

Cost Benefit Analysis (CBA) and Integrative Medicine

- **Cost Benefit Analysis (CBA) encompasses an array of medical economic evaluations including cost benefit/effect/offset, Net Present Value (NPV), Return on Investment (ROI), and predictive econometric modeling**
- **Different methodologies and perspectives result in noncomparable and often non-generalizable outcomes**
- **Lack of standardization in operationalizing and monetizing costs and/or benefits independently of the CBA methodology**
- **CBA issues of IM evaluations are comparable to those in Patient Centered Medical Home (PCMH), chronic care management (CCM), multifactorial behavioral/medical interventions, Integrated Population Health (IPH), and with clinical and cost outcomes research in worksite/corporate environments**
- **Systematic review of “Medical Economics of IM” focused on the 2 most robust databases of CBA of the potential CAM components of IM and the worksite/corporate clinical and cost effectiveness research**

Integrative Medicine and CBA of CAM Components

- **Few if any studies meet the IM definitions criteria and/or are self identified as IM**
- **International research literature review yielded 59 CBA studies (39 “Full” and 20 “Partial” evaluations). Evaluated by BMJ 35 item checklist and 4 criteria of randomization, prospective economic data, comparison to usual care, and blinding**
- **Eight (8) modalities and/or conditions identified with CBA of CAM interventions ranging from acupuncture for migraine to numerous citations of guided imagery, relaxation therapy, and meditation outcomes**
- **Clinical and cost outcomes prototypes most extensive in worksite/corporate research (N=153) with 62 of 63 CBA analyses indicating cost benefit, cost/effect, or ROI**

“Bottom Line” on the “Bottom Line”

- **All worksite interventions (N=153) indicate positive clinical/health outcomes**
- **All demonstrated related benefits (monetize) in STD, LTD, absenteeism, retention, productivity, performance and/or presenteeism**
- **Cost effectiveness, cost benefit, and/or ROI is positive in 62 of the 63 studies analyzed for financial outcomes**
- **Out of the 63 studies reporting financial outcomes, 24 reported ROI and all were positive**
- **Vast majority of all cost effectiveness studies and literature reviews demonstrate positive ROI**
- **In the more rigorous studies/interventions the ROI tends to be lower**
- **Most conservative ROI estimate is 1:1 (Break Even) to 2:1**
- **Evidence based ROI range: Approximately 3.5 - 4.90 : 1**
- **ROI outcomes most evident at approximately 3.25 years**

Actionable Recommendations

- Incorporate CBAs into all “Effectiveness” trials throughout the continuum of prevention, primary care, and Integrative Medicine (“Effectiveness” \neq RCTs)
- Match appropriate CBA methodology, perspective, and outcomes to the specific research hypotheses and implementation environment
- Engage worksite/corporate collaborators in “health” oriented CBAs
- Extend CBA by monetizing such variables as pharmacy offset, STD, LTD, patient/provider satisfaction, changes in HRAs, absenteeism, “presenteeism”, performance, and productivity
- Combine conventional and CAM (ICD 9, CPT, “ABC”) coding for Dx and payment of IM services
- Metrics: Develop an international, internet server available, standardized foundation database of recommended clinical and cost outcome metrics