SMART INVESTMENTS IN HEALTH TECHNOLOGIES

TRACK 3: DIGITAL TRANSFORMATION ENABLES HEALTHCARE RE-INTEGRATION INTO SOCIETY

15:00 - 15:30

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TH'19

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Digital Health Conference
Berchem – Sept 5, 2019

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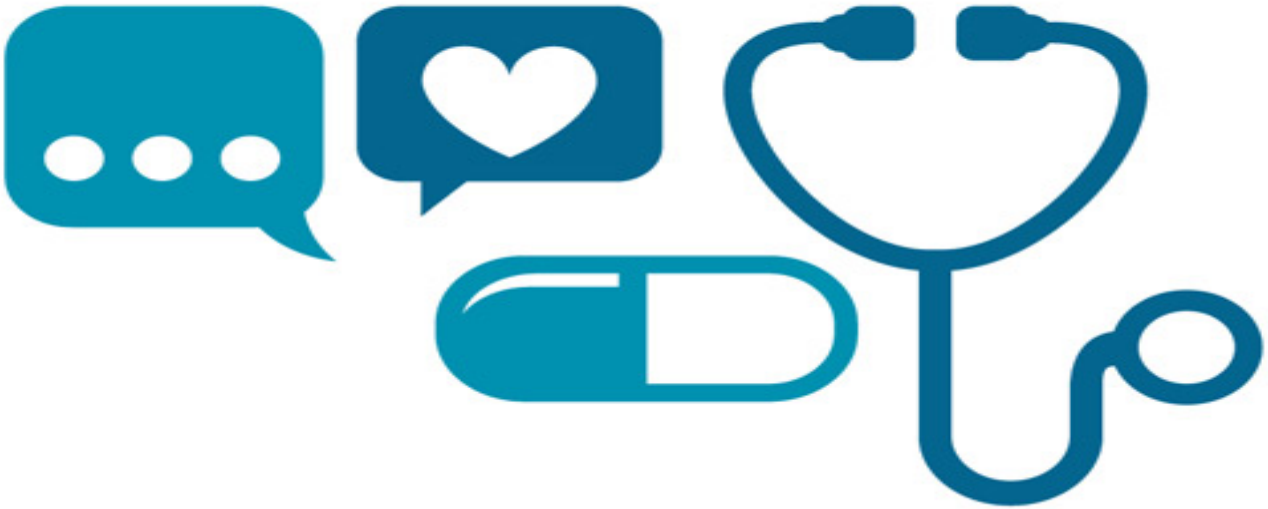


Smart Investments in Health Technologies

Prof. dr. Dominique Vandijck

What is meant by ‘a technology’

Technology is broadly defined to include the drugs, devices, medical and surgical procedures used in health care, as well as measures for prevention and rehabilitation of disease, and the organisational and support systems in which health care is provided

Do we have to invest in healthcare?

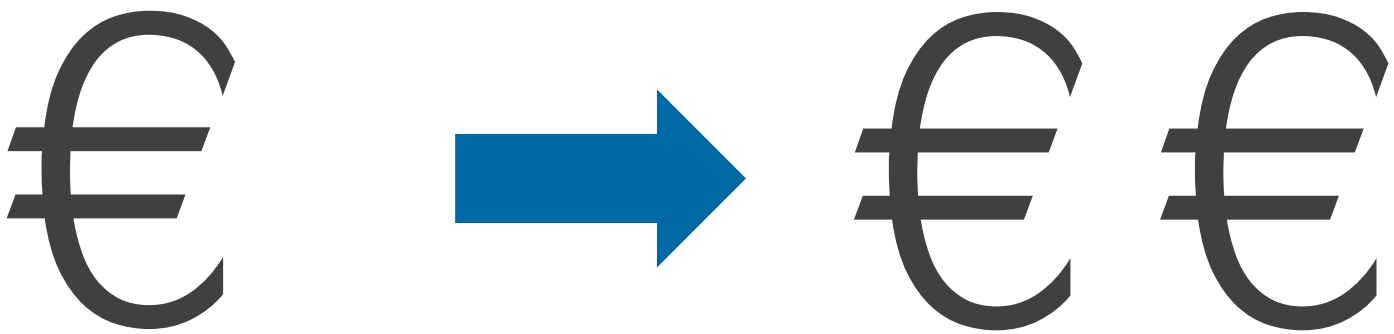
Reeves *et al. Globalization and Health* 2013, **9**:43
http://www.globalizationandhealth.com/content/9/1/43

GLOBALIZATION AND HEALTH

RESEARCH Open Access

Does investment in the health sector promote or inhibit economic growth?

Aaron Reeves[1*], Sanjay Basu[2,3], Martin McKee[3], Christopher Meissner[4] and David Stuckler[1,3]



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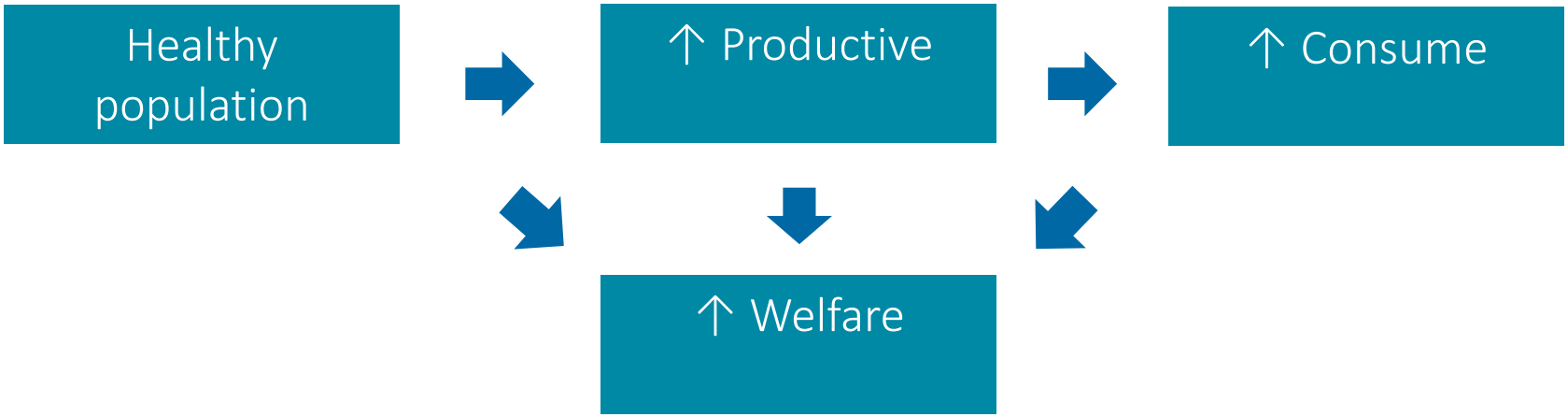
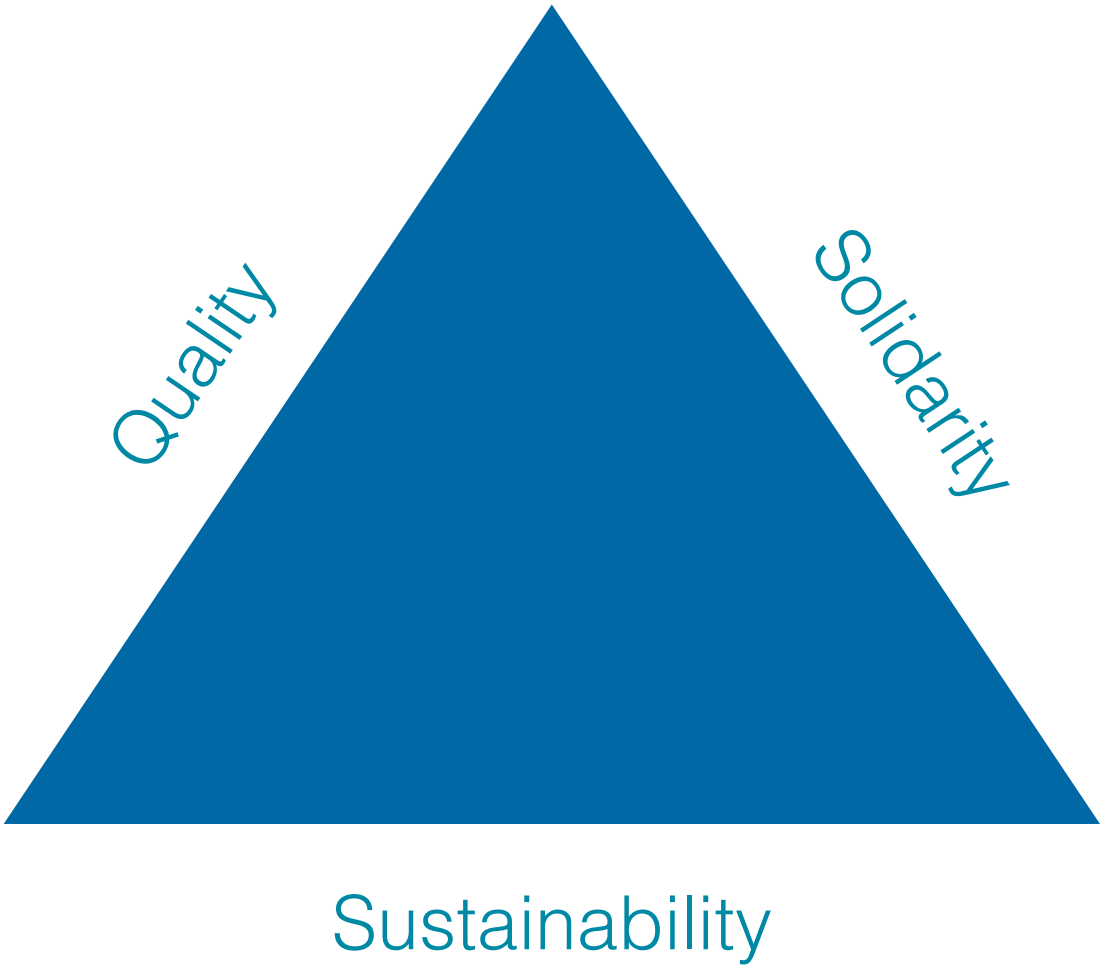


Jacobzone S. OECD 2003

Take home message to policy makers

The conflicting goals of healthcare policy



Recommended approach

" to optimize the health of the population within the limits of the available resources, and within an ethical framework built on equity and solidarity principles."

EU Council of Ministers of Health, 2010

Healthcare costs are rising faster than levels of available funding

ageing population

rise in chronic diseases

high-tech advances

patient demand driven by increased knowledge of options and by less healthy lifestyles

Were should we invest in?

Most significant direct impact will, of course, be the savings achieved for society as they have fewer healthcare costs to bear.

So, we should focus on these technologies that make this happen

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So, we should focus on these technologies that make this happen

oncology
cell & gene therapies
vaccination, infection control
prevention & health promotion
electronic health records
digital innovations
knowledge centers
etc.

What does it mean for innovative technologies / medicines

We need to make available and stimulate innovative technologies/medicines that offer an added therapeutic/societal benefit at an acceptable cost and fill unmet medical needs

Decisions on pricing, reimbursement, recommending usage, … should be more and more based on health economic evaluations

OECD, 2003
EU Council of Ministers of Health, 2010

What is a health technology assessment?

HTA seeks to inform health policy makers by using the best scientific evidence on the medical, social, economic and ethical implications of investments in health care.

Assessment includes:

1. Synthesising health research findings about the effectiveness of different health interventions

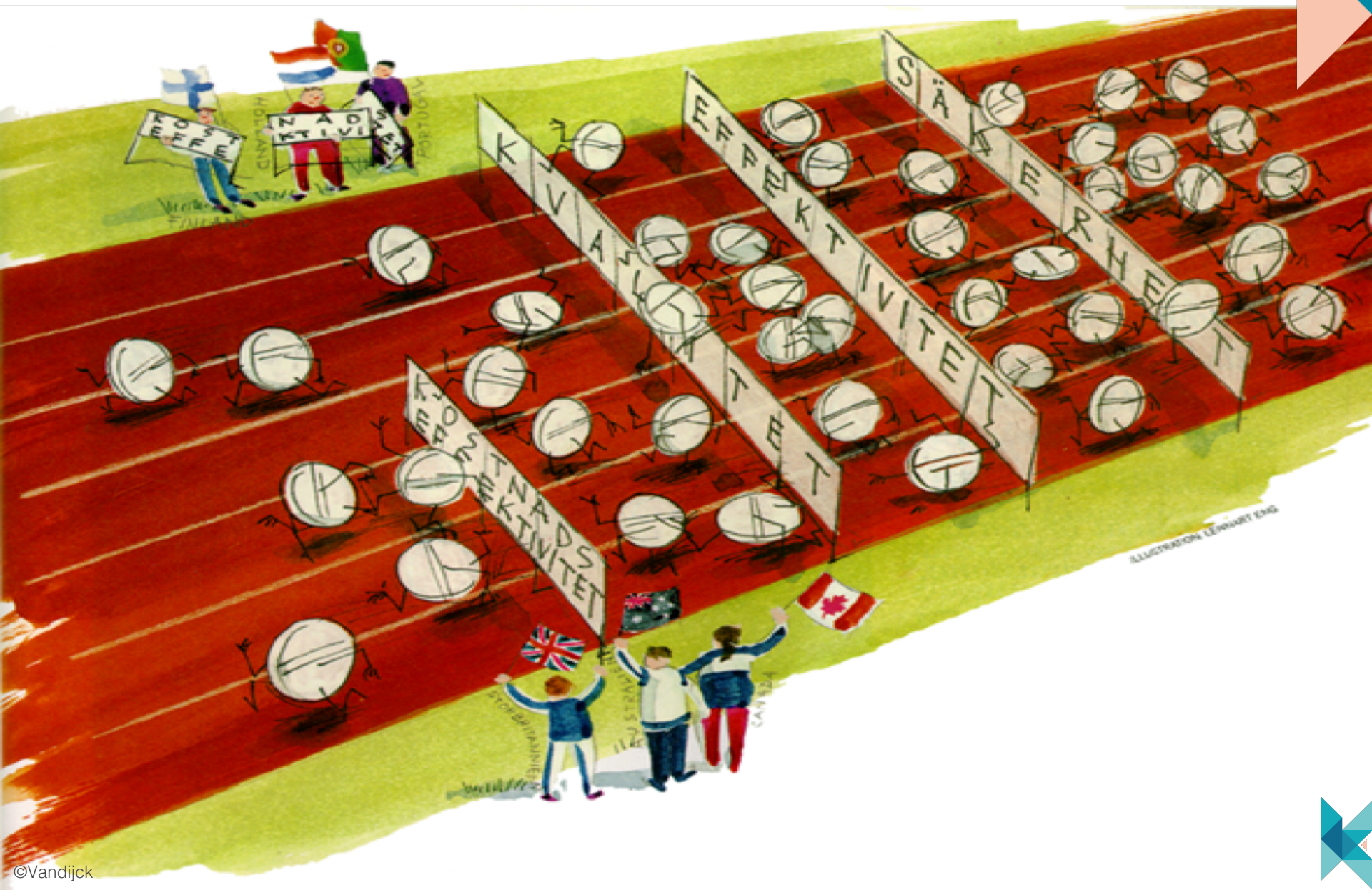
2. Evaluating the economic implications and analysing cost and cost-effectiveness

3. Appraising social and ethical implications of the diffusion and use of health technologies as well as their organisational implications

4. The HTA process helps identify best practices in health care, thereby enhancing safety, improving quality and saving costs.

Vandijck D & Annemans L. EU Comission 2011
http://www.inahta.org/HTA/

The ‘fourth hurdle’



Two views on innovation

"these prices are too high"

"the budgets will explode"

"these medicines offer huge benefits on survival and QoL"

"the medical need is very high"

Pricing – basically two options

Cost

price ➡ price justified by costing structure

- ☺ acceptable mark-up as compensation for the costs of investment in R&D
- ☹ difficult to assess the true cost of R&D (what about failures?)
- ☹ wrong incentives (spend a lot on R&D)
- ☹ added value not sufficiently recognized

Value-based pricing

- ☺ better added value is recognized by better rewarding
- ☹ profit margin may not be in reasonable proportion to the cost structure
- ☹ evidence may not be sufficiently convincing at launch

What is value?

"the importance, worth, or usefulness of something"

Value for money

INPUT ↔ OUTPUT

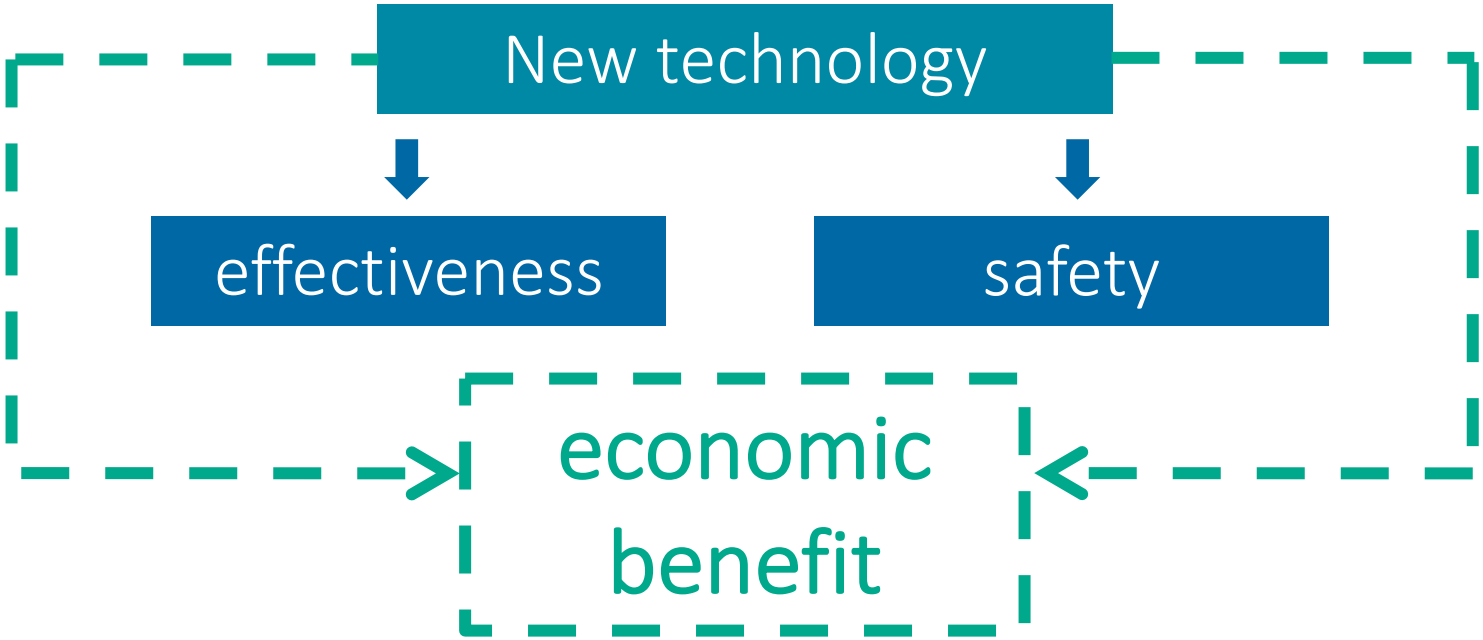
€ health

Strive towards efficiency

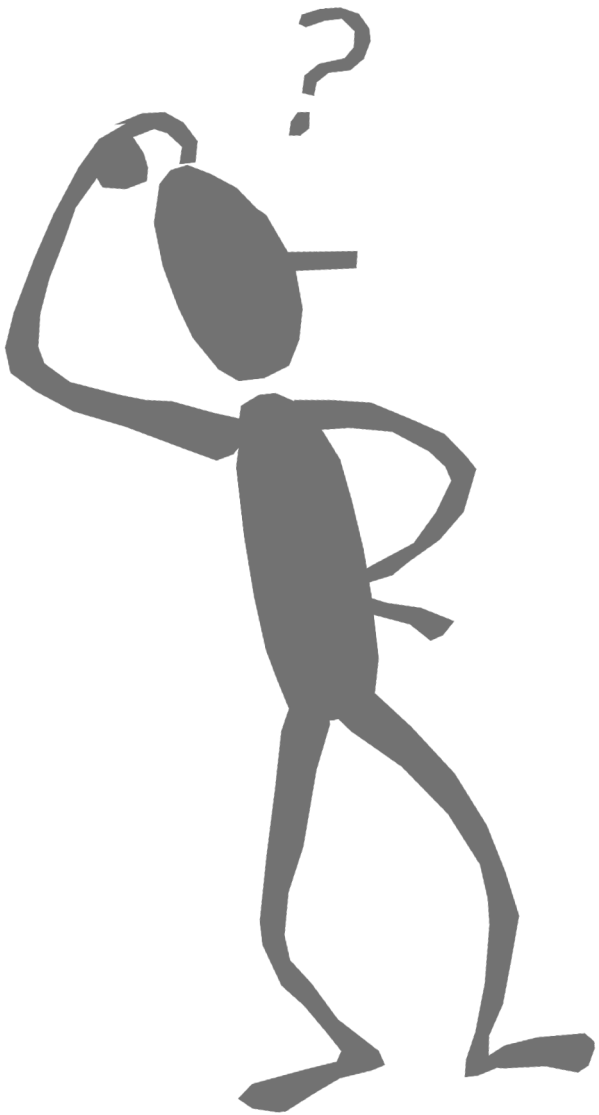
"How (health) economics can contribute to more and better healthcare, and so… health?"

How to assess technologies added value

Since January 2002: obligated submission of a (pharmaco-)economic form



Arrow K. Am Econ Rev 1963;53:941-73



"What are well spent and what are not well spent resources?"

Health economic reflex

No restriction of means vs. restriction of means

use and reimburse everythting	even in case of any growth, growth is limited

It is important to, within (the restrictions of) the available budget, make well-balanced decisions regarding what is possible and what not

Search for efficiency

Healthcare needs to produce health

= only one part of the story

'Producing' means being 'productive'

= healthcare needs to produce health at the most productive OR the most efficient way

optimal spending of resources

equity

Search for efficiency

If we want to produce as much health as possible, we need to allocate the (scarce) resources, to those interventions / drugs / technololgies / programmes / … that produce the most health per euro invested …

… so, to the most productive, the most efficient one!

Three steps of evidence

1. Does it work (compared to placebo)? Does it work in an artificial environment? (‘clinical study’)

   = *‘efficacy’*

2. Does it work by patients suffering a particular disease and at relevant parameters? (‘real life’)

   = *‘effectiveness’*

3. Demonstrate that the resources spent to this intervention, have good value for money

   = *‘efficiency’*

Health economic evaluation

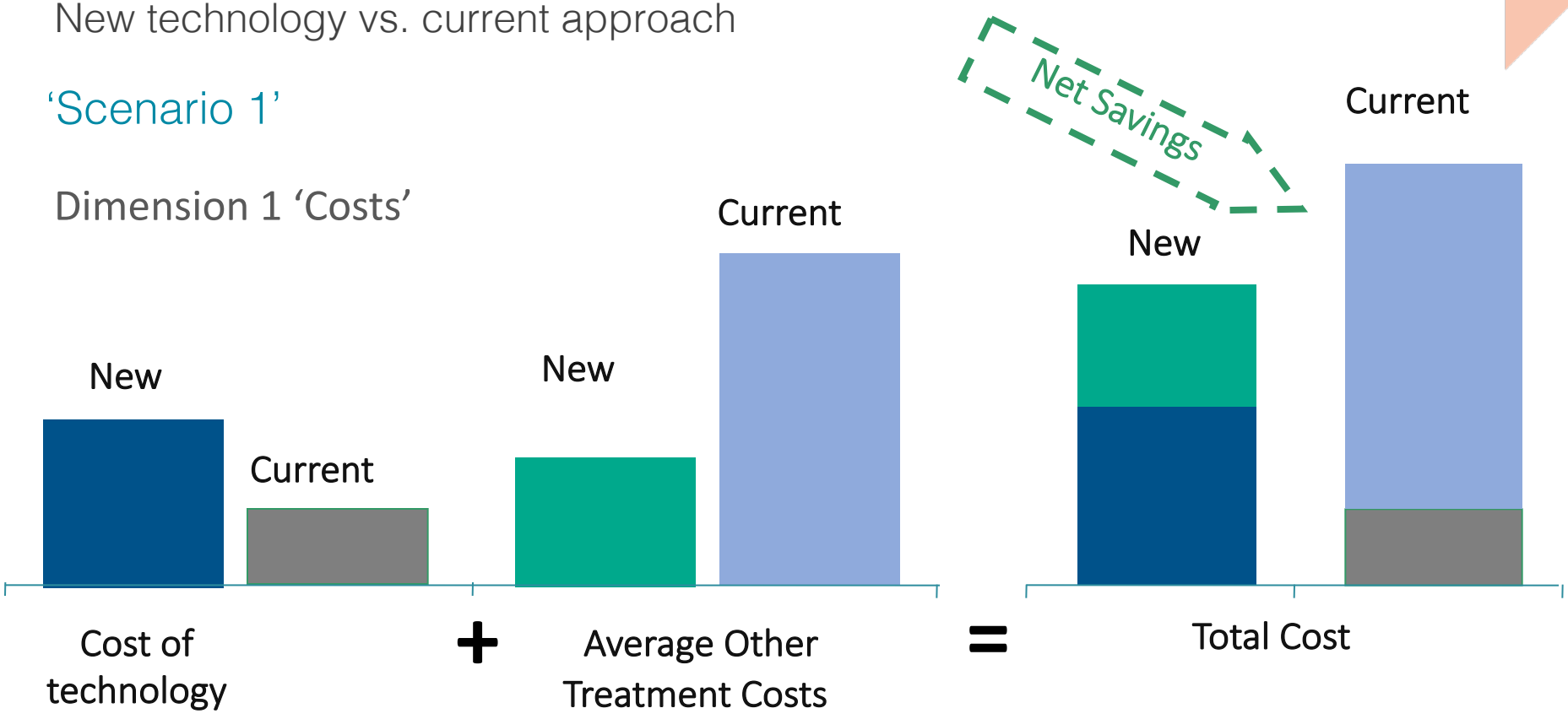
The comparative analysis of ≥ 2 interventions in terms of both their costs and health consequences

Value for money

New technology vs. current approach

'Scenario 1'

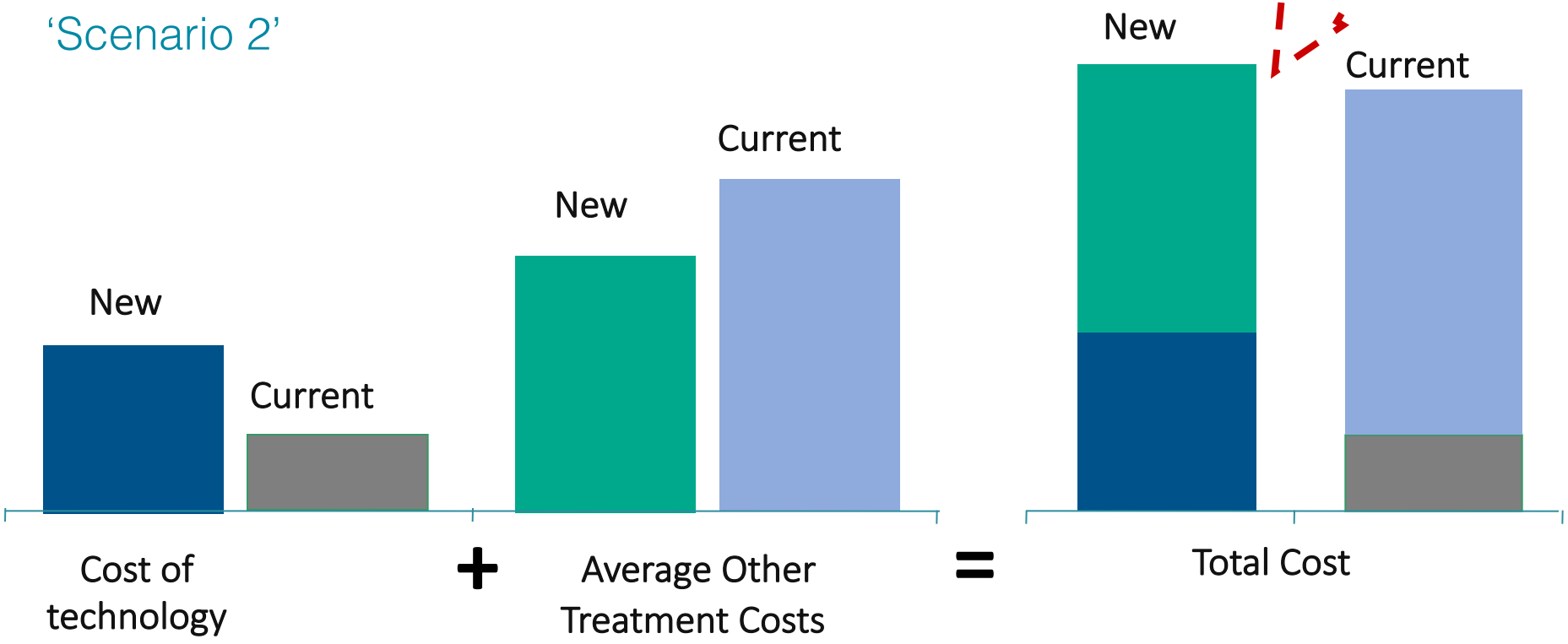
Dimension 1 'Costs'



Value for money

New technology vs. current approach

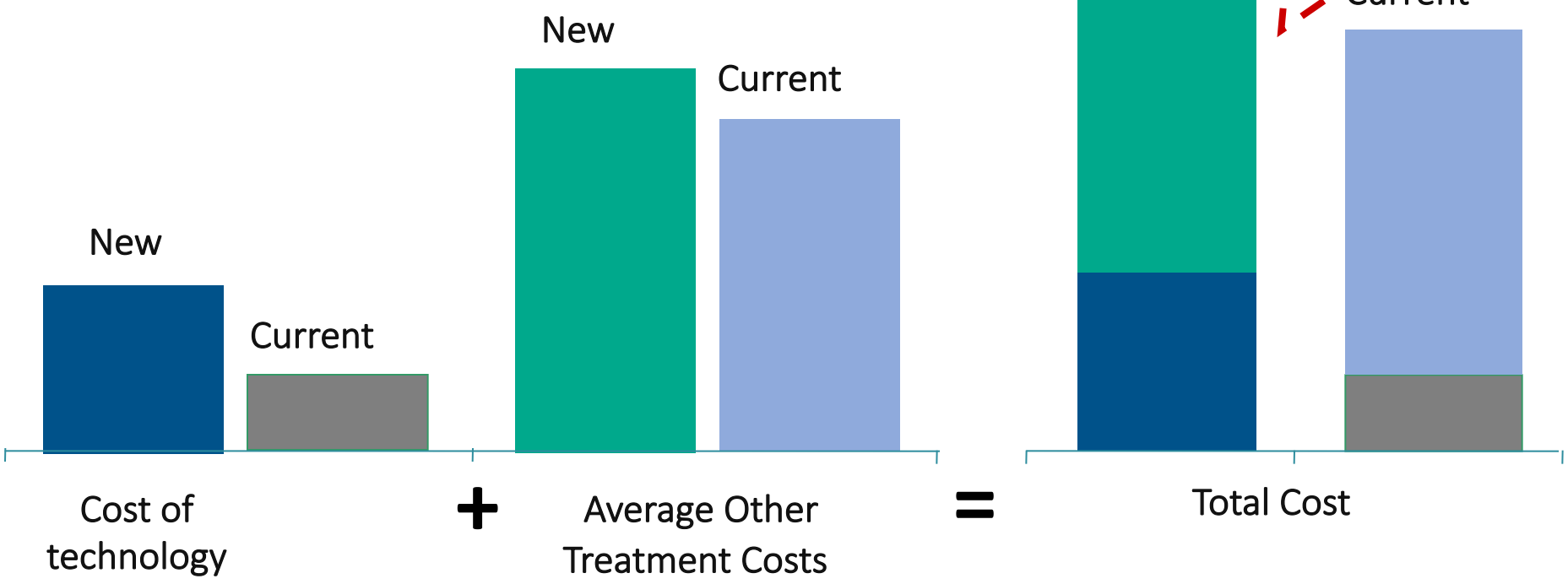
'Scenario 2'



Value for money

New technology vs. current approach

'Scenario 3'



Cost-effectiveness analysis

Basic principles:

1. Calculate the difference in costs between 'New' and 'Current'
   $(C_N - C_C)$

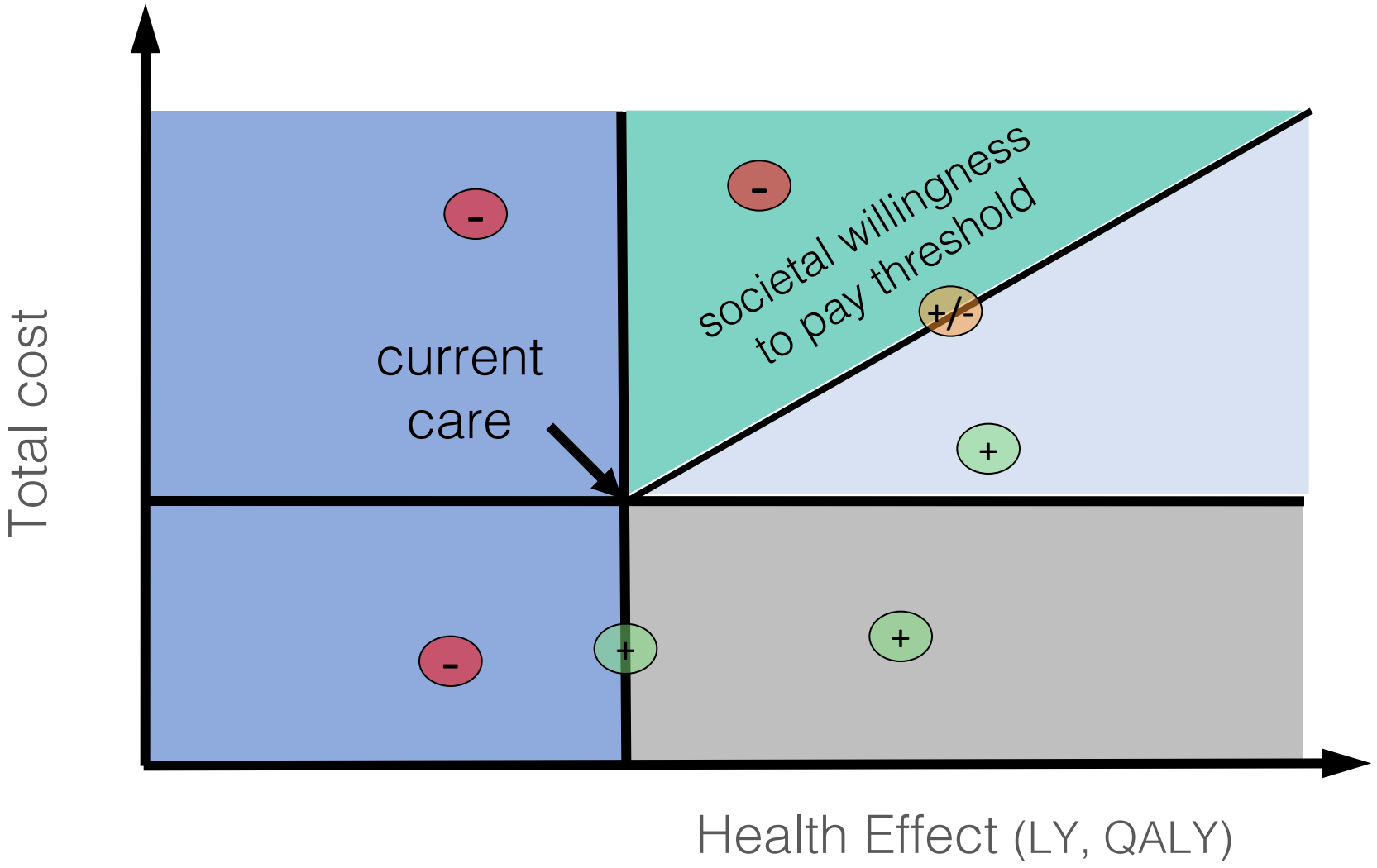
2. Calculate the difference in effectiveness between 'New' and 'Current'
   $(E_N - E_C)$

   new technology is more effective compared to current = health gain
   measure of health(gain) = QALY

3. Calculate the incremental cost-effectiveness ratio (ICER)
   $(C_N - C_C) / (E_N - E_C)$

   results showed in 2 dimensions

Cost-effectiveness plane



The economic value of a QALY is ± €40,000

In summary

Better healtcare ≠ cheaper healthcare

Main objective of (good) healthcare policy

- Not to safe money / resources
- Producing health
- Realising health gain

Healthcare needs to produce health

= only one part of the story

'Producing' means being 'productive'

= healthcare needs to produce health at the most productive OR the most efficient way

Conclusion

We should not be driven by costs, but by the value of how we intervene …

But, is the value of an intervention not the extent to which we are able to gain health per euro invested?

Misconception policy → focus on costs

Misconception professionals → focus on effectiveness

Do not generalize, but consider (sub)cohorts of patients, so that decision-making will be better nuanced and individualized.

Invest in technologies that have most impact on savings achieved for society

Decision regarding the allocation of resources is (always) a better decision in presence of a health-economic evaluation

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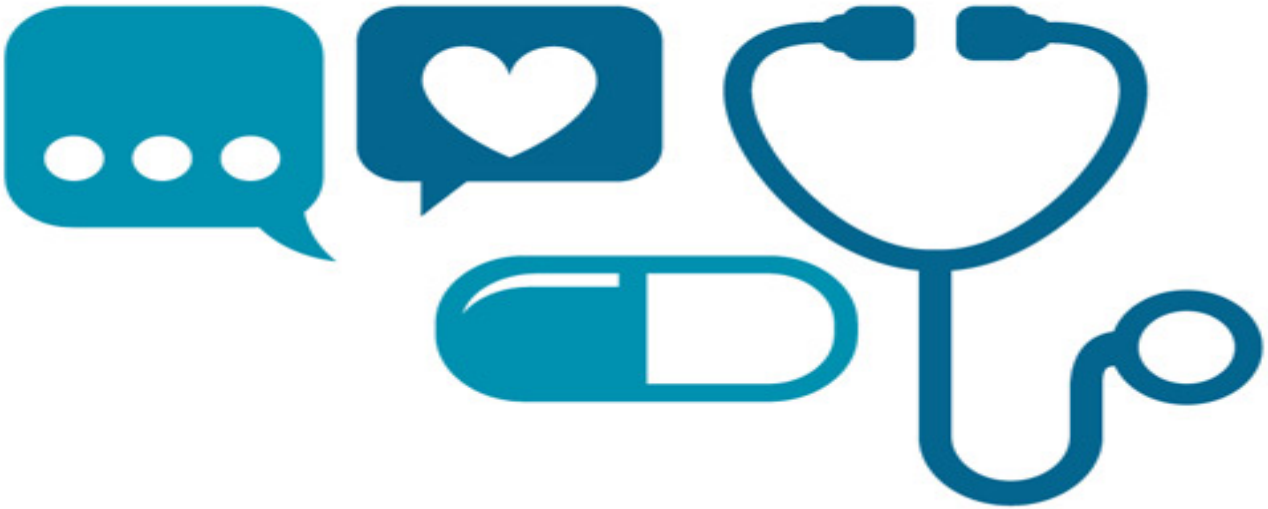

Thank you

for your attention & the kind invitation

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