

# **Are legislators more responsive to high quality evidence? A field experiment**

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# Introduction

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# Evidence-based policymaking: a bipartisan goal

H. R. 4174

## One Hundred Fifteenth Congress of the United States of America

AT THE SECOND SESSION

*Began and held at the City of Washington on Wednesday,  
the third day of January, two thousand and eighteen*

### An Act

To amend titles 5 and 44, United States Code, to require Federal evaluation activities, improve Federal data management, and for other purposes.

*Be it enacted by the Senate and House of Representatives of  
the United States of America in Congress assembled,*

#### SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “Foundations  
for Evidence-Based Policymaking Act of 2018”.

(b) TABLE OF CONTENTS.—The table of contents for this Act  
is as follows:

Sec. 1. Short title; table of contents.

#### TITLE I—FEDERAL EVIDENCE-BUILDING ACTIVITIES

Sec. 101. Federal evidence-building activities.

#### TITLE II—OPEN GOVERNMENT DATA ACT

Sec. 201. Short title.

Sec. 202. OPEN Government data.

#### TITLE III—CONFIDENTIAL INFORMATION PROTECTION AND STATISTICAL EFFICIENCY

Sec. 301. Short title.

Sec. 302. Confidential information protection and statistical efficiency.

Sec. 303. Increasing access to data for evidence.

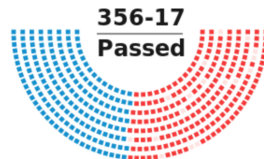
#### TITLE IV—GENERAL PROVISIONS

Sec. 401. Rule of construction.

Sec. 402. Use of existing resources.

Sec. 403. Effective date.

### Ideology Vote Chart



Key: R Yea D Yea R Nay

- Do policymakers **give more credence** to high quality research?

# Research Questions

- Do policymakers **give more credence** to high quality research?
- Can policymakers **recognize** differences in research quality?

# Theory

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# Pre-existing literature

- Literature on evidence use in policy-making, and on the relationship between science, researchers and policy-makers.
- Existing field/audit experiments reaching out to policy-makers

Figure

# Current use (?) of evidence standards in policymaking

- Evidence standards and descriptions [already adopted in federal legislation](#).
  - Secondary Education Act 65, No Child Left Behind 01, Every Student Succeeds Act 2015 (ESSA)



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- **Department of Education (DoE) standards** tiers under ESSA 2015:
  - Strong causal evidence
  - Moderate causal evidence
  - Low causal evidence
  - High levels of specificity covering cluster-random assignment **Figure**, IVs **Figure**, missingness/attrition **Figure**, and RDs **Figure**.

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  - High levels of specificity covering cluster-random assignment [Figure](#), IVs [Figure](#), missingness/attrition [Figure](#), and RDs [Figure](#).
- Other federal agencies have adopted similar standards [Figure](#)

# Current use (?) of evidence standards in policymaking

From DOL CLEAR database:

*"High Causal Evidence standards mean there is strong evidence that the effects estimated in this study are solely attributable to the intervention being examined. This does not necessarily mean that the study found positive impacts, only that the analysis meets high methodological standards and the causal impacts estimated, whether positive, negative, or null, are credible. Currently, only well-implemented randomized controlled trials can receive this rating"*

*"Low Causal Evidence standards mean there is little evidence that the effects estimated in the study are attributable to the intervention being examined, and other factors are likely to have contributed to the results. This does not imply that the study's results are not useful for some purposes, but they should be interpreted with caution. Causal studies that do not meet criteria for a high or moderate evidence rating receive this rating."*

# Design

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# Overview of experimental design

- 2x2 factorial design with two treatments:
  - Evidence standard (low vs. high)
  - Whether evidence standards are explained to policymakers

**Table 1:** Treatment arms

	<b>Lower Tier</b>	<b>Higher Tier</b>
<b>No information</b>	Control	High and no info
<b>Information</b>	Low and info	High and info

# Overview of DoE studies

158 interventions examining 49 outcomes

12 interventions with significant results and same outcome, but analyzed by studies with two different research designs.

	Intervention	Outcome
1	ACT/SAT Test Preparation and Coaching Programs	General academic achievement (high school)
2	Dual Enrollment Programs	Access and enrollment
3	Dual Enrollment Programs	Attainment
4	Knowledge is Power Program (KIPP)	English language arts achievement
5	Knowledge is Power Program (KIPP)	General Mathematics Achievement
6	Pre-K Mathematics	General Mathematics Achievement
7	READ 180®	Comprehension
8	READ 180®	Literacy achievement
9	Success for All®	Alphabetics
10	Success for All®	Comprehension
11	Teach for America (TFA)	English language arts achievement
12	Teach for America (TFA)	General Mathematics Achievement

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    - May also allow us to engage in participant observation (qualitative data)
- Alternatively: email response rates

# Treatment effect estimation

## Primary effects (ATE)

- Block random assignment.
- $ATE = \sum_{j=1}^J \frac{N_j}{N} ATE_j$ 
  - Where  $J$  is the number of blocks, blocks are indexed by  $j$ , and  $\frac{N_j}{N}$  represents the share of subjects who belong to block  $j$ .
- P-values calculated using randomization inference.
- Control group = Low quality evidence + no information

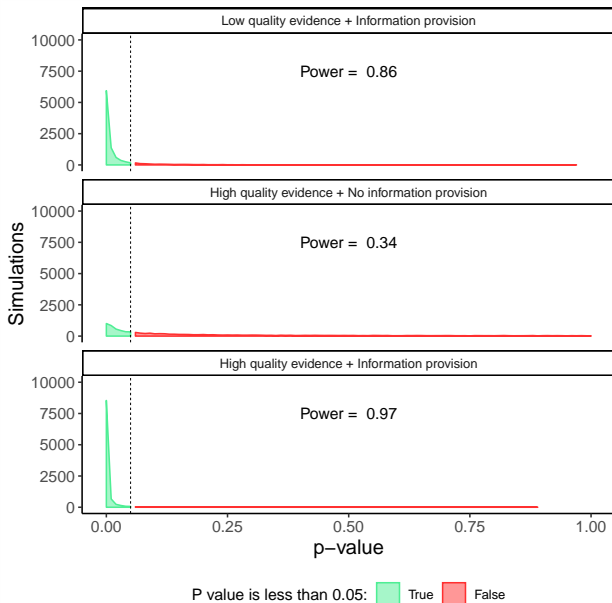
## Heterogenous treatment effects (CATEs)

- Party, ..., ?
- Note preregistration, multiple comparisons, and power.

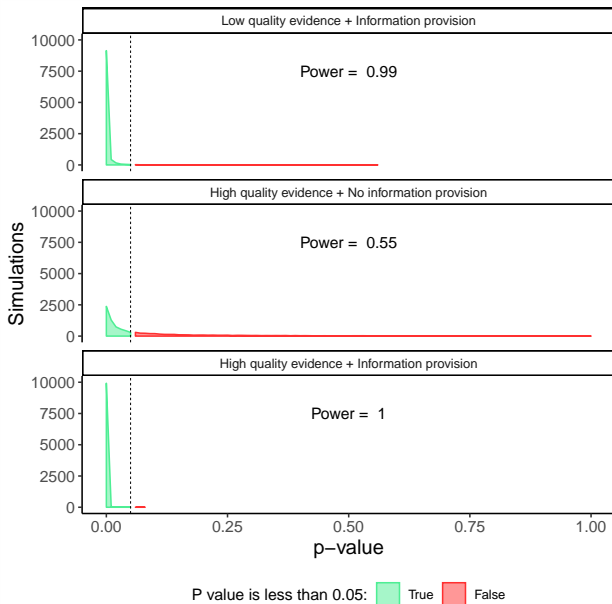
# Power analysis assumptions

- $N = 535$  (federal) and  $1000$  (state)
- Low quality evidence + information provision =  $-10\%$
- High quality evidence + no information provision =  $+5\%$
- High quality evidence + information provision =  $+12.5\%$
- Standard deviation =  $0.08$

# Power analysis: federal



# Power analysis: state



## Conclusion

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# Timeline and questions

- **Ideal timeline**: pre-registration and initial contact with 3rd party organization by end of 2019, roll-out of the experiment in the first half of 2020 (political context)
- Use a **neutral or partisan policy** proposal?
  - Partisan policy proposal might allow us to test legislator's motivated reasoning, but power issues.
- Better **outcome measurements**?
- Suggestions for kind of **organization to partner with**? Is organizational partnering feasible?
- Federal, state, or local level?
- Other suggestions?

## **Supplemental material**

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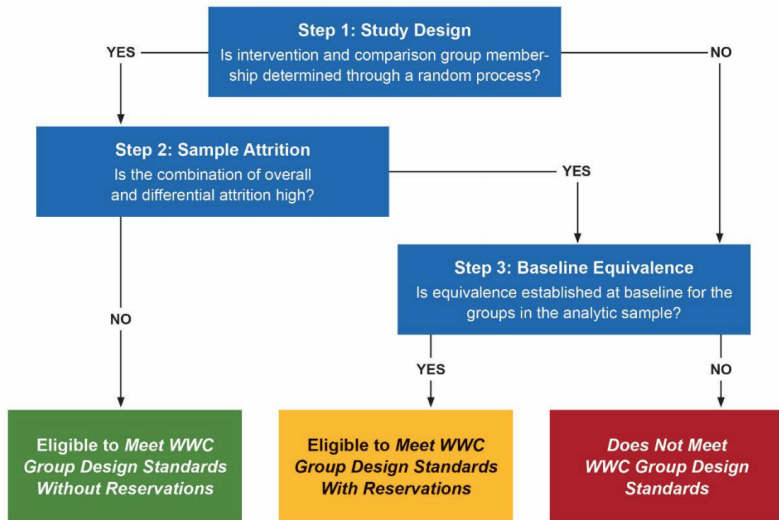


## Existing field/audit experiments

- **Level:** 5 state and local, 1 federal (Kalla & Broockman 2016).  
Between 70 state legislators in 1 state to 4,859 states  
legislators in 44 states (Butler & Broockman 2011)
- **Treatments:** contact by activists, ethnicity of email sender,  
contact by donators, in-person briefings, send district-specific  
survey results
- **Outcomes:** roll call votes, rate of response to emails, seniority  
of meeting, co-sponsorship of bills
- **Design:** block randomization on several covariates (state,  
chamber, party, reelection), matched pairs whenever possible
- **Partnership with outside groups:** 3 yes, 3 no

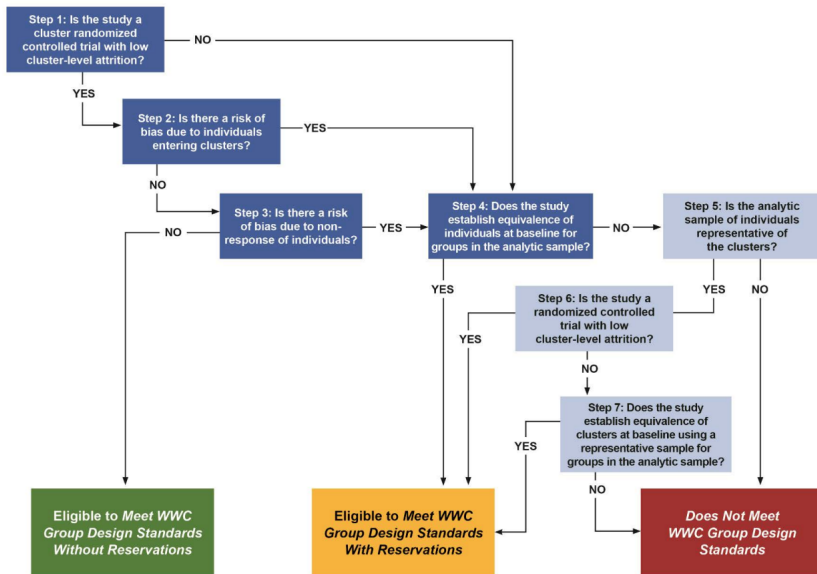
# Evidence tiers

**Figure II.1. Study Ratings for Individual-Level RCTs and QEDs**



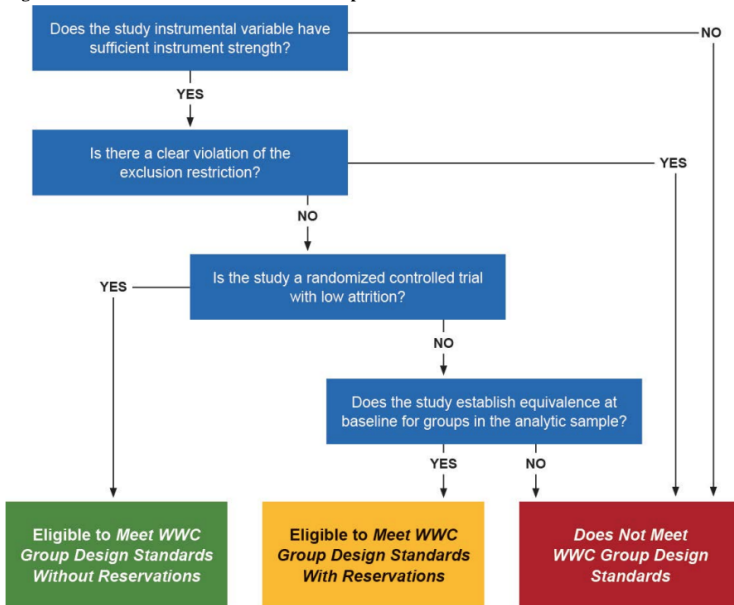
# Evidence tiers: cluster random assignment

Figure II.4. Review Process for Cluster-Level Assignment Studies



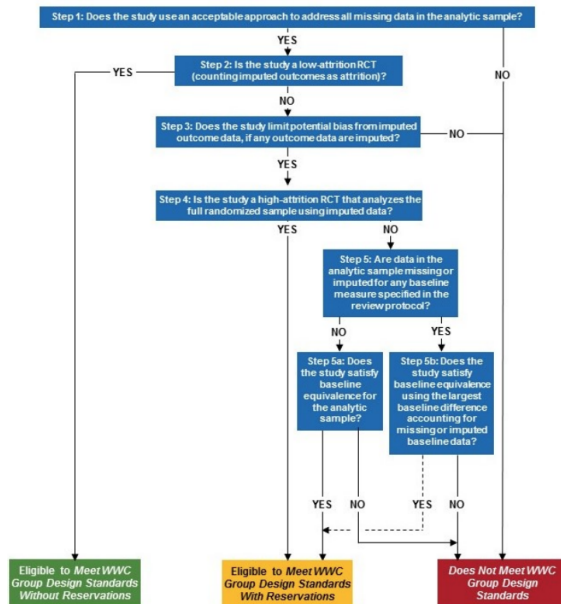
# Evidence tiers: instrumental variables

**Figure II.6. Review Process for Studies that Report a CACE Estimate**



# Evidence tiers: missingness and attrition

Figure II.5. Study Ratings for RCTs and QEDs with Missing Outcome or Baseline Data



# Evidence tiers: regression discontinuity

**Table III.1. RDD Study Ratings**

Standard	To be rated <i>Meets WWC RDD Standards Without Reservations</i> , studies must:	To be rated <i>Meets WWC RDD Standards With Reservations</i> , studies must:
1: Integrity of the forcing variable	Completely satisfy	Partially satisfy
2: Sample attrition	Completely satisfy	Partially satisfy at least one of these two standards
3: Continuity	Completely satisfy	
4. Bandwidth/Functional form	Completely satisfy	Partially satisfy
5. Fuzzy RDD	Completely satisfy	Partially satisfy

## Other federal evidence standards and databases

- [Department of Labor](#) (DoL)'s CLEAR's clearinghouse: evidence on on labor topics
- [Corporation for National and Community Service](#) (CNCS): evidence on what works in national service, social innovation, civic engagement, and volunteering
- [U.S. Agency for International Development](#) (USAID), YouthPower: evidence on what works in youth and peacebuilding, youth and health, youth and agriculture, food security, and nutrition
- [US Departments of Agriculture and Defense](#)'s ClearingHouse for military family readiness: evidence on wide-ranging family and mental health issues.
- [US Department of Health and Human services](#): multiple databases on programs whose purpose is to prevent and/or reduce delinquency or other problem behaviors in young people, teen pregnancy and substance prevention programs, etc.
- [US Department of Justice](#): multiple databases on drugs and substance abuse, juveniles, crime and crime prevention, victims and victimization, law enforcement, technology and forensics, corrections and reentry, and courts

## References

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- Butler, D. M., & Broockman, D. E. (2011). Do politicians racially discriminate against constituents? a field experiment on state legislators. *American Journal of Political Science*, 55(3), 463–477.
- Kalla, J. L., & Broockman, D. E. (2016). Campaign contributions facilitate access to congressional officials: A randomized field experiment. *American Journal of Political Science*, 60(3), 545–558.