

Impact Evaluation of HMI through RCT

Two interventions targeting renewal rates and health outcomes

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1 Objectives

2 Motivation

3 Calcutta Kids - Stratified Randomization

4 CARE Foundation - Instrumental Variable in Randomization

Objectives of the paper

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- ▶ Exhibit **relevance** of RCTs in research on HMI

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- ▶ Demonstrate the **Stratified Randomization** and **Instrumental Variables in Randomization** techniques being used in live projects by CIRM

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What?

What?

Intervention

What?

Intervention \Rightarrow Impact

What?

Intervention \implies Impact \implies Measurement

Problems

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Usually the case!

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How does it help?

- ▶ Whatever changes: Changes for both
- ▶ Not observed or measured: Same for both

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Intervention

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Hypothesis

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Lack of understanding of insurance

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Lack of understanding of insurance \implies Insurance perceived as a loss by **non-claimants**

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Theory of Change

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Theory of Change

Creating value for non-claimants

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Out-Patient Counselling Service to all the insured

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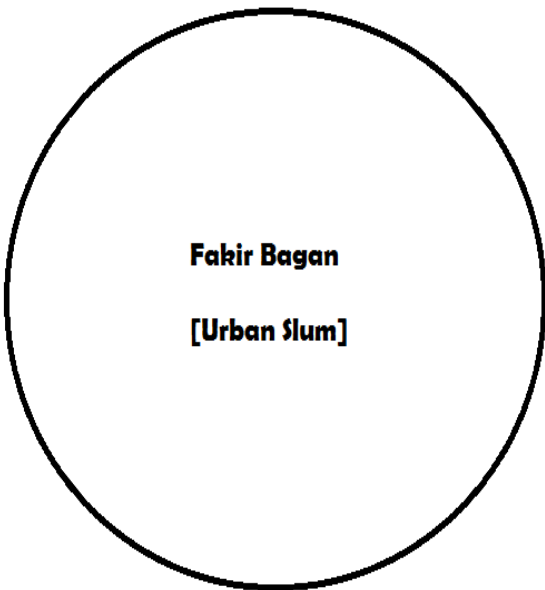
Problem

Omitted Variable Bias

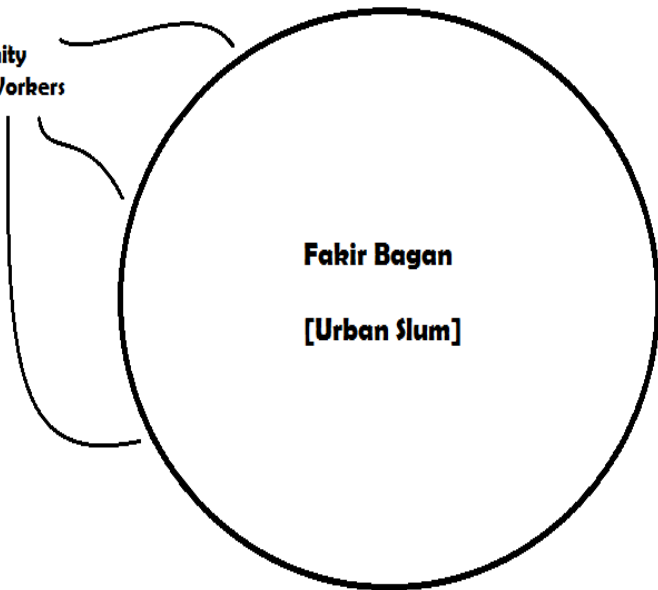
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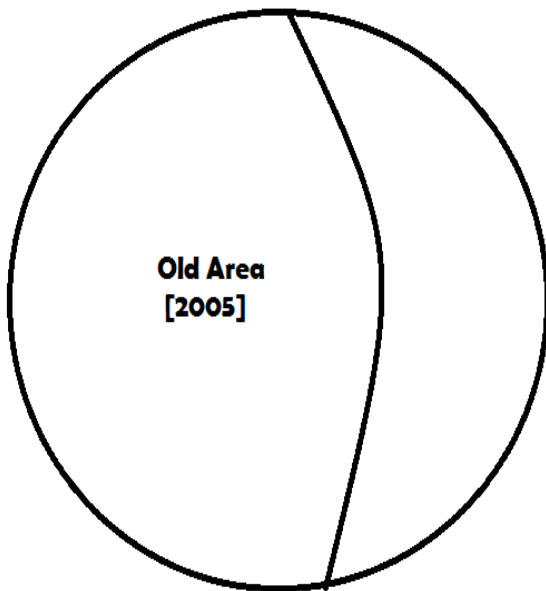
**Howrah,
West Bengal,
India**



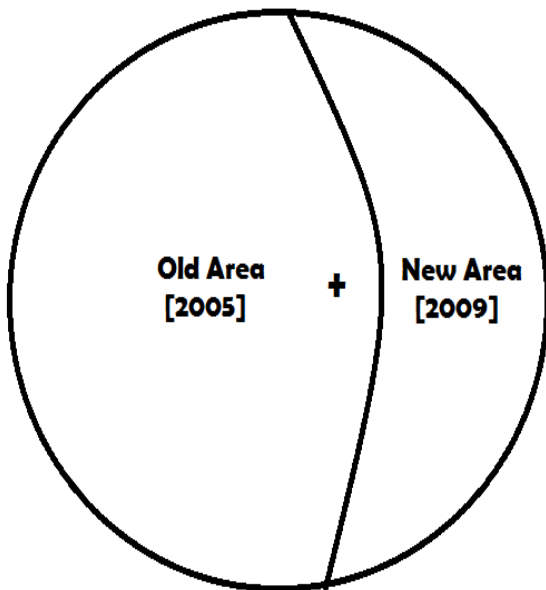
**Community
Health Workers**



**Maternal &
Young Child
Health Initiatives**



**In-Patient
Insurance**



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Efficient to control for these differences.

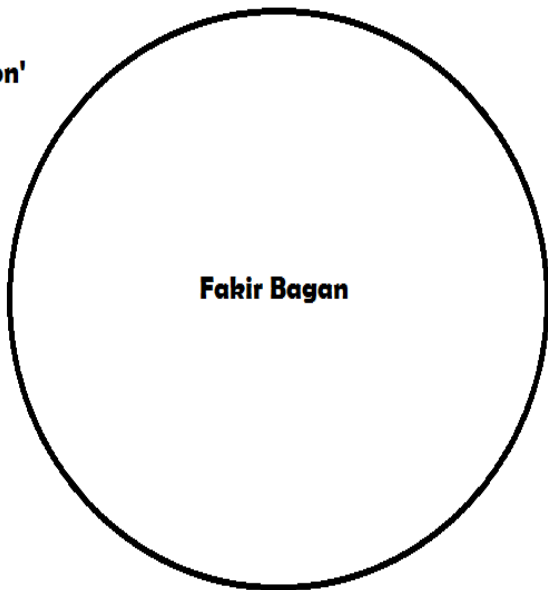
How to Randomize?

- ▶ Choose two identical groups and compare
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 - ▶ **Past presence of CK** in the area - peer influence and community trust.

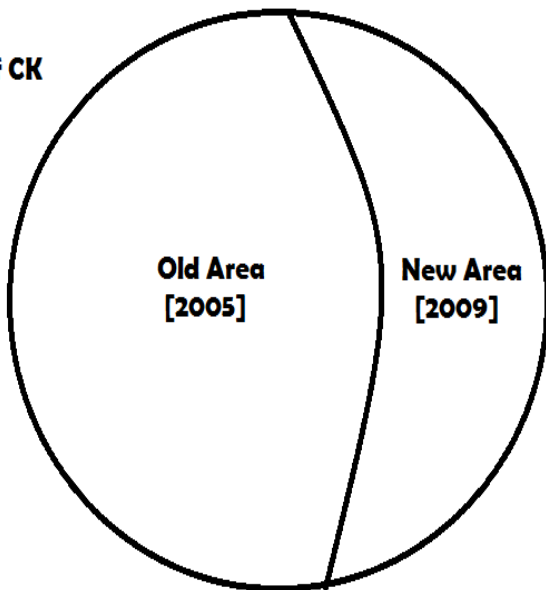
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 - ▶ **Exposure to MYCHI** - affects health-seeking and risk-mitigation behavior etc.

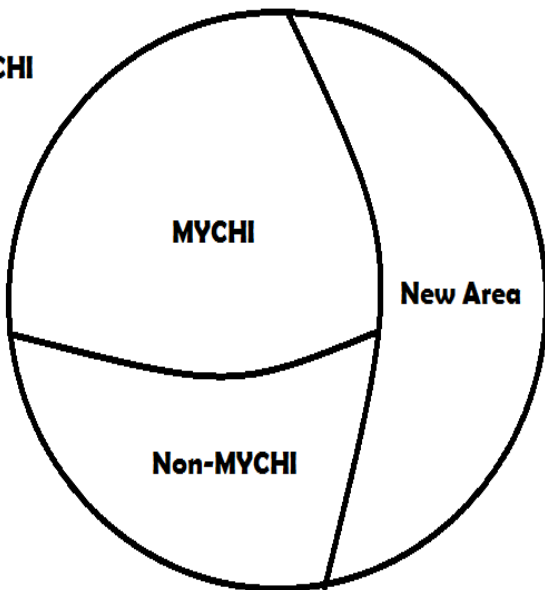
The 'Population'



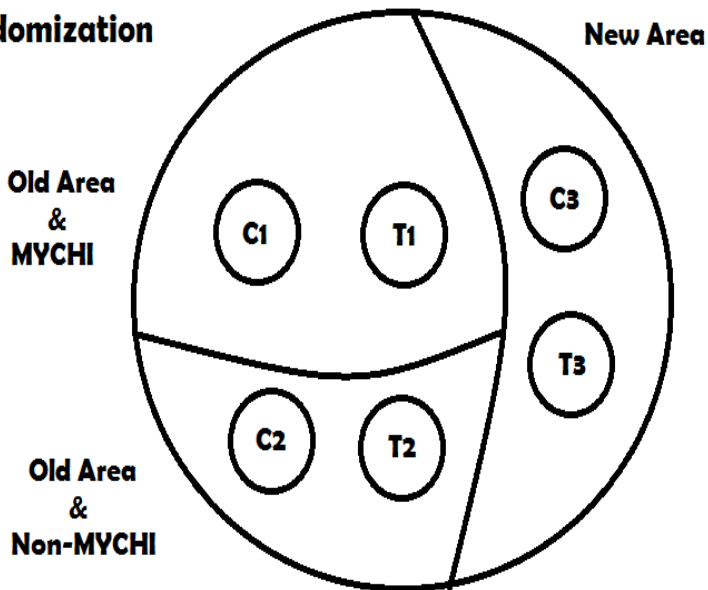
**Stratify by:
Past Presence of CK**



**Stratify by:
Exposure to MYCHI**



Randomization



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 - ▶ Migration.

Way Forward

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- ▶ Enrolment in three phases ending in May, October, December.

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- ▶ Enrolment, baseline survey, and randomization have been completed for the first and second phase.
- ▶ Renewal data shall be available for analysis by December 2011.

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Theory of Change

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Theory of Change

Out-Patient Insurance & Preventive Promotive Package

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Problem

Omitted Variable Bias & Self-selection Bias

Introduction

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- ▶ Present Project
 - ▶ Located in Yavatmal district of Maharashtra, which is a drought prone district and largely poor.
 - ▶ Healthcare delivered via a **hub & spoke** delivery model.
 - ▶ **Village Health Champions** leveraging **hand-held devices** to deliver care at the doorstep.

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⇒ **Randomized Discount-Vouchers.**

Instrumental Variable (2)

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IV Design: 30 HH each in 30 villages = 900

Group	Description	Strength
Control	One-time free check-up by VHC	10 x 30 = 300
Treatment 1	80% discount on Insurance	10 x 30 = 300
Treatment 2	80% discount on Insurance & PPP	10 x 30 = 300

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 - ▶ Drop those in the treatment groups who do not act on our 'intent-to-treat'.
- ▶ Randomization does away with omitted variable bias.
- ▶ *Pure* differences in outcomes can now be observed.

Measurement

In this study the impact will be observed through three difference effects:

1. **C - T2** : Impact of OP insurance on insured people vs. uninsured people.
2. **C - T1**: Impact of combined intervention (OP insurance + preventive and promotive package) on insured people vs. uninsured people
3. **T1 - T2**: Impact of combined intervention (OP insurance + preventive and promotive package) on insured people vs. people with only OP insurance.

Challenges

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- ▶ Loss of Control & Treatment groups

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- ▶ **Loss of Control & Treatment groups**
 - ▶ Migration.
 - ▶ Insufficient use of vouchers - due to lack of knowledge and/or understanding.

Way Forward

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- ▶ Baseline survey completed.

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- ▶ Baseline report to be completed by the end of November.

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- ▶ Mid-line qualitative research to be conducted in January.

Thank You

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