpopulation will lead to greater focus on energy, food and water security
- Sustainability increasingly essential focus for consumer demand, waste management

#### **Ageing Society**



- Population of over 60 years and above will exceed the youth
- Malaysia will become an "ageing nation" come 2035 (>15% of the population aged >60 tahun)

#### **Geopolitical Shift**



- Rapid growth of the emerging market creates a new world order by 2050
- Asian economies will form 50% fo the worlds GDP in 2050

#### Digitalisation



- Rapid development of technology such as Al (Artificial Intelligence)
- Jobs of the future may lead to loss of employment if people are not equipped with the necessary skills

#### **Societal Change**



- Tensions between globalisation with tendencies towards nationalist protectionism
- Economic empowerment and diversity in the workforce

Maklumat Am TN50.pptx



Healthcare will be driven by Quality of Care

Prevention is BETTER than Cure

Healthcare back to Communities, Families & Individuals

Simplify healthcare
Using Creative
Innovations
& Smart Solutions

Public-Private
Partnerships
& Strategic
Collaborations

Focus of Future Healthcare

# GLOBAL SURGERY AS PART OF UNIVERSAL HEALTH COVERAGE







#### PAST, PRESENT & FUTURE OF GLOBAL SURGERY





Before we can plan for the future, we need to first look back where we were in the PAST, where we are NOW and what is in the pipeline for the NEXT 5 years..

#### Past

- · Surgical fraternity exclusive, working in silos
- Lack of integration with global health agendas

#### Present

- Inequitable access to Safe Surgical Care
- Call for Surgery as a Global Health Agenda
- Potential for Malaysia to be at the forefront in Global Surgery policymaking, humanitarian aid, training & research

#### **Future**

- Collaborations with local stakeholders in LMIC to improve access and capacity for surgery
- Bigger role on the global stage in surgical services, training & research
- Creative ideas and innovations to gain higher impact at reasonable costs





# GLOBAL SURGERY 2030 REPORT (Meara et al., 2015) The Lancet Commission on Global Surgery

#### THE REALITY TODAY AND KEY MESSAGES

02

03

04

05

5 billion people lack access to safe, affordable surgical & anaesthesia care when needed

143 million additional surgical procedures are needed each year to save lives and prevent disability

33 million individuals face catastrophic health expenditure due to payment for surgery and anaesthesia each year

Investment in surgical and anaesthesia services is affordable, saves lives, and promotes economic growth

Surgery is an indivisible, indispensable part of health care





# GLOBAL SURGERY 2030 REPORT (Meara et al., 2015) The Lancet Commission on Global Surgery

### Surgery is the neglected step child of Public Health

How can WE contribute as a global actor?

"Universal access to safe, affordable surgical and anaesthesia care when needed saves lives, prevents disability, and promotes economic growth"

#### **Global Surgery Definition**

- An area of study, research, practice, and advocacy that seeks to improve health outcomes and achieve health equity for all people who need surgical and anaesthesia care, with a special emphasis on underserved populations and populations in crisis.
- It uses collaborative, cross-sectoral, and transnational approaches and is a synthesis of population-based strategies with individual surgical and anaesthesia care



#### **Noor Hisham Abdullah**

Published by Hisham Abdullah [?] · 16 March · @

This evening I had a teleconferencing session with the President and executive board of International Society of Surgery in Zurich. I thanked the President Professor Andrew Hill for appointing me to the chair of Global Surgery Committee and share my proposal on the global framework action plan.

After 20mins of my presentation I am delighted that my proposal has been well accepted and unanimously agreed upon. More importantly the President and two executive counselors have volunteered to join my committee.

We shall all come together as one to work hand in hand for the common goal to steer ISS/SIC to greater heights and achievements. Indeed Surgery should be part of the public health/global health agenda and to meet the unmet global surgical burdens particularly in developing countries. I believe our global framework proposal will make ISS/SIC to be more inclusive and relevant, today and tomorrow.





COUNTRY STATEMENT AT THE 71ST WORLD HEALTH ASSEMBLY:

"HEALTH FOR ALL, COMMIT TO UNIVERSAL HEALTH COVERAGE"

21 May 2018, Palais de Nations, Geneva, Switzerland To date surgery is being prioritised as another important component of public health. 90% of deaths from injuries occur in low-and middle-income countries and yet the poorest third of the world's population receives only 3.5% of the surgical operations undertaken worldwide. Universal access to safe, affordable surgical and anaesthesia care when needed, save lives, prevent disabilities and promote economic growth for the country.

"Health for all" should be the frontier of all development efforts. Malaysia joins hands with WHO and members states in championing universal health coverage, focusing on the quality of care to be better than before, stronger in implementation and smarter in partnerships for our present and future generation.

On that note Mr. President, I thank you all for your kind attention







#### **Noor Hisham Abdullah**

Published by Hisham Abdullah [?] ⋅ 25 May at 00:02 ⋅ <a> •</a>

This afternoon I had an exciting and inspiring discussion with World Health Organisation (WHO) on behalf of International Society of Surgery (ISS/SIC) and as chair of the Global Surgery Committee.

ISS/SIC is collaborating and joint forces with the WHO for Universal access to safe, affordable surgical and anaesthesia care align with WHO's Health for all agenda. I had a great and fruitful discussion with Dr Johnson and Dr Montenegro from the Department of Service Delivery & Safety (SDS) /Universal Health Coverage and Health Systems WHO. We agree on the global framework to establish the required minimal standard for universal health coverage for Surgery and anaesthesia, embracing the digital technology, connect the unconnected with mobile services, harnessing creative ideas and innovations to improve the deliveries and services of surgical and anaesthesia care particularly in developing countries. Its time that we prioritised surgery and anaesthesia as another important component of public health. From the WHO data, 90% of deaths from injuries occur in low-and middle-income countries and yet the poorest third of the world's population receives only 3.5% of the surgical operations undertaken worldwide.

"Health for all" should be the frontier of our partnerships and development efforts. ISS/SiC joins hands with WHO and member state Malaysia in championing universal health coverage, focusing on the quality of surgical care and smarter in partnerships for a safer and better healthcare.

- Collaboration between ISS/SIC & WHO for universal access to safe, affordable surgical and anaesthesia care
- Agree on a global framework to establish the required minimal standard for UHC for Surgery and anaesthesia
- Use digital technology to connect the unconnected with mobile services
- Creative ideas and innovations to improve the service delivery of surgical and anaesthesia care in developing countries



# GLOBAL SURGERY ECOSYSTEM FRAMEWORK PROPOSAL *Guiding Principles*







Simple



High Quality of care



Portability & POC Test



Cost effective



Replicable



Daycare

### GLOBAL SURGERY ECOSYSTEM FRAMEWORK PROPOSAL





### Perioperative care





Risk assessment & Stratification

Patient education

Premedication



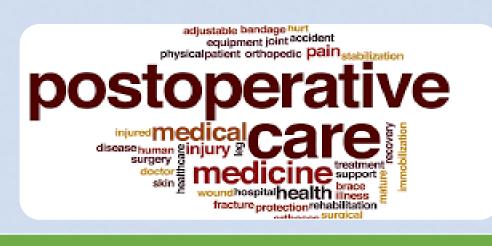
**SURGICAL SPECIALTIES** 

**Essential Surgical List** 

#### **ANAESTHESIA**

Essential Anaesthesia List,

Regional Anaesthesia, Acupuncture Assisted Analgesia



MOBILE
PRIMARY CARE TEAM

Follow up
Wound management
Pain management

#### CLINICAL, RESEARCH & TECHNICAL SUPPORT

Pharmacy:
WHO Essential
Drugs List

Diagnostics:

WHO Essential Diagnostic List, POC Test, Imaging etc.

Engineering:

Logistics, Clinical Waste, Sanitation, Water & Renewable Energy, Sterilisation, Ventilation etc.

NIH:
Performance
Monitoring

#### GLOBAL SURGERY ECOSYSTEM FRAMEWORK PROPOSAL

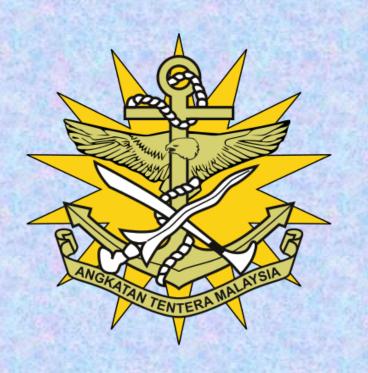




Smart Partnership between Key State and Non-state Actors (Preliminary List)



















#### GLOBAL SURGERY ECOSYSTEM FRAMEWORK PROPOSAL





Smart Partnership between State and Non-state Actors (Future Potential Partners)











# GLOBAL SURGERY ECOSYSTEM FRAMEWORK PROPOSAL Key Functions





O1 Policymaking

Service

03 Training

02

04 Research

SIXTY-EIGHTH WORLD HEALTH ASSEMBLY

WHA68.15

Agenda item 17.1

26 May 2015

Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage

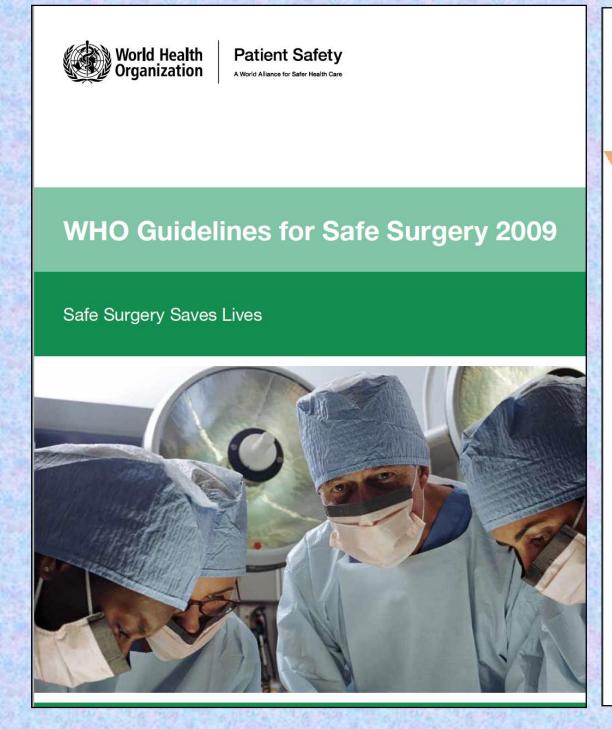


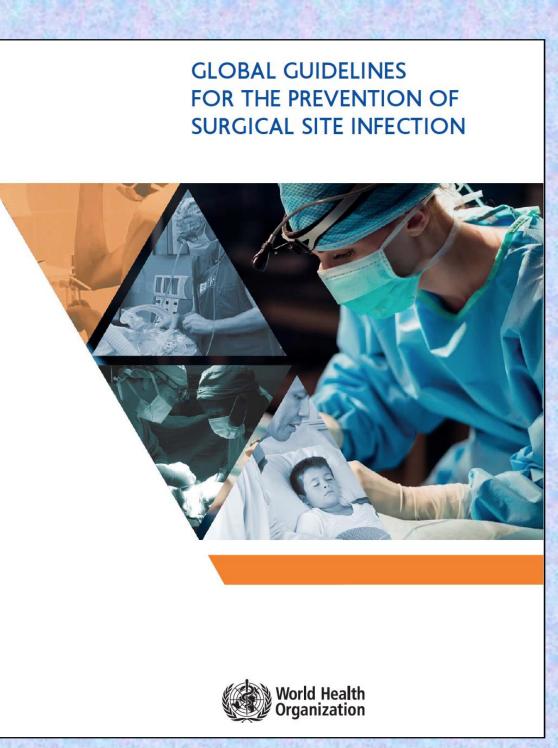
#### POLICYMAKING: GLOBAL SURGERY POLICYMAKING

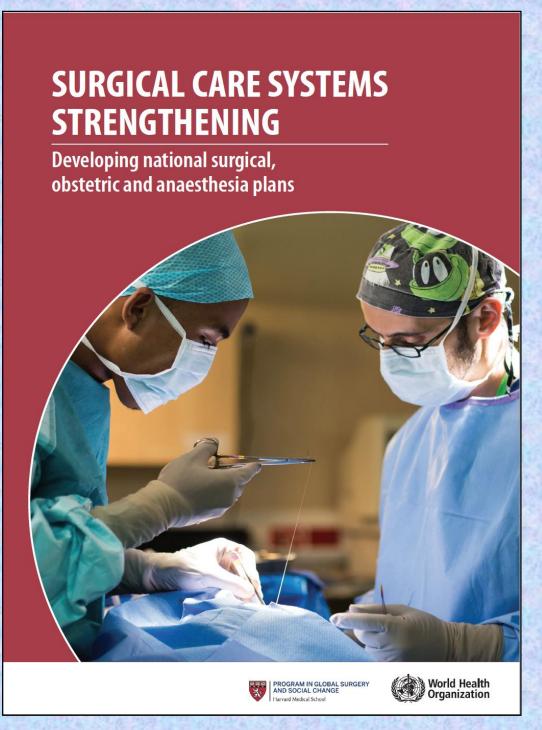




Enhancing our role in global surgery policymaking in United Nations and WHO e.g. Essential Surgical List, Essential Anaesthesia List







SIXTY-EIGHTH WORLD HEALTH ASSEMBLY

Agenda item 17.1

WHA68.15

26 May 2015

Strengthening emergency and essential surgical care and anaesthesia as a component of universal health coverage



#### SERVICE: HUMANITARIAN AID





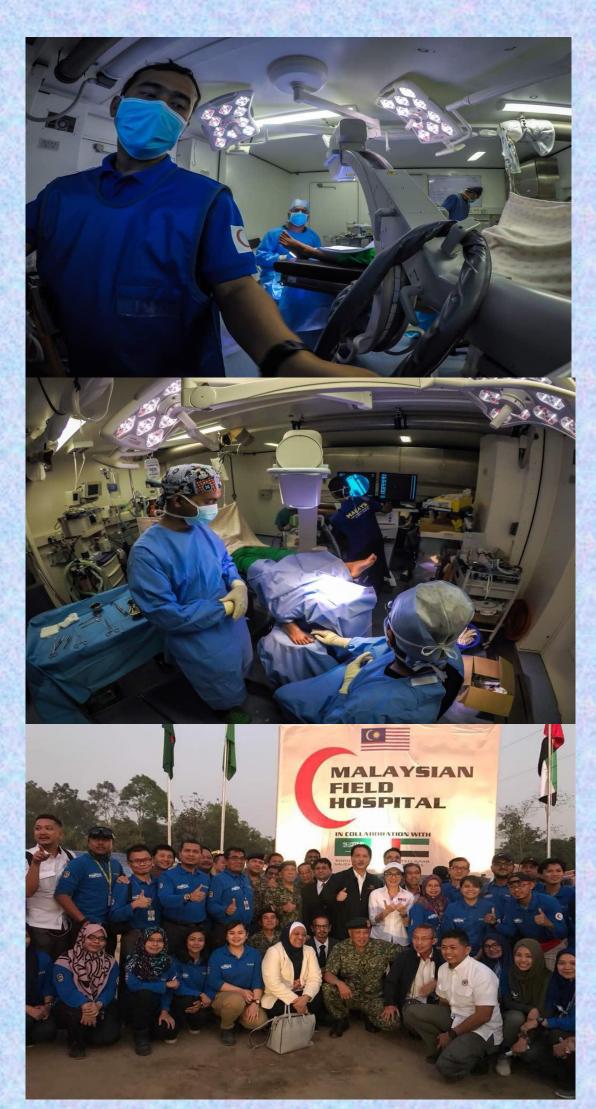
Providing voluntary services in areas of need in partnership with local and international organisations



#### Example:

Volunteering opportunities for ISS members at the Malaysian Field Hospital, Cox Bazar, Bangladesh

- Humanitarian response from the Malaysian Government to the Rohingya refugee crisis
- Collaboration with SA & UAE Governments
- 50-bed medical facility, 2 Operating Theatres
- Operations commenced 1 Dec 2017
- 50% surgery done hernia, lumps & bumps PGU, etc.
   among Bangladeshis and Rohingyas



#### SERVICE: HUMANITARIAN AID





Providing voluntary services in areas of need in partnership with local and international organisations





Example: Volunteering opportunity for ISS members on Mercy Ships

- Humanitarian NGO founded in 1978
- Hospital ships that deliver free, world-class healthcare services, capacity building and sustainable development to those with little access in the developing world
- Service in > 70 countries, treating more than
   2.56 million direct beneficiaries



#### TRAINING





Establishing training hubs in partnership with local ISS Chapters or organisations

#### Examples

Special Breast and Endocrine Surgery Course (last 5 years)

Collaboration with ISS and integrated society of IAES & BSI together with local chapter College Of Surgeons Malaysia, Academy of Medicine Malaysia and MOH Malaysia

#### Postgraduate Course

Collaboration with ISS and integrated societies together with local chapter and College Of Surgeons across the various region. Strategic Partnership with respective colleges to organise postgraduate courses

#### Opportunity

ISSF Travel Scholarship / RCSEd Fellowship

Collaboration with international/local partners in organising short attachment in developing countries to build up local capacity in selected areas of expertise or vice versa

#### RESEARCH



Multinational collaboration between ISS chapters in developed and developing countries

Examples: DNDI, FIND, CREST







Creative ideas & innovations i.e. ISS Award & Competition on Innovation, up-scaling ideas to commercialization





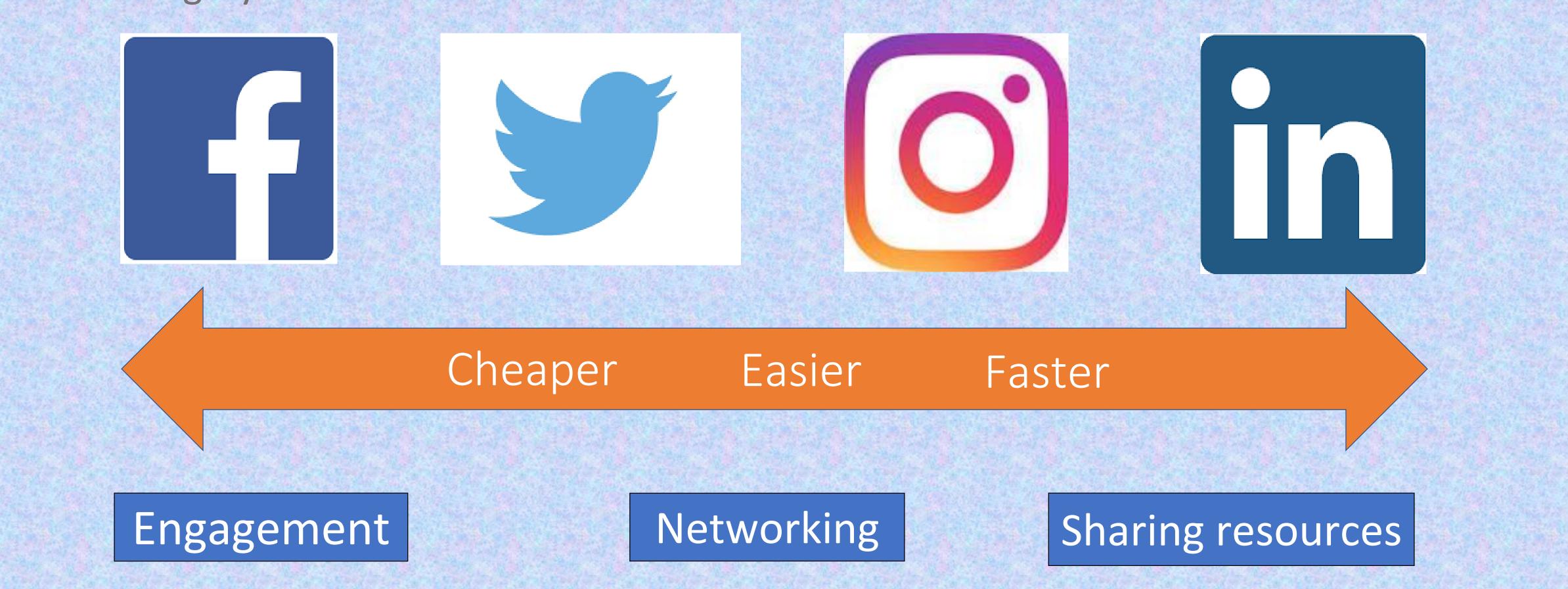


#### SOCIAL MEDIA





Engage with all ISS national chapters/representatives through Global Surgery Committee secretariat





# The new medium of social media is all about winning the war of fragile attention



100 millions hours of video/day 1.7 seconds engagement/video





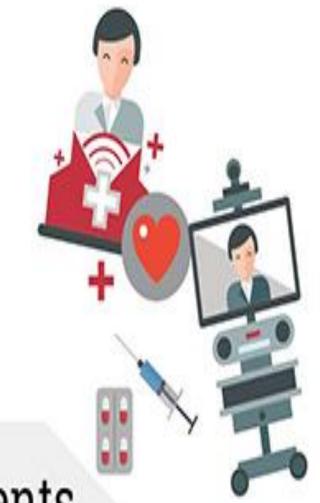
## Social Media for Health Basic Principles

- Building up trust & credibility over time, not overnight
- A 'virtual you' in the realm of social media
  - Image, branding, professionalism
- Engagement, Explanation, Expectation
- Speedy, transparency, fact-laden sharing of information & knowledge
- Utilisation for:
  - Health Promotion
  - Crisis and Risk Management
  - Disseminating Information on Health Policy etc.

Top 5 Digital Transformati on Trends in Healthcare (Estuate, 2018)

# Telemedicine

The telemedicine market is on a constant rise and over **7 billion patients** are expected to access telehealth services by the end of 2018





#### Personalized Treatments

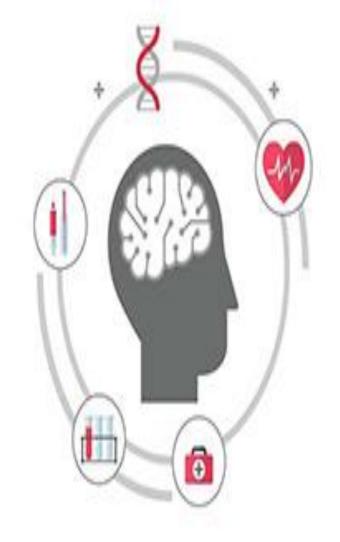
Genomics and advanced analytics are paving a way to fight unique diseases with

personalized medicine



AI is reshaping healthcare enabling

24X7 patient interaction improving
access to emergency healthcare







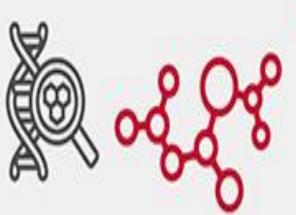
Wearables are the new face of modern healthcare and the market is expected to reach

\$95.3 billion in 2021

Mobility and Cloud Access

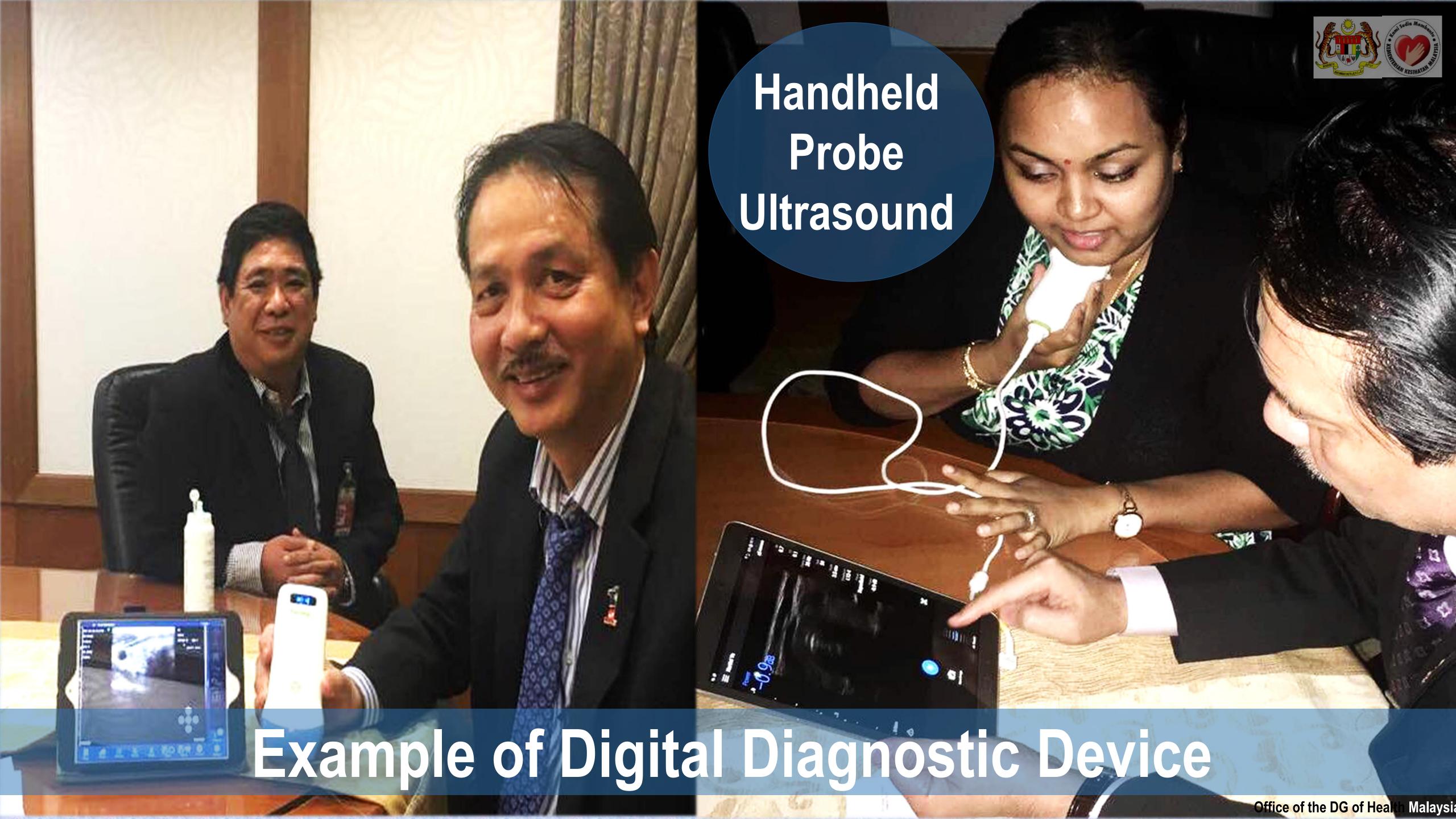
Mobility and cloud enablement to improve patient engagement and maintain patient records systematically









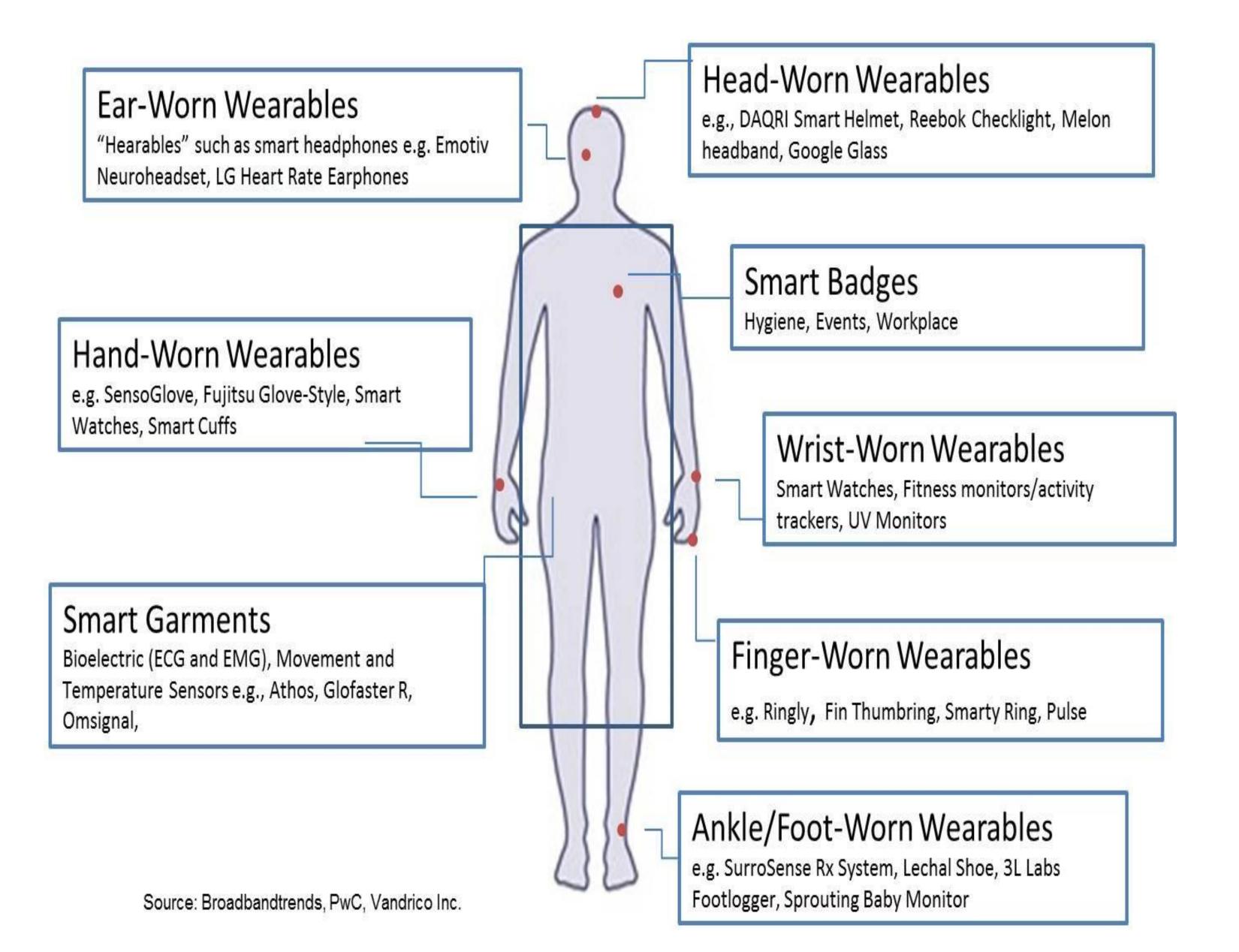




#### Example of Wearables









#### **FUNCTIONS OF WELT**









STEPS

SITTING









#### **FUNCTIONS OF WELT**









**SMART HEALTH FROM THE WAIST** 



Example of Wearable Device





#### ORIGINAL ARTICLE

#### A Pilot Randomized Control Cross over Study Evaluating the Effectiveness and Safety of Mechanical Percussor Compared with Conventional Chest Physiotherapy in Adults with Productive Cough

Punithavathi Narayanan, MBBS, DCH, Ong Loke Meng, FRCP, Irfhan Ali Hyder Ali, MBBS, MMed, Mohd Izmi @ Ibrahim Ahmad, MBBS, Masters Rehab, Dharminy Thurairatnam, MD, Ang Ah Heong, SRN, Hadzlinda Zainal, MBBS, Sivasangari Subramaniam, PhD

Hospital Pulau Pinang, Clinical Research Centre, Jalan residency, 10990 Penang

#### SUMMARY

Introduction: Conventional Chest Physiotherapy (CCPT) remains the mainstay of treatment for sputum mobilization in patients with productive cough such as bronchiectasis

Air way Disease (COPD). Secretions that block the airway can lead to atelectasis and poor oxygenation<sup>1,2</sup>. Improved mobilization of bronchial secretions contributes to improved ventilation-perfusion matching and the normalization of the



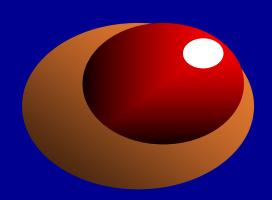
LEGA A handheld, portable, mechanical-electronic controlled medical device for effective percussion and vibration

Example of Made in Malaysia Innovation

## Acupuncture Assisted Anaesthesia







# Acupuncture Assisted Anaesthesia

Meridian line 4: Large Intestine (LI)
Acupoints: HeGu





Neuroscience Letters 307 (2001) 105 ± 08

Neuroscience Letters

www.elsevier.com/locate/neulet

## Activation of the hypothalamus characterizes the acupuncture stimulation at the analgesic point in human: a positron emission tomography study

Jen-Chuen Hsieh<sup>a,b,c,\*</sup>, Chung-Haow Tu<sup>a,b</sup>, Fang-Pey Chen<sup>c,d</sup>, Min-Chi Chen<sup>a</sup>, Tzu-Chen Yeh<sup>a,c</sup>, Hui-Cheng Cheng<sup>a,c</sup>, Yu-Te Wu<sup>a,e</sup>, Ren-Shyan Liu<sup>c,f</sup>, Low-Tone Ho<sup>a,c</sup>

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bInstitute of Neuroscience, School of Life Science, National Yang-Ming University, Taipei, Taiwan Faculty of Medicine, School of Medicine, National Yang-Ming University, Taipei, Taiwan Center of Traditional Medicine, Taipei Veterans General Hospital, Taipei, Taiwan Institute of Radiological Sciences, National Yang-Ming University, Taipei, Taiwan National PET/Cyclotron Center, Taipei Veterans General Hospital, Taipei, Taiwan

Received 25 April 2001; received in revised form 21 May 2001; accepted 22 May 2001

#### **Abstract**

We performed a positron emission tomography study, using regional cerebral blood ow as the index of brain activity, to address the speci®city of brain activation pattern by acupuncture stimulation of short duration at the classical analgesic point. Needling manipulation at 2 Hz was performed at a classical point of prominent analgesic ef®cacy (Li 4, Heku) and a near-by non-classical/non-analgesic point, respectively, in normal subjects. Regions activated by acupuncture stimulation at Li 4 included the hypothalamus with an extension to midbrain, the insula, the anterior cingulate cortex, and the cerebellum. Of note, it was only the stimulation at Li 4 that activated the hypothalamus under the similar psychophysical ratings of acupuncture sensation (deqi) as elicited by the stimulation at the two points, respectively. The data suggested that the hypothalamus might characterize the central expression of acupuncture stimulation at the classical analgesic point and serve as one key element in mediating analgesic ef®cacy of acupuncture stimulation. q 2001 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Acupuncture; Pain; Hypothalamus; Positron emission tomography; Brain; Insula; Brain stem; Cerebellum

Acupuncture has been used as a treatment in Asia for more than 3000 years and is gaining widespread popularity in the modern medicines as an alternative and complementary treatment for many health conditions [14]. Among them, pain alleviation is one of the most common applications. Animal and clinical studies suggested that the analgesia ef®cacy of acupuncture might be achieved by the endogenous opioid ligands [7,11]. Several structures of the descending antinociceptive pathway, e.g. the hypothalamus, the nucleus accumbens, the mesencephalon (including periaqueductal gray matter and raphe nuclei), and the limbic systems are believed to participate in the analgesic mechanism of acupuncture [7,18,21].

activity, on acupuncture stimulation at the classical

The suggested mechanisms have been corroborated by recent functional brain imaging studies in which modulation

of the activities of hypothalamus timbic systems were

demonstrated when contrasting the acupunctural needle manipulation with the controlled super®cial tactile or prick—ing stimulation at the analgesic acupuncture points [10,20]. Using functional magnetic resonance imaging (fM RI), W u et al. [20] had previously demonstrated that acupuncture stimulation at the analgesic acupuncture points, Large Intes—tine 4 (Li 4) and Stomach 36 (St36), activated the hypotha—lamic=timbic system. In addition, a correlation between activation of speci®c areas of brain cortices and correspond—ing acupuncture stimulation at the therapeutic points had been well illustrated [3]. To further address the speci®city of central expression of acupuncture stimulation, we conducted a PET study, using rCBF as the index of brain

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E-mail address: jchsieh@ vghtpe.gov.tw (J.-C. Hsieh).

hypothalamus (x = 2, y = -10, z = 0, Z-max = 4.32; bilaterally extended) and insula (x = 32, y = -22, z = 16, Z-max = 3.38) when compared with *minimal* condition (Fig. 2a). *deqi* activated the hypothalamus more spatially and with an extension to midbrain (encompassing periaqueductal gray matter) when compared with *rest* condition (x = -2, y = -6, z = -4, Z-max = 4.85; bilaterally extended; Fig. 2b). *Minimal* stimulation activated neither the hypothalamus nor the insula when compared with *rest* situation (Fig. 2b). We inadvertently observed a

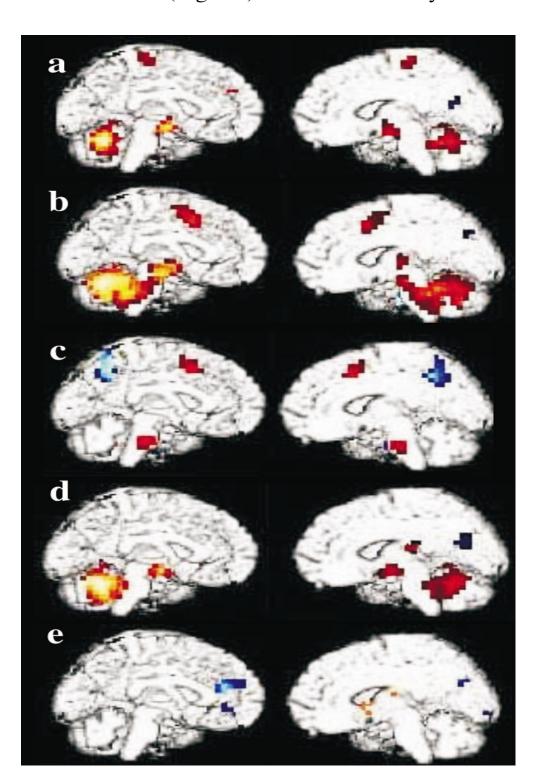


Fig. 2. The activation maps depicting the neuronal activities in different conditions. The warm color (red-yellow) denoted activation and the cold color (blue-cyan) denoted deactivation (not discussed) in experiment 1 (a,b,c) and experiment 2 (d,e). (a) deqi, as contrasted with minimal, activated the hypothalamus and the cerebellum. (b) The activation by deqi in the hypothalamus extended to the midbrain/brain stem when contrasted with rest. (c) Minimal stimulation in experiment 1 did not activate the hypothalamus. (d) Similar activation by deqi at Li 4 as contrasted to minimal stimulation. (e) No activation observed in the hypothalamus by deqi stimulation at non-analgesic point, comparing minimal stimulation.

strong activation of cerebellar vermis extending to left cerebellar hemisphere by deqi in comparison with both minimal (x = -8, y = -80, z = -24, Z-max = 4.17; Fig. 2a) and rest conditions (Z-max = 5.00; Fig. 2b), respectively. In experiment 2, the activation pattern by deqi at the analgesic point (Li 4) was similar to that of experiment 1 as contrasted with the minimal condition (Fig. 2d). Stimulation at the non-analgesic point (with similar acupuncture sensation and intensity as that of deqi) neither activated the hypothalamus, the midbrain/brain stem, nor the insula (Fig. 2e).

The data further corroborated our previous fMRI findings [20]. Acupuncture stimulation with deqi at the analgesic point engages neural substrates of the endogenous anti-nociceptive modulation system, especially the hypothalamus and the midbrain structures. The hypothalamus, with the most abundant endorphinergic neurons and long descending projections to the raphe nucleus and periaqueductal gray matter of the mesencephalon, has been suggested to be critical for acupuncture analgesia [18,19,21]. The absence of hypothalamus/midbrain activation by the stimulation at the non-analgesic point implies that the hypothalamus might characterize the central expression of acupuncture stimulation at the acupuncture point of prominent analgesic efficacy and serve as one of the key neural substrates in mediating analgesic efficacy of acupuncture stimulation [7,18,21].

In the past decade, confirmation has been given to the insula as a visceral sensory area, visceral motor area, motor association area, vestibular area, and language area [13]. Activation of insula by *deqi* and *minimal* conditions was in agreement with the recent idea, based on the functional brain imaging studies [8,9,20] and neuroanatomical knowledge, that insula can be a multifaceted-sensory area and serves as a critical integration cortex [1].

Activation of the anterior cingulate cortex was significant only when contrasting deqi with rest (x = 0, y = -20, z = 36, Z-max = 3.86; Fig. 2d). We did not observed any significant activation of the anterior cingulate cortex when contrasted deqi with minimal (Fig. 2c). Attention and arousal to needling manipulation could account for the activation in this sub-region of the anterior cingulated cortex [9]. The role of the anterior cingulate cortex might be minor in the mediation of deqi phenomenon per se.

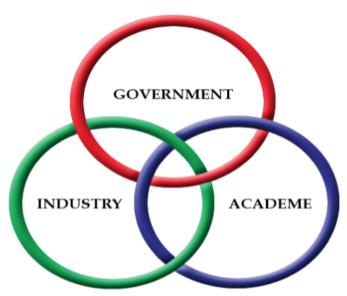
Prominent activation of cerebellum (mainly the vermis) by acupuncture stimulation with deqi was unexpected. The cerebellar activity survived even using a more stringent corrected threshold of P < 0.01 [5]. The brain activation pattern did not code the mild musculocutaneous discomfort due to the stimulation [16]. Neuroanatomical studies have shown that the cerebellum and hypothalamus are interconnected by direct hypothalamo-cerebellar and cerebellohypothalamic projections and by a multitude of indirect pathways [4]. The reciprocal connections between the cerebellum and hypothalamus may be part of the circuits through which the cerebellum participates in the modulation and co-ordination of a wide range of central nervous activ-



#### Formation of Telemedicine Development Group (TDG)

"A vibrant, collaborative ecosystem in Digital Health & Innovation"

THE TRIPLE-HELIX MODEL



TDG Steering Committee
June 2017

( Co- Chaired by DG MOH & MCMC Chairman)





4 Special Interest Groups



2 Knowledge
Dissemination
& Networking

R&D and Clinical Trials

Certification,
Go-to-Market,
Manufacturing

Link to Industry

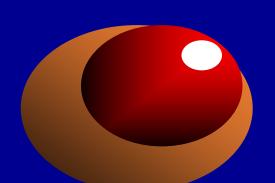
IOT /Wearables/ Big Data

Facilitate Go to Market

Research &
Development

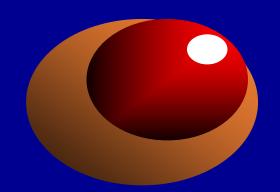






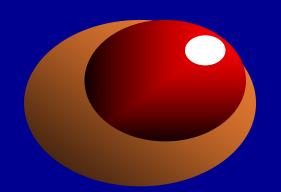
# Reports of Thyroidectomy Procedures Under LA

Author, year	N	Indication	RLN	Hypopara	Bleed	Death	Other
Dunhill, 1907	200	Hyperthyroid				3 (1.5%)	
Cunningham, 1975	43	Nodule	1 (2.3%)		1 (2.3%)		
Fernandez, 1984	433	Benign					27 (6.2%)
Saxe, 1987	17	All					2 (12.0%)
Hochman, 1991	21	All	1 (4.8%)	3 (14.0%)	1 (4.8%)		2 (9.5%)
*LoGerfo, 1991	21	All		1 (4.8%)			
* LoGerfo, 1994	40	All					1 (2.5%)
Kulkarni, 1996	16	All		1 (6.2%)			2 (12.0%)
Samson, 1997	809	All	19 (2.3%)	16 (2.0%)	1 (0.1%)	1 (0.1%)	
Prasad, 1998	33	All					
*LoGerfo, 1998	203	All		10 (4.9%)	3 (1.5%)		2 (1.0%)
Fahey, 2001	58	All					2 (3.4%)
LoGerfo, 2002	6	Thyroiditis					
Hisham, 2002	65	All	_	-	_	-	2 (3.0%)
TOTAL	1,965	_	21 (1.1%)	31 (1.6%)	6 (0.3%)	4 (0.2%)	40 (2.0%)

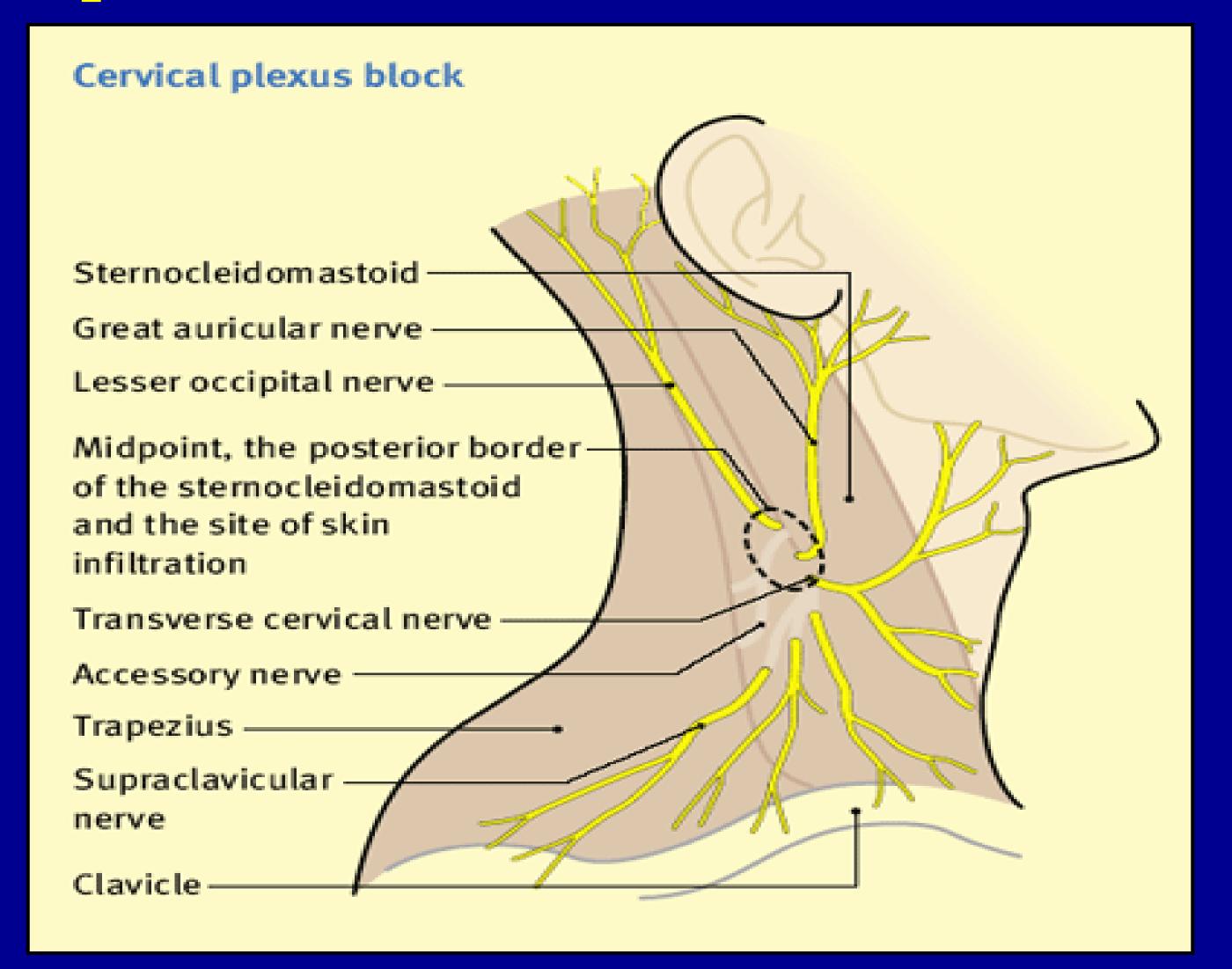


# Outcomes of Thyroid Surgery under daycare

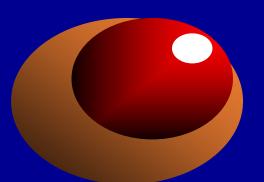
	GA	LA	Completed Daycare
Synder et al (58 patients) Arch Surg 2006;131:167-173	29	29	51 (88%)
Hisham et al (76 patients) J One-day Surgery 2006;16;13-15	37 (20) 54%	39(39) 100%	59 (77.6%)
Inabnet et al (224 patients) Thyroid 2008;18:57-61	40 (18) 45%	184 (162) 88%	180 (80.4%)



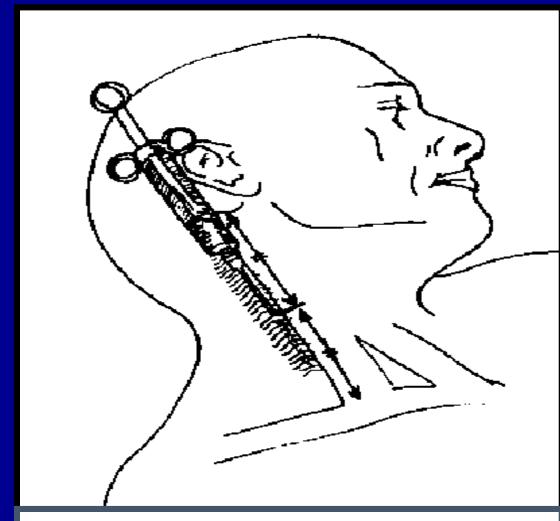
#### Superficial Cervical Plexus

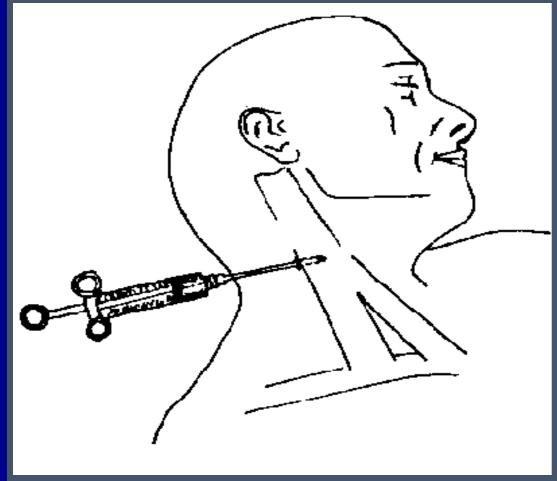






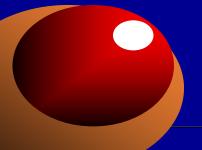
## Superficial Cervical Plexus Block





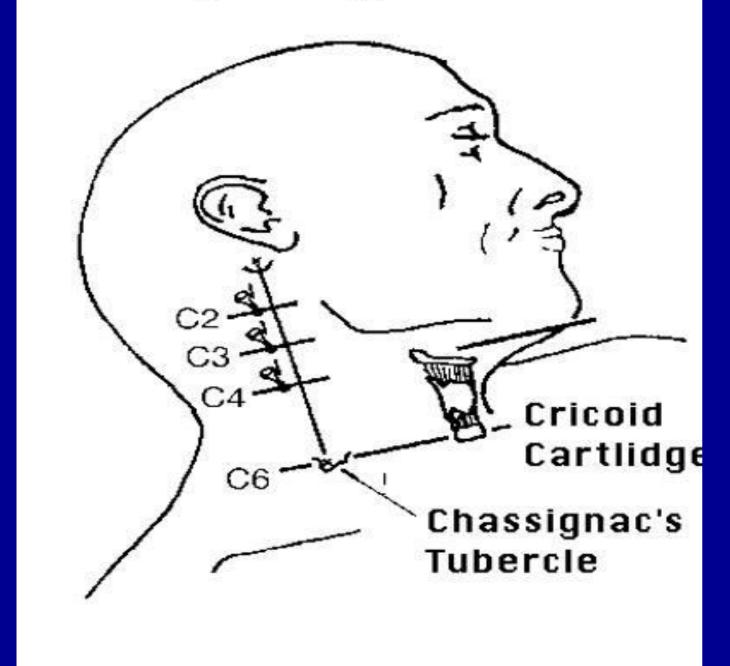






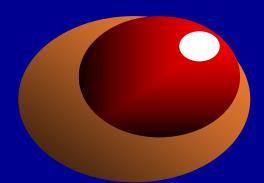
# Deep Cervical Plexus Block











#### Largest goitre in the world was done under LA

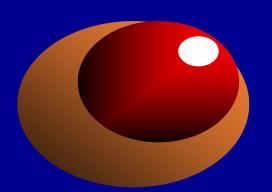


20 years history 75x60x45cm goitre in a 48 year old man who was unable to sit & walk for 4 years due to the enormously huge size.



Manoppo AE. Resection of an unusually large goitre. Br J Surg 1977; 64:158-9





#### Largest goitre in the world was done under LA

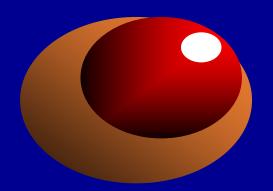




The surgery was done under LA with the patient in prone position (20mls of 2% procaine used) and the surgery was completed with a temporary tracheostomy.

Manoppo AE. Resection of an unusually large goitre. Br J Surg 1977; 64:158-9





## Acupuncture Assisted Anaesthesia

Thyroid Surgery

#### **Stimulation**

- 1. Mechanical
- 2. Heat
- 3. <u>Electrical:</u>

Frequency 30Hz

Adjusted intensity

Duration 30 mins



# Acupuncture Assisted Anaesthesia





# Change for the Better

"It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change"

- Charles Darwin







# "A Nation working together for better Health"

Technically and economically efficient approaches to the achievement of UHC may include the use of ICT: electronic medical records, telemedicine systems, digital monitors for drug adherence, and clinical decision—support applications; expansion of the quantity and quality of human resources for health at the physician, nurse, and community health worker levels; improvements in inventory systems and supply chains for the delivery of vaccines, drugs, diagnostics, and medical devices; screening for risk factors and early signs of disease; and focusing on the often neglected domains of surgical care, reproductive health, and mental health.





# "A Nation working together for better Health"

Continous efforts to ensure universal access to proven public health interventions that address social and Environmental determinants of health,

such as health education campaigns;

access to safe water;

regulation of excessive sugar and salt in the food supply;

control of tobacco and the unsafe consumption of alcohol;

road traffic safety; walkable city designs;

Expanding enrollment in high-quality primary and secondary schools; and more equitable distributions of income and wealth.





# "A Nation working together for better Health"

Achieving UHC is an ambitious aspiration and a powerful indicator of human progress.

#### Quality healthcare system for UHC,

Health for all and leaving no one, no community and no country behind

Surgery is certainly an important component of Public Health

Universal Health Coverage for surgery and anaesthesia for the marginalized populations is desirable, leaving no one behind







## PUTRAJAYA





