CHARITÉ
UNIVERSITÄTSMEDIZIN BERLIN

Costs and cost-effectiveness of Complementary and Alternative Medicine

"Complementary and Alternative Medicine – Innovation and Added Value for European Healthcare" 9 October 2012 European Parliament, Brussels

Claudia M. Witt, MD, MBA

CHARITÉ UNIVERSITÄTSMEDIZIN BERLIN

Professor of Medicine
Acting Director
Institute for Social Medicine, Epidemiology and Health Economics
Charité University Medical Center Berlin
www.charite.de/cam

Senior Fellow CMTP Center for Medical Technology Policy

Visiting Professor
UNIVERSITY of MARYLAND SCHOOL OF MEDICINE
CENTER FOR INTEGRATIVE MEDICINE

Why Economic Evaluations on CAM?

Limited financial resources in health care

CAM often used in addition

Integration into health care plan?

Possible Cost Savings on Provider Level

- China: TCM hospital outpatient and inpatient costs around 30% lower than in conventional hospital
- UK: (3 case studies of intergrative care): 30% less GP visits, 50% reduced drug bill[2]
- Netherlands: patients whose GP has additional CAM training have up to 30% lower healthcare costs[3]

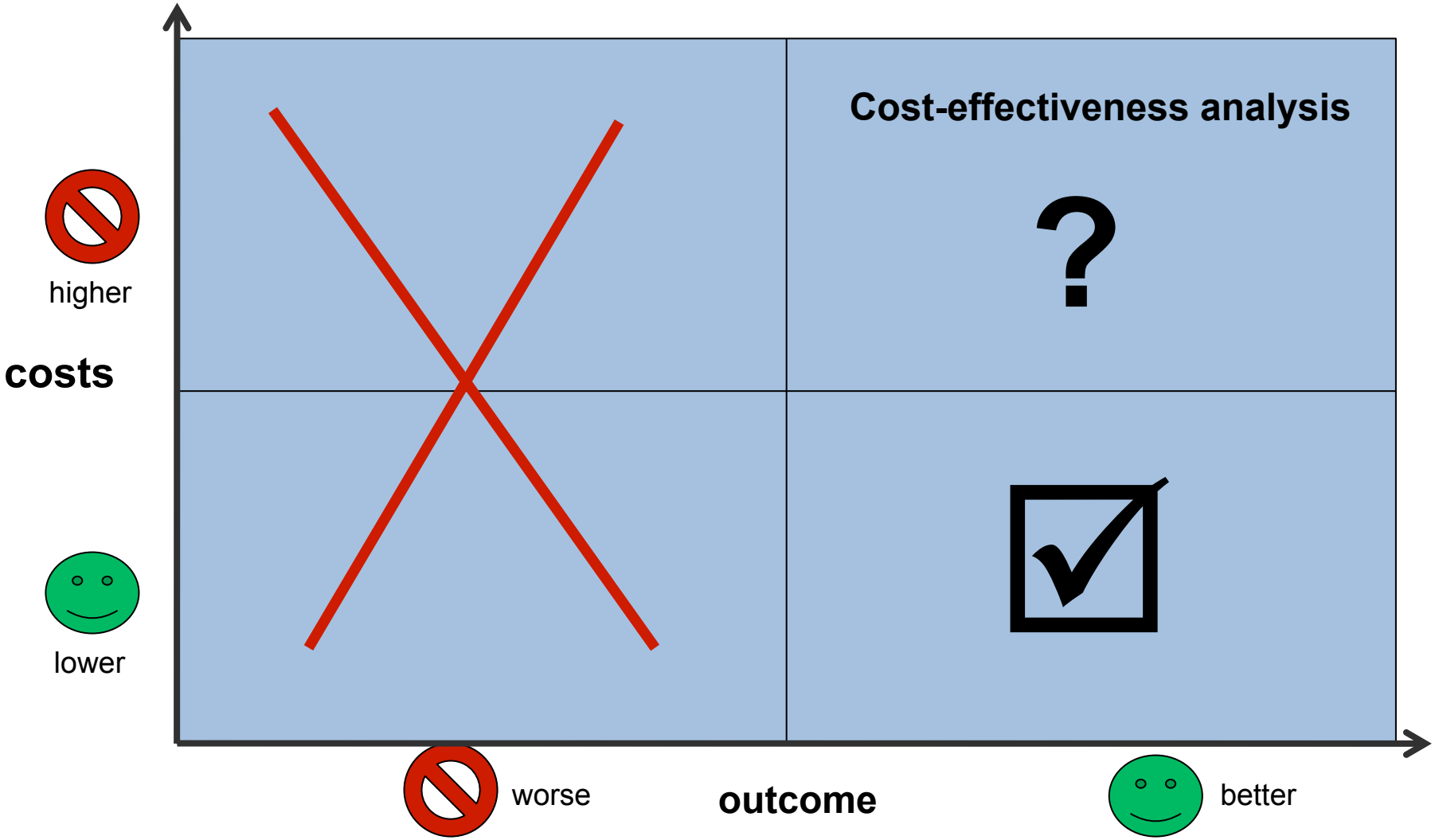
[1]WHO Workshop report on Traditional Medicine in primary health care 2007
[2]Smallwood Report UK
[3] Kooreman Eur J Health Econ 2011

Background

- Careful interpretation of economic analyses
  - Outcome and costs vary widely depending on treatment and context
  - Studies use different:
    - Economics evaluation methods
    - Perspectives
- Types of economic analyses
  - Cost of diseases
  - Full economic analyses
    - Comparison of treatments
    - Costs and benefits

Full Economic Analyses

Difference between two interventions



Economic Anayses on CAM – A Systematic Review

- 338 economic evaluations on CAM published
- Nearly all of them from Western countries
- 204 between 2001 and 2010
- 114 full economic evaluations
- 28 higher quality studies

Hermann P, Poindexter B, Witt CM, Eisenberg D. BMJ Open 2012

Economic Analyses (2001-2010)

CAM type	All	Full economic evaluations
Manipulatitve/ body practices	45	25
Acupuncture	41	29
Natural products	38	28
Mind Body Medicine	27	16
Homeopathy	24	13
Complex CAM	18	1
Other CAM	25	12

Hermann P, Poindexter B, Witt CM, Eisenberg D. BMJ Open 2012

Cost Savings - Better Outcome and Lower Costs

- 16 (29%) of 56 comparisons made in higher quality studies
- Non-pharmacological treatments:
  - Acupuncture for low back pain[1]
  - Naturopathic care for low back pain[2]
  - Acupuncture for breech presentations[3]
  - Manual therapy for neck pain[4]
  - Tai Chi to prevent hip fractures in elderly[5]

Hermann P, Poindexter B, Witt CM, Eisenberg D. BMJ Open 2012

[1]Ratcliffe BMJ 2006, [2]Herrman Altern Ther Health Med 2008, [3]van den Berg CTIM 2010, [4]Korthals-de Bos BMJ 2003, [5]Wilson J Clin Outcomes Manag 2001

Cost Savings - Better Outcome and Lower Costs II

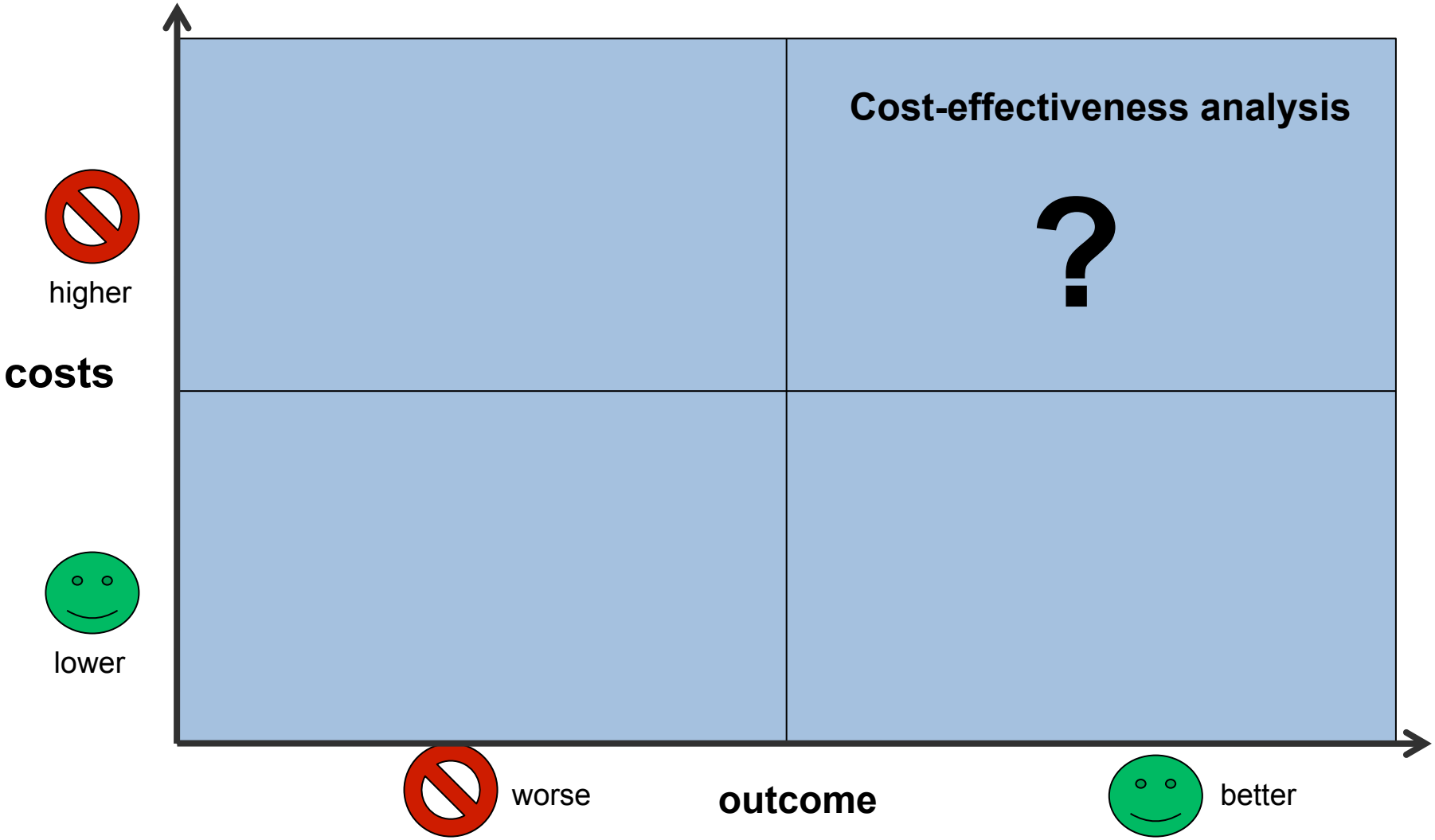
- Supplements
  - Perioperative oral Arginine and Omega-3 fatty acids in colorectal cancer[6]
  - Vitamin K1 in post menopausal women with osteoporosis[7]
  - Vitamin C, E and beta-carotene for cataract prevention[8]

Hermann P, Poindexter B, Witt CM, Eisenberg D. BMJ Open 2012

[6]Braga Nutrition 2005, [7]Stevenson Med Decis Making 2010, [8]Trevithick J Orthomolecular Med 2006

Cost-Effectiveness

Difference between two interventions



Cost-Utility-Analysis

How much do we have to pay
to gain one extra year of "perfect quality of life" (QALY) due to the intervention ?

Incremental Cost-Effectiveness Ratio (ICER)

$$\text{ICER} = \frac{\text{Diff. costs (intervention – control)}}{\text{Diff. QALYs (intervention – control)}}$$

Cost-Utility Analyses
Results from the Systematic Review

- Study quality of the cost-utility analyses of CAM was slightly better than that across all medicine

- Of the 28 Cost-Utility-Analyses comparisons:
  - 18% (n=5) $0 - $10,000/QALY
  - 54% (n=15) $10,000 - $50,000/QALY

Hermann, Poindexter, Witt, Eisenberg. BMJ Open 2012

Cost-Effective – ICER $0-$10.000

- Acupuncture for Dysmenorrhea, Germany[1]
- Acupuncture for low back pain
  - Chronic low back pain, UK[2]
  - Acute low back pain, Korea[3]
- Exercise program plus spinal manipulation for low back pain, UK[4]
- Osteopathy for subacute back pain, UK[5]

Hermann, Poindexter, Witt , Eisenberg. BMJ Open 2012

[1]Witt Am J Obstet Gynecol 2008, [2]Ratcliffe BMJ 2006, [3]Kim BMC CAM 2010, [4]UK Beam Trial Team BMJ 2004, [5]Williams Fam Pract 2004

Cost-Effective – ICER $10.000 - $ 50.000

- Acupuncture, Germany:
  - Headache[1]
  - Osteoarthritis[2]
  - Neck pain[3]
  - Low back pain[4]
  - Allergic rhinitis[5]

- Acupuncture for headache, UK[6]
- Alexander technique or massage for chronic back pain, UK[7]
- Omega-3 fatty acids to avoid death after myocardial infarction[8]

Hermann, Poindexter, Witt , Eisenberg. BMJ Open 2012

[1]Witt Cephalalgia 2008, [2]Reinhold Eur J Health Econ 2008, [3]Willich Pain 2006, [4]Witt Am J Epi 2006, [5]Witt Am J Epi 2009
[6]Wonderling BMJ 2004, [7]Hollinghurst BMJ 2008, [8]Quilici In J Clin Pract 2006

Complexity of Economic Analyses on CAM

- CAM mainly used as complex interventions
- The theory of many CAM methods predicts life style changes and possible long-term effects

Assumptions and Possible Translations

- Prevention of illness as a result of CAM treatments might result in cost-savings[1]
  - e.g. less time off from work, less direct costs
- For example, lifestyle intervention for diabetes patients in primary care is cost-effective in relation to standard care[2]

[1]Smallwood Report UK
[2]Jacobs-van der Bruggen Diabetes Care 2009

Conclusion

- A number of high quality studies indicate cost-effectiveness or even cost saving for single CAM treatments.
- Long-term economic impact not known, but aspects such as life style change could have positive economic impact.