Economic Evaluation To Policy

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Contents

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- Importance of Economic evaluation
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Sustainable Development Goal

Goal 3: Ensure healthy lives and promote well-being for all at all ages

- There are 9 targets plus 4 means of implementing targets
- 26 indicators

Target 3.8: Achieve universal health coverage including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

Universal Health Coverage (UHC)

Definition

According to World Health Organization;

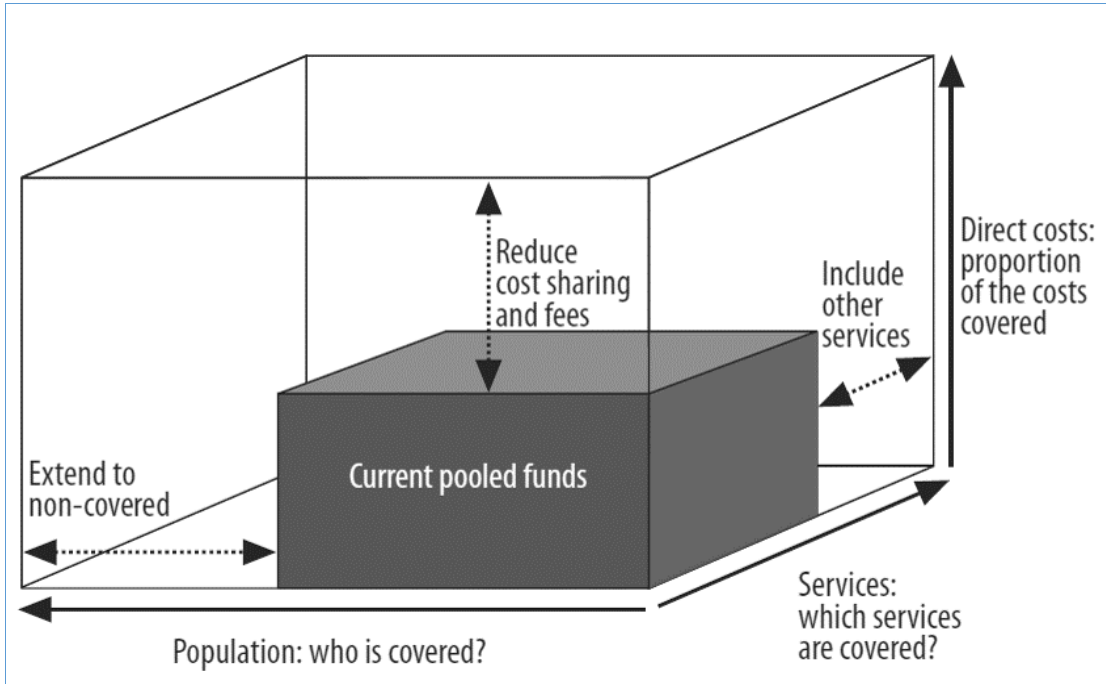
- UHC means that everyone in the population has access to appropriate promotive, preventive, curative and rehabilitative healthcare when they need it and at an affordable price.

Objectives

1. Equity in access to health services – those who need the services can get them and not only those who can pay
2. The quality of health services is good enough to improve the health of those receiving the services
3. Financial risk protection – ensuring that the cost of using care does not put people at risk of financial hardship

Dimensions of UHC

- UHC comprises three important dimensions; the population covered by the scheme, the services that are available and the level of financial contribution.



UHC includes

1. Affordable health care delivery to avoid financial risk when using the service

2. Availability of essential medicines and technologies to diagnose and treat medical problem

3. Well-trained, motivated health workers to provide the services to meet patient's need based on the best available evidence

4. Address social determinants of health such as education, living condition and household income that affect access to health care

Healthcare Delivery

❖ Areas of concern:

1. Equitability
2. Accessibility
3. Comprehensiveness of healthcare provision
4. Minimal spending per capita
5. % of out of pocket payment
6. Quality of healthcare services

These had been mentioned in MDG and now in SDG

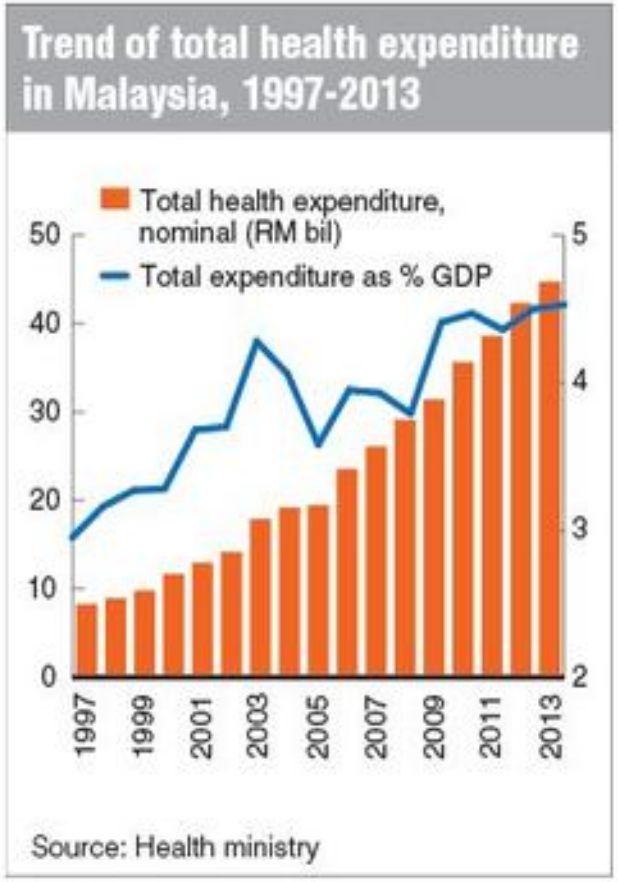
➢ WHO recommended to ensure Universal Health Coverage (UHC)

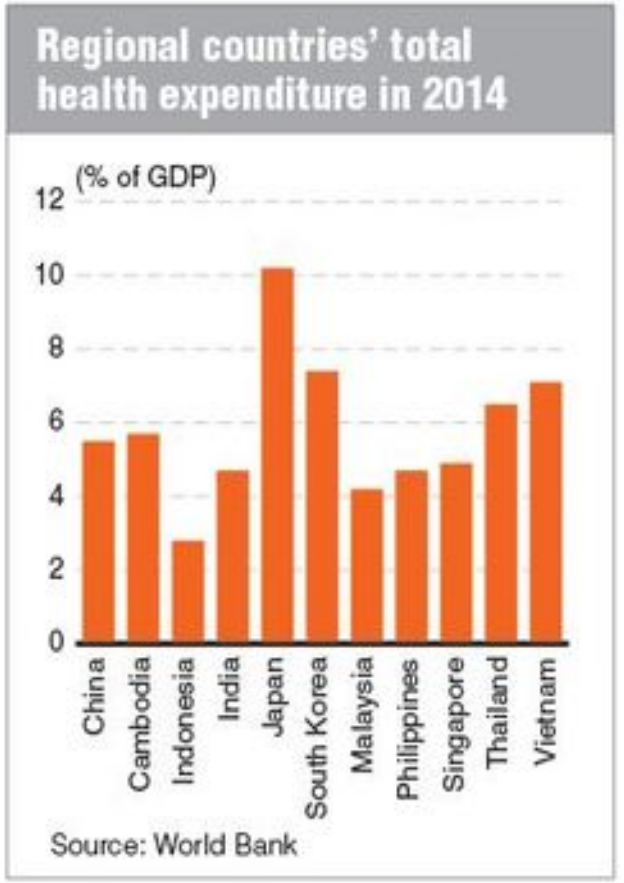
Problems of Healthcare Delivery

- Double diseases burden faced by the low and middle income countries - need more investment on health resources
- Health care prices grow faster than overall prices.
- Rising costs will reduce accessibility to health care.
- Increase in quality of care will increases spending.
- Supplier induced demand and moral hazards issues.
- People's bad choices – use of harmful substances.
- Limited or lack of resources

Constraints in financing healthcare

- Total healthcare expenditure as a proportion of GDP has always been low



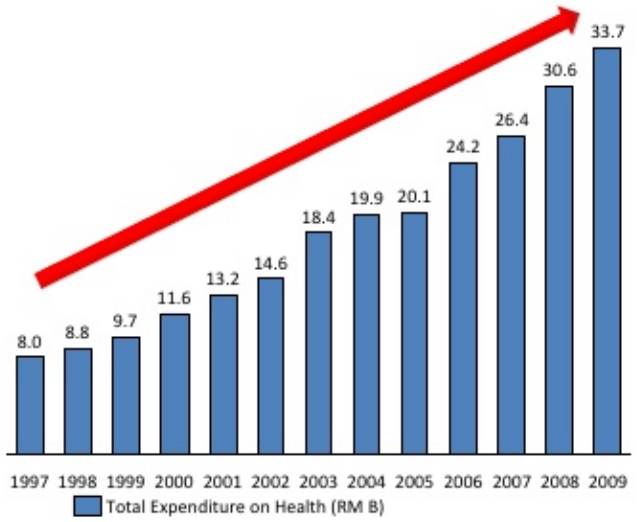


Constraints in financing healthcare

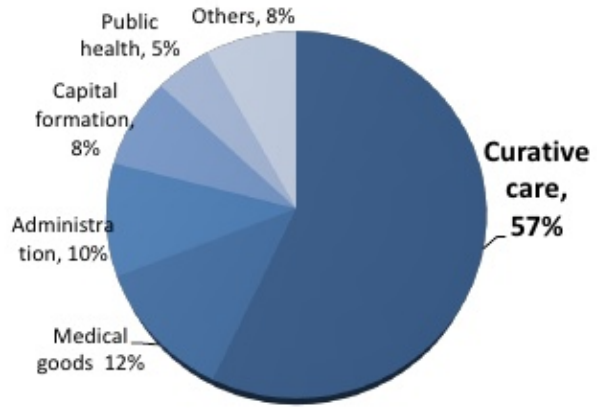
- Expenditure growth is very rapid with high inflation rates for healthcare
- MOH Budget allocation mostly for curative care

Malaysian Healthcare spending continues to grow at a fast rate…

Expenditure growth is about 11 % on average per year over the past 12 years



Curative care has 57% share of the expenditure in 2009

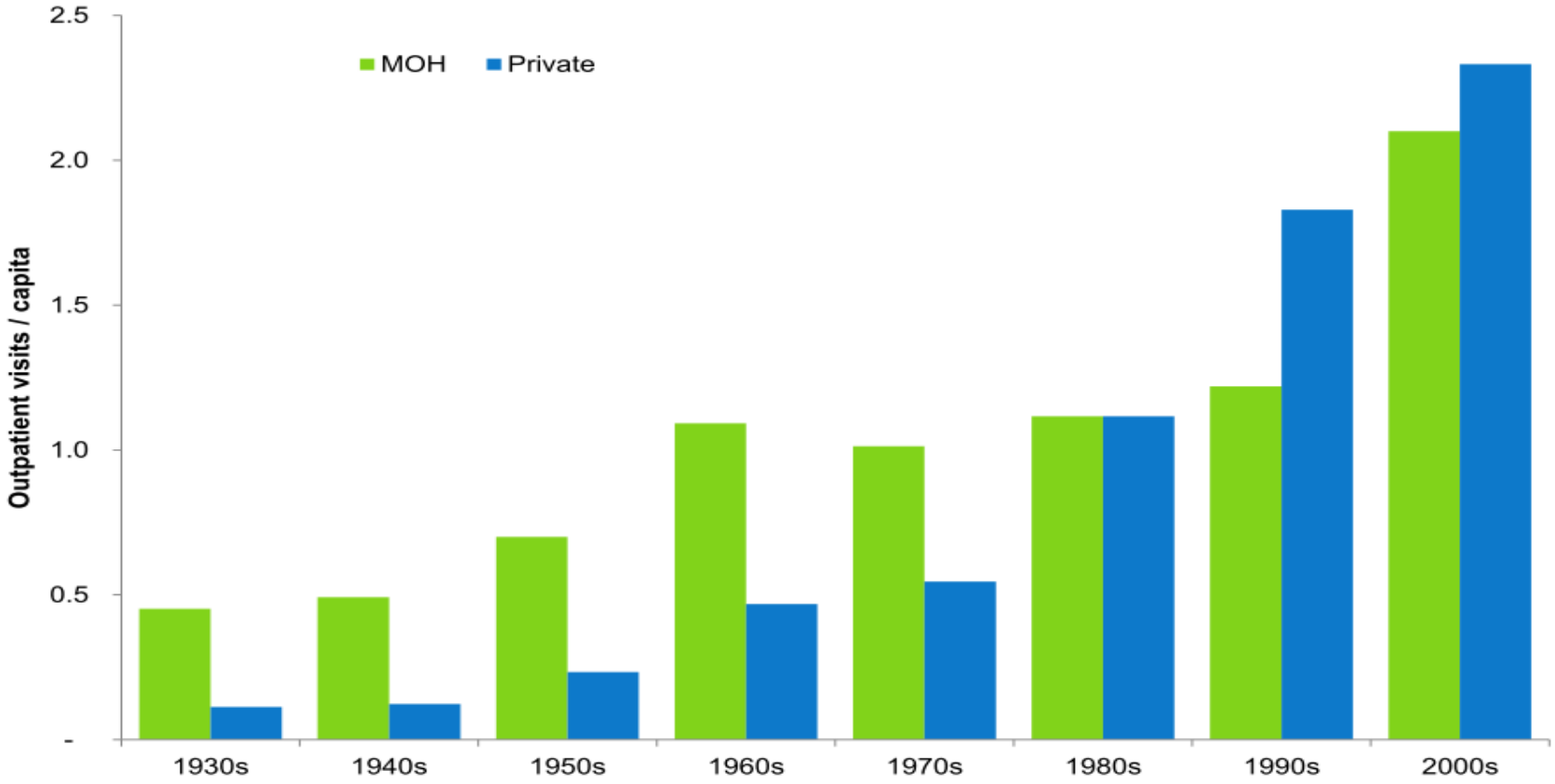


Total Health Expenditure by Functions of Healthcare

Source: Malaysia National Health Accounts: Health Expenditure Report (2009 -Unpublished)

Increasing use of private care

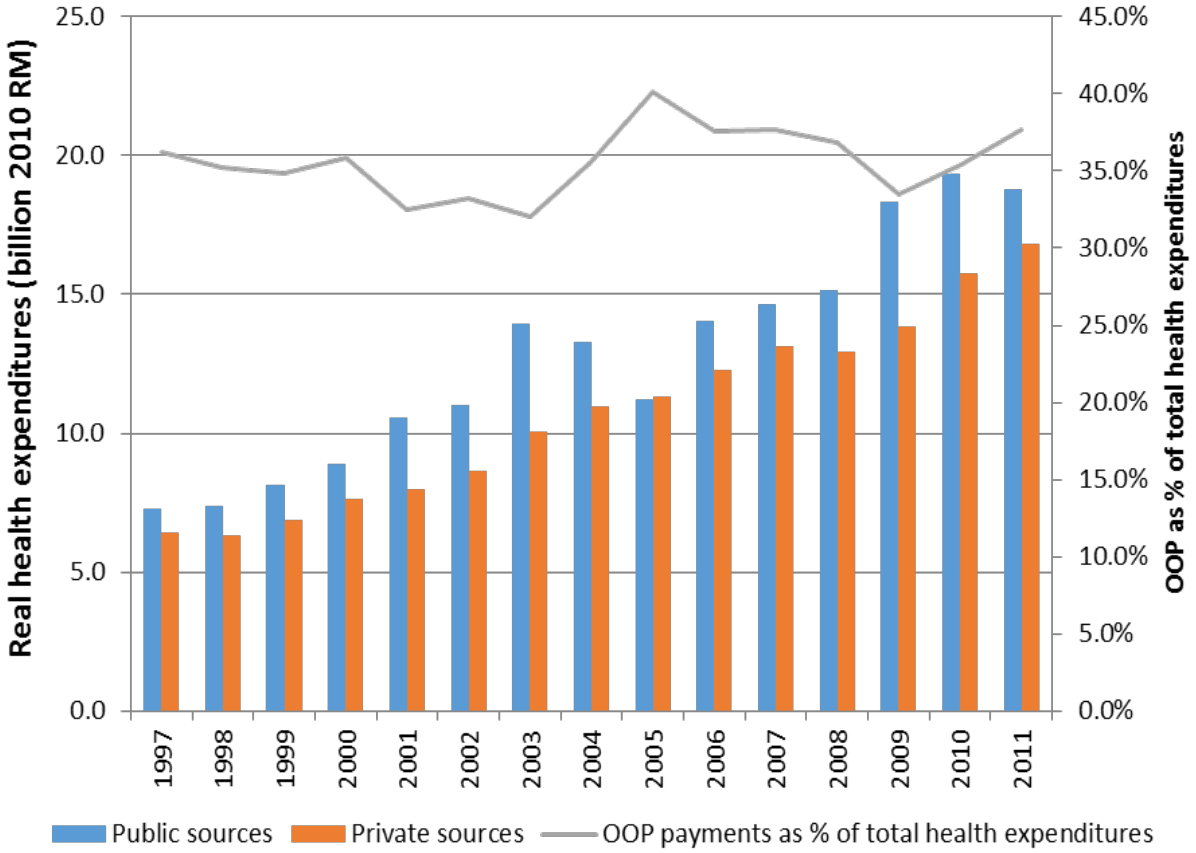
- Hoping for a better quality care and shorter waiting time



Source: HEALTH POLICY RESEARCH ASSOCIATES, INSITUTE FOR HEALTH SYSTEMS RESEARCH & INSITUTE FOR HEALTH POLICY 2013. Malaysia Health Care Demand Analysis. Inequalities in Healthcare Demand & Simulation of Trends and Impact of Potential Changes in Healthcare Spending. Kuala Lumpur: Institute for Health Systems Research.

Issue in paying for health care

- Fees for private care higher than public care
- Paid for mainly through out-of-pocket (OOP) payments
- Currently OOP payments make up a third of total health expenditures



Source: MINISTRY OF HEALTH MALAYSIA 2013. Malaysia National Health Accounts. Health Expenditure Report (1997-2011). Putrajaya: Ministry of Health, Malaysia.

Issue with scarcity of resources

- Limited budget (resources) means there is a need to prioritize
- Opportunity foregone when resources are committed to a particular intervention such as preventive program
- Decision to choose an intervention from among several interventions need to be made objectively (not based on intuition)
- Systematic economic evaluation to provide evidence
- To assists in decision/policy making

Economic Evaluation

- Economic evaluations explicitly designed to inform care providers and patients about the best available research evidence and to enhance its use in their practices.

❖ Goals of economic evaluation:

1. to measure efficiency or the value of money utilised on one health intervention programme in comparison to another.

2. to provide advice to decision-makers or stakeholders on health care intervention programme.

3. To guide on healthcare resources allocation.

What is economic evaluation

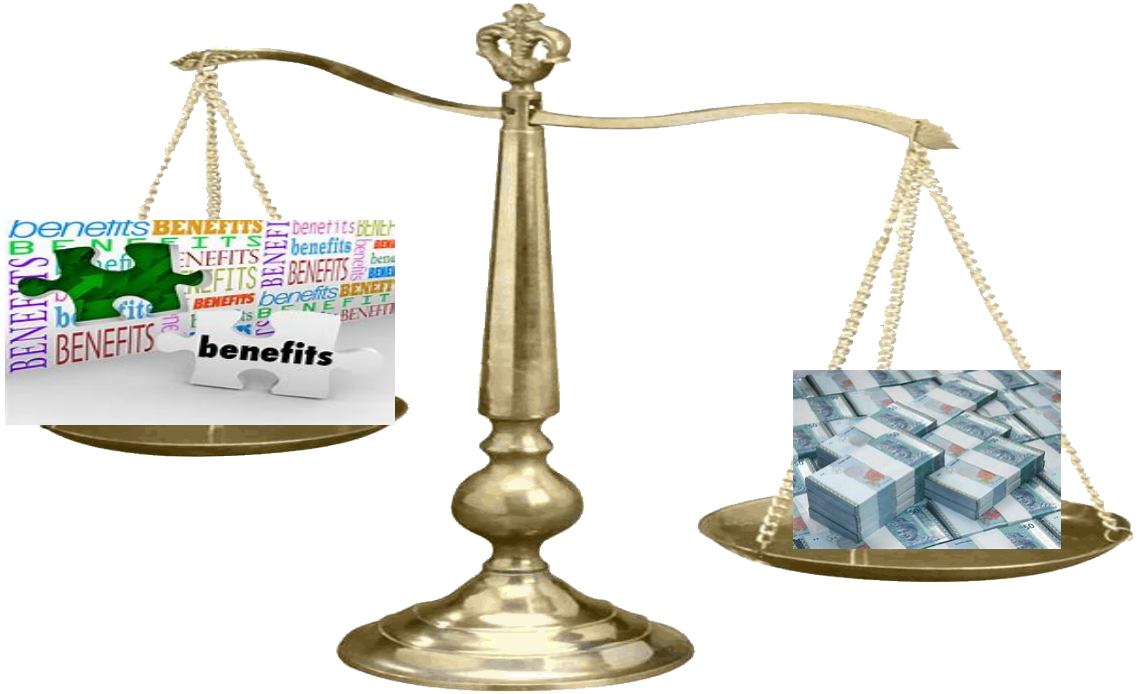
- Economic evaluation studies generally seek to address the two questions:
  - Are limited resources used in the best ways possible?
  - Is value for money achieved in their use?

- EE is not about comparing the cost and benefit of a program

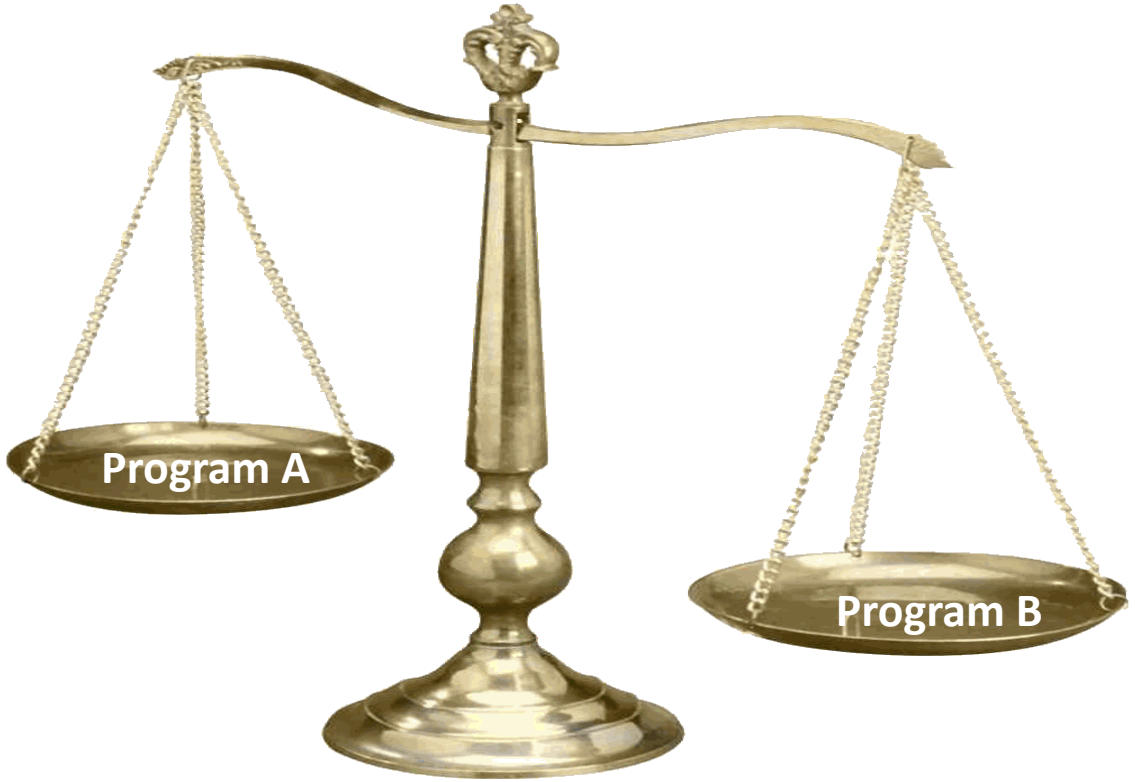
- But to determine which intervention among several interventions with the same goal is more cost-effective

- EE starts with assessing the effectiveness and quality of an intervention before it can be considered as the alternative to an existing intervention

Economic Evaluation

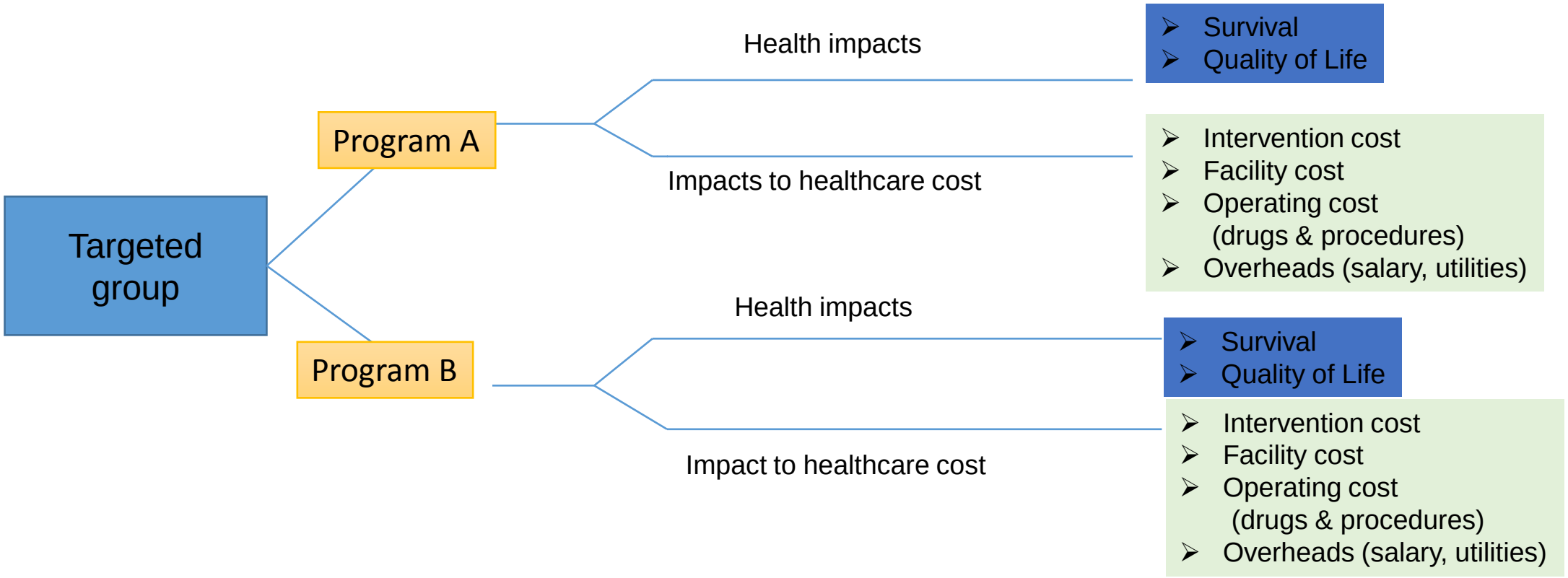


Cost versus Benefits

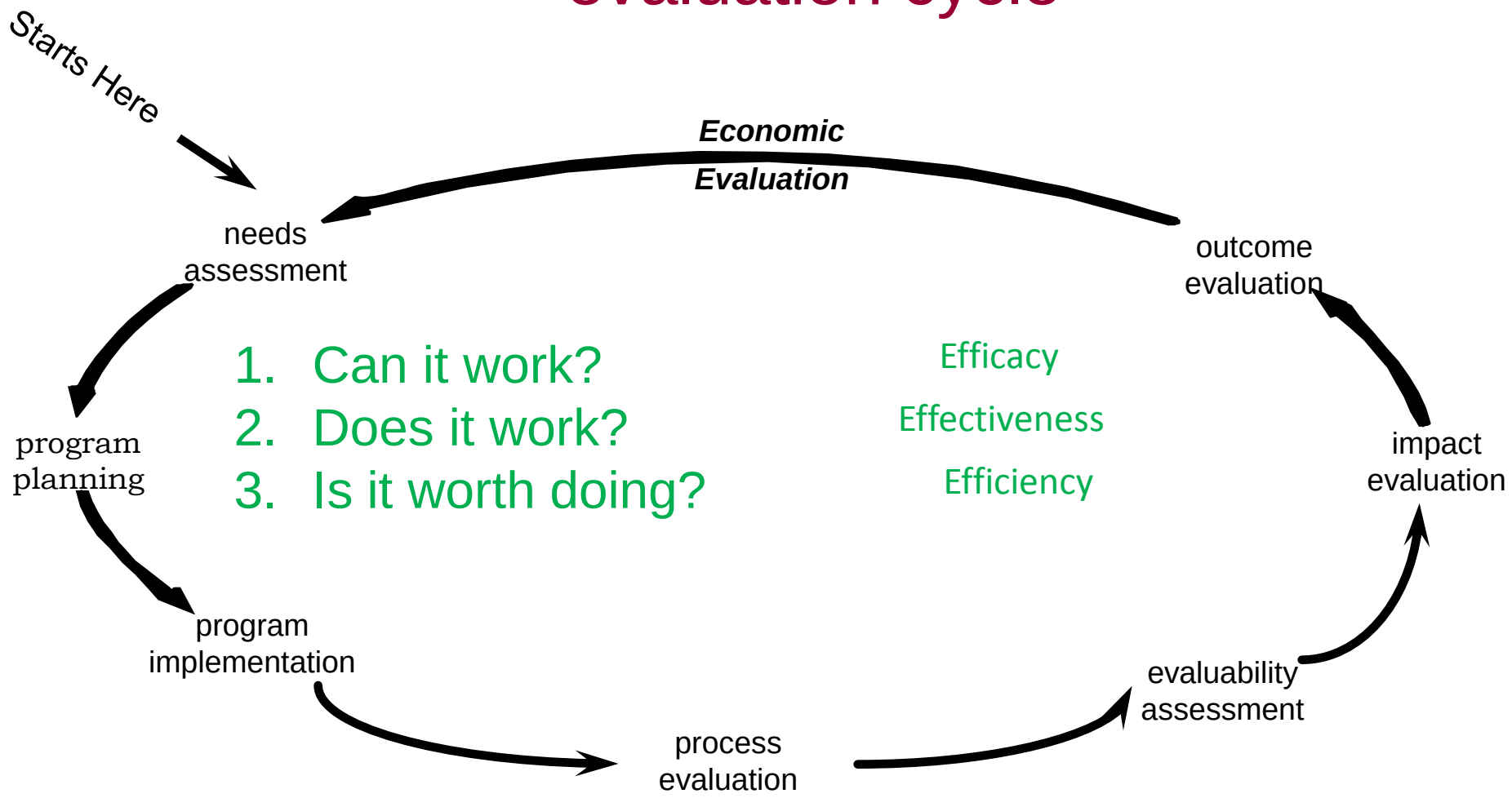


Looking for the **more cost-effective intervention**

Economic Evaluation of Health interventions



Place of economic evaluation in the wider 'evaluation cycle'



Uses of EE findings

Economic evaluation as an aid to:

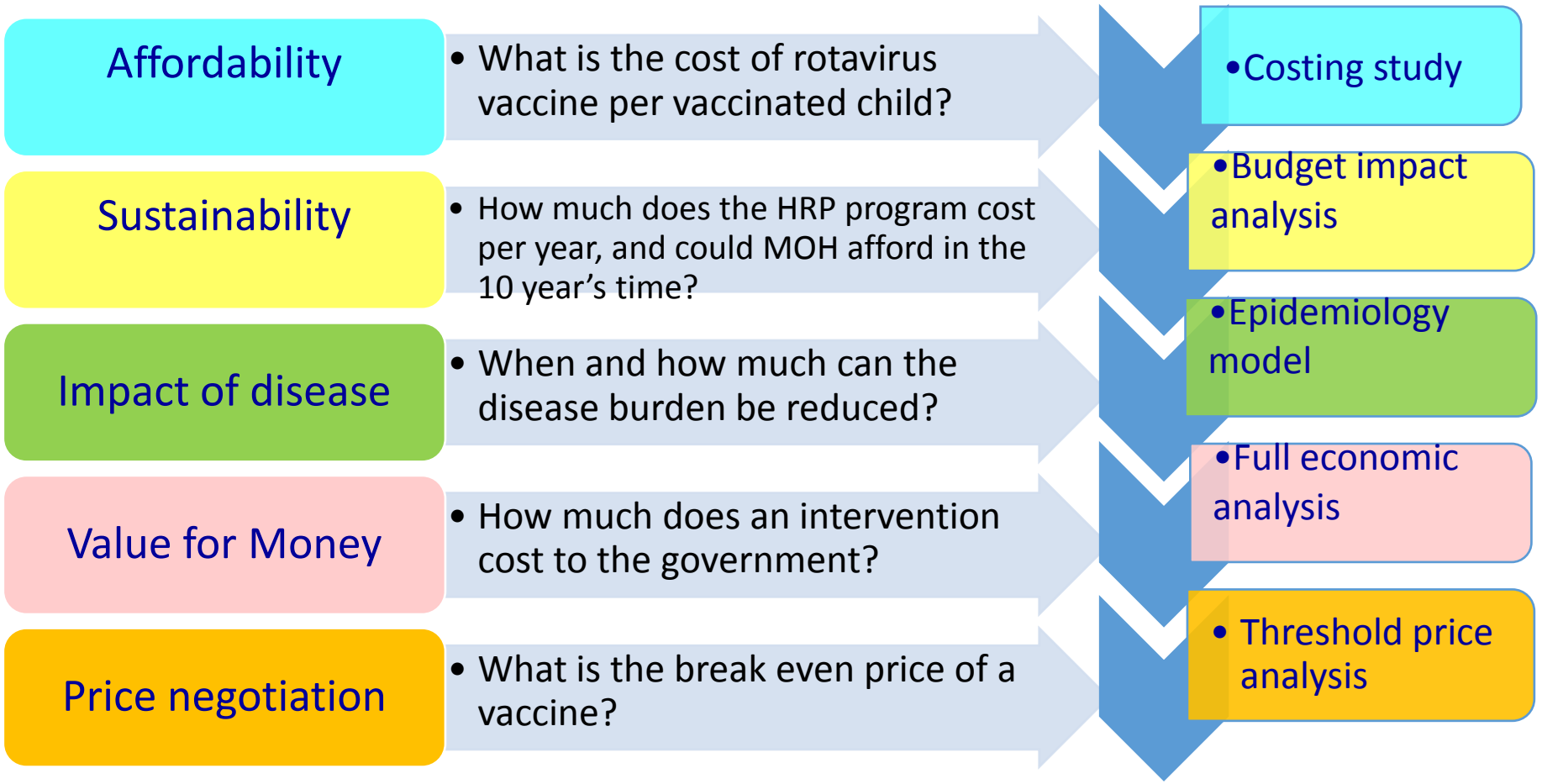
- ✓the development of treatment guidelines
- ✓decisions within health care organizations
- ✓introduction of new medical technologies
- ✓Rationing in healthcare
- ✓reimbursement decisions
- ✓pricing decisions are examined

- "It is concluded that economic evaluation seems to be most useful in the development of treatment guidelines and as an aid to reimbursement decisions" (1)

1. Johannesson M. 1995. Economic evaluation of health care and policymaking. Health Policy. Sep;33(3):179-90.

Various types of EE for Healthcare

Method depends on the motivation of study



Health Economic Model

- A Health Economic Model (economic evaluation model) is a mathematical framework whose purpose is to estimate the effects of an intervention on valued health consequences and costs.

- Models enable an evaluation to be extended beyond what has been observed in a study and can bring together data from a variety of different sources.

- Commonly used as decision analysis models;
  - Decision tree analysis (acute diseases with full recovery) and
  - Markov cohort models (for chronic diseases with homogeneous characteristics of patients)
  - Microsimulation modellings (discrete events)

Public health investment case

- ❖ makes an evidence-based argument for why scarce health resources should be directed towards a particular disease, and
- ❖ estimates the amount of additional resources needed and the return on investment expected over a specific time period.
- ❖ Investment cases can also be used to compare different investment scenarios to see which one(s) produce the best results and have the highest ROI.

- ➢ To increase program efficiency – avoids duplication and fragmentation and for synergistic action
- ➢ Mobilize limited resources
- ➢ Enabled evidence based advocacy

Policy Implications

- Decision to develop policy on the adoption of an intervention should not be solely based on CEA evidence.
- Should assess the efficacy, safety and acceptance by the local people (social and cultural) and economy of the country (also willingness to pay)
- The analysis should be extended to Budget Impact Analysis to determine its sustainability
- These are commonly done under the broader scope of Health Technology Assessment (HTA)

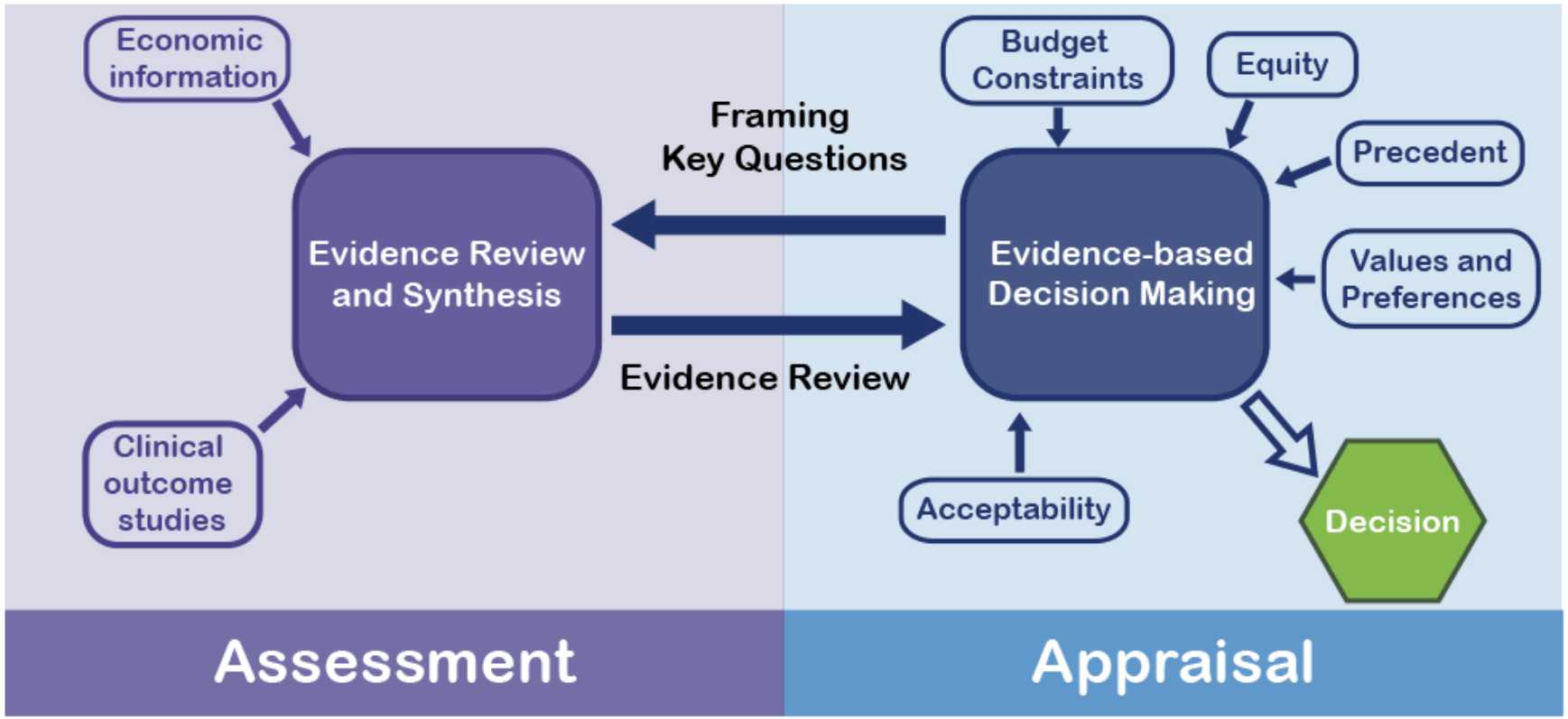
Health Technology Assessment

- HTA is a multidisciplinary process that summarizes information about the medical, social, economic and ethical issues related to the use of a health technology in a systematic, transparent, unbiased robust manner.

- It aims to inform the formulation of safe, effective, health policies that are patient-focused and seek to achieve best value.

❖ HTA's role is to create links between the policy and the research domains.

The two main components of HTA: Assessment and Appraisal



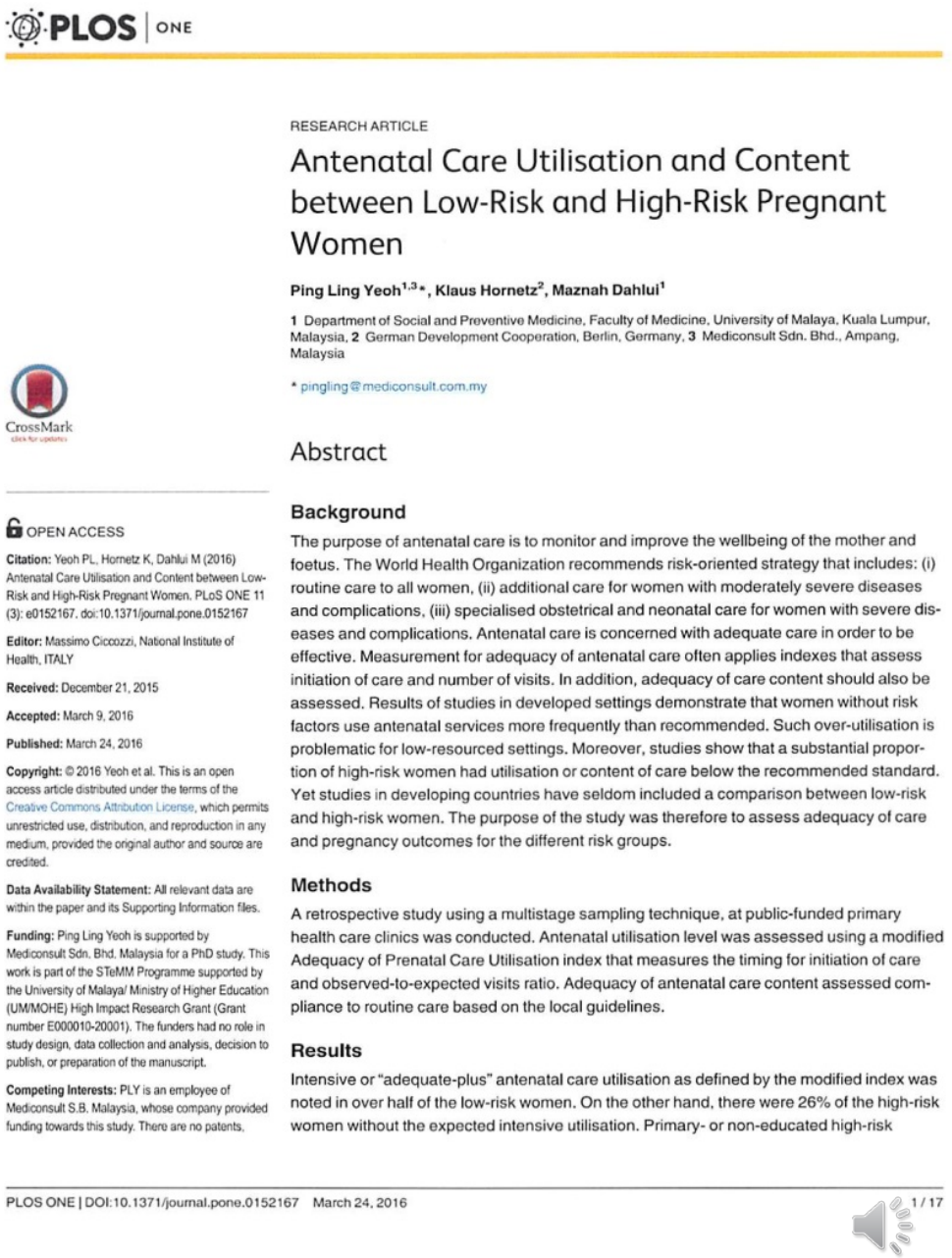
EUPATI
European Patients' Academy on Therapeutic Innovation
www.eupati.eu

Adapted from Teutsch, S., Berger, M. (2005). 'Evidence synthesis and evidence-based decision making; Related but distinct processes. *Medical Decision Making,* pp. 487-489.

Assessing Effectiveness, Cost and Cost-effectiveness of Health Interventions

Assessing the Efficiency of Antenatal Program

- Objective: to determine the adequacy of antenatal care, its associated factors and pregnancy outcomes among women attending antenatal care at public health facilities.
- Results: on adequacy of care and pregnancy outcomes for the different risk groups; the low-risk pregnancies had a higher ANC content score (more frequent visits and had more investigations) than the high-risk pregnancies.



PLOS ONE

RESEARCH ARTICLE

Antenatal Care Utilisation and Content between Low-Risk and High-Risk Pregnant Women

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OPEN ACCESS

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Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

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Competing Interests: PLY is an employee of Mediconsult S.B. Malaysia, whose company provided funding towards this study. There are no patents,

Abstract

Background

The purpose of antenatal care is to monitor and improve the wellbeing of the mother and foetus. The World Health Organization recommends risk-oriented strategy that includes: (i) routine care to all women, (ii) additional care for women with moderately severe diseases and complications, (iii) specialised obstetrical and neonatal care for women with severe diseases and complications. Antenatal care is concerned with adequate care in order to be effective. Measurement for adequacy of antenatal care often applies indexes that assess initiation of care and number of visits. In addition, adequacy of care content should also be assessed. Results of studies in developed settings demonstrate that women without risk factors use antenatal services more frequently than recommended. Such over-utilisation is problematic for low-resourced settings. Moreover, studies show that a substantial proportion of high-risk women had utilisation or content of care below the recommended standard. Yet studies in developing countries have seldom included a comparison between low-risk and high-risk women. The purpose of the study was therefore to assess adequacy of care and pregnancy outcomes for the different risk groups.

Methods

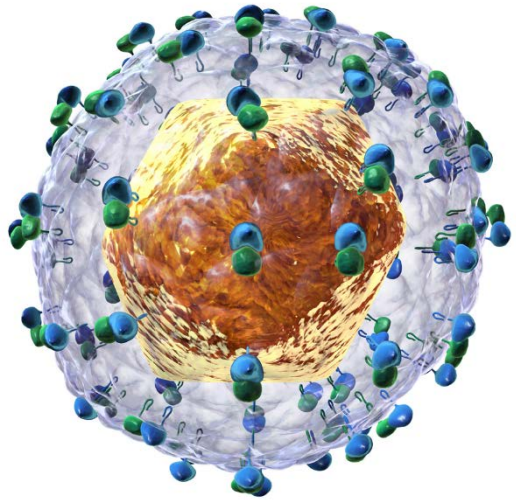
A retrospective study using a multistage sampling technique, at public-funded primary health care clinics was conducted. Antenatal utilisation level was assessed using a modified Adequacy of Prenatal Care Utilisation index that measures the timing for initiation of care and observed-to-expected visits ratio. Adequacy of antenatal care content assessed compliance to routine care based on the local guidelines.

Results

Intensive or "adequate-plus" antenatal care utilisation as defined by the modified index was noted in over half of the low-risk women. On the other hand, there were 26% of the high-risk women without the expected intensive utilisation. Primary- or non-educated high-risk

Projection of Disease Burden - to justify DAA treatment of Hepatitis C

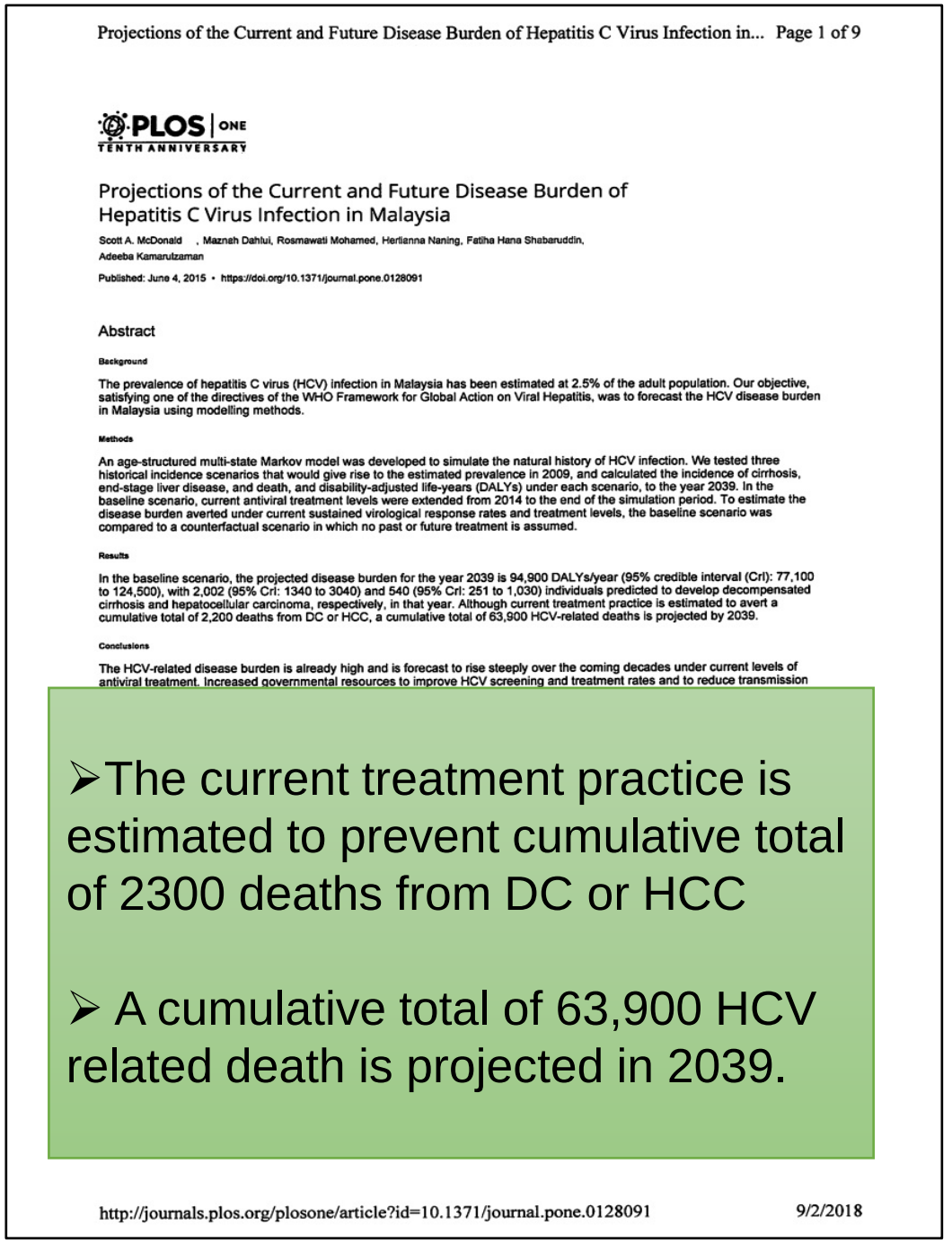
- Estimation of Hep C virus infection is needed in order to perform economic evaluation to determine the cost of Direct Acting Antiviral (DAA) drugs for price negotiation.
- Whether it should be licensed or worth for MOH to invest on purchasing it for the public hospitals.
- Applied a multi-parameter evidence synthesis methods - used both direct and indirect epidemiological parameters of interest.



Hepatitis C virus

Projected Disease Burden of Hepatitis C

- Estimation of Hep C virus infection is needed in order to perform economic evaluation to determine the cost of Direct Acting Antiviral (DAA) drugs for price negotiation.
- Whether it should be licensed or worth for MOH to invest on purchasing it for the public hospitals.
- 454,000 persons were estimated to be living with HCV infection in 2009.



PLOS ONE | TENTH ANNIVERSARY

Projections of the Current and Future Disease Burden of Hepatitis C Virus Infection in Malaysia

Scott A. McDonald , Maznah Dahlui, Rosmawati Mohamed, Hertianna Naning, Fatiha Hana Shaharuddin, Adeeba Kamarulzaman

Published: June 4, 2015 • https://doi.org/10.1371/journal.pone.0128091

Abstract

Background

The prevalence of hepatitis C virus (HCV) infection in Malaysia has been estimated at 2.5% of the adult population. Our objective, satisfying one of the directives of the WHO Framework for Global Action on Viral Hepatitis, was to forecast the HCV disease burden in Malaysia using modelling methods.

Methods

An age-structured multi-state Markov model was developed to simulate the natural history of HCV infection. We tested three historical incidence scenarios that would give rise to the estimated prevalence in 2009, and calculated the incidence of cirrhosis, end-stage liver disease, and death, and disability-adjusted life-years (DALYs) under each scenario, to the year 2039. In the baseline scenario, current antiviral treatment levels were extended from 2014 to the end of the simulation period. To estimate the disease burden averted under current sustained virological response rates and treatment levels, the baseline scenario was compared to a counterfactual scenario in which no past or future treatment is assumed.

Results

In the baseline scenario, the projected disease burden for the year 2039 is 94,900 DALYs/year (95% credible interval (CrI): 77,100 to 124,500), with 2,002 (95% CrI: 1340 to 3040) and 540 (95% CrI: 251 to 1,030) individuals predicted to develop decompensated cirrhosis and hepatocellular carcinoma, respectively, in that year. Although current treatment practice is estimated to avert a cumulative total of 2,200 deaths from DC or HCC, a cumulative total of 63,900 HCV-related deaths is projected by 2039.

Conclusions

The HCV-related disease burden is already high and is forecast to rise steeply over the coming decades under current levels of antiviral treatment. Increased governmental resources to improve HCV screening and treatment rates and to reduce transmission

- The current treatment practice is estimated to prevent cumulative total of 2300 deaths from DC or HCC
- A cumulative total of 63,900 HCV related death is projected in 2039.

Assessing the outcome of new treatment

- To determine the quality of life of Transfusion Dependent Thalassemia Patients (TDTP) with and without iron chelator Desferrioxamine.
- The QoL of TDTP on Desferrioxamine was higher due to less incidence and severity of iron overload complications such as heart disease and DM.
- Injections can be hassle and painful

Original Article

Singapore Med J 2009; 50(8) : 794

Quality of life in transfusion-dependent thalassaemia patients on desferrioxamine treatment

Dahlui M, Hishamshah M I, Rahman A J A, Aljunid S M

ABSTRACT

Introduction: The quality of life of transfusion-dependent thalassaemia patients is affected by the disease itself and iron overload complications from repeated blood transfusion. Desferrioxamine has been used to remove the excess iron, resulting in decreased mortality and morbidity. In Malaysia, a significant proportion of the transfusion-dependent thalassaemia patients are not prescribed desferrioxamine, due to its high cost, especially as it is not subsidised by the government. The aim of this study was to measure the quality of life of thalassaemia patients on desferrioxamine treatment.

Methods: A cross-sectional study was performed on all transfusion-dependent thalassaemia patients on follow-up at two tertiary hospitals in Kuala Lumpur, Malaysia, in 2005. Quality-of-life scores were measured by using the translated MOS SF-36 questionnaires, while diseases related to iron overload complications were obtained from the medical records. Use of desferrioxamine was elicited through interviews and validated by drug records. Quality-adjusted life-years (QALYs) presented were formulated from residual life-years and quality-of-life scores.

Results: A total of 112 transfusion-dependent thalassaemia patients were recruited, with 54 (48 percent) and 58 (52 percent) patients on sub-optimum and optimum desferrioxamine treatments, respectively. QALYs were higher in patients on optimum desferrioxamine (9.04, standard deviation [SD] 2.46) than patients on sub-optimum desferrioxamine (5.12, SD 2.51). QALYs were associated with the level of serum ferritin, iron overload complications and total family income.

Conclusion: Optimum desferrioxamine usage reduces iron overload complications and provides a better quality of life.

Keywords: desferrioxamine treatment, iron overload complications, quality of life, quality-adjusted life-years, transfusion-dependent thalassaemia

Singapore Med J 2009; 50(8): 794-799

INTRODUCTION

Thalassaemia is a genetic disorder affecting globin chain synthesis with various clinical manifestations, depending on the number and the type of globin chain affected. The more severe forms are beta-thalassaemia major, which warrants regular blood transfusion at an early age, and thalassaemia intermedia which presents later and require less frequent transfusions. The aim of regular blood transfusions is to eliminate the primary complication of severe thalassaemia by ameliorating anaemia and suppressing erythropoiesis. Given that patients are usually transfused at an early age, many develop complications of iron overload and blood transmitted infections. Among the common diseases that are related to high iron load are heart failure, liver fibrosis, diabetes mellitus, growth retardation and delayed puberty.[1] Iron chelator is needed to remove the toxic iron and desferrioxamine (desferrioxamine B methanesulphonate, or clinically known as Desferal [Norvatis]) had been proved to reduce the iron load and the complications of iron overload.[2] Since the introduction of desferrioxamine, the morbidity and mortality related to thalassaemia have been reduced significantly.

The quality of life (QOL) should be considered an important index of effective treatment. An assessment of QOL differs from other forms of medical assessment in that it focuses on the individuals' own views of their well-being and assesses other aspects of life, giving a more holistic view of well-being. Several studies had looked into the domains of quality life that is affected by thalassaemia and its treatment. Pakbaz et al suggested that emotional functioning is one of the impaired QOL domain in thalassaemia patients;[3] however, several other QOL studies in adult thalassaemia had shown that the treatment and cultural differences did not have any major effect on

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Cost Study

Dahlui et al. BMC Health Services Research 2012, 12(Suppl 1):O1
http://www.biomedcentral.com/1472-6963/12/S1/O1

BMC Health Services Research

ORAL PRESENTATION Open Access

Cost analysis of UMMC services: estimating the unit cost for outpatient and inpatient services

Maznah Dahlui[1*], Ng Chiu Wan[1], Tan Seow Koon[2]

From The 6th International Casemix Conference 2012 (6ICMC2012)
Kuala Lumpur, Malaysia. 6-7 June 2012

Introduction
Hospital cost analysis is an essential tool relating the inputs of resources in monetary terms to the outputs of services provided by hospitals. Cost information is part of the basic information needed by hospital managers and national policy makers to enable them to make informed decisions to enhance performance of hospitals in a health care delivery system and for efficient allocation of resources within or between hospitals.

Objectives
The primary objective of the study was to determine the actual costs of health care service provision, including costs for surgical procedures, at the University of Malaya

Results
The average length of hospital stay (ALOS) for all admissions in 2010 was 6.30 days (SD 8.945) while the ALOS for the medical and surgical wards were 6.7 days (SD 8.886) and 5.6 days (SD 9.005) respectively. The costs per admission at the medical and surgical wards were RM 4,296 and RM 6,073.71 respectively, while the cost per diem were RM 641.15 and RM 1,085.48, respectively. The average cost for a surgical procedure performed at the operating theatre was RM 1084.59. The major cost component for the medical wards was for consumables which made up 70% of the total cost for the medical inpatient services. In contrast, costs for treatment procedures made up 62% of total costs for the surgical inpatient services.

- A costing analysis had been performed at UMMC in 2012 to determine the cost per diem at the various wards, the day-care and for outpatient visit

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GENERAL DERMATOLOGY
BJD British Journal of Dermatology

Is universal *HLA-B*15:02* screening a cost-effective option in an ethnically diverse population? A case study of Malaysia

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Linked Comment: Plumpton and Hughes. *Br J Dermatol* 2017; 177:904–905.

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International Journal of Rheumatic Diseases 2018

ORIGINAL ARTICLE

Clinical and economic implications of upper gastrointestinal adverse events in Asian rheumatological patients on long-term non-steroidal anti-inflammatory drugs

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Abstract

Aim: To determine the incidence and direct costs of NSAID-induced upper GI adverse events in Malaysian rheumatology patients.

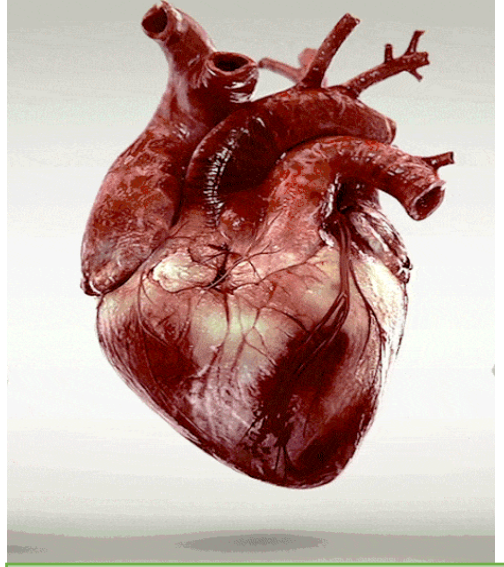
Methods: A retrospective, multi-centre, cohort study of rheumatology patients on long-term NSAIDs was conducted. Clinical data of patients treated between 2010 and 2013 were collected for a 24-month follow-up period. The costs of managing upper GI adverse events were based on patient level resource use data.

Results: Six hundred and thirty-four patients met the inclusion criteria: mean age 53.4 years, 89.9% female, diagnosis of rheumatoid arthritis (RA; 59.3%), osteoarthritis (OA; 10.3%) and both RA and OA (30.3%). Three hundred and seventy-one (58.5%) patients were prescribed non-selective NSAIDs and 263 (41.5%) had cyclo-oxygenase-2 inhibitors. Eighty-four upper GI adverse events occurred, translating into a risk of 13.2% and an incidence rate of 66.2 per 1000 person-years. GI adverse events comprised: dyspepsia $n = 78$ (12.3%), peptic ulcer disease (PUD) $n = 5$ (0.79%) and upper GI bleeding (UGIB) $n = 1$ (0.16%). The total direct healthcare cost of managing adverse events was Malaysian Ringgit (MR) 37 352 (US dollars [USD] 11 419) with a mean cost of MR 446.81 ± 534.56 (USD 136.60 ± 163.42) per patient, consisting mainly of GI pharmacotherapy (33.8%), oesophagoduodenoscopies (23.1%) and outpatient clinic visits (18.2%). Mean cost per patient by GI

mented between *HLA-B*15:02* and erse reactions (SCARs) in Asians. ly valuable in many countries to lity to SCARs.
f universal *HLA-B*15:02* screening lohnson syndrome/toxic epidermal pulation.
l Markov model was developed to gnosed epilepsy among adults: (i) screening (current practice); (ii) mazepine initiation; and (iii) alter- prescribing without *HLA-B*15:02* alyses were performed over a life- ss ratios were calculated.
A prescribing were dominated by cur- rsal *HLA-B*15:02* screening resulted in fs) at an additional cost of 707 U.S. 0-2622 QALYs at an additional cost of ileptic treatment efficacy.
nlikely to be a cost-effective inter- nce of an ethnically diverse popu- er *HLA-B*15:02* screening a viable f the population is at risk and an vailable.

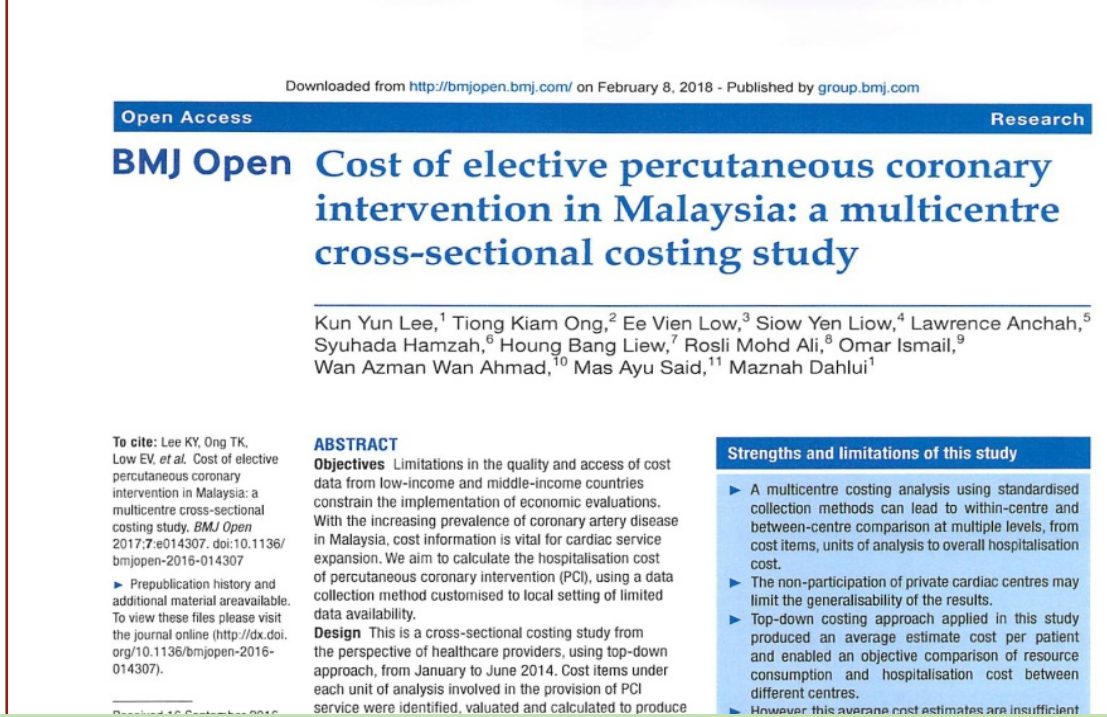
:?
with carbamazepine (CBZ)-induced al necrolysis (TEN) in Asians. an countries.

2017 British Association of Dermatologists



Policy on PCI Center

- MOH has been referring cardiac patients with coronary artery blockage to a private heart center and purchase their PCI (percutaneous coronary intervention).
- A study was performed to determine the cost of PCI at the center and if PCI is performed at several types of government hospitals



Open Access Research

BMJ Open

Cost of elective percutaneous coronary intervention in Malaysia: a multicentre cross-sectional costing study

Kun Yun Lee,[1] Tiong Kiam Ong,[2] Ee Vien Low,[3] Siow Yen Liow,[4] Lawrence Anchah,[5] Syuhada Hamzah,[6] Houng Bang Liew,[7] Rosli Mohd Ali,[8] Omar Ismail,[9] Wan Azman Wan Ahmad,[10] Mas Ayu Said,[11] Maznah Dahlui[1]

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ABSTRACT

Objectives Limitations in the quality and access of cost data from low-income and middle-income countries constrain the implementation of economic evaluations. With the increasing prevalence of coronary artery disease in Malaysia, cost information is vital for cardiac service expansion. We aim to calculate the hospitalisation cost of percutaneous coronary intervention (PCI), using a data collection method customised to local setting of limited data availability.

Design This is a cross-sectional costing study from the perspective of healthcare providers, using top-down approach, from January to June 2014. Cost items under each unit of analysis involved in the provision of PCI service were identified, valuated and calculated to produce

Strengths and limitations of this study

- A multicentre costing analysis using standardised collection methods can lead to within-centre and between-centre comparison at multiple levels, from cost items, units of analysis to overall hospitalisation cost.
- The non-participation of private cardiac centres may limit the generalisability of the results.
- Top-down costing approach applied in this study produced an average estimate cost per patient and enabled an objective comparison of resource consumption and hospitalisation cost between different centres.
- However, this average cost estimates are insufficient

- On the government side, it provides evidence on cost-effectiveness of PCIs and how prioritization of budget and allocation of personnel should be made.
- These are important to maintain an equitable basis for financing health services in the face of escalating health care cost.

Cost of Dengue Vector Control

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doi:10.4269/ajtmh.14-0667

Cost of Dengue Vector Control Activities in Malaysia

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Abstract. Dengue fever, an arbovirus disease transmitted by *Aedes* mosquitoes, has recently spread rapidly, especi in the tropical countries of the Americas and Asia-Pacific regions. It is endemic in Malaysia, with an annual average 37,937 reported dengue cases from 2007 to 2012. This study measured the overall economic impact of dengue in Malay and estimated the costs of dengue prevention. In 2010, Malaysia spent US$73.5 million or 0.03% of the country's G on its National Dengue Vector Control Program. This spending represented US$1,591 per reported dengue case US$2.68 per capita population. Most (92.2%) of this spending occurred in districts, primarily for fogging. A previ paper estimated the annual cost of dengue illness in the country at US$102.2 million. Thus, the inclusion of prevent activities increases the substantial estimated cost of dengue to US$175.7 million, or 72% above illness costs alone. If in vative technologies for dengue vector control prove efficacious, and a dengue vaccine was introduced, substantial exist spending could be rechanneled to fund them.

- We examined variations in dengue vector control cost and resource consumption between the District Health Departments (DHDs) and Local Authorities (LAs).
- To assist informed decision making as to the future roles of these agencies in the delivery of dengue vector control services in Malaysia.

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The Cost of Dengue Vector Control Activities in Malaysia by Different Service Providers

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and Donald S. Shepard, PhD[3]

Abstract

We examined variations in dengue vector control costs and resource consumption between th de se in ins pc sp fo re so

- Overall, for Dengue control activity, DHDs spent US$679 per case and LAs spent US$499 per case.
- The highest expenditure for both agencies was for fogging.
- These findings provide some evidence to rationalize delivery of dengue vector control services in Malaysia.

adult mosquitoes. DHD officers are assisted by vecto staff from the local authorities (LAs), public agencies in the public administration of large urban center country. In addition to fogging, the DHDs intensify occurring vector control activities, such as premise ins

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Which approach can enhance screening uptake?

- Pilot project for organized cervical cancer screening (2012)
- all women aged 20 years old and above were invited for PAP smear and received recall to repeat the test.
- A CEA was conducted to determine which recall method would be most cost-effective.
- Calling women for PAP smear via telephone was the most cost-effective method.

DOI:http://dx.doi.org/10.7314/APJCP.2014.15.13.5143
The Most Cost-Effective Recall Method for the Malaysian Cervical Cancer Screening Program

RESEARCH ARTICLE

Cost Effective Analysis of Recall Methods for Cervical Cancer Screening in Selangor - Results from a Prospective Randomized Controlled Trial

DOI:http://dx.doi.org/10.7314/APJCP.2013.14.10.5901
The Phone Call as the Best Recall Method for Cervical Cancer Screening

RESEARCH ARTICLE

Is the Phone Call the Most Effective Method for Recall in Cervical Cancer Screening? - Results from a Randomised Control Trial

Rima Marhayu Abdul Rashid[1,2*], Majdah Mohamed[2], Zaleha Abdul Hamid[2], Maznah Dahlui[1]

Abstract

Objective: To compare the effectiveness of different methods of recall for repeat Pap smear among women who had normal smears in the previous screening. Design: Prospective randomized controlled study. Setting: All community clinics in Klang under the Ministry of Health Malaysia. Participants: Women of Klang who attended cervical screening and had a normal Pap smear in the previous year, and were due for a repeat smear were recruited and randomly assigned to four different methods of recall for repeat smear. Intervention: The recall methods given to the women to remind them for a repeat smear were either by postal letter, registered letter, short message by phone (SMS) or phone call. Main Outcome Measures: Number and percentage of women who responded to the recall within 8 weeks after they had received the recall, irrespective whether they had Pap test conducted. Also the numbers of women in each recall method that came for repeat Pap smear. Results: The rates of recall messages reaching the women when using letter, registered letter, SMS and phone calls were 79%, 87%, 66% and 68%, respectively. However, the positive responses to recall by letter, registered letter, phone messages and telephone call were 23.9%, 23.0%, 32.9% and 50.9%, respectively ($p<0.05$). Furthermore, more women who received recall by phone call had been screened ($p<0.05$) compared to those who received recall by postal letter (OR=2.38, CI=1.56-3.62). Conclusion: Both the usual way of sending letters and registered letters had higher chances of reaching patients compared to using phone either for sending messages or calling. The response to the recall method and uptake of repeat smear, however, were highest via phone call, indicating the importance of direct communication.

Keywords: Cervical cancer - screening - recall - intervention - uptake - Malaysia

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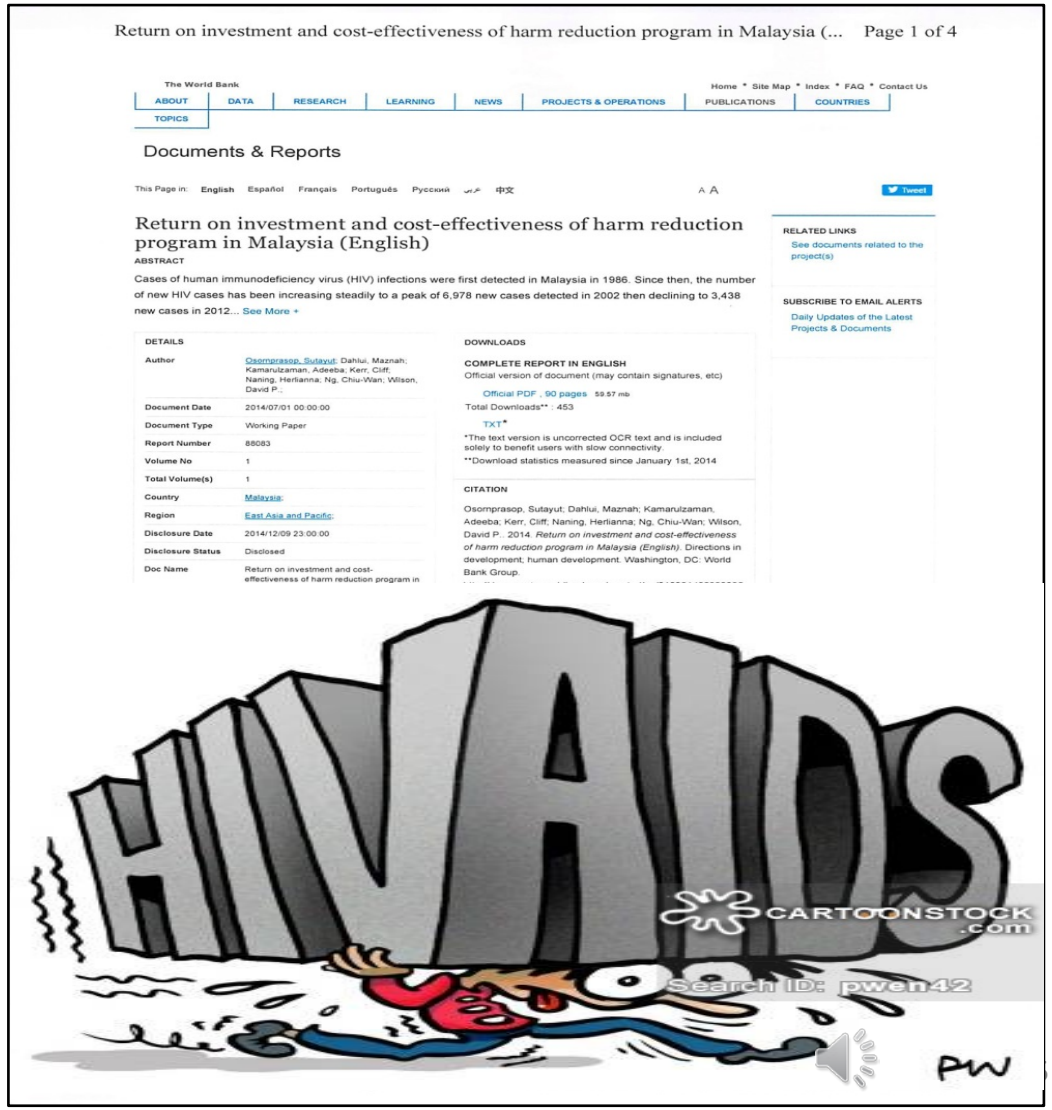
Introduction

Malaysia (Sankaranarayanan et al., 2001; WHO, 2005).
The importance of cervical screening could not be

Policy Decision to continue HRP

- EE was needed to assist the decision whether to continue with the program.
- Findings: a longer time is needed to see the return of investment.
- Cost-effective from the perspective of the government by causing savings in direct health care cost from infections that were averted.
- World Bank consultancy (with CERIA team)



Advocacy for Breast Cancer Screening

DOI:http://dx.doi.org/10.7314/APJCP.2013.14.12.7161
Breast Cancer Awareness of Rural Women in Malaysia

RESEARCH ARTICLE

Breast Cancer Awareness of Rural Women in Malaysia: is it the Same as in the Cities?

Abdul Aziz Norlaili*, Mohd Amin Fatihah, Nik Farid Nik Daliana, Dahlui Maznah

Abstract

Breast cancer is the most common cancer among women globally. This study was conducted to compare the awareness of breast cancer and the practice of breast self-examination (BSE), clinical breast examination (CBE) and mammography screening among rural females in Pahang and Perak. A cross-sectional study was carried out in five selected rural districts of Pahang and Perak. Two hundred and fifty households were randomly selected and interviewed face to face using a semi-structured questionnaire. The majority of residents from both states were Malay, aged between 50 and 60 years and had a secondary level of education. Malay women aged 40–49 years and women with a higher level of education were significantly more aware of breast cancer ($p<0.05$). About half of these women practiced BSE (60.7%) and CBE (56.1%), and 7% had underwent mammography screening.

(GLOBOCAN, 2008). In the U.S. in 2013, more than 200,000 new cases of invasive breast cancer, along with 64,640 new cases of in-situ breast cancer, were expected to be diagnosed in women (American Cancer Society, 2013). Breast cancer is increasingly common in Malaysia (Yip et al., 2012). According to Omar et al., 2011, a total of 3,242

disease were also found to be from rural areas (Leong et al., 2007) and to have deficits in knowledge of symptoms and risk factors of breast cancer (Abdul Hadi et al., 2010; Nik Rosmawati, 2010). These findings are further supported by other studies, with two qualitative studies that explored Malaysian cancer patients' perceptions of

- Several studies had been conducted locally on the KAP of screening for breast cancer among women in Malaysia.

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Breast screening and health issues among rural females in Malaysia: How much do they know and practice?

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ARTICLE INFO

Available online 28 December 2012

Keywords:
Breast cancer
Knowledge
Breast self-examination
Clinical breast examination
Mammography

ABSTRACT

Objective. This study investigated rural women's knowledge of breast cancer and screening methods by ethnicity and examined the predictors of breast screening methods.

Methods. A cross-sectional survey was conducted in 2011 in five rural districts of Perak; 959 women were interviewed using a semi-structured questionnaire. ANOVA and regression analysis were used in data analysis.

Results. Women below 50 years old, of Malay ethnicity and who had secondary education scored better than those older, of Chinese ethnicity and had primary education ($p<0.001$). The uptake of breast self-examination (BSE), clinical breast examination (CBE) and mammogram was 59%, 51% and 6.8%, respectively. Multivariate analysis revealed knowledge of breast cancer and CBE as top predictors of BSE, being married and knowledge of breast cancer as top predictors for CBE; and CBE as the top predictor of mammography uptake. Support from husbands and family members for breast cancer screening was a predictor for CBE and BSE.

clinical breast examination (CBE), mammography for women over 40 years old, and breast self-examination (BSE). In 2006, that uptake of BSE, CBE and mammography was 57%, 52% and 7.6%, respectively (Institute of Health, 2008).

Although limited, knowledge of screening methods had been studied in the urban areas in Malaysia. Poor knowledge of breast cancer symptoms among school teachers (Parsa et al., 2008) and

living in the rural areas to determine their level of breast health knowledge, breast cancer screening practice and its influencing factors.

Methods

A cross-sectional survey was conducted in 2011, in five rural districts of Perak. A thousand households were selected randomly from 25 villages in which women aged between 20 and 60 years old were interviewed, guided by a structured questionnaire (Dahlui et al.). The questionnaire consists of

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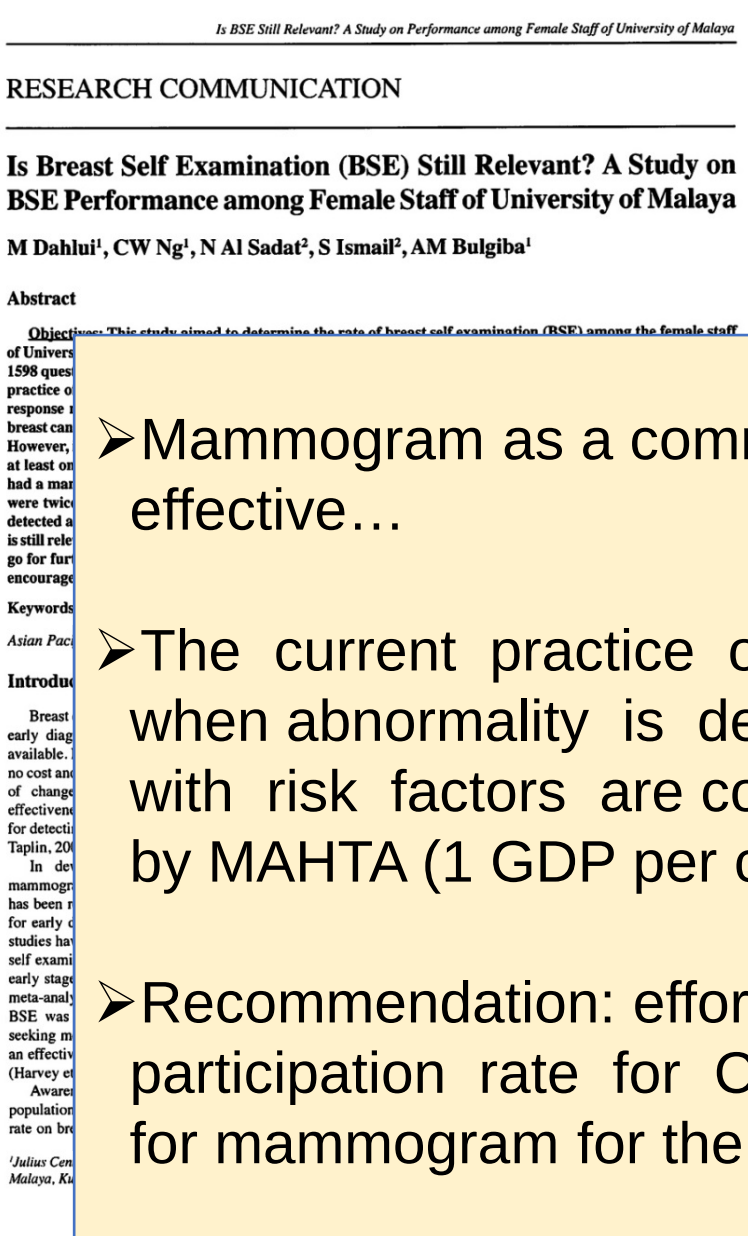
- We need to know whether the current practice is still relevant or need to change

Evidence for Policy on Breast Cancer Screening



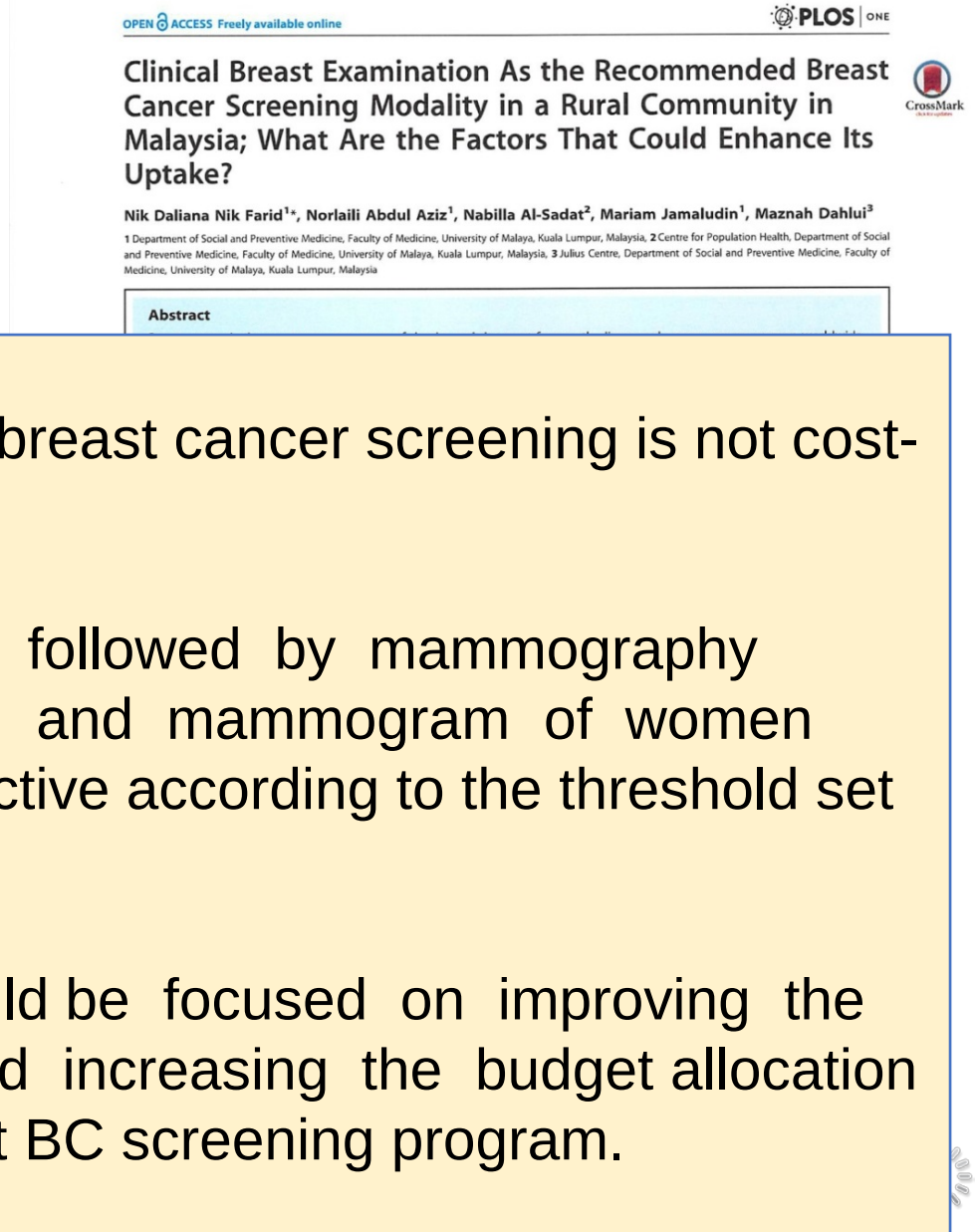
Is BSE Still Relevant? A Study on Performance among Female Staff of University of Malaya

RESEARCH COMMUNICATION

Is Breast Self Examination (BSE) Still Relevant? A Study on BSE Performance among Female Staff of University of Malaya

M Dahlui[1], CW Ng[1], N Al Sadat[2], S Ismail[2], AM Bulgiba[1]

Abstract



OPEN ACCESS Freely available online

PLOS ONE

Clinical Breast Examination As the Recommended Breast Cancer Screening Modality in a Rural Community in Malaysia; What Are the Factors That Could Enhance Its Uptake?

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Abstract

- Mammogram as a community breast cancer screening is not cost-effective…
- The current practice of CBE followed by mammography when abnormality is detected, and mammogram of women with risk factors are cost-effective according to the threshold set by MAHTA (1 GDP per capita)
- Recommendation: efforts should be focused on improving the participation rate for CBE and increasing the budget allocation for mammogram for the current BC screening program.

Summary

- Equity should be targeted when delivering and financing healthcare
- Limited resources for healthcare calls for optimal resources allocation
- Both issues are considered when performing economic evaluation
- The findings from economic evaluation provides the evidences to assist in decision making on which intervention would be most cost-effective and on how much resources to be mobilized
- A policy on the implementation of intervention that is developed based on HTA would be more acceptable by the people and could be sustained by the government.

Retain
and not flush
out?


Thank You!