PRAGMATIC PROGRAM EVALUATION IN ACADEMIC DETAILING

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Why evaluate?

How many visits did we make?

How much time did we spend with physicians?

Did my program improve quality?

Did my program reduce costs (and for whom)?

Were physicians satisfied?

What is the best way to achieve results?

Agenda

□ Introductions and overview (5 mins)

□ **Workshop 1**: Service-level program evaluation (40 mins)
- Intro to the session (5 minutes)
- Group work (15 minutes)
- Group discussion (20 minutes)

□ **Workshop 2**: Outcome evaluation (40 mins)
- Intro to the session (5 minutes)
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□ Wrap-up (5 minutes)

Pragmatic Program Evaluation in Academic Detailing: A Case Study

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Disclosure and Disclaimers

The authors have no relevant financial or nonfinancial relationships to disclose. During the development, analysis, and preparation of this presentation, the authors were employees of the US Veterans Health Administration, Department of Veterans Affairs.

The views and opinions expressed in this presentation are those of the authors and do not necessarily reflect the official policy or position of any agency of the US government. Assumptions made within the analysis are not reflective of the position of any US government entity.

Example: Academic Detailing and AUD Medications

- Alcohol-use disorder (AUD) pharmaceutical treatments were underutilized at the VA

- Academic detailing was funded to develop and execute strategies to address this issue

VA Academic Detailing Increased Medication Assisted Treatment for AUD
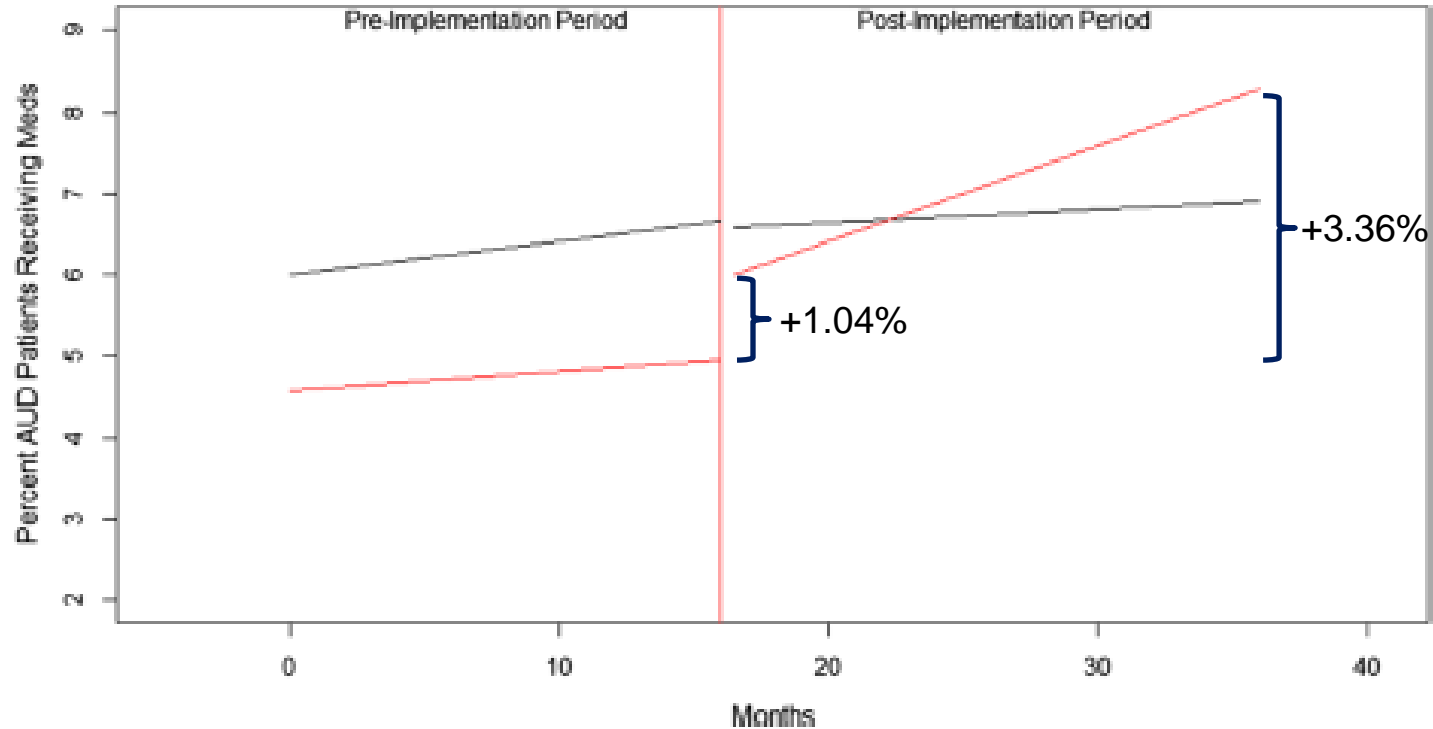
Fig. 1 Effects of academic detailing program implemented in 37 VHA sites compared to secular trend in rest of VHA. The *red* segments represent the intervention sites and the *black* segments represent the control sites

Harris *et al.* Multifaceted academic detailing program to increase pharmacotherapy for alcohol use disorder: interrupted time series evaluation of effectiveness. *Addict Sci Clin Pract (2016) 11:15*

Why Perform a Program Evaluation?

- Answer a policy question
  - Was AD effective in improving access to AUD-related prescription rates?

- Evaluate a program's operational elements provides basis for process improvement

- Provide outcome assessment to stakeholders to encourage funding and identify new opportunities

Beginning with the End in Mind

- Goal: Provide empirical evidence supporting academic detailing's impact on AUD-related prescribing to decision makers

- Document work-related activities as a proxy for productivity for process evaluation

- Construct an evaluation to address stakeholders "desires/demands"
  - Use metrics that are intuitive and easy to understand

- Develop a timeline
  - Capture the expected changes

Select the Sample and Analysis Plan

- Facility-level analysis
  - Exposed/Unexposed to academic detailing
- Eligibility: Veterans who had an AUD-related clinical encounter
- Timeline: 16 months pre and 20 months post
- Interrupted time-series analysis with mixed-effects regression model

Data to Collect for Analysis Plan

- Outcome:
  - Proportion of Veterans with an AUD-related clinical encounter prescribed an AUD-related medication per month

- Provider Visit:
  - Date of visit
  - Topic(s) Covered
  - Time with Provider
  - Barriers Identified
  - Commitment Attained
  - Monitor Behavior Change

Evaluating the service delivery function is distinct

Program evaluations are useful in measuring:

- effectiveness of meeting goals
- level of quality of the program activities
- strengths and weaknesses of the program
- factors that may determine why the program succeeded or failed

In addition, program evaluations:

- allow programs to assign value
- improve processes by identifying best practices

Academic Detailing Achieving the Outcomes

- Metric/Monitor
- Patient Impact
- Provider Satisfaction
- Healthcare System Change/Progress
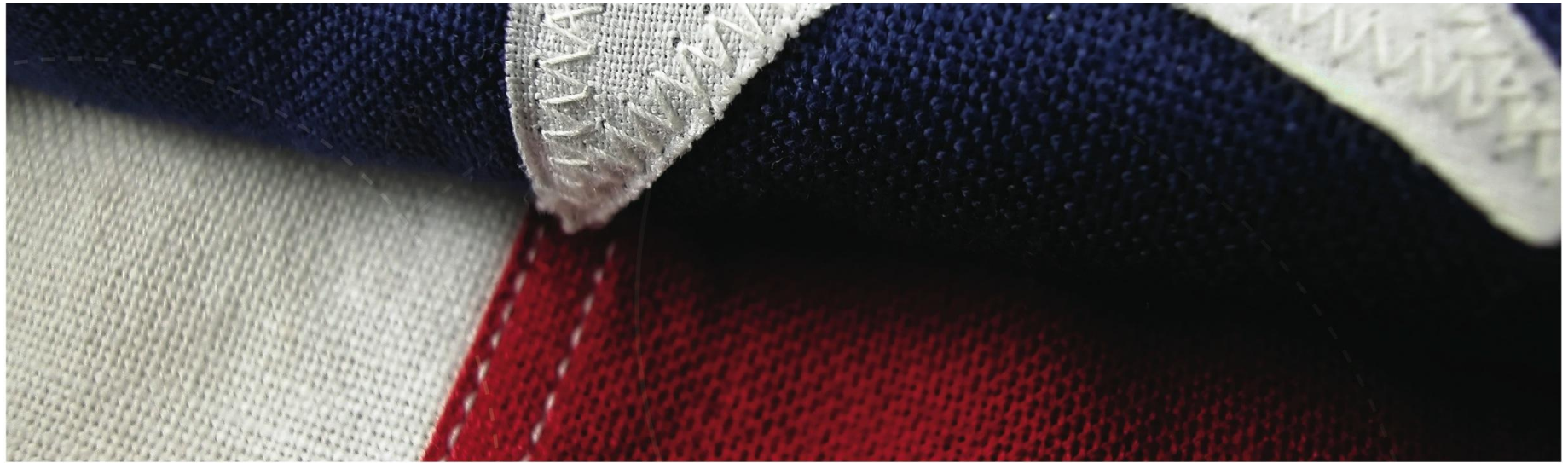
Exercise:
How would your AD Program respond to CARA Act request for evaluation?

Check Out the CARA act

Needs to Be Discussed when Setting FY17 priorities for VA AD Programs

- **See Link to act below and segments referencing AD.**

- **https://www.congress.gov/114/plaws/publ198/PLAW-114publ198.pdf**

SEC. 913. REVIEW, INVESTIGATION, AND REPORT ON USE OF OPIOIDS

- **IN TREATMENT BY DEPARTMENT OF VETERANS AFFAIRS.**

- (a) COMPTROLLER GENERAL REPORT.—

- (1) IN GENERAL.—Not later than two years after the date *JULY 2016* of the enactment of this Act, the Comptroller General of the United States shall submit to the Committee on Veterans' Affairs of the Senate and the Committee on Veterans' Affairs of the House of Representatives a report on the Opioid Safety Initiative of the Department of Veterans Affairs and the opioid prescribing practices of health care providers of the Department.

Multi-faceted Strategies AD and Population Management Tools, Audit and Feedback Approach

(2) ELEMENTS.—The report submitted under paragraph

(1) shall include the following:

- (A) An assessment of the implementation and monitoring by the Veterans Health Administration of the Opioid Safety Initiative of the Department, including examining, as appropriate, the following:
  - (i) How the Department monitors the key clinical outcomes of such safety initiative (for example, the percentage of unique veterans visiting each medical center of the Department that are prescribed an opioid or an opioid and benzodiazepine concurrently) and how the Department uses that information—
  - (I) to improve prescribing practices and
  - (II) to identify high prescribing or otherwise inappropriate prescribing practices by health care providers.
- (ii) How the Department monitors the use of the Opioid Therapy Risk Report tool of the Department (as developed through such safety initiative) and compliance with such tool by medical facilities and health care providers of the Department,

CARA Act – Asks for AD Program Reporting

- (iii) The implementation of academic detailing programs within the Veterans Integrated Service Networks of the Department and <u>how such programs are being used to improve opioid prescribing practices</u>.

  – How are you demonstrating impact of VISN Academic Detailing programs are improving opioid prescribing practices?

- (iv) Recommendations on such improvements to the Opioid Safety Initiative of the Department as the Comptroller General considers appropriate.

CONTACT

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PRAGMATIC PROGRAM EVALUATION
OUTCOME EVALUATION

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Basic evaluations steps

1. Decide on your question(s)
2. Identify what intervention you are studying
3. Choose the outcomes are most important to you
4. Select a design
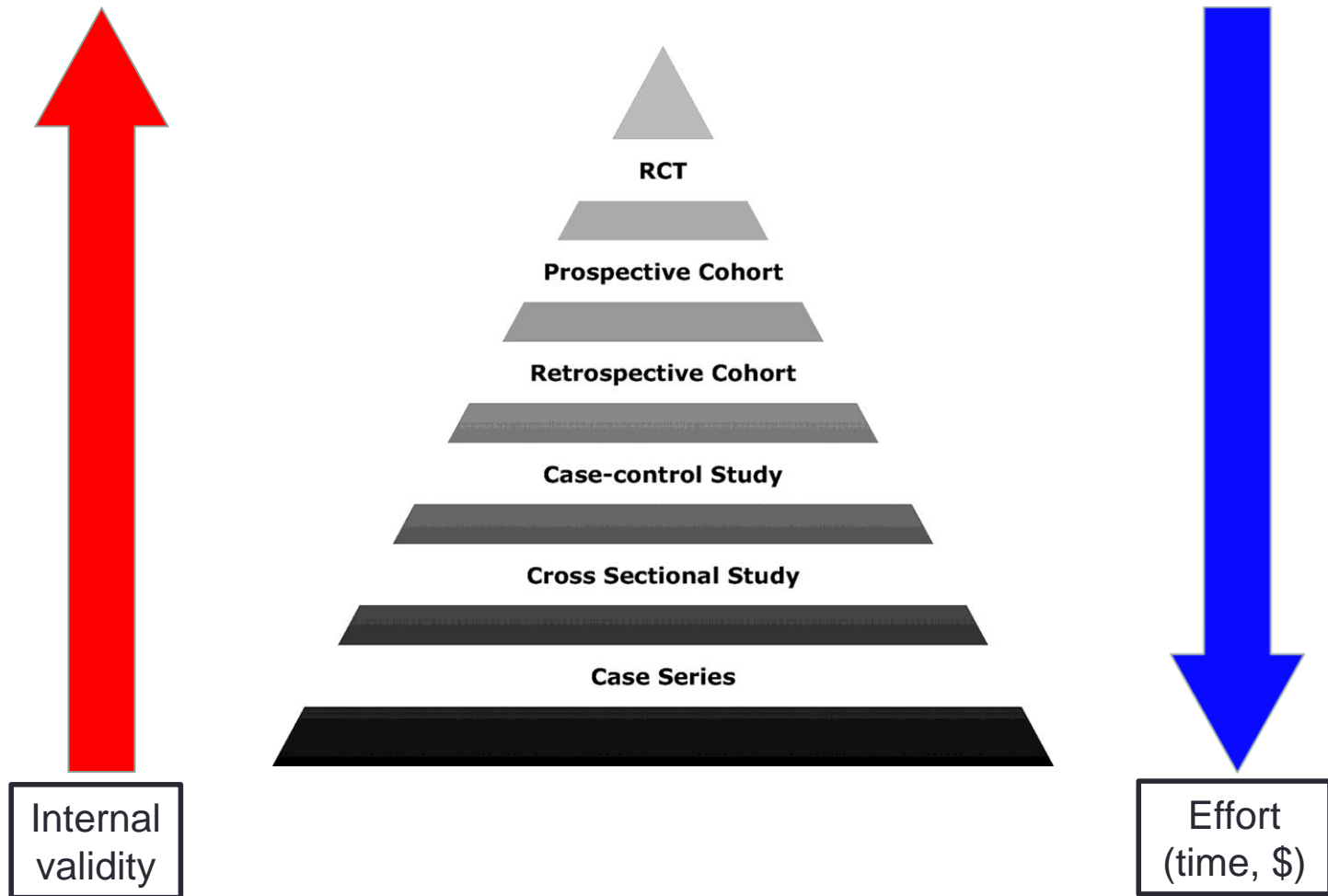5. Choose a comparator
6. Perform your evaluation/analyze your results

Which outcomes you measure may be influenced by the data to which you have access

(

DATA SOURCES

| OUTCOME	Surveys	Charts/EHRs	Direct measurement	Claims
Satisfaction	✓			
Drug use		(✓)	✓	✓
Clinical outcomes		✓	✓	(✓)
Resource use		(✓)	✓	✓
Spending				✓

Randomized controlled trial

PROVIDERS RANDOMLY ASSIGNED TO AN INTERVENTION

- **Objective**: to improve the appropriateness of broad spectrum antibiotic use

- **Design**: RCT
  - "Block" randomized medical teams
  - Reviewed orders daily to identify unnecessarily broad spectrum antibiotics
  - Intervention teams detailed

- **Primary outcome**: Number of days of unnecessary antibiotic use

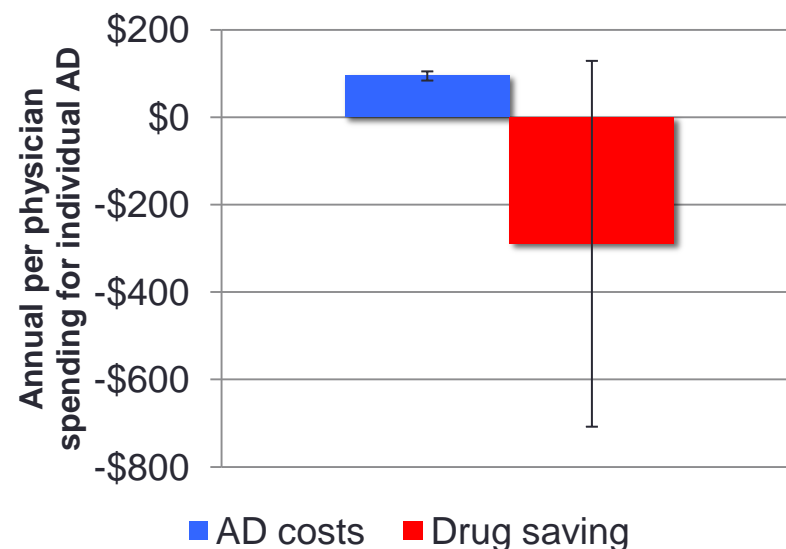SOURCE: Solomon et al. Arch Intern Med 2001; 161: 1897
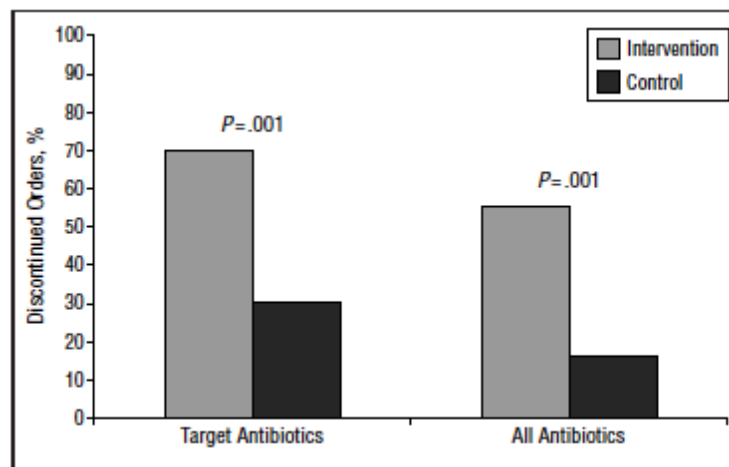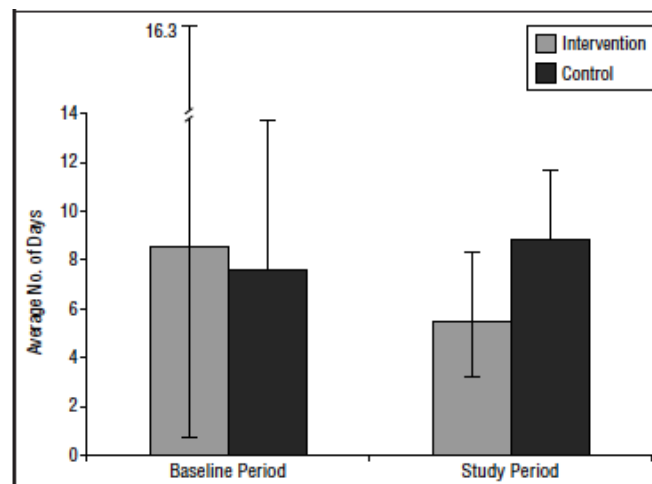
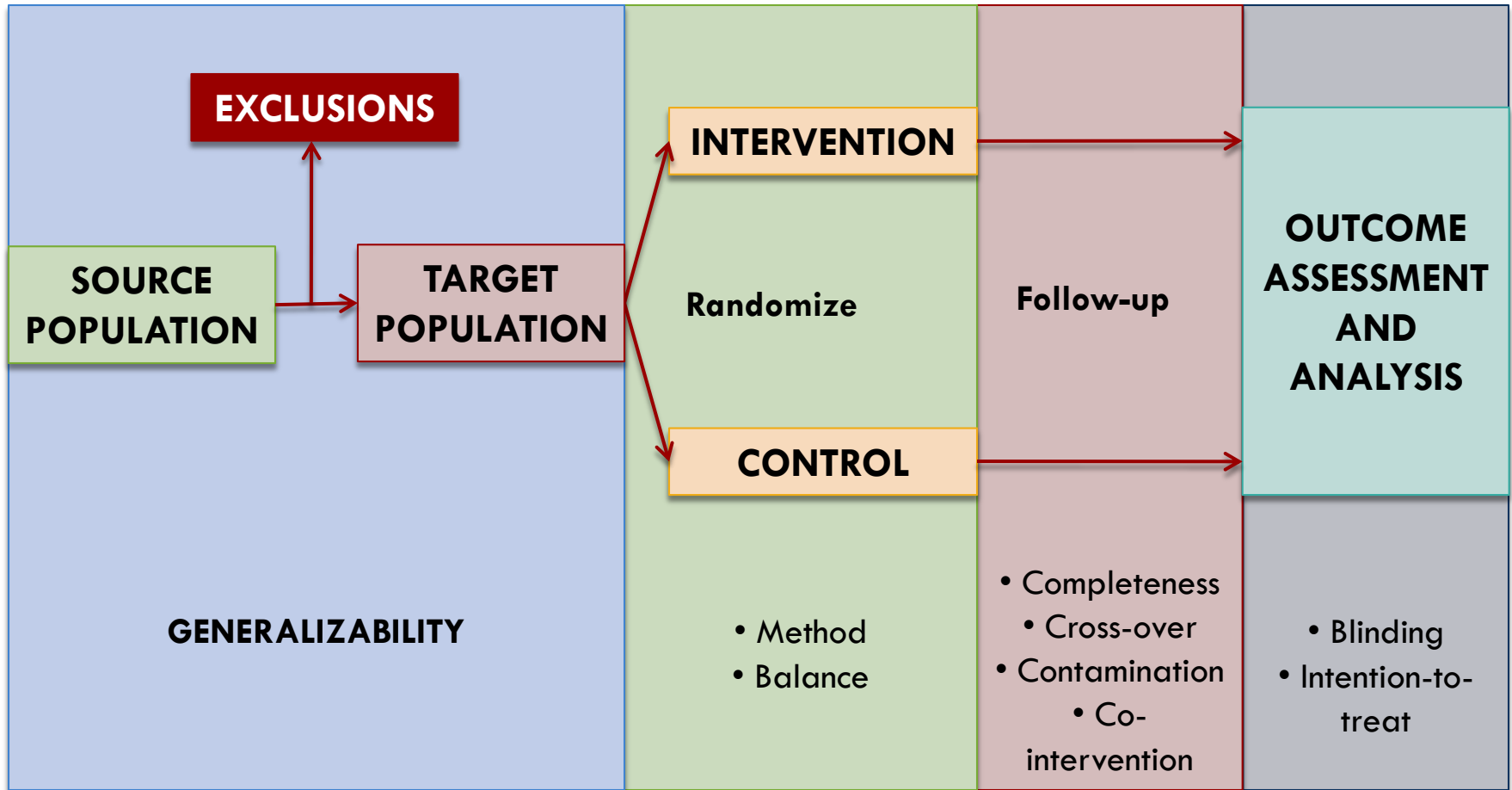# Economic evaluation of health care programs alongside a RCT
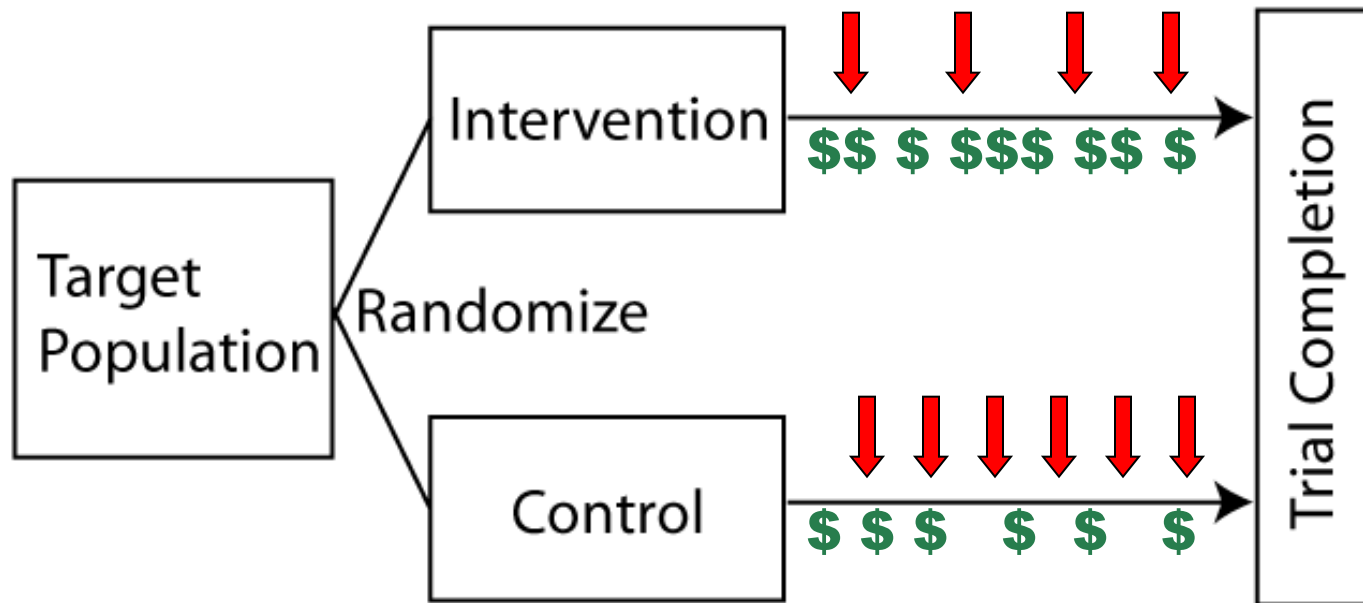
Economic evaluation

- **Objective**: to evaluate the economic impact of group academic detailing for hypertension in a large HMO

- **Design**: Retrospective cost analysis of a randomized controlled trial
  - Used process data to derive intervention costs
  - Used administrative pharmacy records to generate prescribing costs

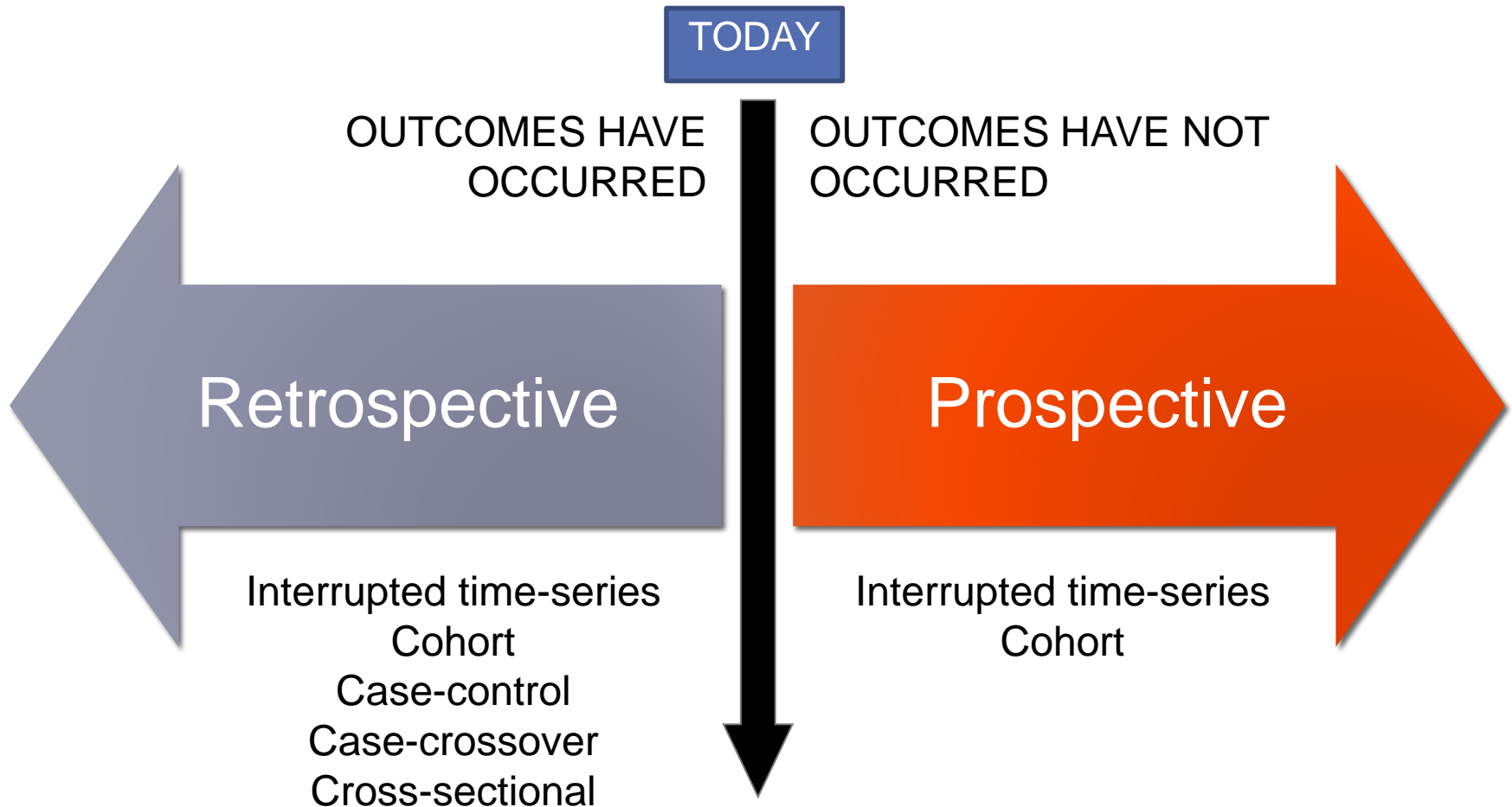- **Primary outcome**: Average daily hypertensive drug costs

	Change in daily drug costs, $	
	Year 1	Year 2
Individual AD	-0.06 (p=.176)	-0.05 (p=.203)
Group AD	0 (p=.998)	-0.6 (p=.131)

SOURCE: Simon et al. J Clin Hypertension 2007; 9: 15.

Designing an internally valid trial

Observation design choices

TODAY

OUTCOMES HAVE OCCURRED

OUTCOMES HAVE NOT OCCURRED

Retrospective

Prospective

Interrupted time-series
Cohort
Case-control
Case-crossover
Cross-sectional

Interrupted time-series
Cohort

The typical challenges of non-randomized studies

- Confounding by indication
- Secular trends
- Reliable assessment of exposure
- Reliable assessment of outcomes
- Identification of relevant subgroups
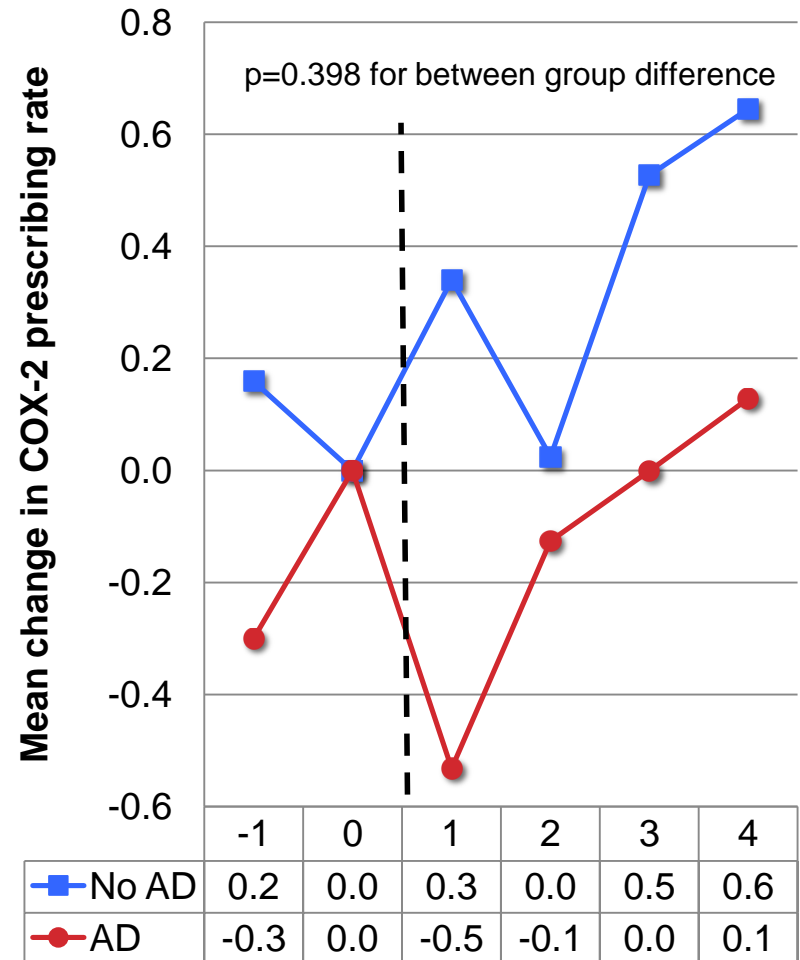- Ascertainment of long-term outcomes (loss to follow-up)
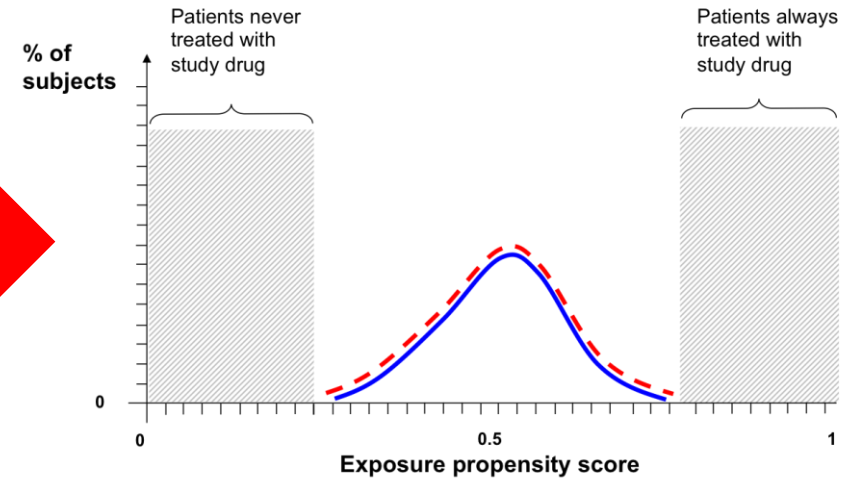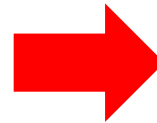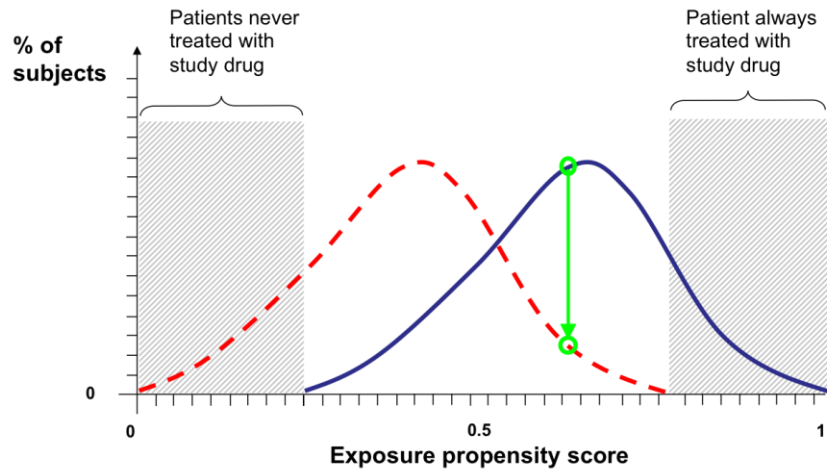
Design

Analysis

Time series (pre-post) studies
OUTCOMES BEFORE AND AFTER INTERVENTION ARE COMPARED

- **Objective**: to evaluate the effect of a COX-2 academic detailing program

- **Design**: "Retrospective" pre-post with control group
  - Evaluated COX-2 prescribing by MDs who volunteered to receive a single AD visit on Cox-2 inhibitors in Nova Scotia
  - Compared to MDs who did not volunteer
  - Used administrative claims to identify patients and evaluate outcomes

- **Primary outcome**: Rate of COX-2 use (measured by the number of defined daily doses consumed per patient)

p=0.398 for between group difference

Mean change in COX-2 prescribing rate

	-1	0	1	2	3	4
No AD	0.2	0.0	0.3	0.0	0.5	0.6
AD	-0.3	0.0	-0.5	-0.1	0.0	0.1

SOURCE: Graham et al. Annals of Pharmacotherapy 2008; 42: 749

Propensity score matching

BREAKOUT SESSION

An academic detailing program designed to reduce inappropriate antipsychotic prescribing is about to get started in your State. You've been asked to plan an an evaluation which assesses the program's impact on clinically or economically-relevant outcomes.

- What specific outcomes would you propose to study and why?

- How would you design your evaluation?

- What data sources would you use?

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