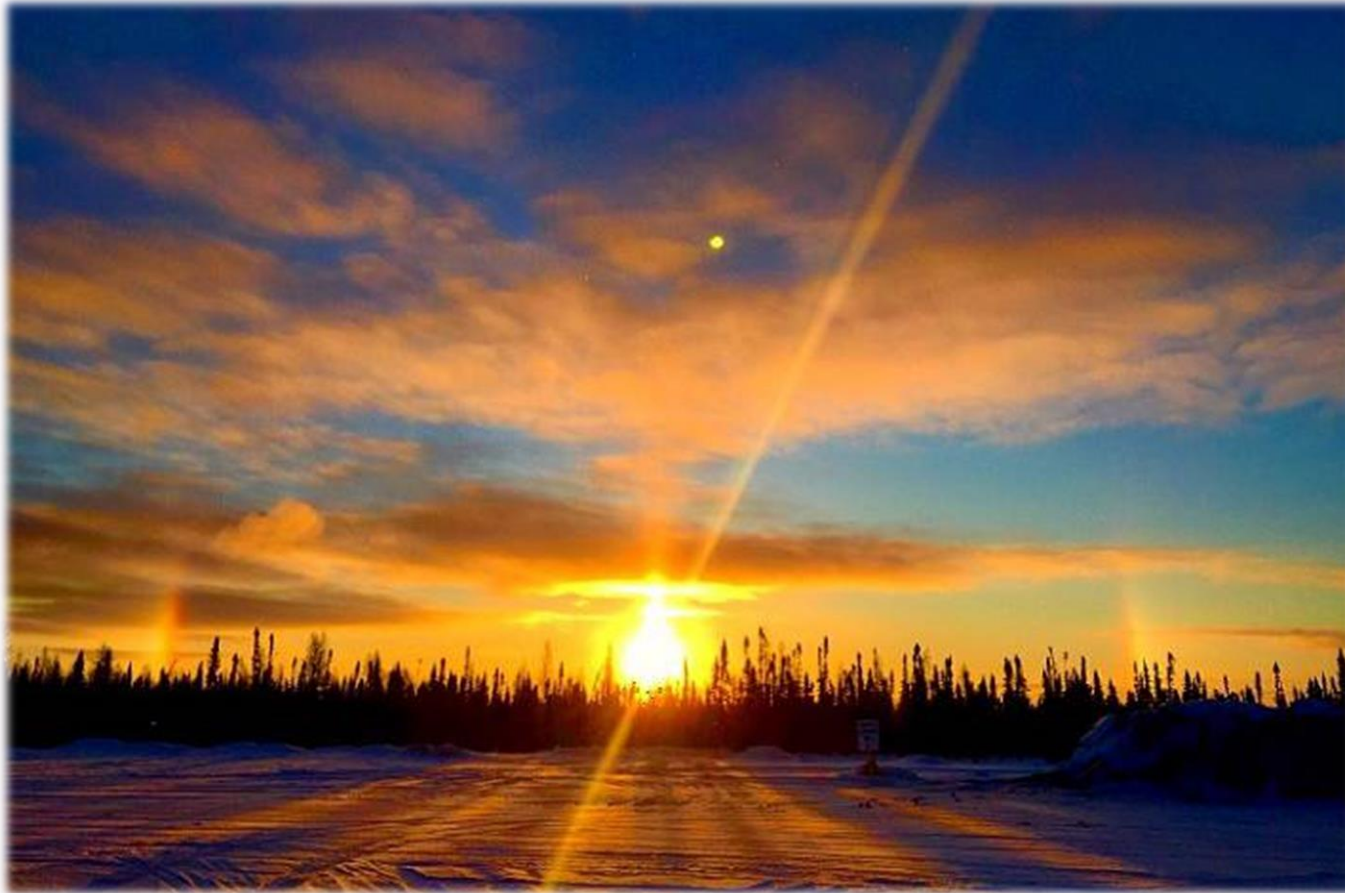


What works to reduce the gap in children's health? Lessons from Manitoba

Marni Brownell, PhD

International Network for Research in Inequalities in Child Health (INRICH)

. Traditional Territories Acknowledgement



Pathways To Health and Social (PATHS) Equity for Children Program of Research

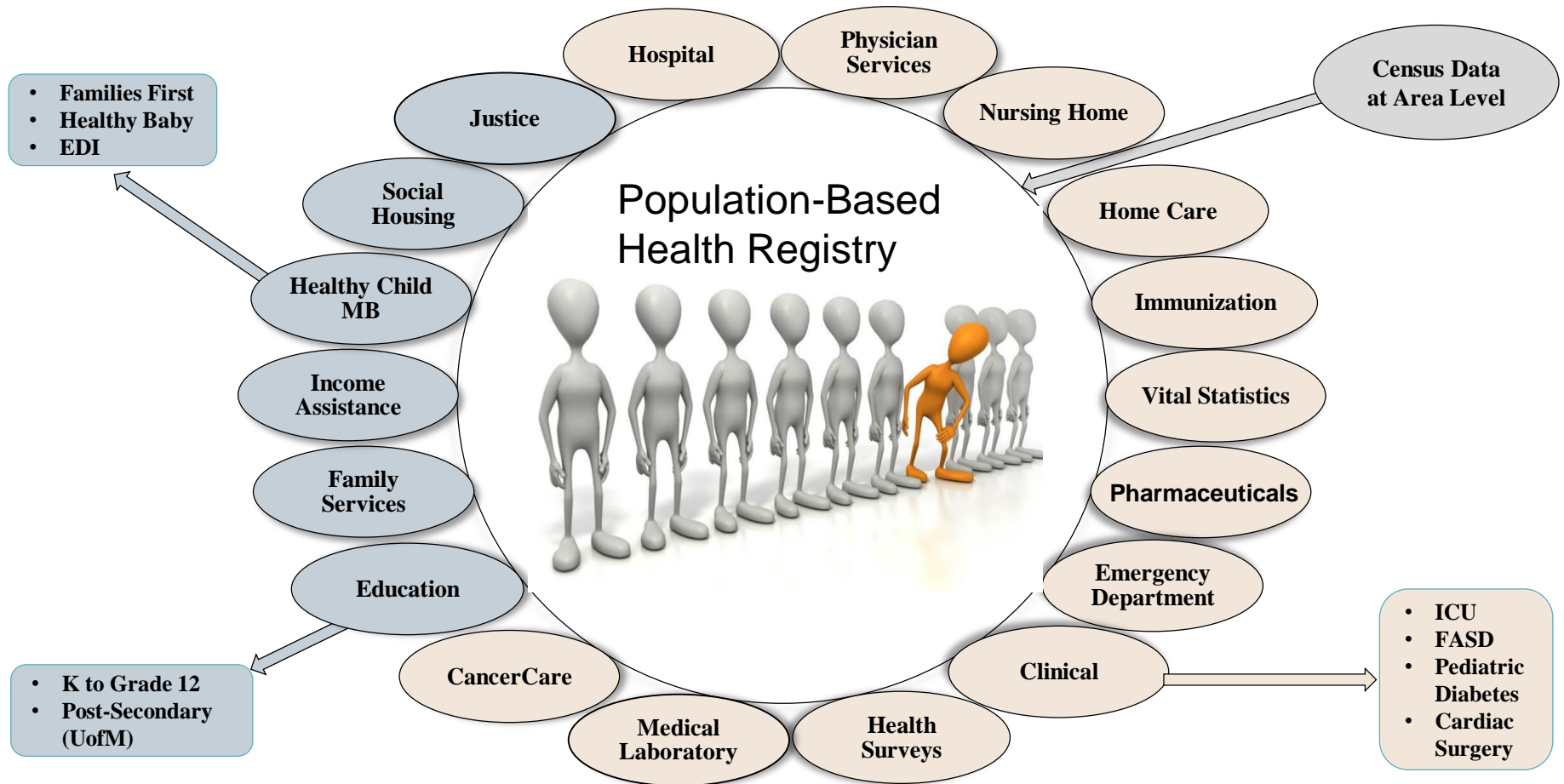


Evaluated 12 existing programs for kids to determine the association with:

1. improved overall health and well-being for children
2. reduced socioeconomic inequities or gaps in health and well-being



MCHP Houses the De-Identified Population Research Data Repository



Health

Education

Child Welfare

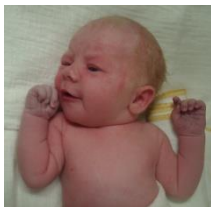
Income Assistance

Social Housing

Early

School Entry

Justice



Baby Friendly Hospital Initiative

Full-Day Kindergarten

Early Intervention for ADHD

Early Psychosis Prevention & Intervention

Healthy Baby Program

CSI Summer Learning Enrichment

In-School Teen Clinics

Physician Integrated Network

Families First Home Visiting

Roots of Empathy

Healthy Buddies

Social Housing



Manitoba Healthy Baby Prenatal Benefit (HBPB) Program

- aimed at promoting pre- and perinatal health
- Benefits start in 2nd trimester of pregnancy; monthly cheque for \$81.41
- Eligibility - medical note confirming pregnancy and expected date of delivery
 - Completed application
 - Net family income < \$32,000
 - Resident of Manitoba



Is HBPB associated with improved outcomes?

- Low birth weight
- Small for gestational age
- Large for gestational age
- Preterm birth
- 5-minute Apgar
- Length-of-stay for birth hospitalization
- Breastfeeding initiation
- Readmission within 30 days
- Hospital admission first 2 years
- Immunization 1 and 2 years
- Early Development Instrument (EDI)



Methods



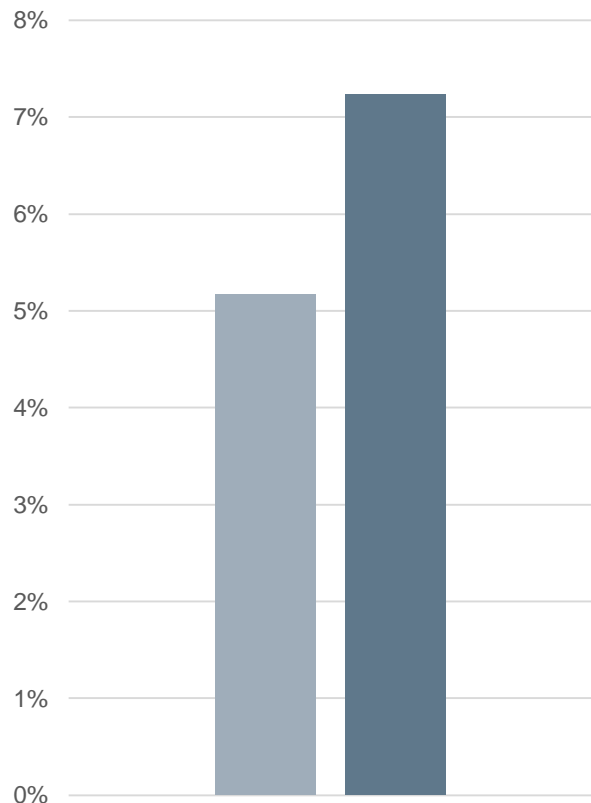
- Included all women receiving Income Assistance during pregnancy – all eligible for HBPB, but not all applied (years: 2003-2010)
 - 10738 HBPB,
 - 3853 no HBPB
- Used propensity scoring to ensure women in treatment and comparison group were comparable
 - Calculated based on probability of receiving HBPB
 - Inverse probability of treatment weights (IPTW) applied to balance groups



Perinatal Outcomes

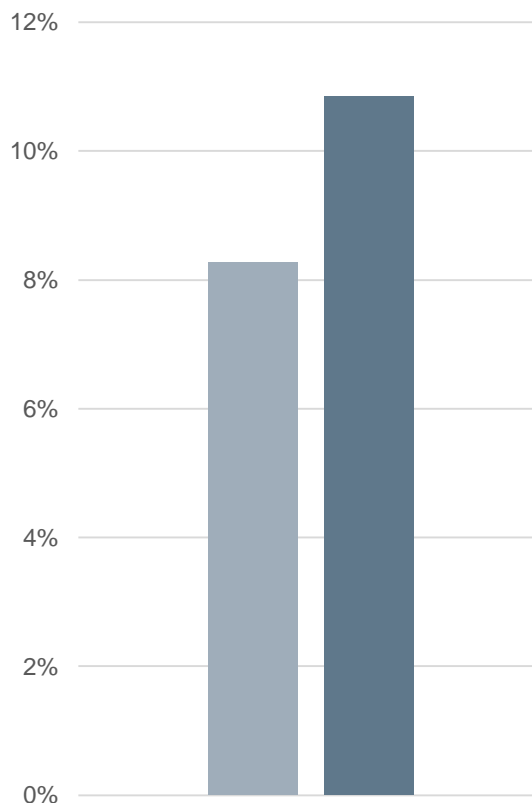
HB  No HB 

Low Birth Weight



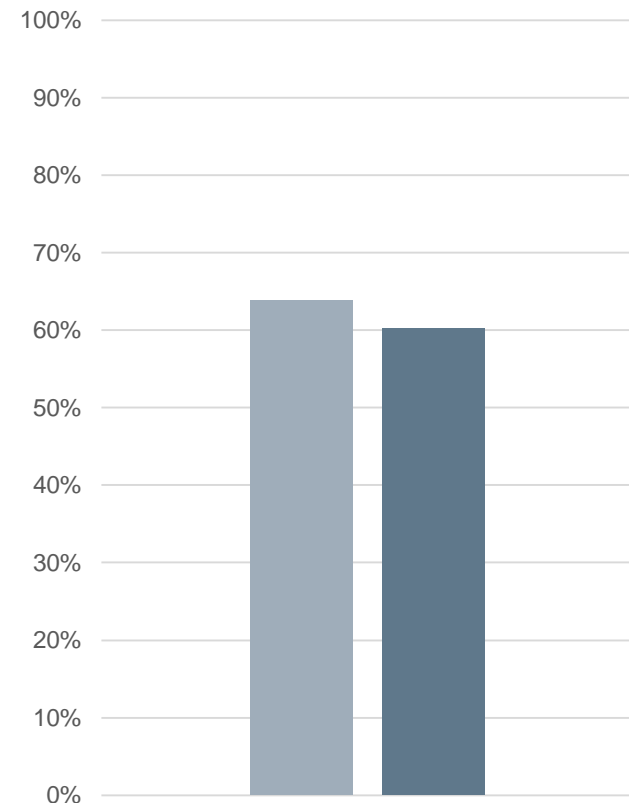
RR=0.71*

Preterm Birth



RR=0.76*

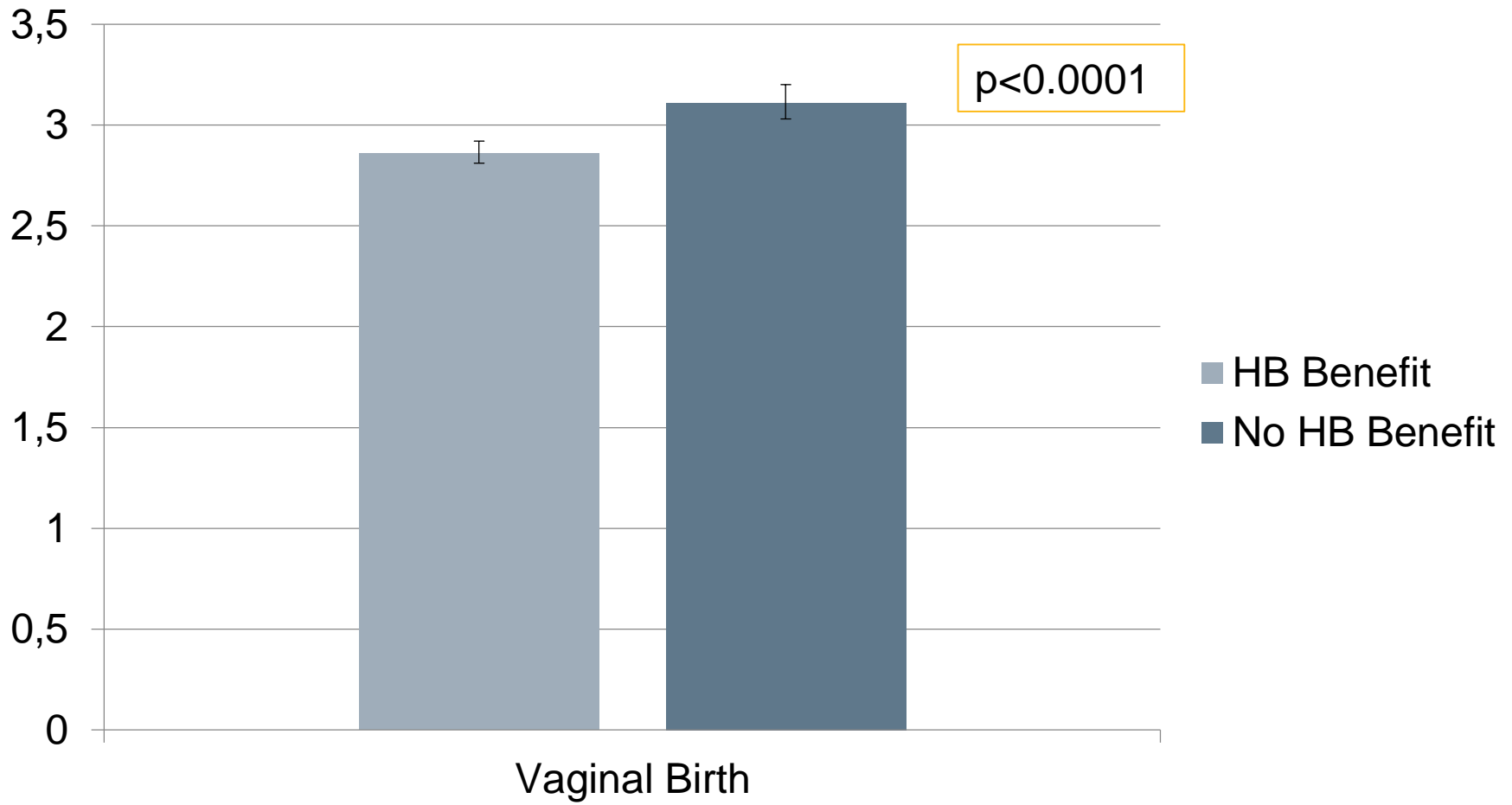
Breastfeeding Initiation



RR=1.06*

Brownell et al.,
Pediatrics, 2016

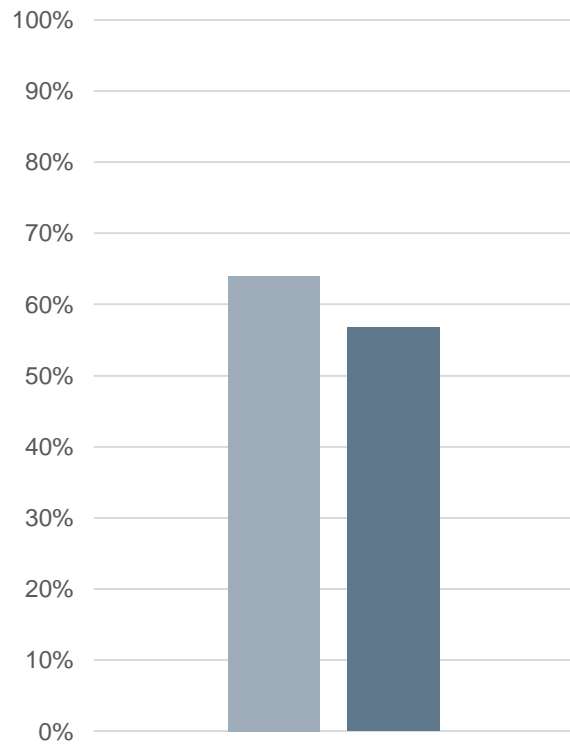
Average Length of Birth Hospital Stay



Longer-term Outcomes

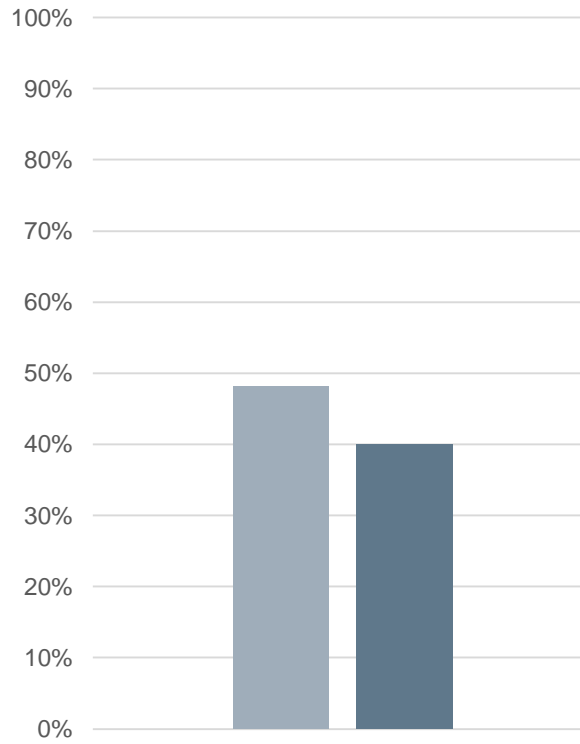
HB  No HB 

1-yr Immunization



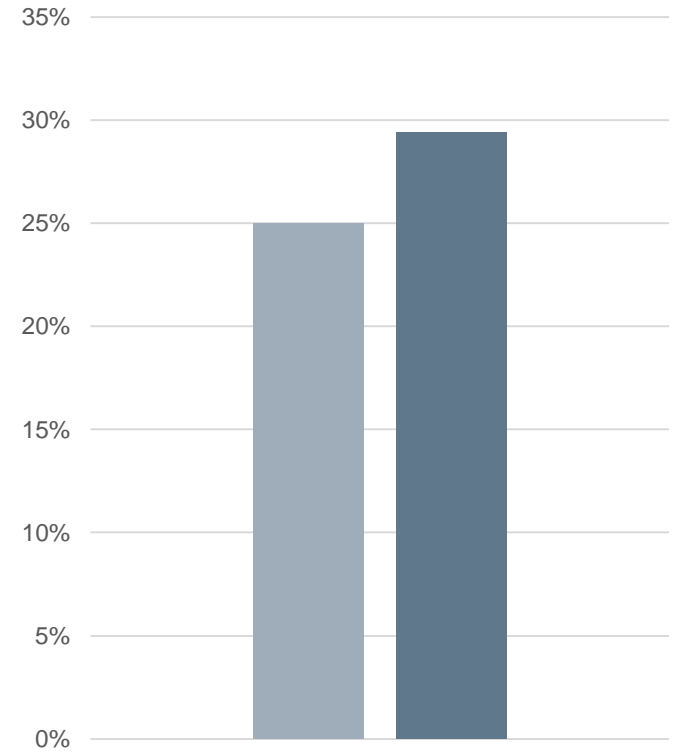
RR=1.13*

2-yr Immunization



RR=1.20*

Developmental Vulnerability,
Language & Cognitive



RR=0.85*

Is HBPB associated with improved outcomes?

- Low birth weight ↓
- Small for gestational age
- Large for gestational age
- Preterm birth ↓
- 5-minute Apgar

- Length-of-stay for birth hospitalization ↓
- Breastfeeding initiation ↑

- Readmission within 30 days
- Hospital admission first 2 years
- Immunization 1 and 2 years ↑

- EDI Language & Cognitive ↑



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Is the Healthy Baby Prenatal Benefit Associated with a Reduced Gap?

Is the HBPB associated with reduced socioeconomic inequities in breastfeeding, low birth weight and preterm births?



Breastfeeding Initiation

Healthy Baby

Not Low Income



88.6%

Low Income



68.6%

66.4%

Preterm Births

Healthy Baby

Low Income



8.8%

7.5%

Not Low Income



5.8%

Low Birth Weight Births

Healthy Baby

Low Income



66.2%

4.3%

Not Low Income



3.7%

Families First Home Visiting

- 2-stage screening to determine eligibility
- enhancing parents' capacity to provide a **nurturing and supportive environment** for their children
- Currently serving approx 1500 families
- Weekly home visits provided by **trained non-professional home visitors.**
- Home Visiting support is offered for **3 years** (although average time = 18 months)
- Home Visitors have limited caseloads
- Use skill building **curriculum focused on parenting, child development and family functioning**



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Do children in the home visiting program have better outcomes?

Outcomes examined

- Taken into care before 1st, 2nd, and 3rd birthday
- Hospitalizations for child maltreatment related injuries
- Immunization rates at 1 year and 2 years of age
- Child development scores at kindergarten (EDI)

Methods

- Children with high risk scores born in years 2003-2009
 - In program = 4,575
 - Not in program = 5,186
- Propensity score calculated
 - Probability in program based on FF Screening
- Inverse probability of treatment weights
 - Applied to balance program and comparison groups



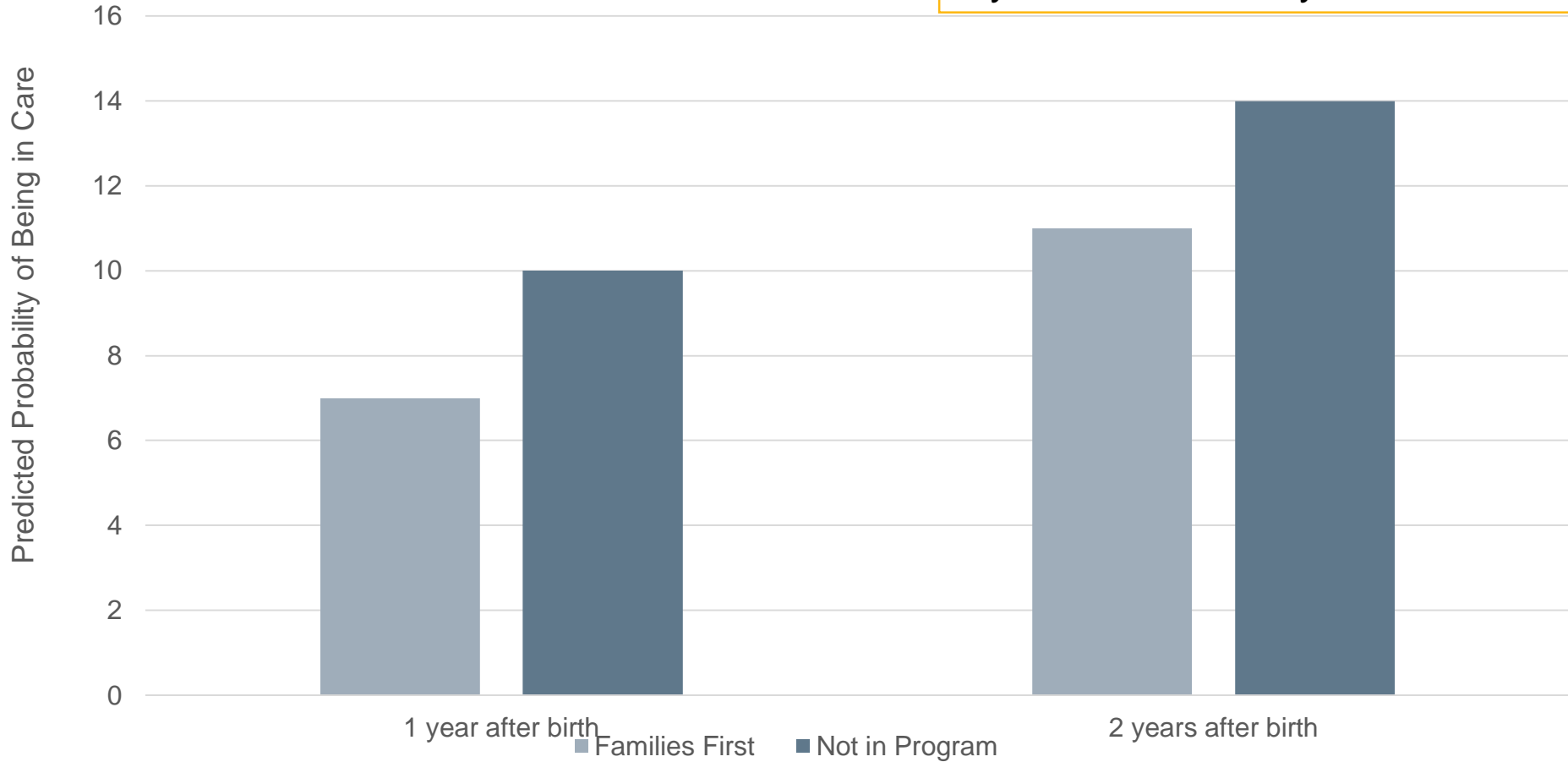
CIHR IRSC



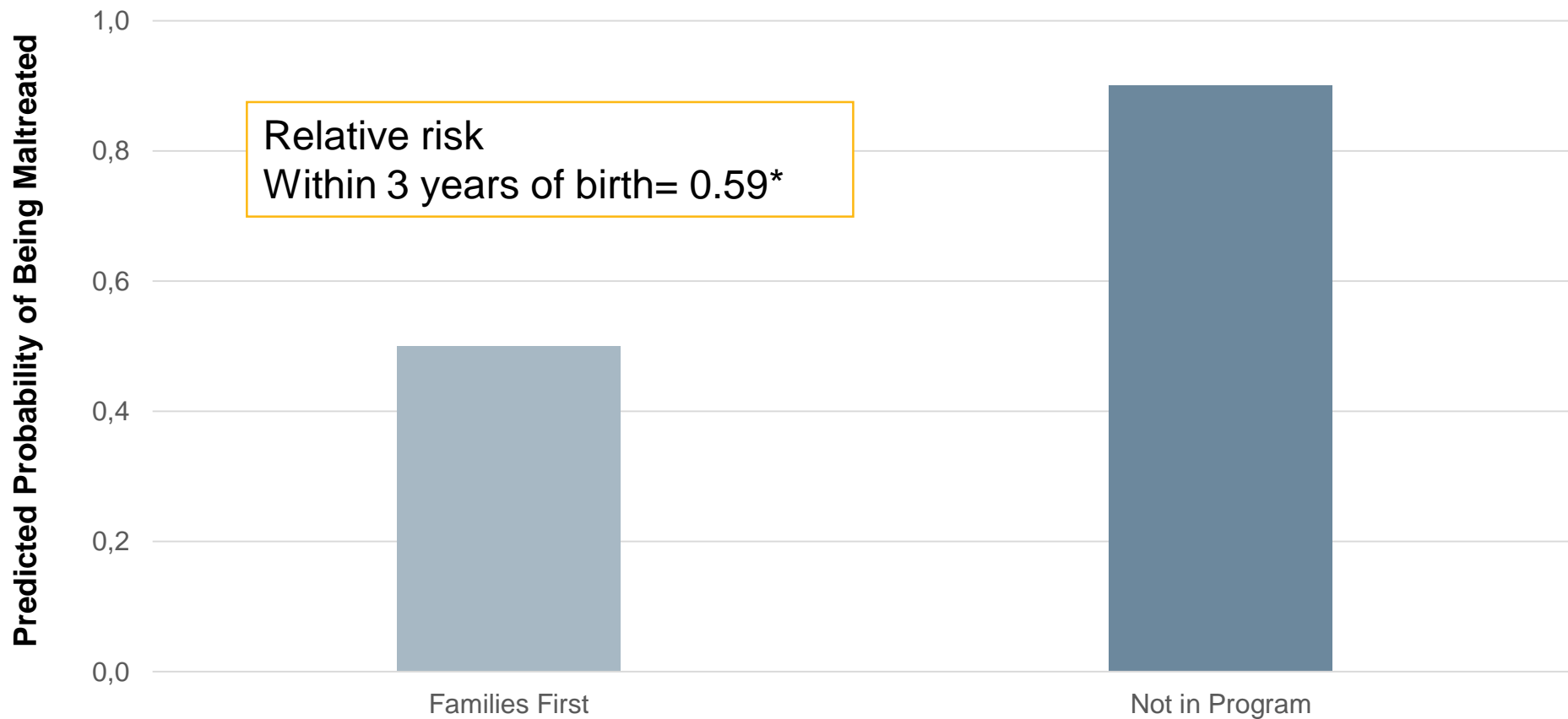
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Children in Care

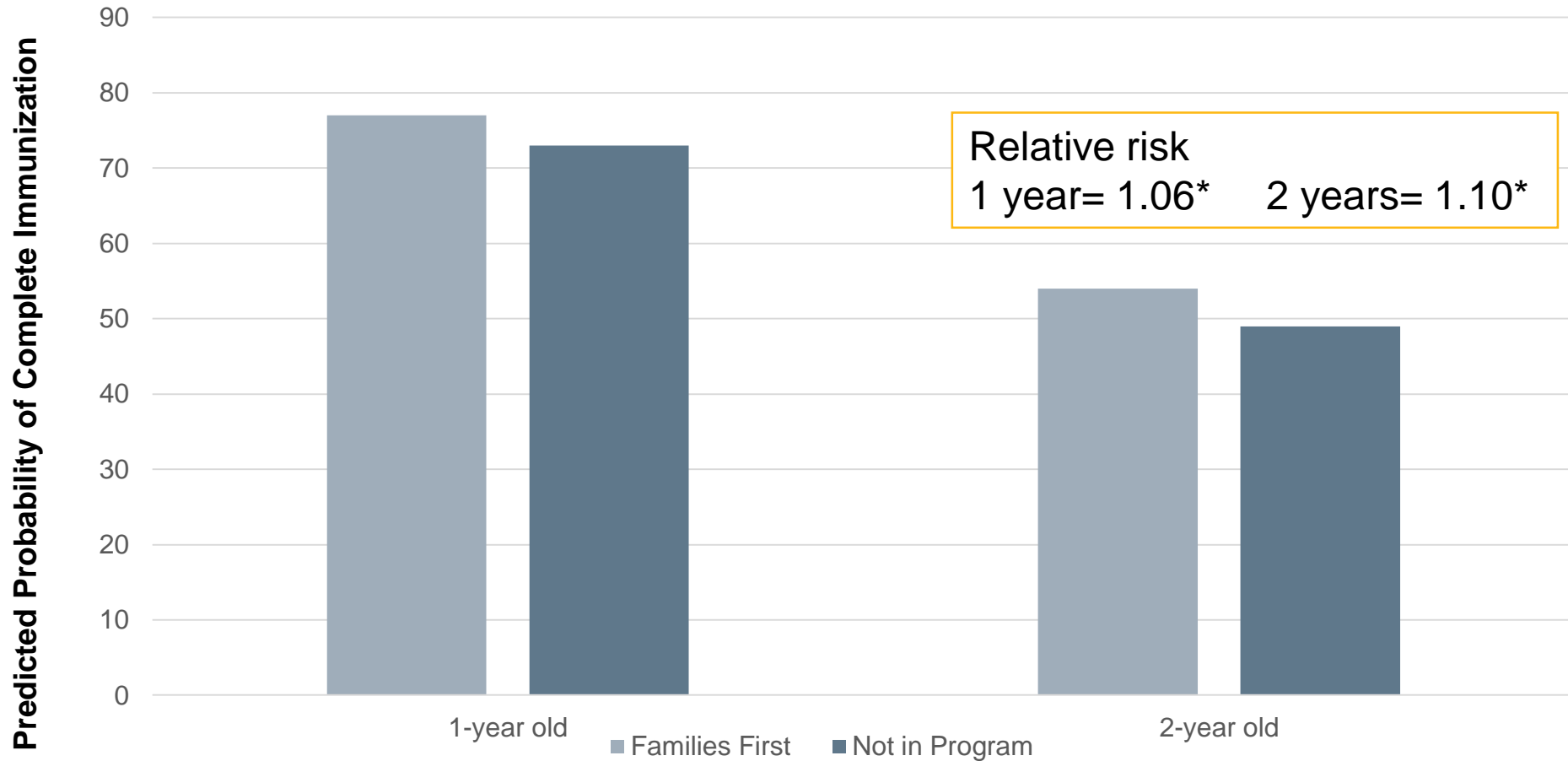
Relative risk
1 year = 0.75* 2 years = 0.79*



Injury for Child Maltreatment



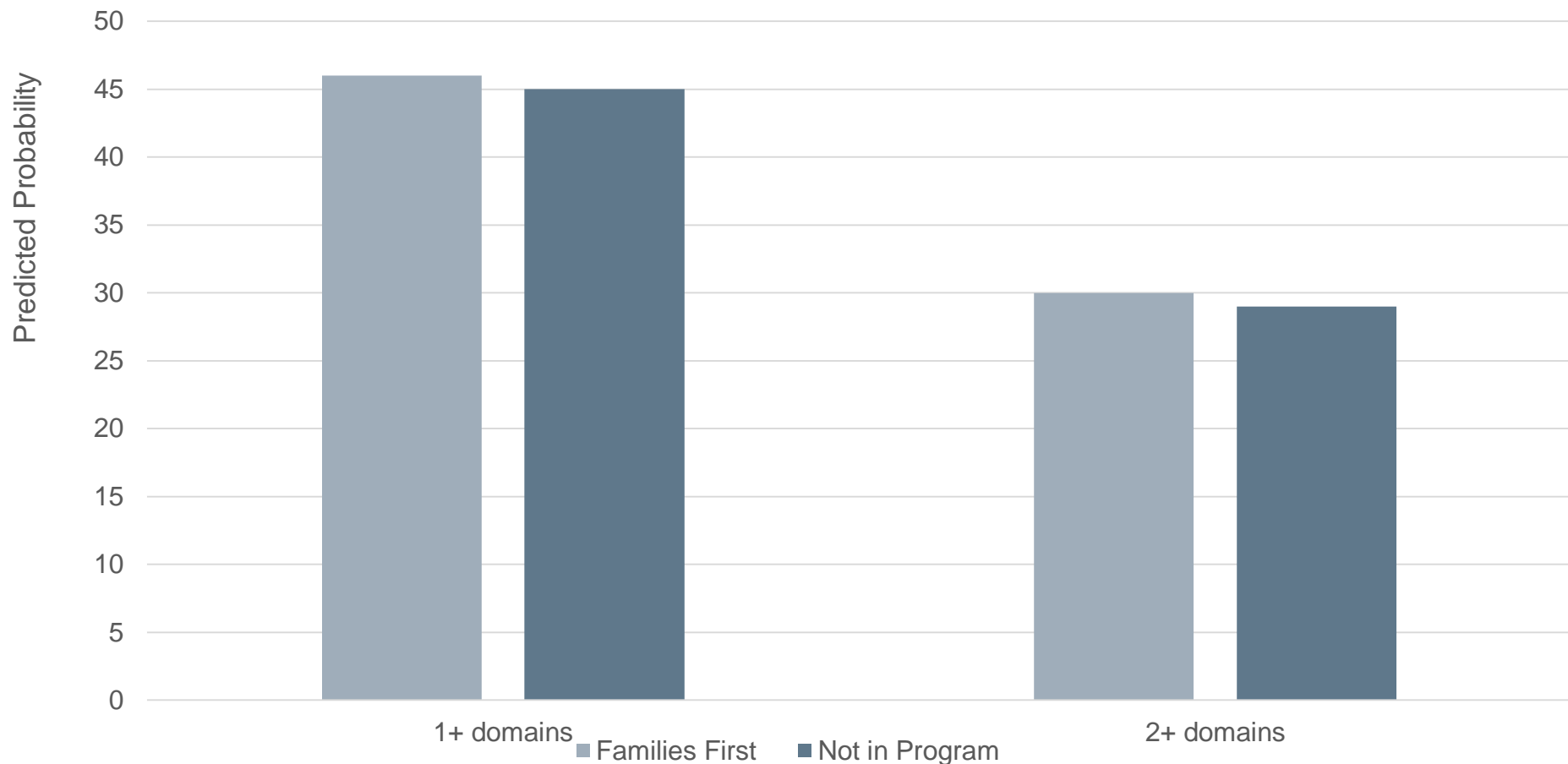
Complete Immunization



Chartier et al 2017; Isaac et al 2015



Developmental Vulnerability at School Entry (EDI)



Do children in the home visiting program have better outcomes?

Outcomes examined

- Taken into care before 1st, 2nd, and 3rd birthday ↓
- Hospitalizations for child maltreatment related injuries ↓
- Immunization rates at 1 year and 2 years of age ↑
- Child development scores at kindergarten (EDI)

Is the Families First Home Visiting Program Associated with a Reduced Gap?



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Taken into care by 1st birthday

Families First

At Risk



100.11%

7.4%

Not at Risk



2.3%

Immunization at 1 year

Families First

Not at Risk



78.2%
78.0%

At Risk

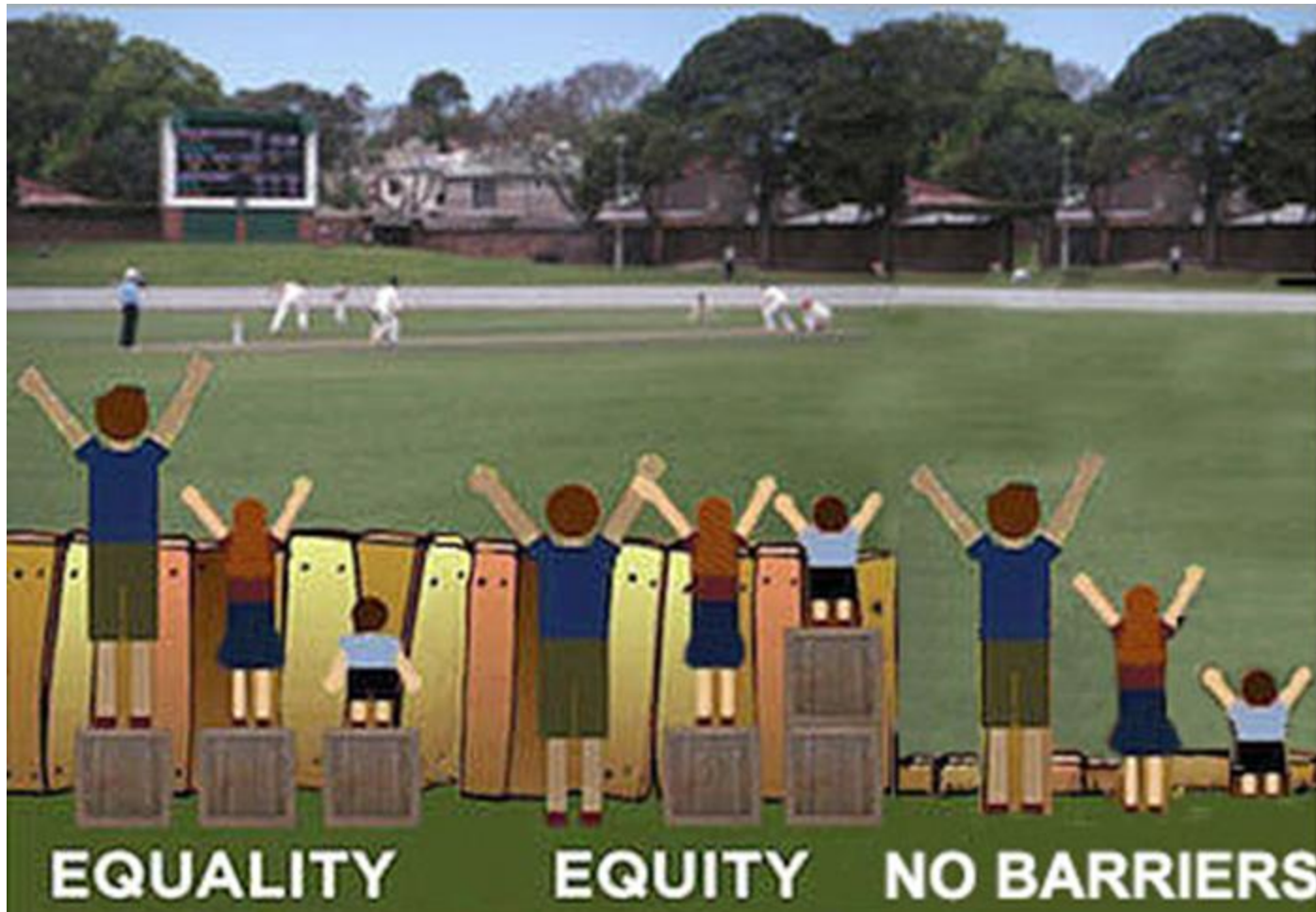


77.5%
77.5%

Health Equity



Health Equity



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What's Next?

ENVISION – EvaluatiNg Home VIsiting PrOgrams for First Nations Families

STRENGTH – SupporTing REsiliency in INdiGenous Child HealTH and Development

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