

## Epidemiology, Public Health: Review of Regression Discontinuity

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### Abstract

Whenever a decision rule assigns treatment, such as antihypertensive or antiretroviral therapies, to patients who or CD4 count. Similar to randomization, RD can address issues with confounding caused by unobserved factors. Randomised controlled trial (RCT) when a treatment has already become the norm, but RD can provide robust causal inference when internal or external validity is dubious.

**Keywords:** Epidemiology; Public Health; Regression Discontinuity; Treatment; Health Services Research

### Introduction

Adding a treatment to a population is a common goal of public health. Randomised controlled trials (RCTs) are the gold standard for evaluating the effectiveness of a new treatment. However, RCTs are often difficult to conduct, especially when the treatment is already widely used. Regression discontinuity (RD) is a quasi-experimental design that can be used to evaluate the effectiveness of a treatment when it is assigned based on a continuous variable. RD is a type of causal inference that uses the discontinuity in the relationship between a treatment and an outcome to estimate the causal effect of the treatment. RD is often used to evaluate the effectiveness of a treatment when it is assigned based on a continuous variable, such as a patient's CD4 count or a patient's blood pressure. RD is a type of causal inference that uses the discontinuity in the relationship between a treatment and an outcome to estimate the causal effect of the treatment. RD is often used to evaluate the effectiveness of a treatment when it is assigned based on a continuous variable, such as a patient's CD4 count or a patient's blood pressure.

" a a d a s " , f e e y , ed , a s e s e e  
h d e e CD4 a d d e e e a e e d e d ;  
a s a a y 5 .

a a s e a e e e s a e d e s e  
a s a d e e e e d f a a f e e e D  
a e e a . Add a y , e s e a e e e s a  
e d e s e f a s e a e s e s a s e  
s e d s e a a e e e s e d s e a a e  
d a s . F a e s e e e e s f a a d D :

e s a e f e a e e d s a s e s  
a e f e d s a s e a e s a e s e s  
e e a e e a e s a e e e d e s e s e Z  
s e s e s . Add a y , e e a e e e d s d e s a d  
f a e d a s e e e Z e e e s e s  
e e a d d a a e s ( a a a d e e s a d d s a  
e s y e a e e e e s Z ) a a e s e d e s e s  
a e f d e e e a e a e a e e s ( C A C E ) f  
d d a e e s e s e s e " f y " a s f D s e  
e y e d s e s e s a e a a e d a d a e d y  
s e d e e f a e s e s e d s e . B s e " f y "  
a d s e " a e e f D , e a a e a a a s s a  
e s e s e s e a s e s e d .

e a e s f a s A y a e Z s a s  
a e e d s e a y a e s e d h y e s e a s e s a d  
a e s e s d s a s e e e f e s e s a h e e d .  
a D d e s a e a a e a f e a e e d a s d e e s  
s e a s e s a e s e a e a e f Z s a s s e  
a e e e s a a e s a s y a s f h e e d  
f d e ( a d e e e - d e e e a a y ) . A d s  
a e a s e a e e f i s e a a e a e s y Z e a  
s e s a d e a s e s d e a a e e s a e f i e 6-10 Z  
s e s e s a d s a a e a a s f e d a s .

a e s s a e a d e s e s e d s e a  
d e s d e s a a e e s e e d s a a s e s a s  
s e h e s e s a s e e s f a e e s e a e d s  
d e e a a e s a h s d e f i s e e d .

D c

F a y e a s s e s e d s e d s a d s h s  
f h e s e e e a d s Z a e s f e e e  
s s a e d e s a d e y d s y s e  
e a s h e e Z a d s e e s e s y a s s