

 **OFFICE OF INFORMATION AND REGULATORY AFFAIRS**

ERS Risk Assessment, Economic Analysis, and Foodborne Illness Regulations Conference

Dominic J. Mancini, OMB-OIRA
November 16, 2007

What does OMB Require?

- Executive Order 12866 requires agencies to conduct a regulatory analysis for economically significant regulatory actions as defined by Section 3(f)(1).
- OMB has had regulatory analysis guidelines in place since the 1980s. Prior to A-4, the most recent guidelines were issued in 1996 and 2000.
- The “Regulatory Right to Know Act” requires OMB to “issue guidelines to agencies to standardize
 - (1) measures of costs and benefits; and
 - (2) the format of accounting statements.”
- OMB Circular A-4 Contains the latest relevant regulatory analysis guidance.

2

Analytical Approaches

- Benefit-Cost Analysis
- Cost-Effectiveness Analysis

3

Benefit-Cost Analysis

- Benefit-cost analysis is a primary tool used for regulatory analysis.
- Where all benefits and costs can be *quantified and expressed in monetary units*, benefit-cost analysis provides decision makers with a clear indication of the most efficient alternative, that is, the alternative that generates the largest net benefits to society
- This is useful information for decision makers and the public to receive, even when economic efficiency is not the only or the overriding public policy objective.
- A substantial majority ...of the resulting estimates of VSL vary from roughly \$1-\$10 million

4

Cost-Effectiveness Analysis

- Cost-effectiveness analysis (CEA) is *required* for all major rulemakings for which primary benefits are improved public health and safety.
- Effectiveness metric for public health and safety rulemakings:
 - integrated measures (e.g., equivalent lives, QALY, DALY)
 - no requirement for specific measure

5

Diversity in Benefits Estimates

- **EPA:** WTP both for morbidity and mortality. VSL approx. \$5-5.5 million, adjusted for real-income growth over time. CEA using cost per QALY.
- **FDA:** "Hybrid" Benefit-Cost Approach, assigning a monetary value to QALY, primarily used for morbidity. VSL of \$5 million is common for mortality. CEA is usually cost per QALY.
- **USDA:** WTP for both morbidity and mortality. VSL of \$5 million is common; \$4.2-\$10 million used in Roberts example. CEA in mad-cow rule using cost per infectious dose (ID-50).
- **OSHA:** Generally follows EPA's lead on VSL and mortality benefits. CEA usually cost per case of disease avoided (e.g. lung cancer).
- **DOT:** VSL for mortality is \$3 million by Department policy. Mortality and morbidity calculated in "Equivalent Lives Saved." CEA is cost per equivalent life saved.

6

Examples of New Results

- Hammitt and Haninger (2007):
 - \$8,000 - \$16,000 per case generic foodborne illness.
- Lasher (2007):
 - \$3,300 - \$12,000 per case of Campylobacteriosis.
- Zorn (2007):
 - \$7,000 per short term case of Reactive Arthritis
 - \$976,000 per long term case of Reactive Arthritis

Does it Matter?

- EPA Air (42 rules):
 - Average Benefit/Cost Ratio: 10.8
 - If Benefits lower by 20%: 8.6
 - If Benefits lower by 50%: 5.4

Average Benefit Cost Ratios For Selected Health and Safety Rulemakings

	Number of Rules	B/C Ratio	B*.8/C Ratio	B*.5/C Ratio
EPA Air	42	10.8	8.6	5.4
EPA Water	11	2.7	2.1	1.3
OSHA	7	4.5	3.6	2.3
DOT	15	2.1	1.7	1.1
FDA	12	13.6	10.9	6.8
USDA	3	8.7	6.9	4.3

Individual Rulemakings with Benefit-Cost Ratios Less Than 1

- Of 90 Rules, **17** had a B/C Ratio < 1
- If Benefits lower by 20%, **26** Rules would have a Benefit/Cost Ratio < 1
- If Benefits lower by 50%, **35** rules would have a Benefit/Cost Ratio < 1

Updated Principles for Risk Analysis

- Available at:
www.whitehouse.gov/omb/memoranda/fy2007/m07-24.pdf.
