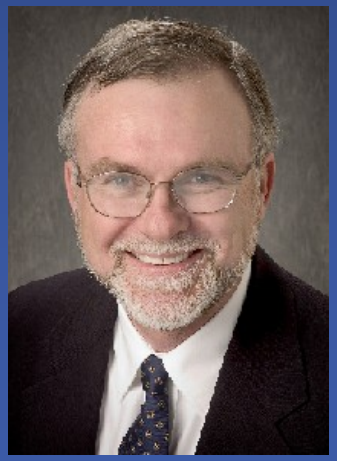
Common Pitfalls in Cost Determination

Health Care Costs: In Pursuit of Standardized Methods and Estimates for Research and Policy Applications

Rockville, Maryland
December 6–7, 2007

Paul G. Barnett, PhD



HERC
Health Economics Resource Center

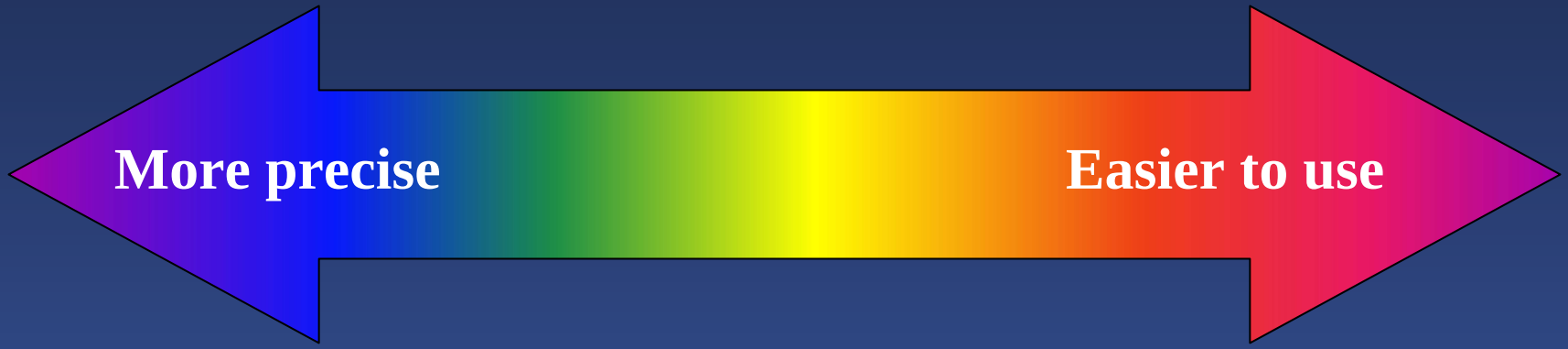
Choice of costing methods

- Trade-off: precision vs. ease of use

Some common costing methods

Direct measurement	Quantify labor and other inputs of an intervention
Activity based costing	Comprehensive provider costing system
Cost-adjusted charges	Provider bill adjusted by ratio of cost to charges
Pseudo-bill	Measure utilization and apply reimbursement schedule
Average cost per unit	Measure utilization and apply average unit cost of DRG, days, or visits

Trade-Off



Direct measurement

Activity based costing

Cost adjusted charge

Pseudo-bill

Average cost per visit, day, or DRG

Precision is not just finding the correct mean

- Has variance has been preserved?
  - This can be important!
  - Needed to determine the uncertainty surrounding cost-effectiveness findings

Pitfalls and limitations

- Pitfalls: the pet peeves of costing curmudgeon
- Perspective: a study that needs to find person-level cost for clinical trial or observational study
- Each method has it limits

Direct measurement

- Pitfall #1: Hourly cost of employing staff is multiplied by time spent providing service
  - No one spends 40 hours a week in direct patient care
  - Need to find cost per hour of direct patient care
- Limitation: Can't measure the direct cost of everything

Activity Based Cost Allocation

- Pitfall #1: Taking data on face value
  - Solution: Review data for plausibility, consistency with alternate estimates
- Limitation: Data may be inaccessible

Cost-Adjusted Charges

- Pitfall #1: Hospital bills may be hard to obtain
- Pitfall #2: Strong assumption that charge is proportionate to economic cost
- Limitation: Not feasible to gather charges of ambulatory care or physician component

Pseudo bill: pitfalls in inpatient care

- #1 Don’t forget physician component (it is 20% of the cost of a hospital stay)
- #2 Avoid “Average daily rate” for acute hospital stays-- DRG is much better predictor of cost than length of stay
- #3 If using published payment per DRG, don’t forget about teaching, disproportionate share, outlier payments, etc.

Pseudo bill: Pitfalls in outpatient care

- #1 Avoid single unit cost for all care when care is heterogeneous
- #2 Don’t ignore facility payment for procedures provided in a facility
- #3 Follow reimbursement rules

Conclusion

- Seek counsel of reimbursement experts

Conclusion

- Multiple methods may be needed within a single study

Conclusion

- Review assumptions
  - Are they consistent with hypotheses?
- Check for bias
  - Is the intervention or control group being favored by the costing assumptions?