Overview

• Considerations for applying cost evaluation to FT
• Cost-effectiveness calculations
• Cost-benefit analysis
• Validity issues related to cost-evaluations
• Advocacy and application
Controversy, Purpose, and Importance

• Arguments against:
  – Considers only momentary aspect of intervention
  – Ignores quality of clinical interventions
  – Used to justify cuts to funding for services

• Supporting arguments:
  – Has been effectively used to expand services
  – Insufficient to focus only on clinical outcomes
  – Especially important in MFT research since information is lacking in the literature
Components of Cost Evaluation

• Costs (three types; Lazar, 2010)
  – Management
  – Accountant
  – Economist

• Benefits
  – Avoided expenses
    • e.g., Health care costs
    • e.g., Criminal justice
    • e.g., Lost work days
  – Increased salary, etc.

• Effectiveness
  – Clinical outcomes
  – Effect sizes
Cost-Effectiveness Analysis

• Compare average cost between programs with similar effect sizes
• Incremental cost-effectiveness ratio
  – Useful to compare two treatments
• Cost-utility analysis
  – Quality adjusted life years
Incremental Cost-Effectiveness Ratio (ICER)

- ICER = \( (C_a - C_b) / (E_a - E_b) \)
- Two programs for substance abuse
  - Treatment A: costs $15,000/yields 93 days sober
  - Treatment B: costs $12,000/yields 75 days sober
- ICER = \( (15,000 - 12,000) / (93 - 75) \) = $166
- Programs are equally cost-effective (even though Treatment A costs more overall)
Cost-Benefit Analysis

• Benefits
  – Exhaust possible benefits and monetize them
  – E.g., Lee and Aos (2011)

• Cost-benefit ratio
  – Discounting

• Cost-benefit analysis
  – Net present value
Cost-Benefit Ratio

• Values should be discounted to “current dollar” values prior to analysis
  – Cost or benefit / 1+discount rate
  – Discount rate of 3% adequate
• Cost-benefit ratio formula
  \[ CBR = \frac{\text{Present Value}_b}{\text{Present Value}_c} \]
• Treatment A example (without discounting)
  \[ CBR = \frac{\$1,250 \times 93 \text{ days}}{\$15,000} = \frac{\$116,250}{\$15,000} = \$7.75 \]
• Savings of $7.75 for each dollar spent
Cost-Benefit Analysis

• Net present value

\[ NPV = \sum_{y=0}^{N} \frac{(Q \times B - C)_y}{(1 + Dis)^y} \]

• Treatment A example (single year)

\[ Treatment \ A = \frac{(93 \text{ days} \times \$1,250 - \$15,000)}{1 + 0.03} = \$98,300 \]

• Treatment B example (single year)

\[ Treatment \ B = \frac{(75 \text{ days} \times \$1,250 - \$12,000)}{1 + 0.03} = \$79,368 \]

• Treatment A is preferable as it has a more positive economic impact than Treatment B
Cost Evaluations and Validity

• Construct validity
  – Significant impact from how costs and benefits are defined. Should include both:
    • Indirect costs/benefits
    • Direct costs/benefits

• Conclusion validity
  – Inclusion or exclusion of theoretical costs/benefits can dramatically effect results
  – May overestimate/underestimate fiscal impact
Couple and Family Level Data

- Often ignored in cost-evaluation studies
- Systems thinking predicts impact on others beyond the “Identified Patient”
- Costs and benefits should be calculated for family members

*What are some possible systemic outcomes that should be considered in cost evaluations?*
Advocacy and Application

• Two areas of focus for advocacy
  – Grass roots level
    • Satisfied customer taking information directly to stakeholders
    • Within the insurance system, clients hold the power to effect change
  – Professional level
    • Contact policy makers to argue for changes
      – Requires having solid information demonstrating cost-savings
    • Use to strengthen grant applications
    • Incorporate cost mindset into outcome research
Summary

• Covered in this presentation
  – Considerations for applying cost evaluation to MFT
  – Cost-effectiveness calculations
  – Cost-benefit analysis
  – Validity issues related to cost-evaluations
  – Advocacy and application
Questions?
How to do cost effectiveness research on family therapy

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• effect size is a measure of the strength of a phenomenon (for example, the change in an outcome after experimental intervention). A descriptive statistic that conveys the estimated magnitude of a relationship without making any statement about whether the apparent relationship in the data reflects a true relationship in the population. In that way, effect sizes complement inferential statistics such as p-values. Among other uses, effect size measures play an important role in meta-analysis studies that summarize findings from a specific area of research, and in statistical power analyses.

• file:///E|/dx.doi.org/10.1016/j.jval.2013.02.002