

# Performance Measurement and Program Evaluation For Drug Courts

Fred L. Cheesman II, Ph.D.

The National Center for State Courts



# Module 5: Cost-Efficiency Analysis

- Two types
  - Cost- Benefit Analysis
  - Cos-Effectiveness Analysis



# Components of a Cost-Benefit Analysis

- A formal way of adding up the advantages and disadvantages of doing one thing as opposed to doing something else
- Compares present values of all benefits less those of related costs when benefits can be valued in dollars the same way as costs
- Performed in order to select the alternative that maximizes the benefits of a program



# Components of a Cost-Benefit Analysis (Cont.)

- **Potential Benefits**

- Savings in jail and prison costs

- Jail and prison costs are generally calculated at a minimum of \$40/day (not counting construction costs) though they are frequently higher

- Per day costs of drug court program participation and services generally range between \$8 - \$14

- Avoid overall criminal justice system costs associated with arrests, prosecution, adjudication, and disposition of drug cases



# Components of a Cost-Benefit Analysis (Cont.)

- Average # of post-graduation arrests for year after graduation = .22, for comparison group = 1.22
- Averted cost of police protection = \$762
- Savings, comparing 18 graduates with 18 comparison group members:
- $(18 \times 1.22 \times \$762) - (18 \times .22 \times \$762) = \$16,459 - \$3,018 = \$13,441$



# Components of a Cost-Benefit Analysis (Cont.)

- **Potential Benefits**
  - Avoid public health costs associated with drug-related physical illnesses
    - Emergency room care
    - Hospitalization
    - Outpatient medical services
    - Medication



# Components of a Cost-Benefit Analysis (Cont.)

- **Potential Benefits**

- Avoid costs associated with drug-related mortality and premature death
- Social welfare costs
  - Foster care and other support of family members
- Avoid costs related to lost productivity
  - Workplace accidents
  - Unemployment



# Components of a Cost-Benefit Analysis (Cont.)

- **Potential Benefits**

- Avoid costs related to the specific impacts of drug use

- Fetal alcohol syndrome and drug exposed infants
    - IV drug user related AIDS
    - Hepatitis
    - Drug-related TB

- Avoid costs incurred by crime victims, persons involved in auto accidents, etc.





# 5 Elements of Cost-Benefit Analysis

1. Add up monetary benefits
2. Subtract the costs
3. Determine whether the resulting “bottom line,” expressed in dollar terms, is positive or negative
4. Compare the estimated bottom line to the returns available from other options
5. Test the riskiness of the conclusions (“sensitivity analysis”)



# Cost-Effectiveness Analysis

- Relates the cost of a given alternative to specific measures of program outcomes, e.g., dollars per crime averted
- Especially useful when program objectives are singular or sufficiently related so that the relationship between objectives is clear, valuing in dollars is impossible or impractical, or there is a dominant measure of effectiveness (e.g., recidivism)



# Cost-Effectiveness Analysis Example

- Example (Roehl and Guertin, 2002), using data from Monterey County, revisited
- Compare drug court to alternative, incarceration
- Average cost of a drug court graduate
  - Assume average length of stay in both alternatives is 1.5 years or about 548 days
  - Cost per day of drug court = \$14
  - Estimated Cost of drug court per graduate = (548 days) X (\$14 per day) = \$7,672



# Cost-Effectiveness Analysis Example

- Average cost of incarceration
  - Cost per day of incarceration = \$40
  - Estimated Cost of comparison group member = (548 days) X (\$40 per day) = \$21,920
- Cost per arrest
  - Drug court: (.22 arrests per participant) / (\$7,672 per participant) = .0000286 arrests per dollar spent on drug court or 28.6 arrests for every million dollars spent on drug court



# Cost-Effectiveness Analysis Example

- Cost per arrest
  - Incarceration:  $(1.22 \text{ arrests per participant}) / (\$21,920 \text{ per participant}) = .0000556$  arrests per dollar spent on drug court or 55.6 arrests for every million dollars spent on incarceration
  - Every million dollars spent on drug court results in 55.6 – 28.6 or 30 fewer arrests (after release) than a million dollars spent on incarceration



# Advantages and Disadvantages of Cost Efficiency Analysis

- Easy for policy-makers to understand
- Benefits often difficult to quantify
- Requires specialized skills
- Easy to “fudge”

