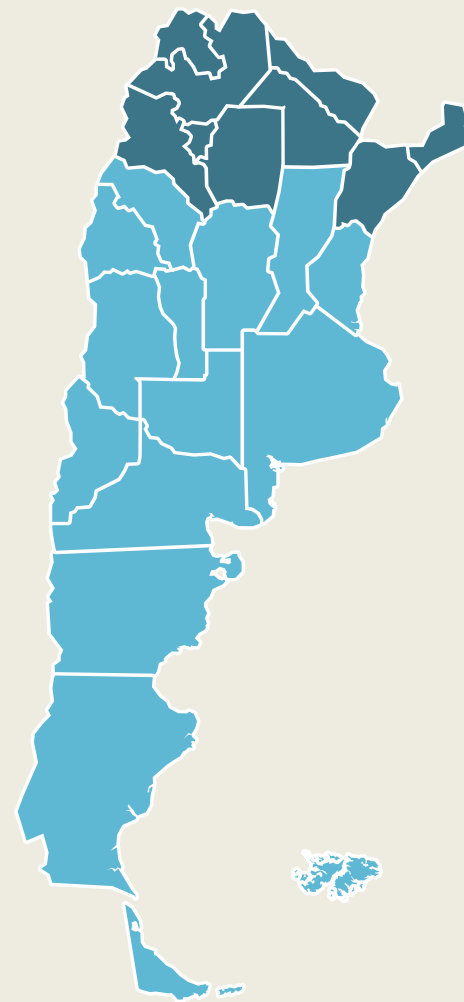


Rewarding Provider Performance
to Enable a Healthy Start to Life:
Evidence from Argentina's Plan Nacer

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London, June 2014

- What is Plan Nacer?
 - Origins and Objectives
 - Financing Mechanism
 - Implementation & Definition
- Evaluation
 - Objectives and Methods
 - Data
 - Results
- Summary



What is Plan Nacer?

Origins and Objectives

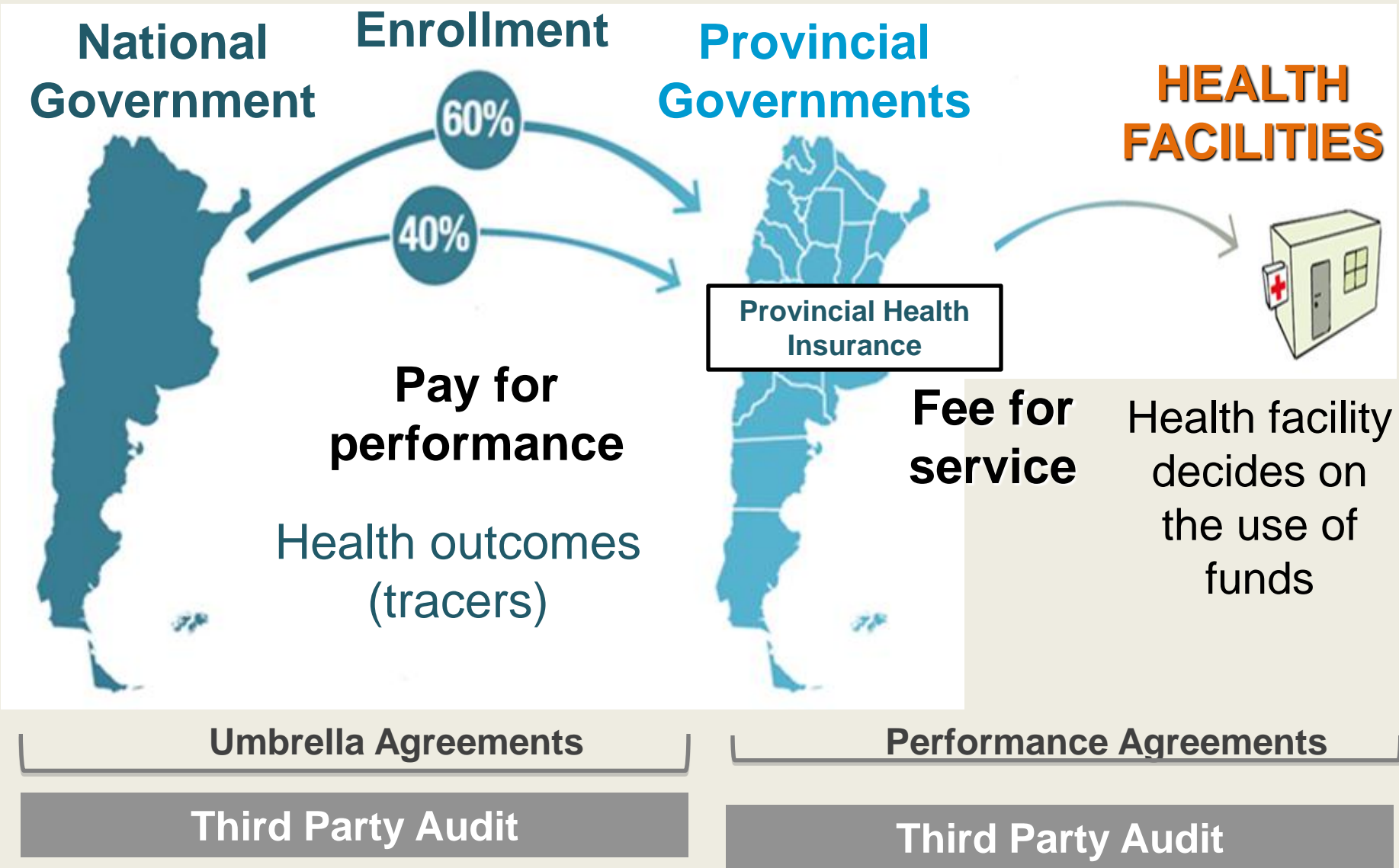
Plan Nacer: Origins and Objectives

- 2002-03 financial crisis
 - 40% loose jobs & insurance
 - Switch to under- resourced public sector
- Improve maternal and child health
 - For the Uninsured
 - Access and quality of care

What is Plan Nacer?

Financing Mechanism

Financing Mechanism

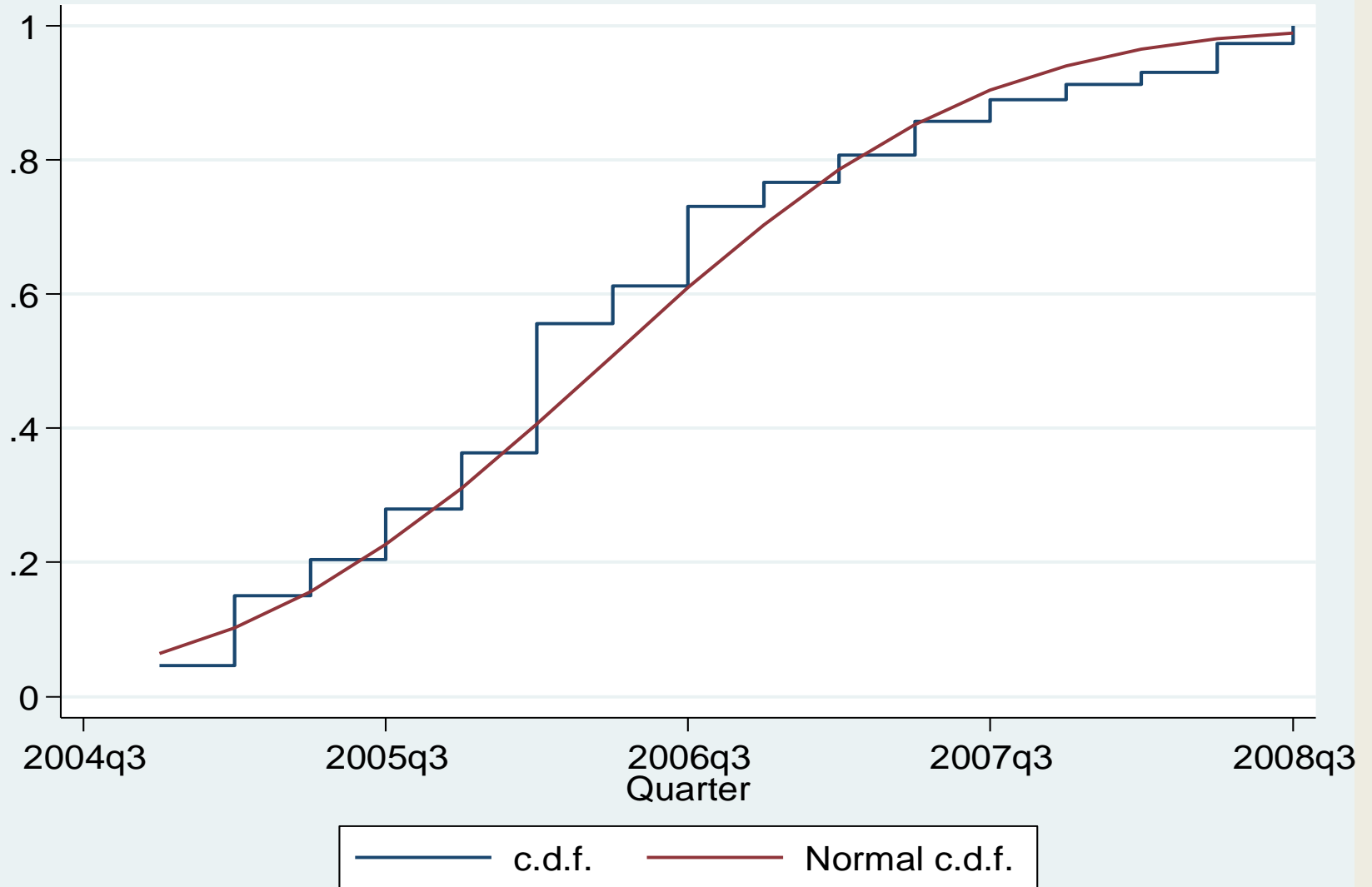


This slide is based on Plan Nacer presentation

What is Plan Nacer?

Implementation & Definition

Phased Clinic Enrollment into Plan Nacer



Definition: Enrollment

Two levels of enrollment:

- **Clinic enrollment**
 - The clinic signs an agreement with the province and bills services to Plan Nacer
- **Patient enrollment**
 - The mother and child enroll in the Plan Nacer Roster

Evaluation

Objectives and Methods

Objectives and Methods

To measure the impact of a clinic enrolling in Plan Nacer on outcomes of:

- ✓ All patients

Method: Diff in Diff

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Method: Diff in Diff
- ✓ Patients enrolled in Plan Nacer: Beneficiaries
Method: Diff in Diff with Instrumental Variables

Objectives and Methods

To measure the impact of a clinic enrolling in Plan Nacer on outcomes of:

✓ All patients

Method: Diff in Diff

✓ Patients enrolled in Plan Nacer: Beneficiaries

Method: Diff in Diff with Instrumental Variables

✓ Patients not-enrolled in Plan Nacer: Non-Beneficiaries

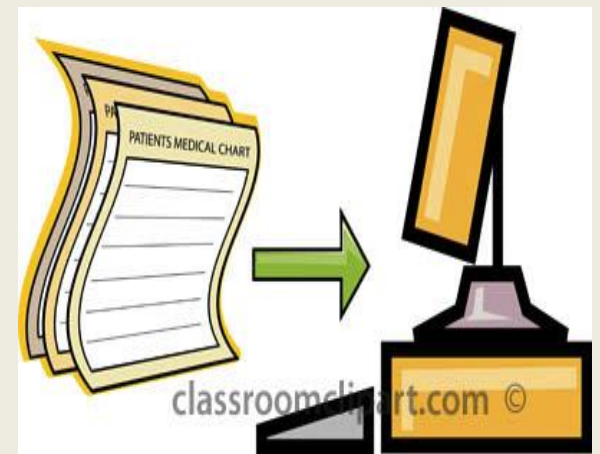
Method: Diff in Diff with Instrumental Variables

Evaluation

Data

Birth Certificate Data

- Universe of births in public hospitals
 - 7 northern Provinces during
 - 2004-2008
 - Digitalized over 300,000 records
 - Mother: DNI, address, birth date, Tetanus, C-Section
 - Baby: Birth weight, APGAR, Neonatal mortality
- Very large sample sizes
- Can measure rare outcomes
 - Low Birth weight
 - Neonatal mortality



Match Birth Certificate Data To...

- Plan Nacer Beneficiary Roster
 - Using DNI
- Clinic used for prenatal care, using
 - Plan Nacer administrative data
 - “Remediar” pharmaceuticals program
 - Geocoding
- Clinic’s effective date of participation in Plan Nacer Effective
 - Date of first bill to Plan Nacer

Outcome Indicators

| Prenatal care | Sample Size | Mean for 2004-08 |
|--------------------------------|-------------|------------------|
| Number of prenatal care visits | 228,656 | 4.563 |
| Tetanus toxoid vaccine | 108,535 | 0.786 |
| C- section | 282,042 | 0.235 |

Outcome Indicators

| Birth outcomes | Sample Size | Mean for 2004-08 |
|---------------------------------|-------------|------------------|
| Birth weight (in grams) | 274,078 | 3,277 |
| Low birth weight (<2,500 grams) | 274,078 | 0.07 |
| APGAR score at 5 minutes > 6 | 248,840 | 0.982 |

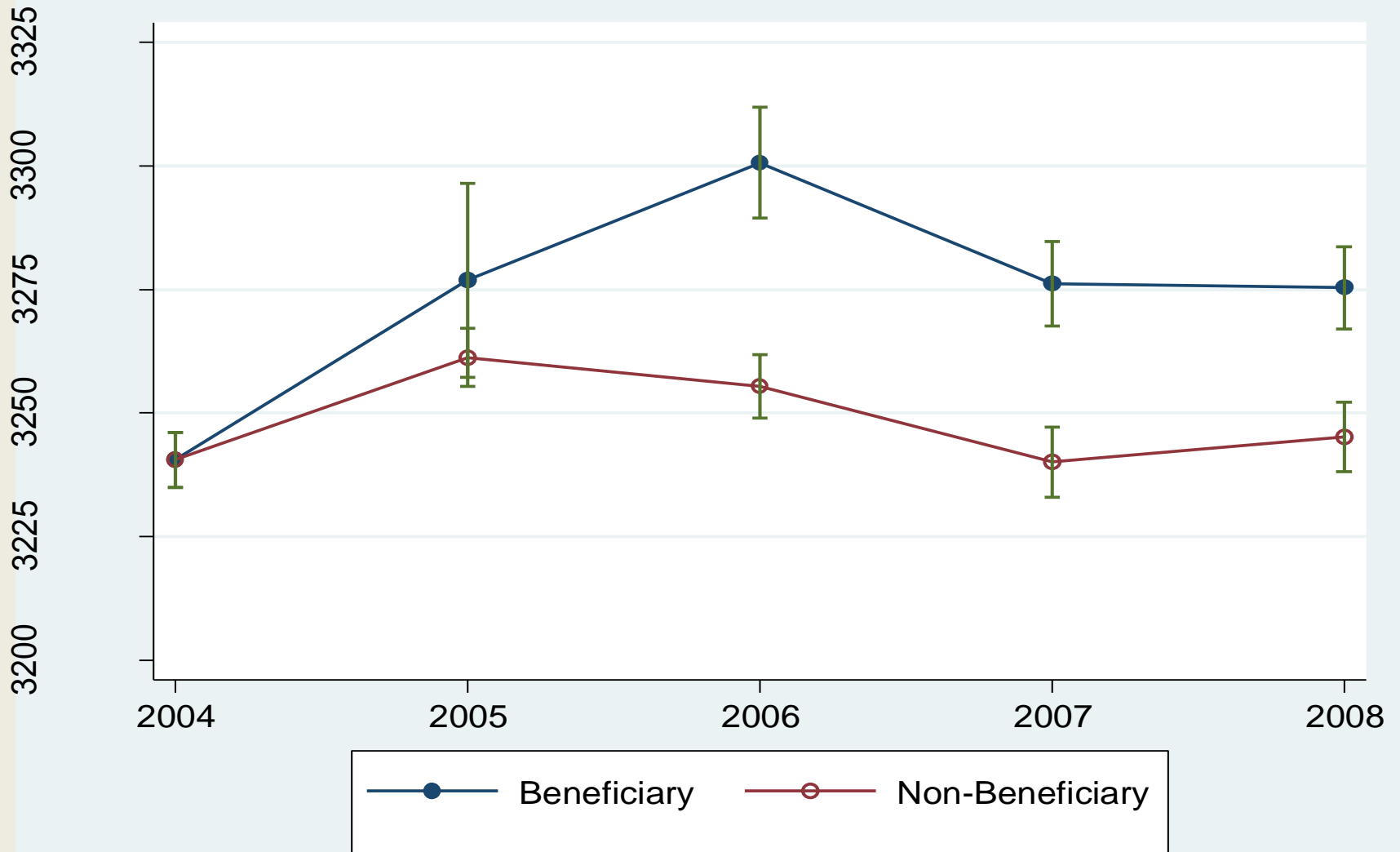
Outcome Indicators

| Mortality | Sample Size | Mean for 2004-08 |
|--|-------------|------------------|
| Neonatal mortality per 1,000 live births | 131,943 | 8.28 |

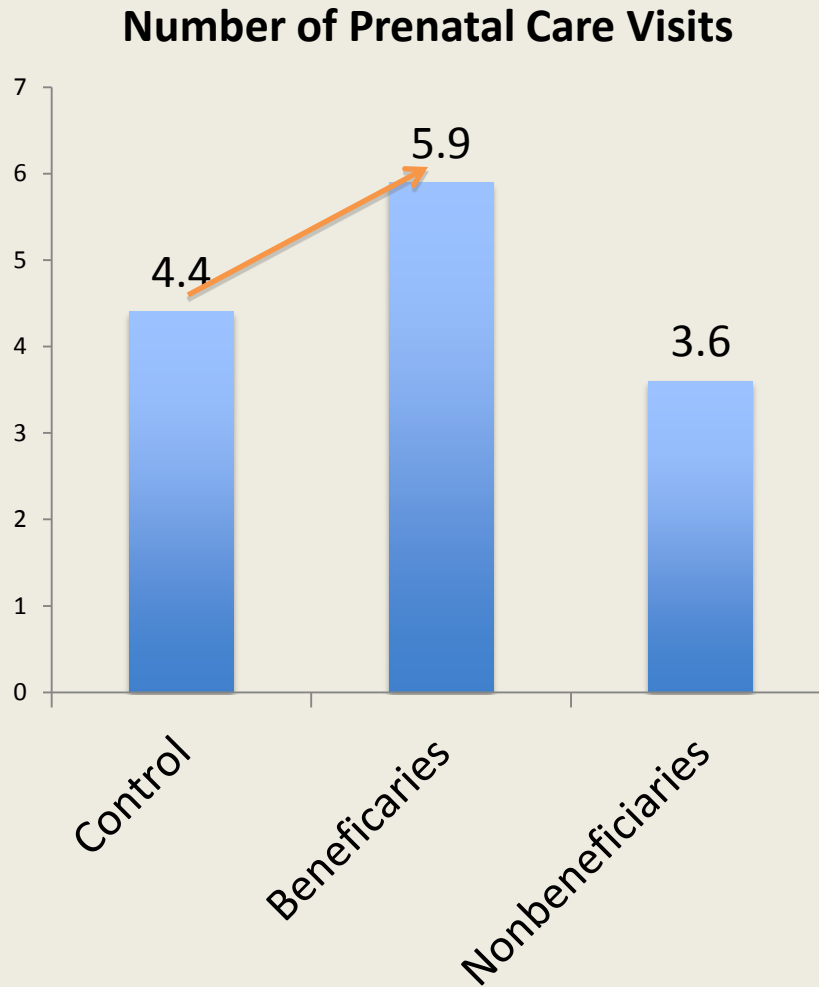
Evaluation

Results

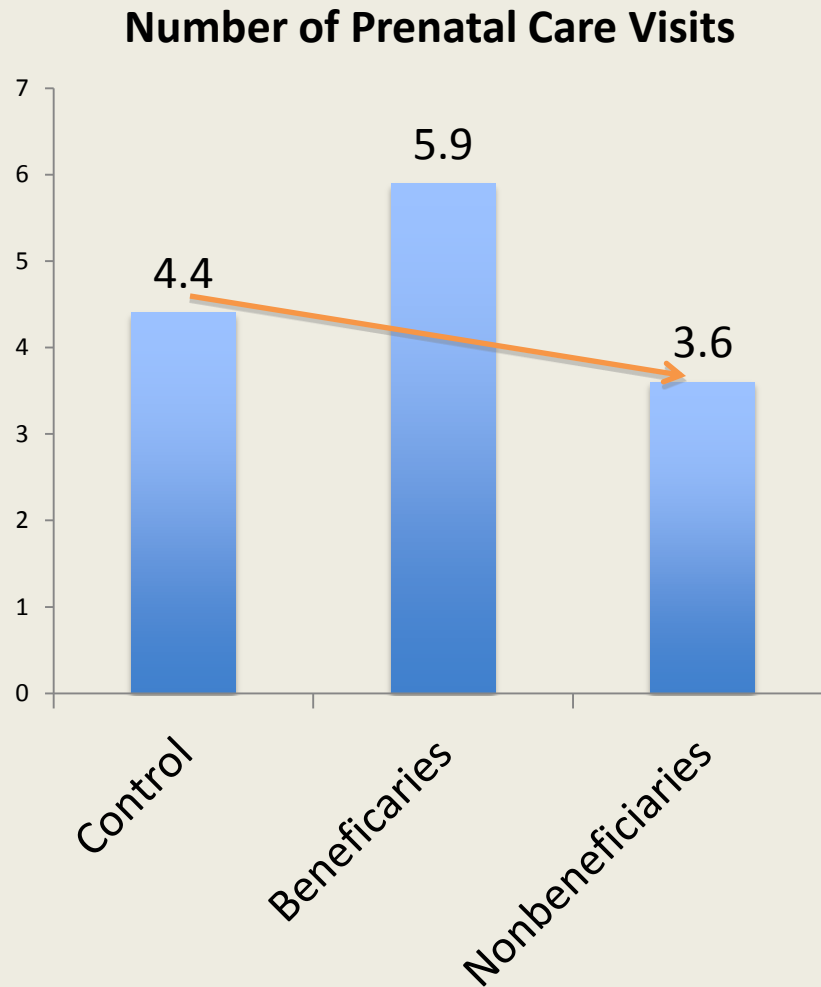
Mean Birth Weight by Beneficiary Status Over Time



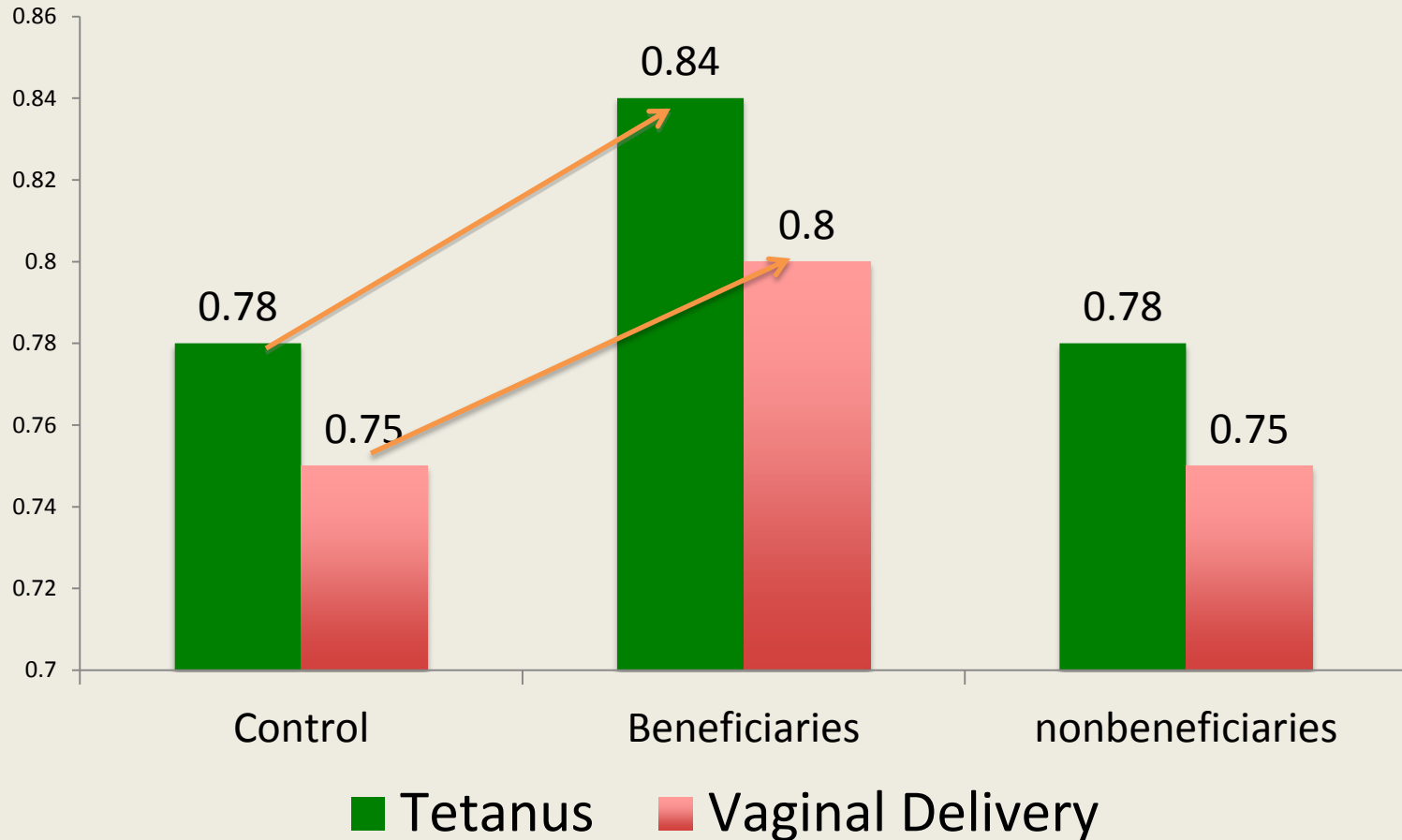
Plan Nacer Increases Beneficiary Prenatal Care Use



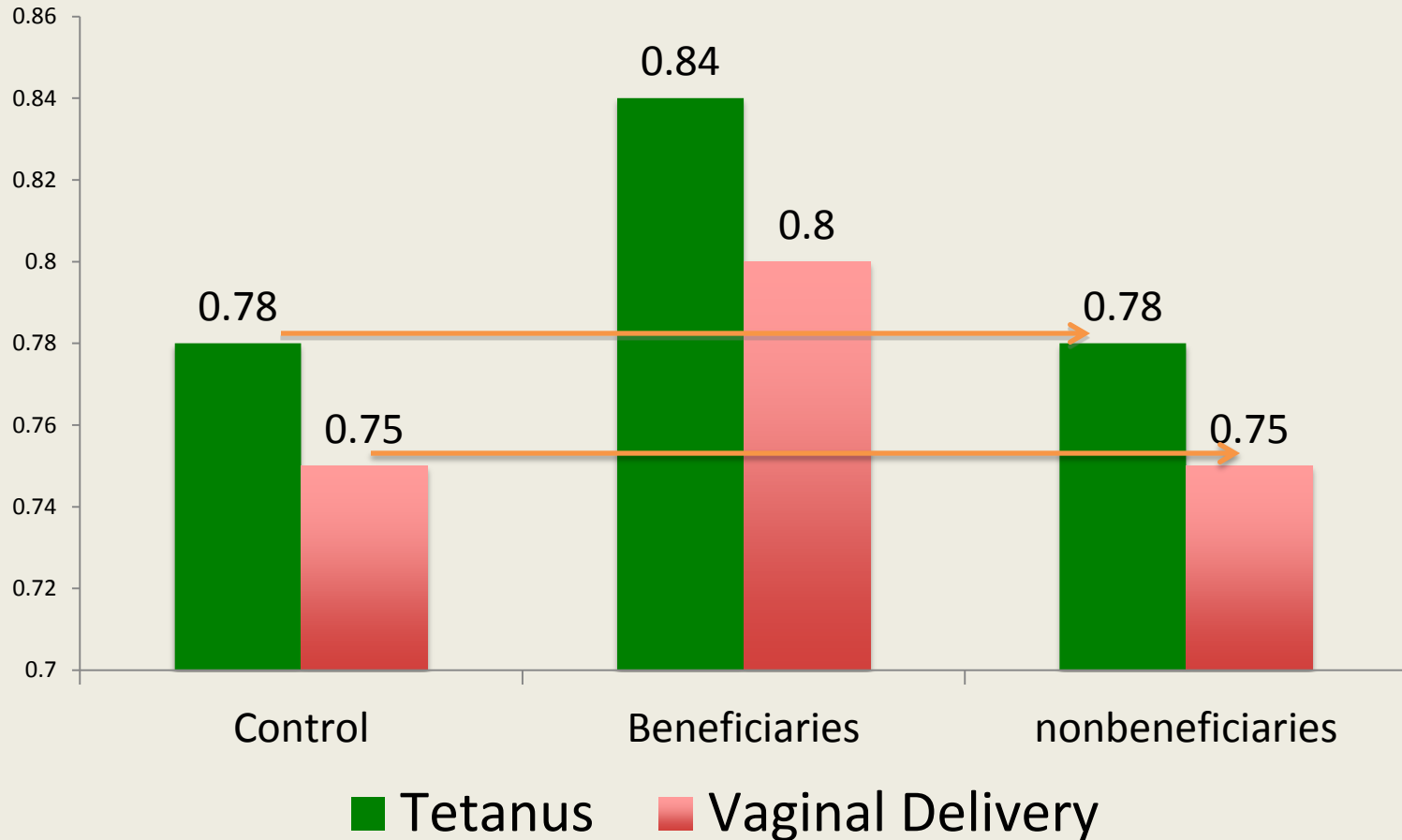
Some Negative Spillover to Non-Beneficiary Prenatal Care Use



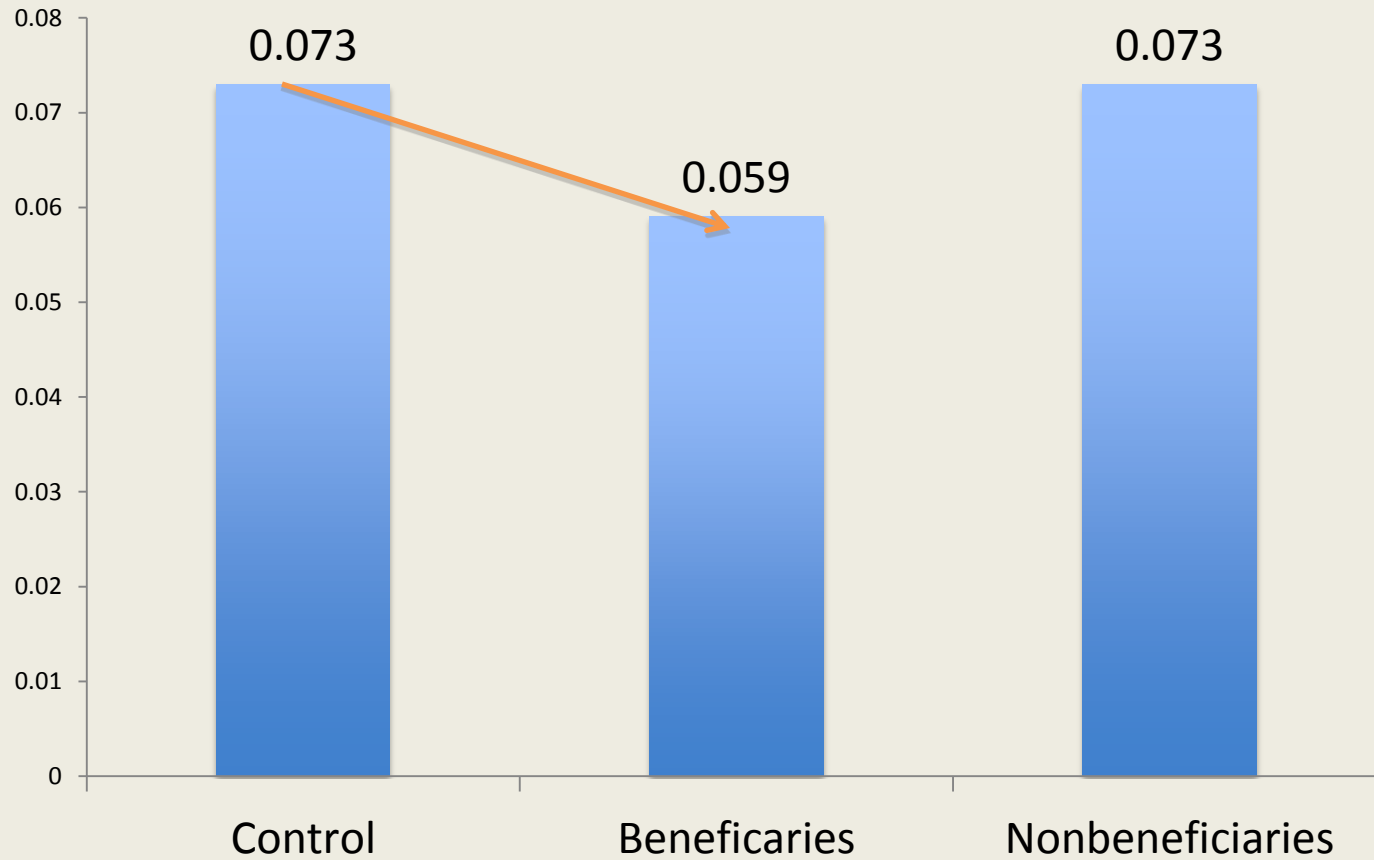
Plan Nacer Increases Beneficiary Prenatal Care Quality



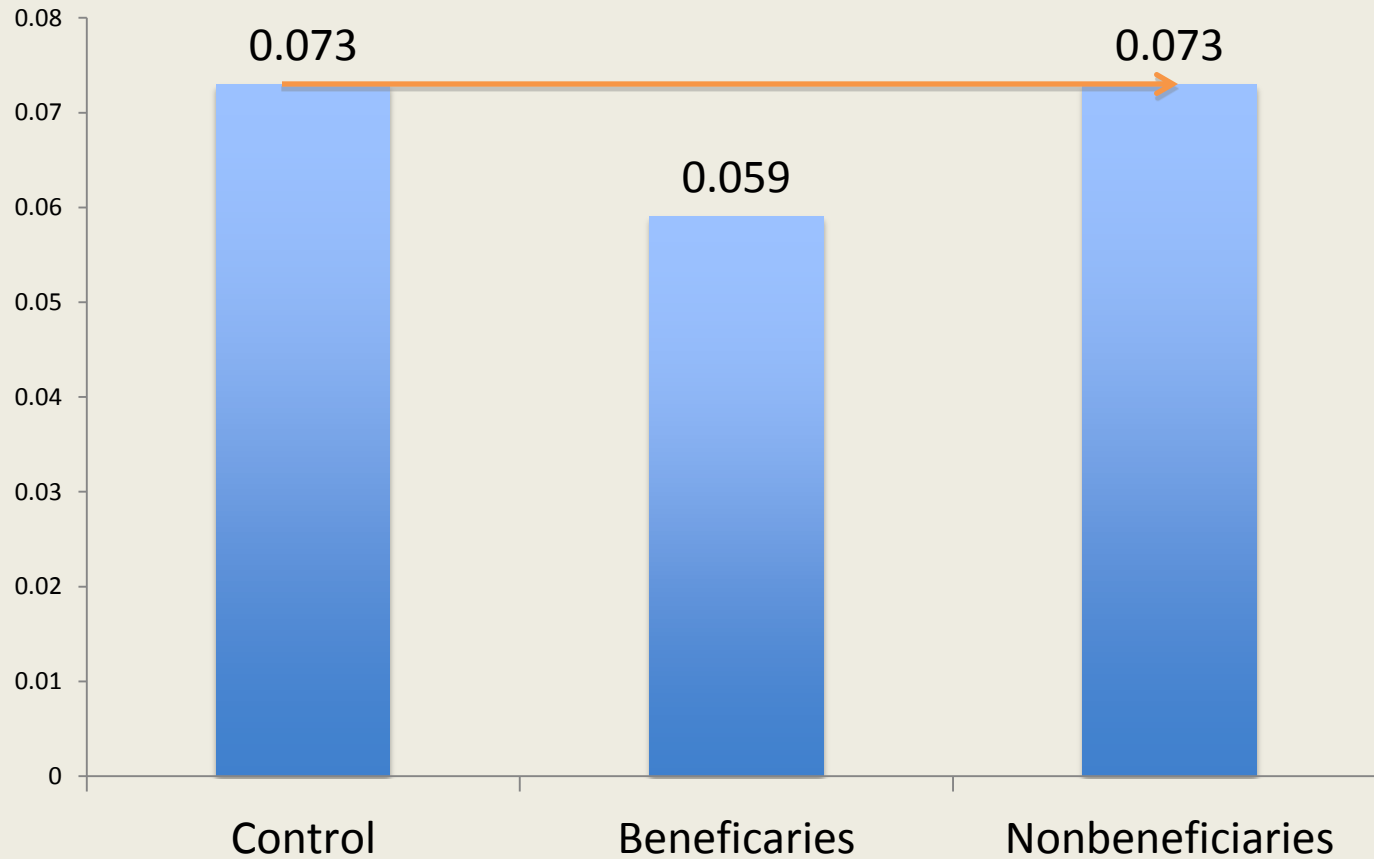
No Spillover to Non-Beneficiary Prenatal Care Quality



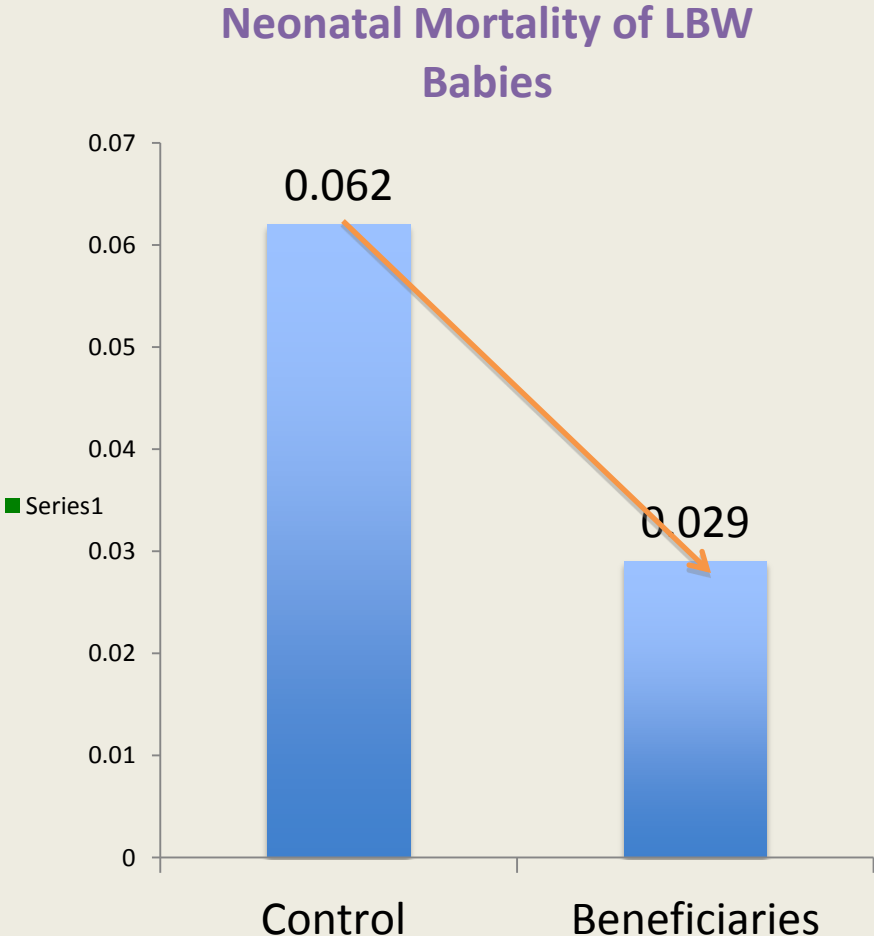
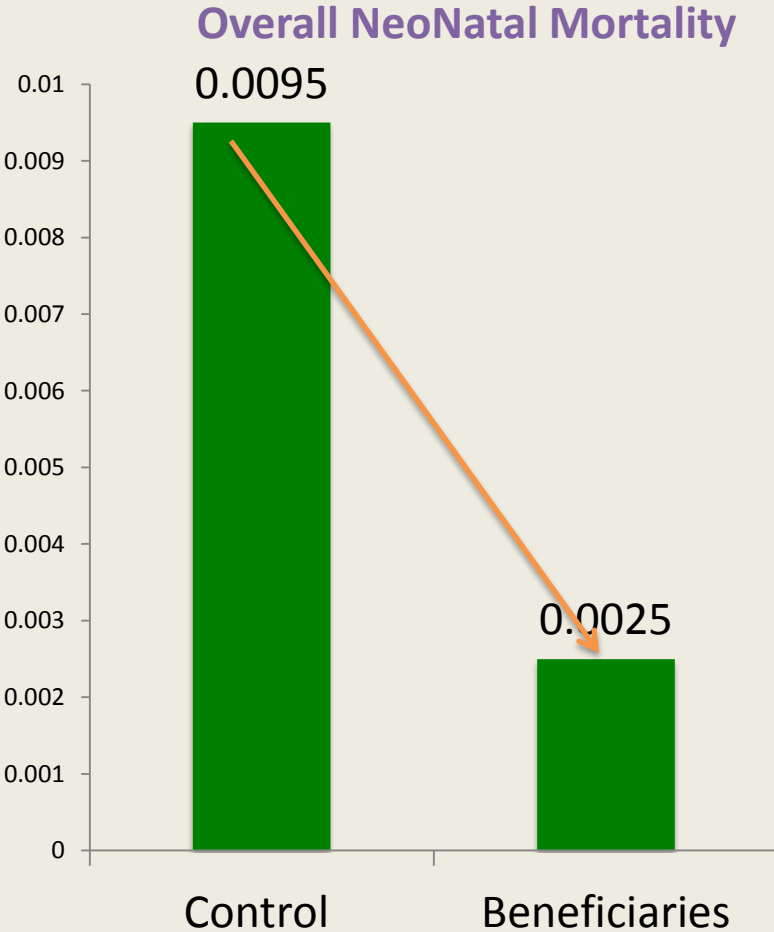
Plan Nacer Reduces Beneficiary Low Birth Weight



No Spillover to Non-Beneficiary Low Birth Weight



Plan Nacer Reduces Neonatal Mortality



How Plan Reduced Neonatal Mortality

- Neonatal mortality mostly from LBW babies
- Lower by
 - Preventing LBW
 - Better care for LBW babies
- Find
 - 54% of reduction from preventing LBW
 - 46% from better care for LBW babies

Plan Nacer : Cost Effectiveness

| | Lower bound | Point estimate | Upper bound |
|-------------------------------------|-------------|----------------|-------------|
| Neonatal deaths averted | 117 | 733 | 1,349 |
| Low-birth weight babies averted | 171 | 1,071 | 1,970 |
| Plan Nacer DALYs saved | 4,064 | 25,401 | 46,738 |
| Cost per DALY saved | \$5,086 | \$814 | \$442 |
| Annual real GDP per capita 2005–08) | \$6,075 | \$6,075 | \$6,075 |

Summary

- Positive impact on birth outcomes
 - More prenatal care
 - Better birth outcomes & less neonatal mortality
 - No negative effect on Non-Beneficiary outcomes
- Cost effective
- Strong coverage and quality of basic data (i.e birth records, patient's hospital form, vital stats)
 - Use these data for IE whenever possible

The end