

Population Health Impact Institute

A POPULATION HEALTH MANAGEMENT APPROACH FOR EMPLOYERS

Orlando March 10, 2005

PHI
Institute

Thomas Wilson, PhD, DrPH

Founder and Board Chair

(513) 289-3743

twilson@PHInstitute.org

www.PHInstitute.org

Organization of Talk

Paradigm Shifts in the US Health Care System

Supply Side Management to Demand Side Management to *Buyer's Side Management*.

Economic Value of Demand Management

CBO Earthquake and After Shocks

Conceptual Solution: *Independent, Valid Assessments*

Ethical Principles: Assessing *independence*

Evaluation Principles: Assessing *validity*

Operational Solution: *Assessing Credibility*

The Role of the Population Health Impact Institute.

Health System Cost Containment Paradigm Shifts

- “Supply side management” (provider-focused) to “demand side management” (patient-focused)
 - “Suppliers” have entered the “demand-side management” (e.g. Consumer Directed Health Plans, Wellness, HRA, Disease Management, etc.)
 - DM is nearly a \$1b industry, Rapid Growth, Private and Public investments
 - *Question: How do we manage the “suppliers” of “demand management”?*
- A Prediction: “Buyer-side Management”
 - Where health itself is an central goal (not just health care supply and health care demand) and the “value” (economic and otherwise) of good health is a principle goal
 - Where purchasers (government, employers) actively manage both the process and outcomes.

Demand-Side Earthquake

CBO Report

“Insufficient Evidence” from the Peer-Reviewed Literature.

- After 100s of articles, presentation, etc. an independent group (the US Congressional Budget Office) concluded there was *“insufficient evidence to conclude that DM programs can generally reduce overall health spending.”*



CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas Holtz-Eakin, Director

An Analysis of the Literature on Disease Management Programs

October 13, 2004

After Shocks

from the CBO Report

DM Value Area	DMAA	AHIP	IHPM
1 Clinical Evidence	Yes	Yes	Yes
2 Satisfaction	Yes	Yes	Yes
3 Rapid DM Growth	Yes	Yes	Yes
4 Economic Evidence	Yes	Yes	“insufficient”

- Why? What to do? How do we turn “insufficient evidence” to “sufficient evidence” Who should do it?

Credibility ... The Solution

- **Validity:** Clear Evaluation Framework
- **Independence:** Clear Ethical Principles
 - We will discuss ethics first, even though it is not a hot issue as it is in many other places, we don't want it to become an issues here: *This is a preventive strategy.*
 - We don't want the new patient centered paradigm to falter.

Background to Ethics:

Health Care Crises of Confidence

- Rx Industry
- Medical Journal Editors
- NIH and consultants
- CDC immunization promotion vs. safety of immunizations.
- FDA panel
 - New advisory board separating safety from approval

Ethics? With “Disclosure” it is in the “Eyes of the Beholder”

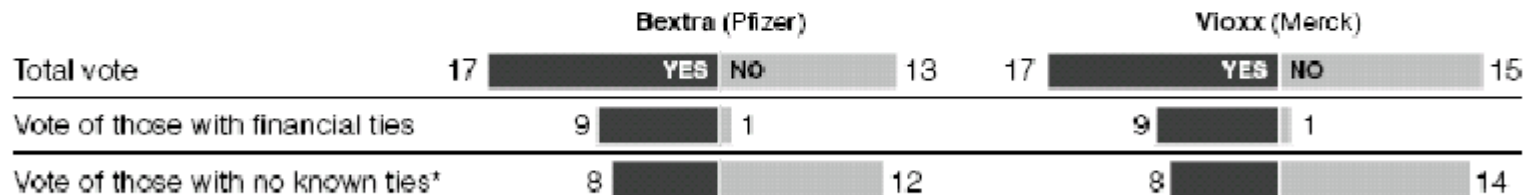
The New York Times

February 24, 2005

The Votes on Painkillers: A Second Look

Ten of the 32 members of the advisory panel that voted last week to advise the F.D.A. against banning Bextra, Vioxx and Celebrex had financial ties with the companies that make these drugs.

Should the following drugs be allowed to continue marketing?



Sources: F.D.A.; Center for Science in the Public Interest

*Two abstained on Bextra.

Panel voted 31-1 in favor of Celebrex.

The New York Times

Our Goal:
Preventing Ethical Problems

PHI Institute Solution:

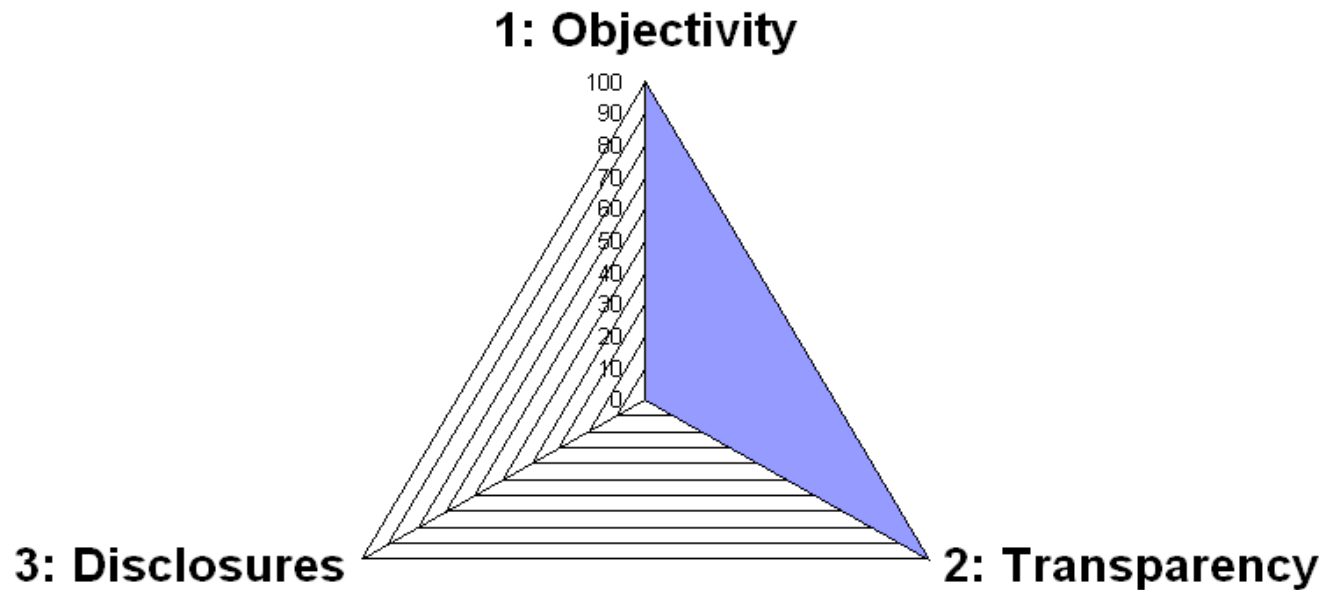
CODE OF EVALUATION ETHICS

1) Objectivity

2) Transparency of Methods

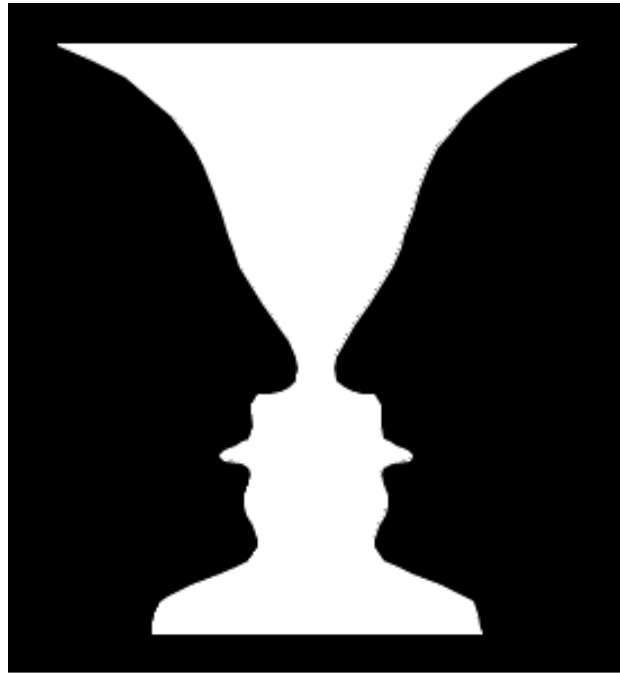
3) Disclosure of Interests

Ethics Scoring: *To Assess Independence*



© 2005 Population Health Impact Institute, Cincinnati, Ohio. For private use only. Commercial use prohibited. PHI institute reserves the exclusive right to use this system for benchmarking purposes. All other rights reserved.

Data



*Data doesn't say anything, you must interpret it: Face or Vase?
(...data can be biased, the interpretation can be biased)*

Background to Evaluation

- The HOT, HOT, issue
 - DMAA, NMHCC, AMA, AHA, SOA, PHII, independent authors have all chimed in.
- WHY?
 - There is no gold standard, like the RCT in the Rx industry.
 - A LITTLE SECRET ...
 - THERE NEVER WILL BE!
 - The only hope is to agree upon and then follow generally acceptable evaluation principles ... and hope to approach the validity of double-blind RCTs.

PHI Institute Solution: *EVALUATION FRAMEWORK*

1) Data Quality

Measurement Error

2) Equivalence

Differential Error

3) Statistical Quality

Non-Differential Error

4) Intervention Causal Pathway

Temporal Error

5) Generalizability

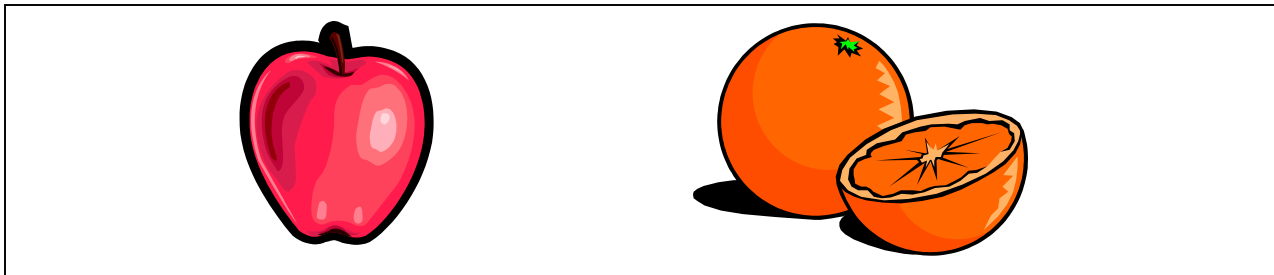
Transmission Error

© 2005 Population Health Impact Institute. All Rights Reserved. PHI Institute encourages the private, non-commercial use of this framework, however, it reserves the exclusive right for benchmarking services.

Evaluation Principle I: *Data Quality*

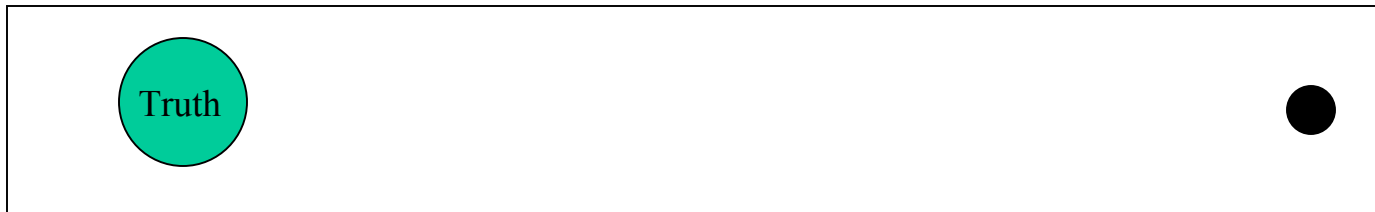
Measurement Error

Apples-to-apples or to-oranges?



Evaluation Principle II: *Equivalence*

Non-Differential Error

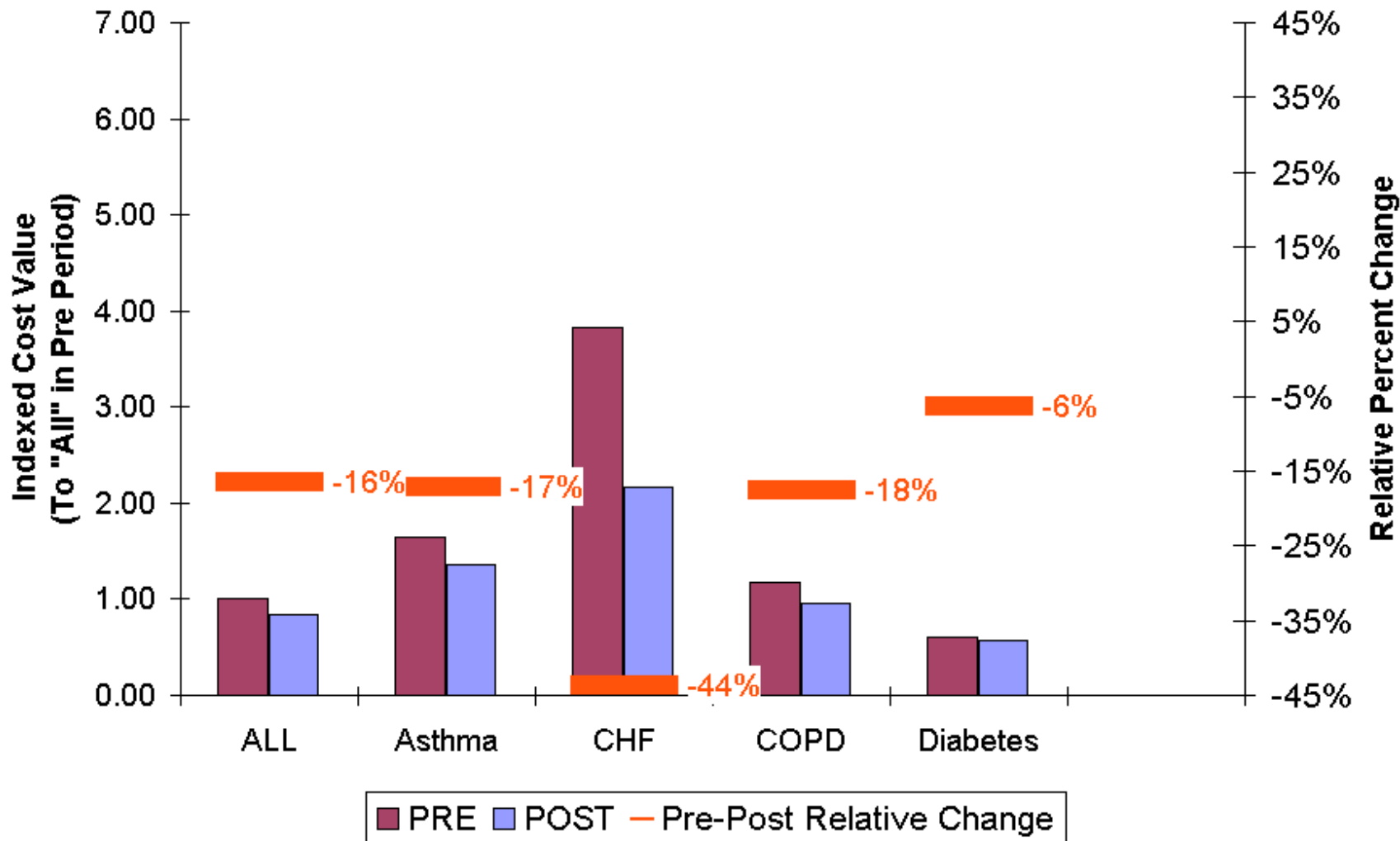


Mini-Case Study on Equivalence: *Pre-Post Study with “Patient as their Own Control”*

- Method: Select individuals in “pre” period that meet the condition criteria, calculate total and average claims paid.
- Introduce the “N” intervention.
- Follow all individuals through the “post” period and calculate all claims in “post” period.
- Compare the two periods, limit populations to those enrolled in the health plan for the entire two years.

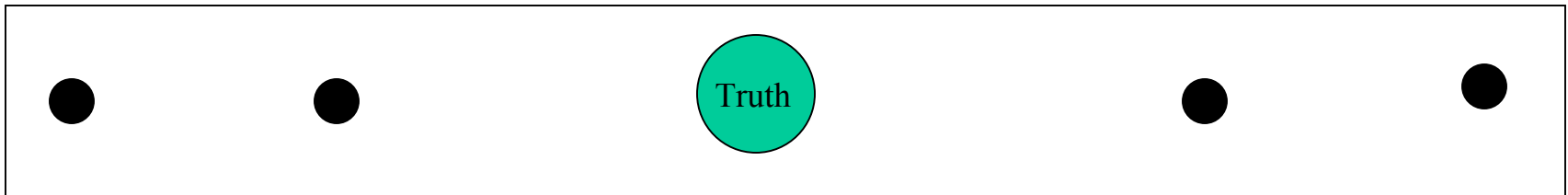
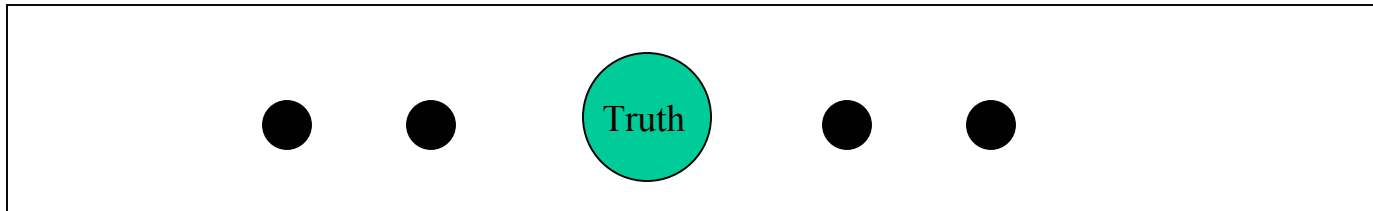
Pre-Post Design #1 Testing "N" Impact

Patients Selected in Pre-Period and followed in Post Period.



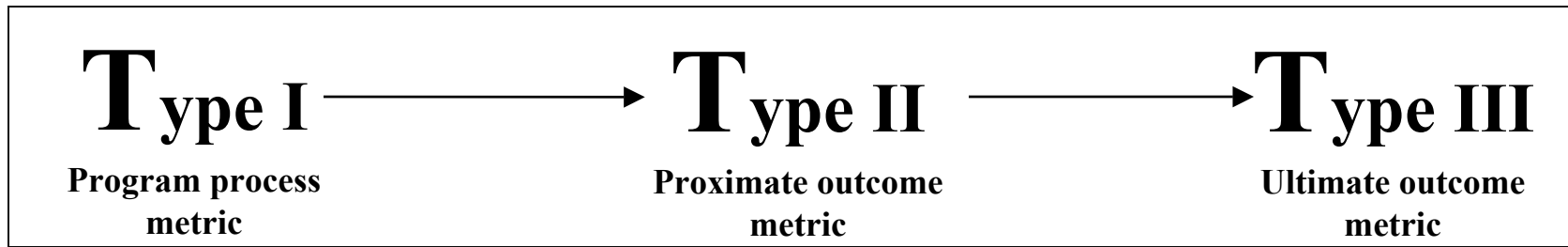
Evaluation Principle III: *Statistical Quality*

Non-Differential Error



Evaluation Principle IV: *Intervention Pathway*

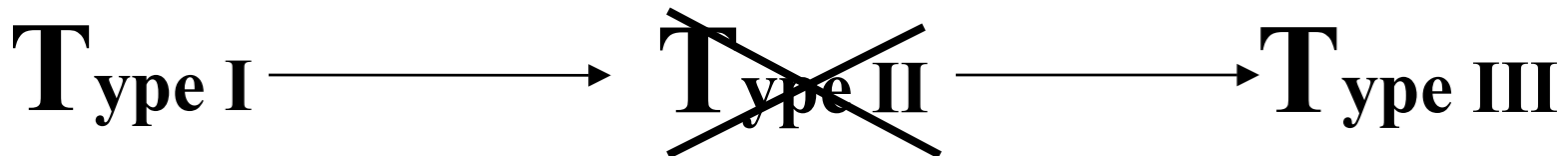
Prior Evidence (or logic)



Posterior Evidence (consistent with hypothesis)

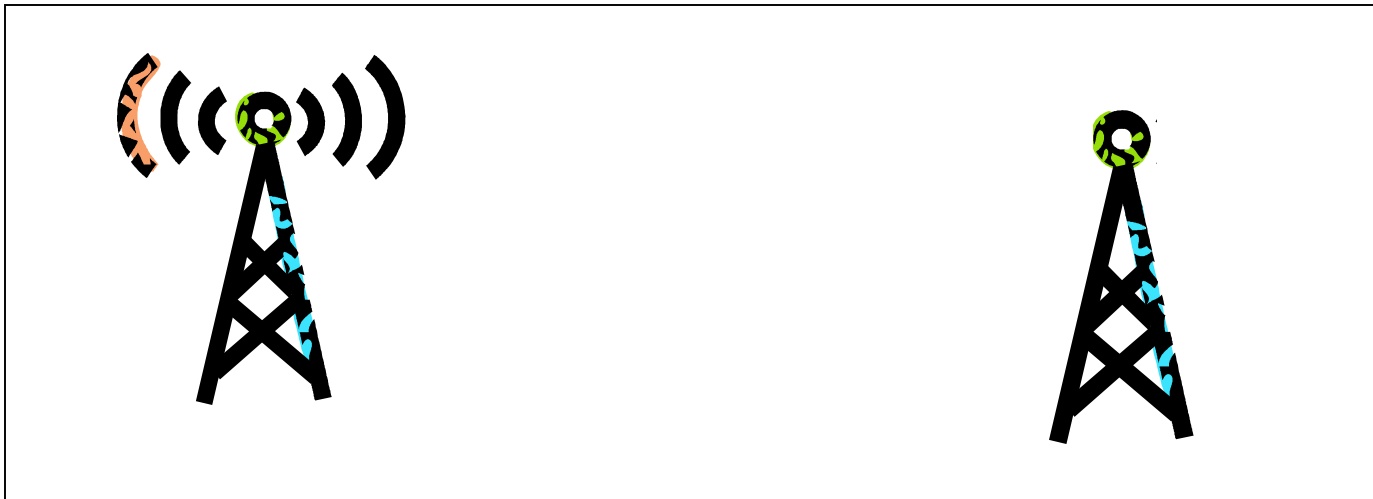


Posterior Evidence (not consistent with hypothesis)



Evaluation Principle V: *Generalizability*

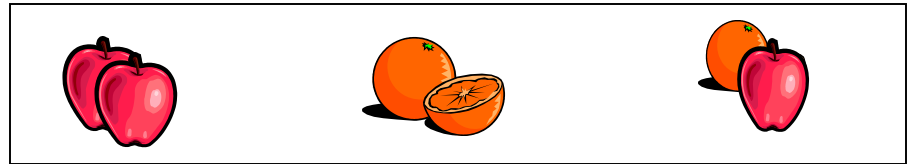
Transmission Error



Re-capitulation: *Evaluation Principles*

1. Data Quality

Measurement Error



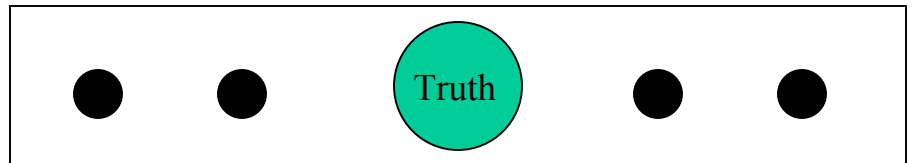
2. Equivalence

Differential Error



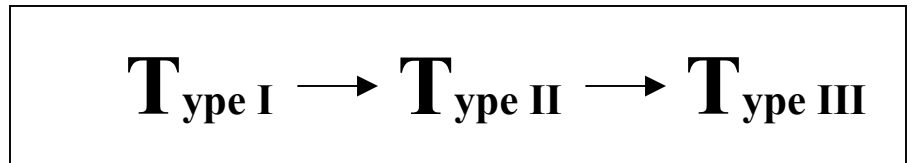
3. Statistical Quality

Non-Differential Error



4. Intervention Pathway

Temporal Error

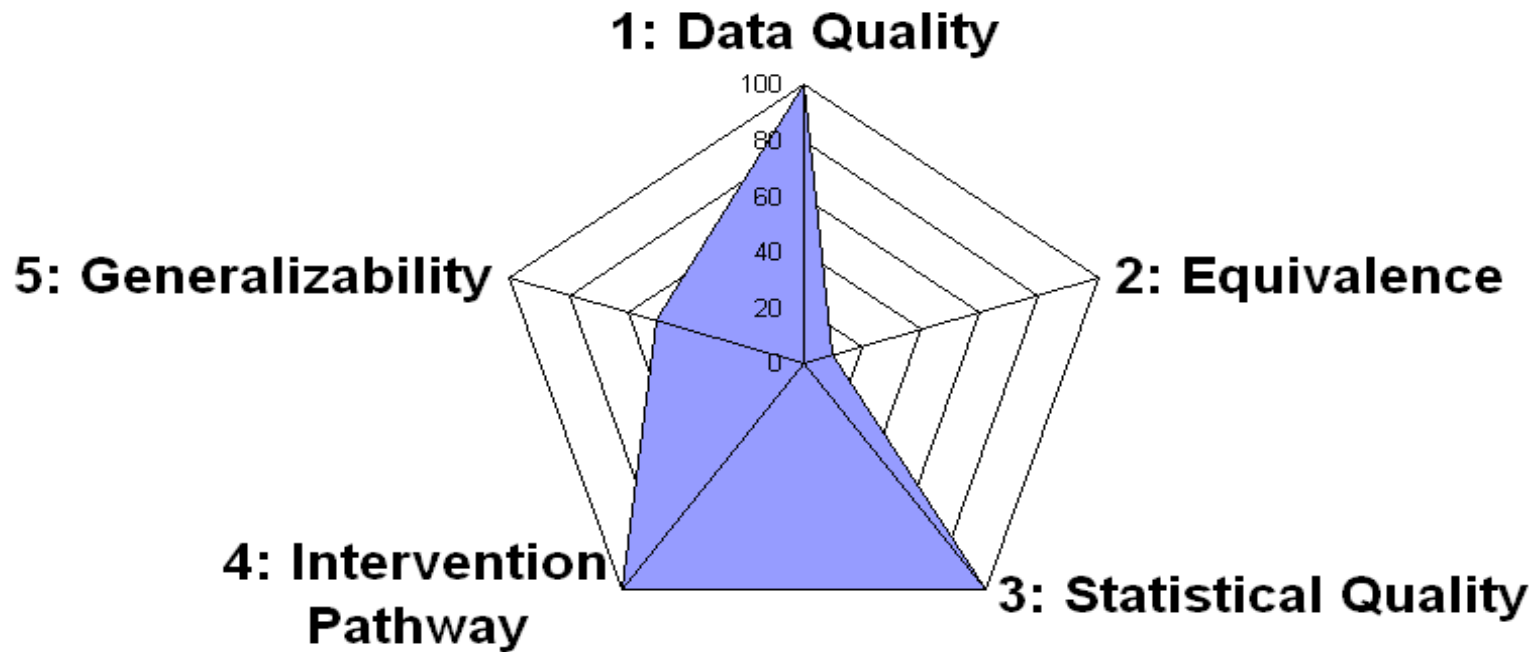


5. Generalizability

Transmission Error



Evaluation Scoring: *To Assess Validity*



© 2005 Population Health Impact Institute, Cincinnati, Ohio. For private use only. Commercial use prohibited. PHI institute reserves the exclusive right to use this system for benchmarking purposes. All other rights reserved.

Scoring Credibility:

How it all fits together.

1) **Independence**=

Objectivity+Transparency+Disclosure.

From Code of Evaluation Ethics

2) **Validity**=

Data Quality + Equivalence + Statistical Quality +
Intervention Pathway + Generalizability,

From Evaluation Principles

Credibility = Independence + Validity

The PHI Institute:

Education, Research, and Benchmarking

Mission: Promote independent and valid evaluations of defined population health programs through ...

- **Education**
 - Knowledge Transfer Workshops.
- **Research**
 - Papers and Articles based on
 - Literature reviews, focus groups, surveys, health data.
- **Benchmarking**
 - Convening scientific/experts panels to *score* CREDIBILITY (Independence + Validity) of program evaluation strategy (past, present, & future)
 - Convening scientific/experts panels to set parameters for data analysis to do empirical method-to-method and program-to-program impact (Crash TestsSM).

The PHI Institute:

Stakeholders

- **Stakeholder Advisory Panels**
 - Employer Groups
 - Public Purchasers
 - Suppliers
- **Subscribers**
 - Corporate Members
 - Individual Members

The PHI Institute: *Charter Advisory Board*

Robert M. Day, PhD, Director, Health Planning & Finance Team, Office of the Governor, Kansas

Ian Duncan, FSA, FIA, FCIA, MAAA Actuary, Lotter Actuarial Partners

Jeffery Guterman, MD, MS Senior Medical Director, LA County Department of Health, and
Professor of Medicine, David Geffen School of Medicine, UCLA

Ariel Linden, DrPH, Health Services Researcher, Linden Consulting Group

Gary Montrose, PHI Institute Co-founder, Population Health Consultant, Ashby-Montrose & Co.

Maureen Connors Potter, Executive Director, Disease-Specific Care Certification, Joint Commission
Accreditation Healthcare Organizations

Alex Rodriguez, MD, Chief Medical Officer, Magellan Health Services, Inc.

Patricia Salber, MD, Chief Medical Officer, Center for Practical Healthcare Reform

Thomas Wilson, PhD, DrPH, PHI Institute Founder, CEO & Board Chair, Epidemiologist, Trajectory
Healthcare, LLC

**For more information about
PHI Institute**

Population Health Impact Institute

www.PHIinstitute.org

Thomas Wilson, PhD, DrPH
twilson@PHIinstitute.org

10663 Loveland-Madeira Rd, #210B
Loveland Ohio 45140

Office: 513.349.5846
Direct: 513.289.3743
Fax/VM: 866.887.2219