

# Baby Friendly Initiative: Quality Improvement with a Kick!

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Manitoba Centre for Health Policy



CIHR IRSC



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## TRADITIONAL TERRITORIES ACKNOWLEDGEMENT

The University of Manitoba campuses are located on original lands of Anishinaabeg, Cree, Oji-Cree, Dakota, and Dene peoples, and on the homeland of the Métis Nation.

We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.



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# Disclosure Statement

Research presented here was supported by the following:

- Canadian Institutes for Health Research
- Research Manitoba
- Kellogg Foundation

I am Scientific Chair for Breastfeeding at the American Public Health Association and am on the Executive Council for the International Society for Research in Human Milk and Lactation

In addition to above, I have also had money from the Duke Endowment, the Heart and Stroke Foundation, and the Canadian Foundation for Innovation

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# Learning Objectives

- Summarize current literature on breastfeeding inequities
- Describe different approaches to reducing breastfeeding inequities
- Discuss some emerging strategies to reduce breastfeeding inequities

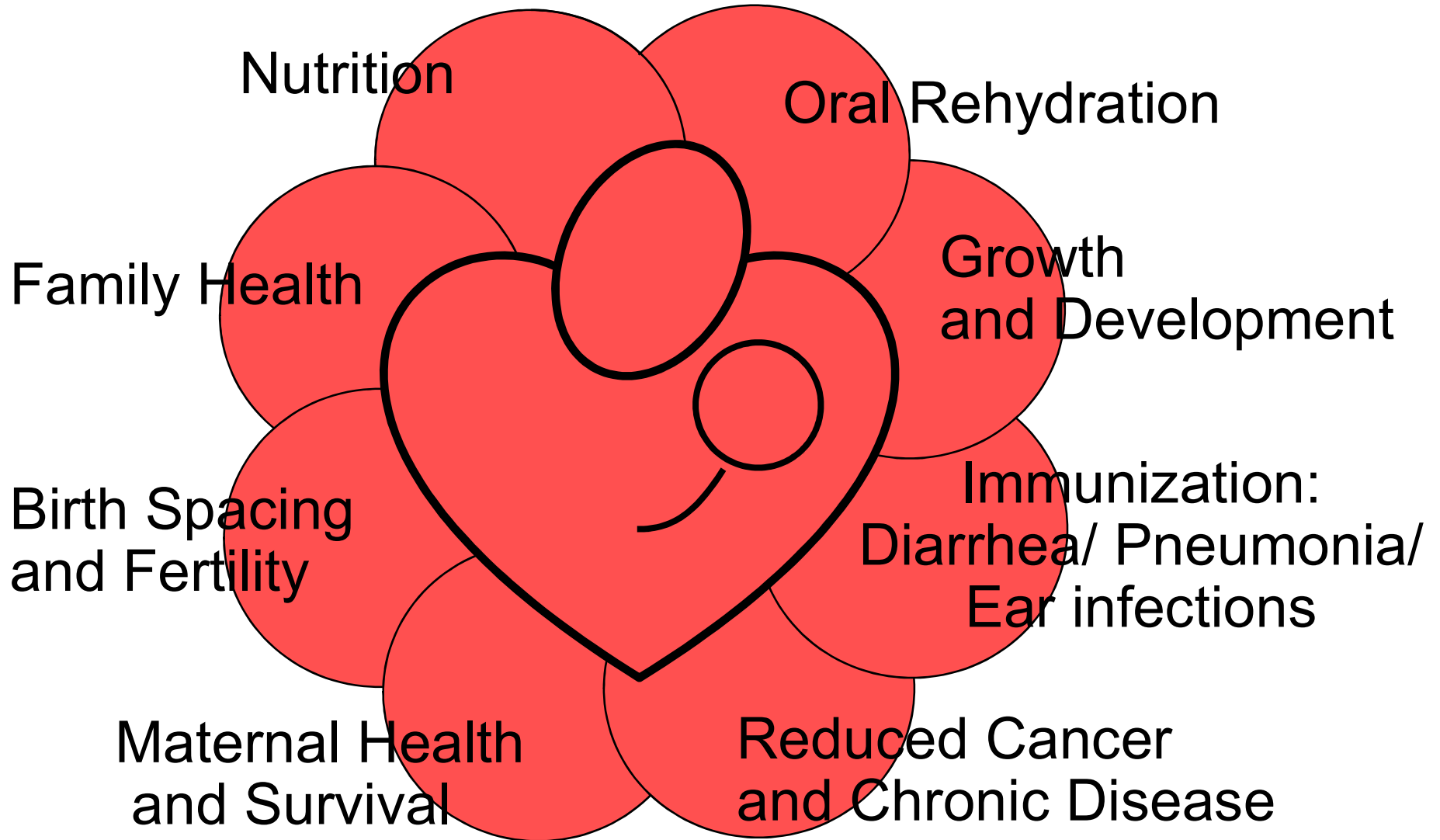


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# Breastfeeding is the Heartbeat of Maternal/Infant Health



Logo, Breastfeeding Division, IRH

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# BREASTFEEDING INEQUITIES

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# Breastfeeding Inequities

Original Article

## Breastfeeding in England: time trends 2005–2006 to 2012–2013 and inequalities by area profile

Laura L. Oakley\*, Jennifer J. Kurinczuk\*, Mary J. Renfrew<sup>†</sup> and Maria A. Quigley\*

\*Policy Research Unit in Maternal Health and Care, National Perinatal Epidemiology Unit, University of Oxford, Oxford, UK, and <sup>†</sup>School of Nursing and Midwifery, College of Medicine, Dentistry and Nursing, University of Dundee, Dundee, UK

M.  
betwee

### Abstract

Breastfeeding rates in England have risen steadily since the 1970s, but rates remain low and little is known about breastfeeding among a large, random sample of ethnically diverse women.

GILBERTO F. CHÁVEZ, MD, MPH<sup>c</sup>

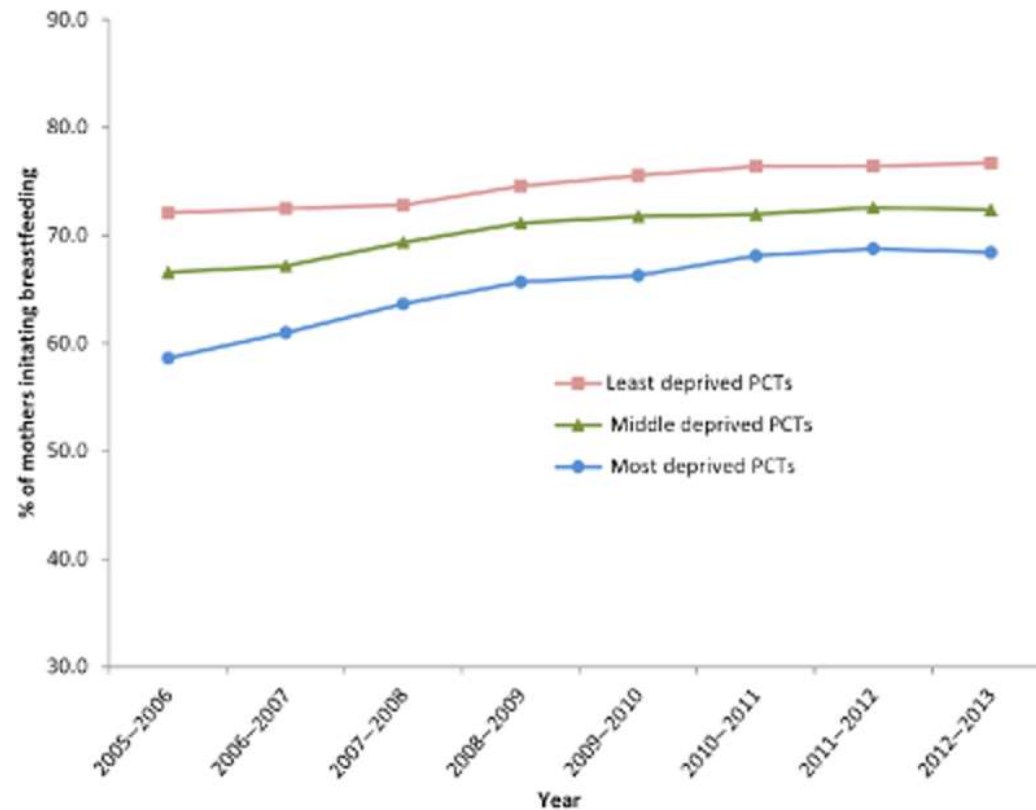
JOHN L. KIELY, PhD<sup>d</sup>

**Methods.** This study used logistic regression analysis to examine the influence of a range of socioeconomic factors on the chances of ever breastfeeding



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# Breastfeeding in England: time trends 2005–2006 to 2012–2013 and inequalities by area profile



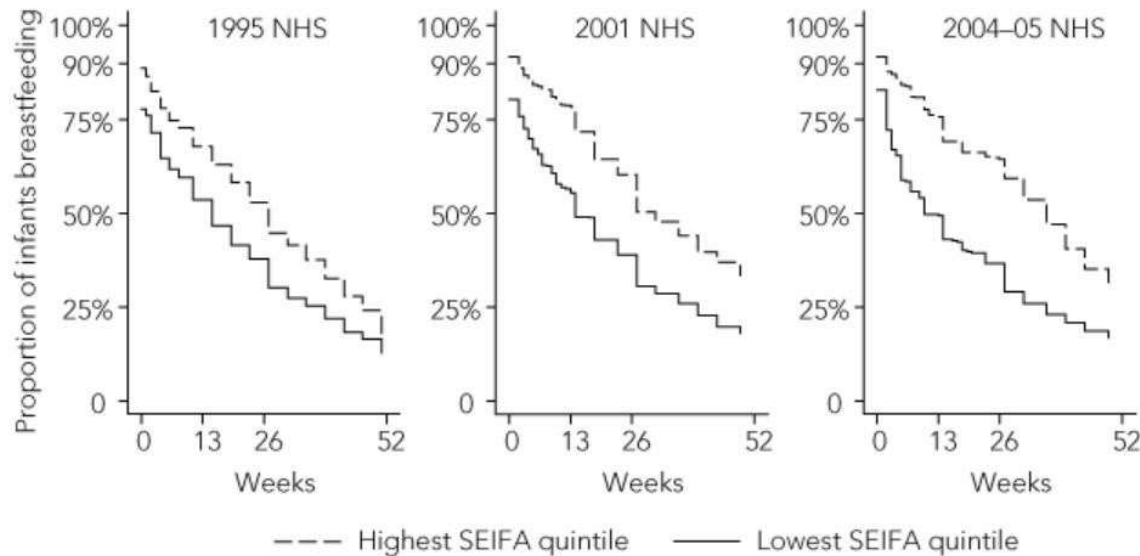
Breastfeeding in England: time trends 2005–2006 to 2012–2013 and inequalities by area profile, Volume: 12, Issue: 3, Pages: 440-451, First published: 24 November 2014, DOI: (10.1111/mcn.12159)



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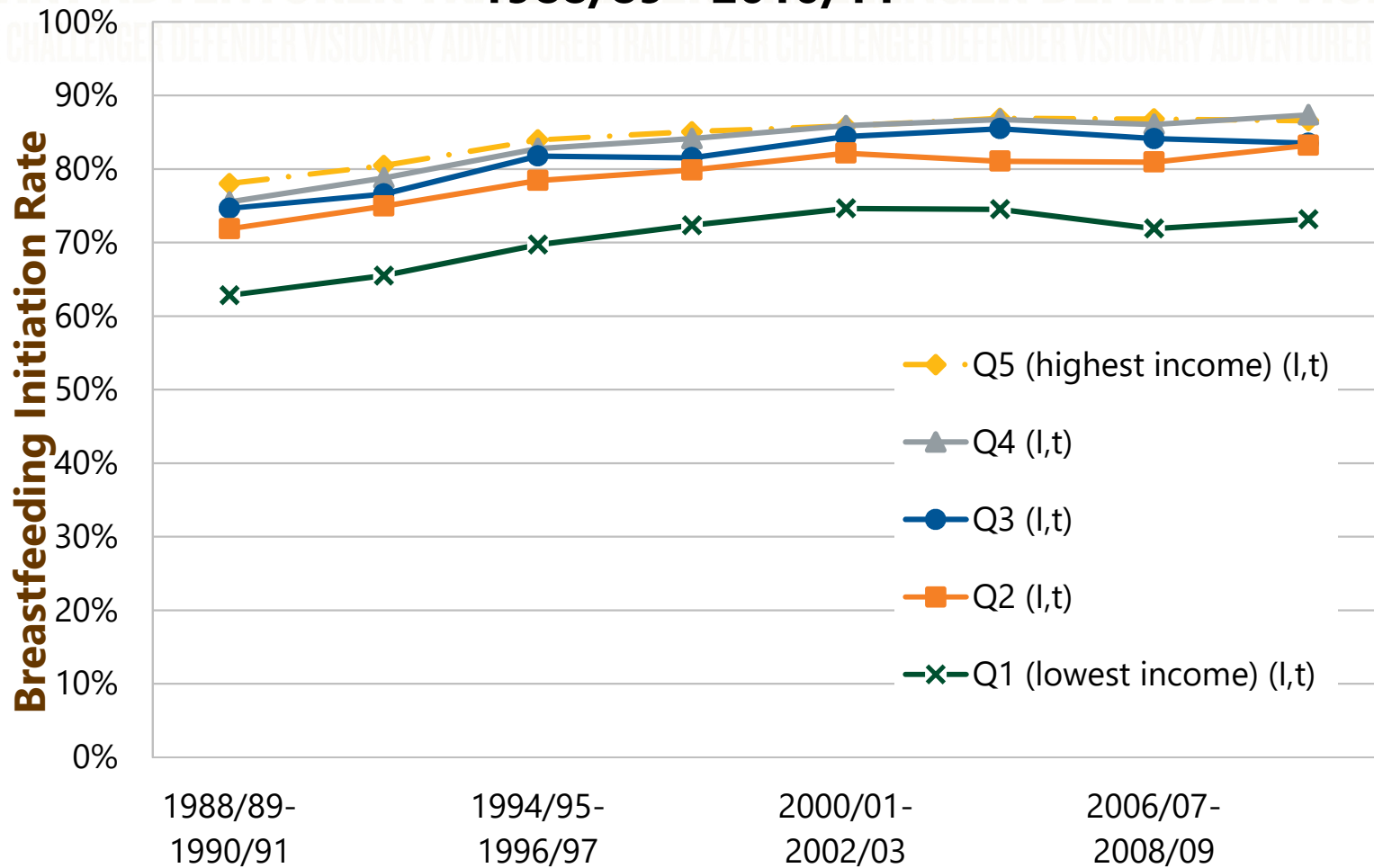
2 Breastfeeding duration: weighted estimates of proportions of infants breastfeeding at 0–52 weeks in the 1995, 2001 and 2004–05 National Health Surveys (NHSs) in the lowest and highest SEIFA quintiles\*



SEIFA = Socio-Economic Indexes for Areas.<sup>11</sup> \* Lowest quintile has lowest incomes and highest proportion of unskilled workers.

**Socioeconomic status and rates of breastfeeding in Australia: evidence from three recent national health surveys.** [Med J Aust.](#) 2008 Sep 1;189(5):254-6.

## Manitoba Breastfeeding Initiation Rate by Income Quintile, 1988/89 - 2010/11



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# APPROACHES TO ADDRESS INEQUITIES

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- **Rose's Theorem:** "a large number of people at small risk may give rise to more cases of disease than a small number who are at high risk."

## Reference

- Rose, G. The Strategy of Preventive Medicine. Oxford, England: Oxford University Press; 1992.

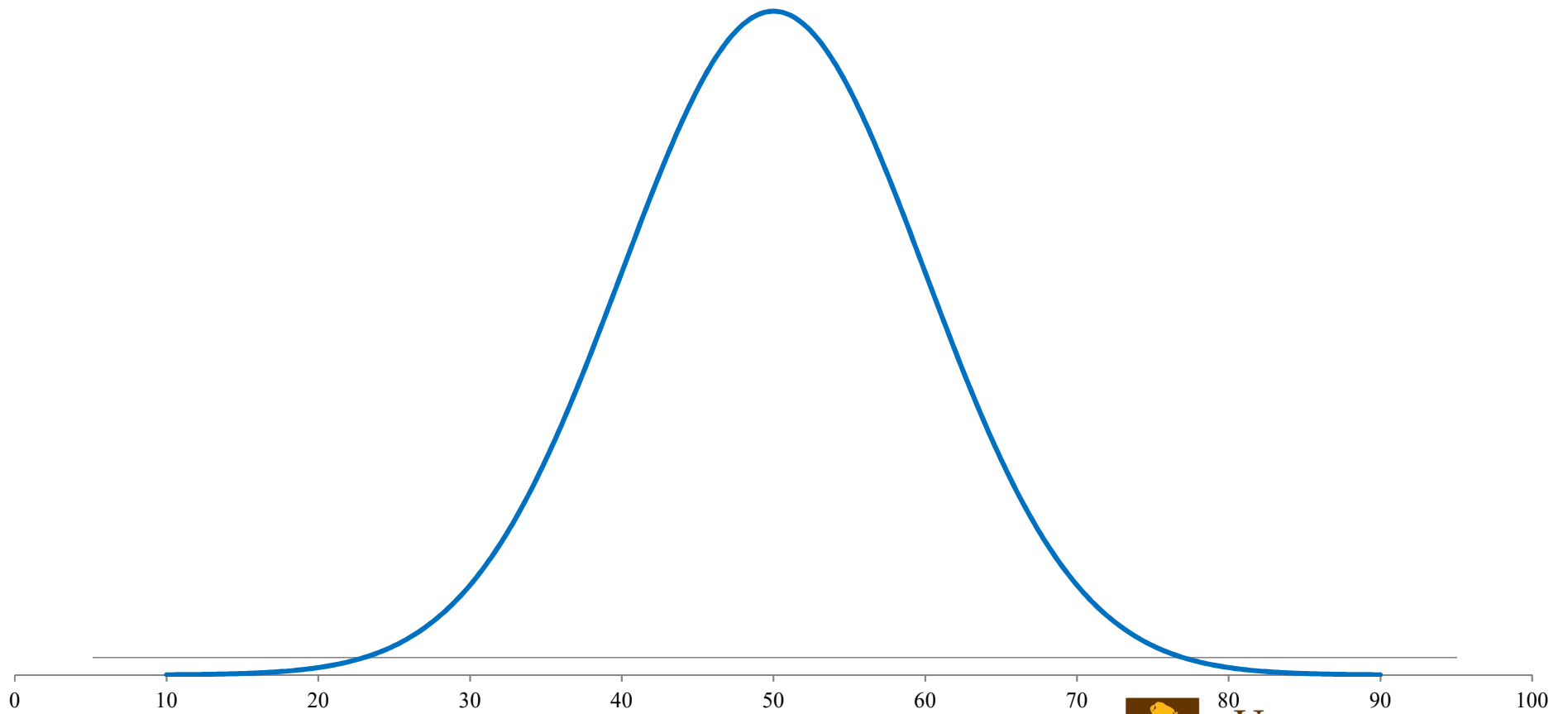


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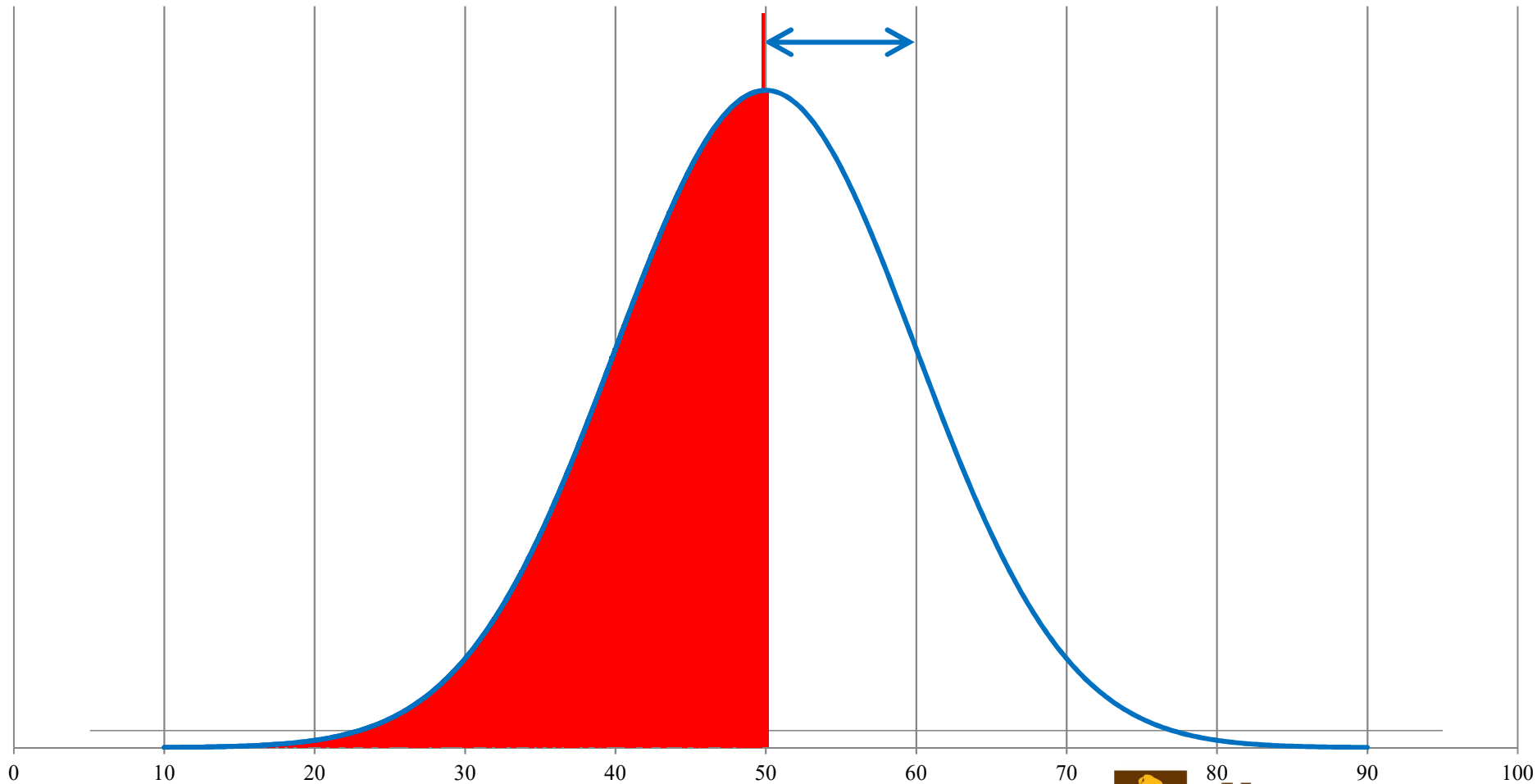


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50% "unhealthy"

1 SD  
10 pts



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**What if we could help everyone improve by  
JUST 5 POINTS?**

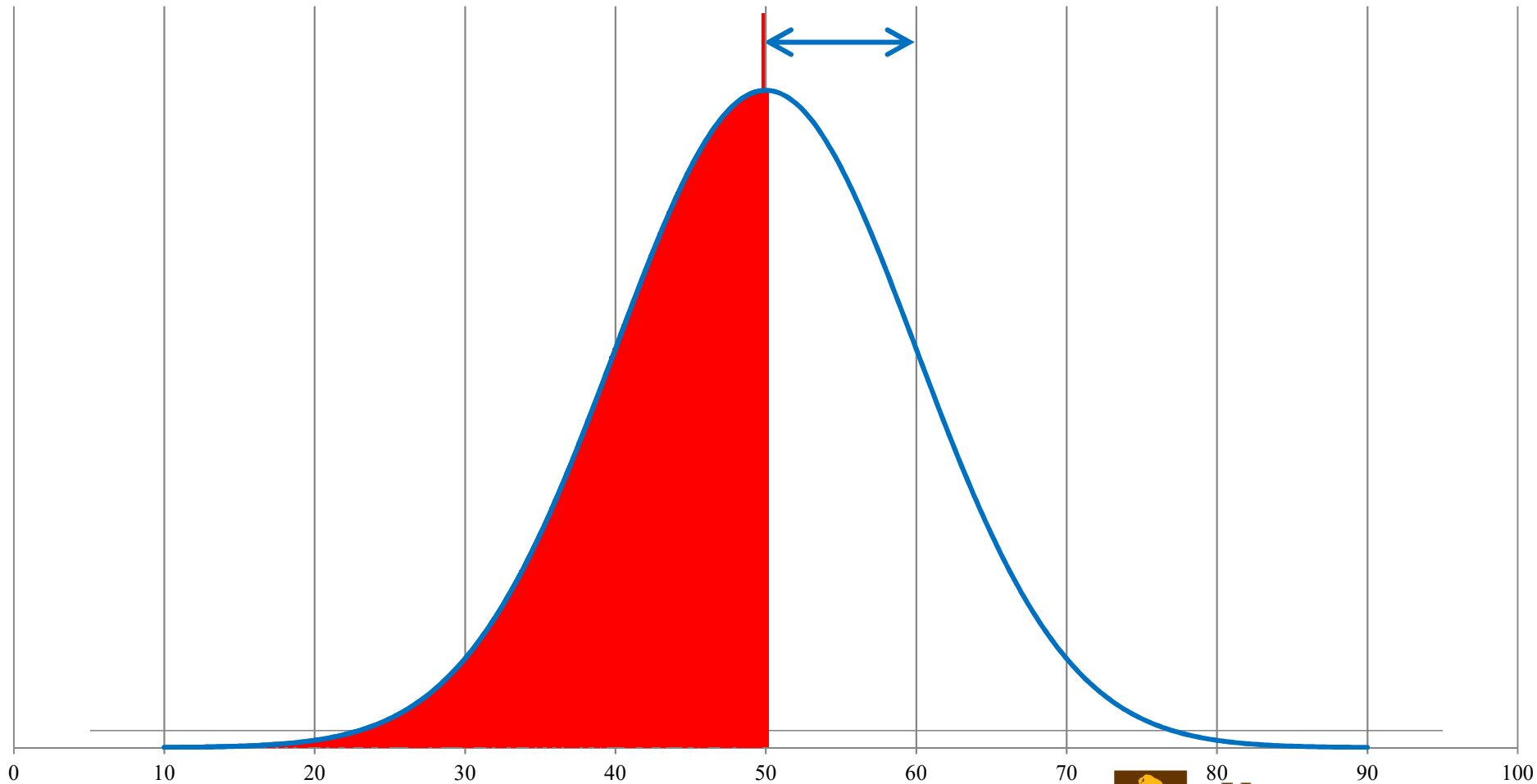


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50% "unhealthy"

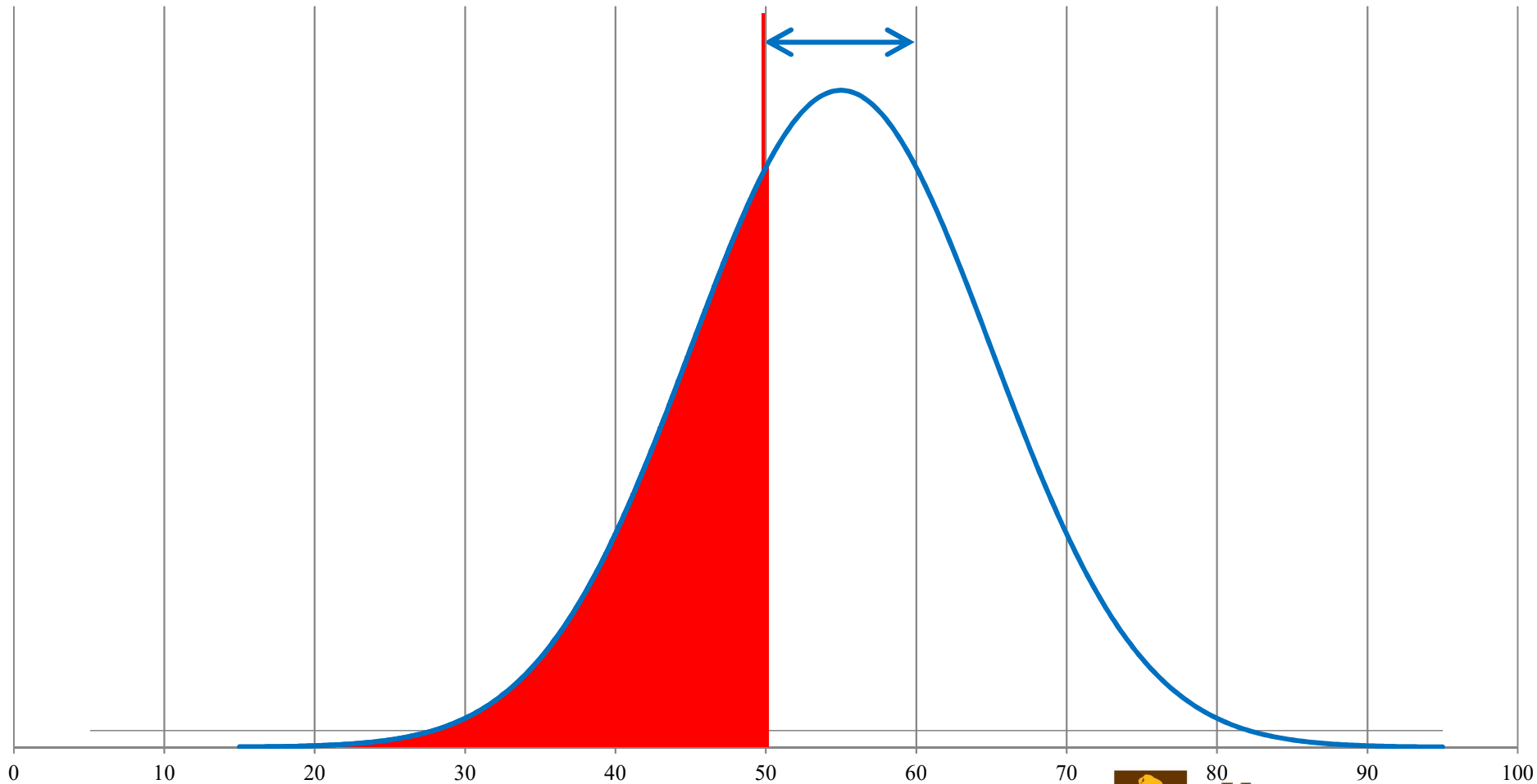
1 SD  
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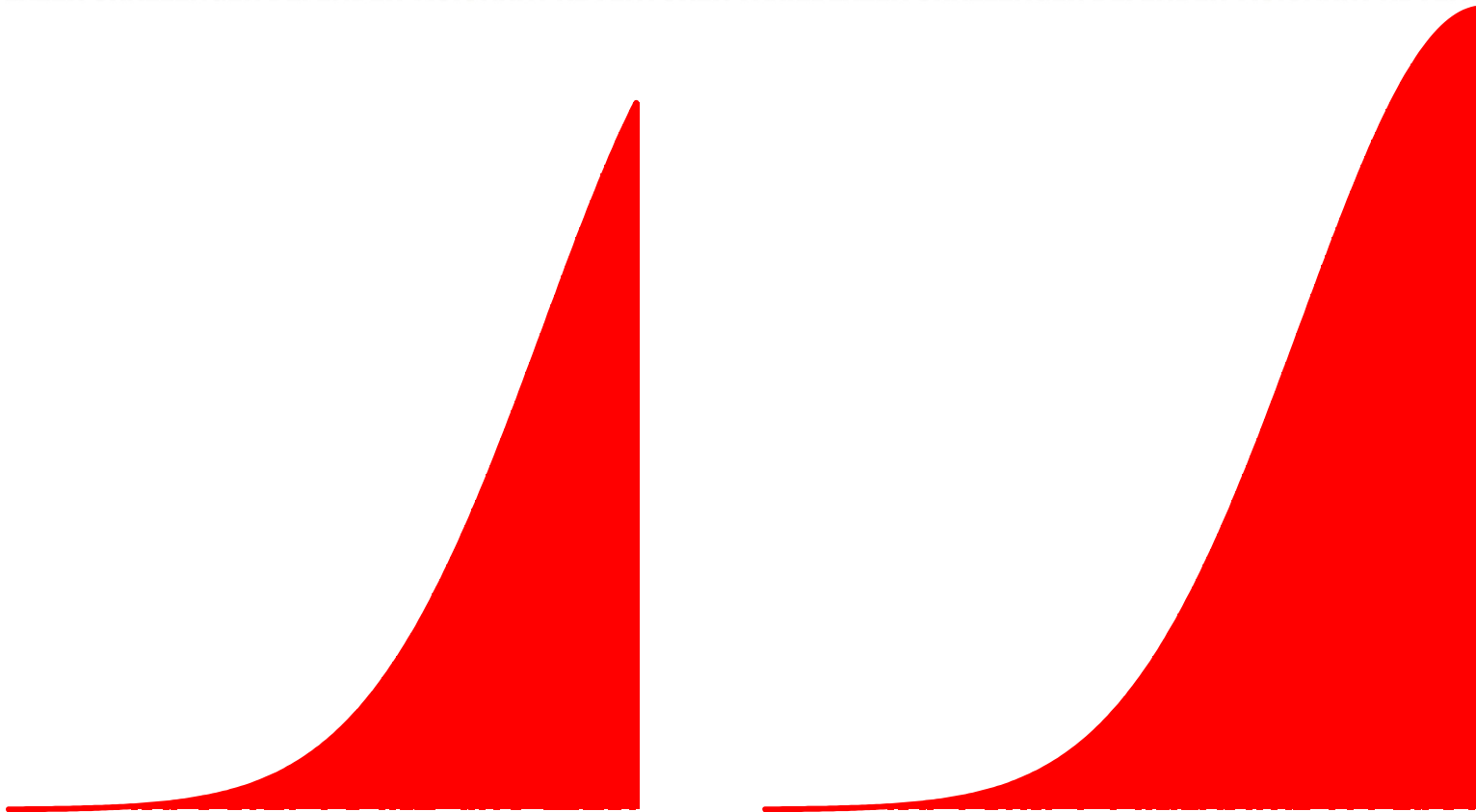


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31% "unhealthy" 1 SD  
10 pts



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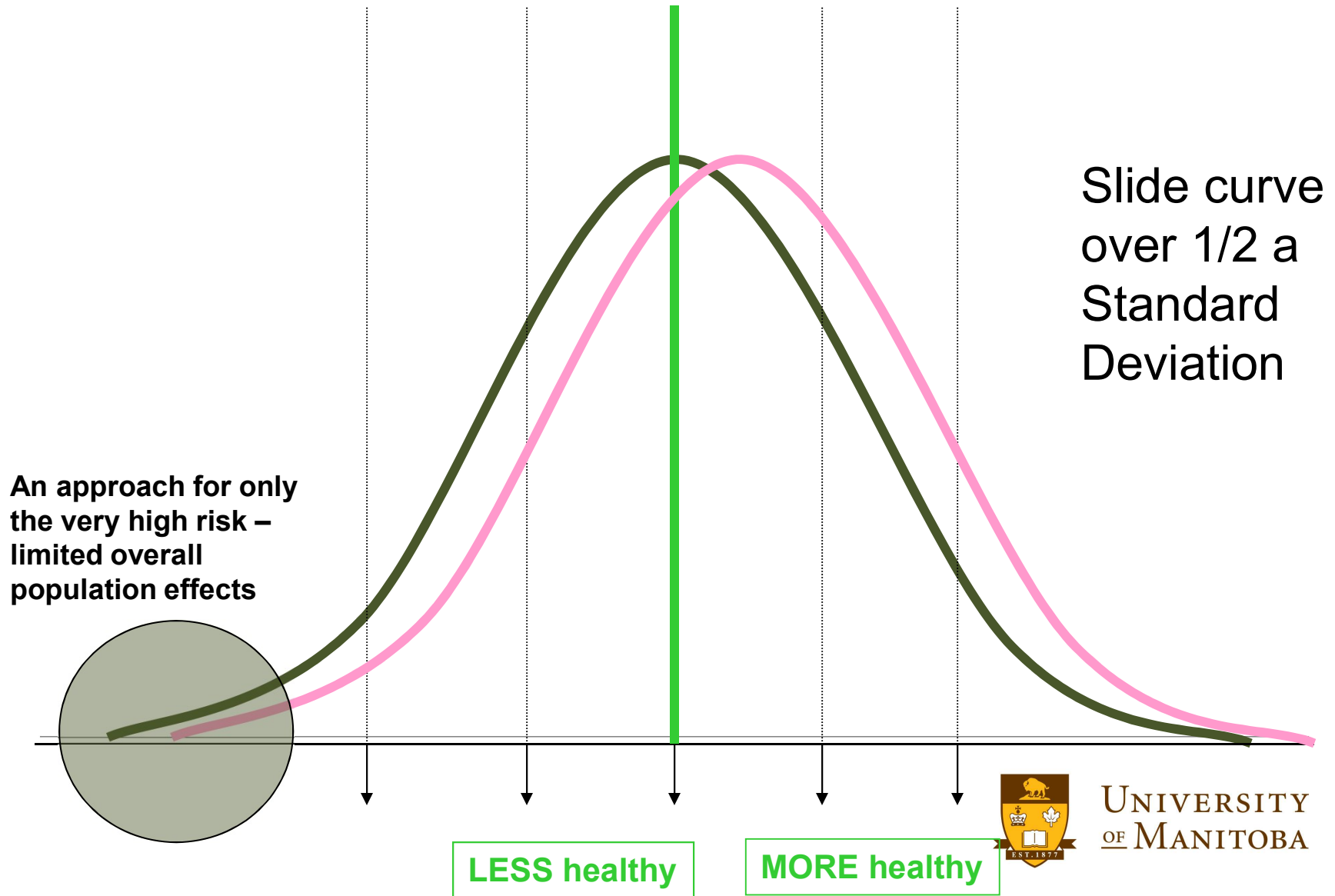
31% “unhealthy”

50% “unhealthy”



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Rose-Theorem Coloured Glasses:  
Population-based Effects!

# Strategies to Address Inequities

“Shift and Squish”

- SHIFT: Universal Programs



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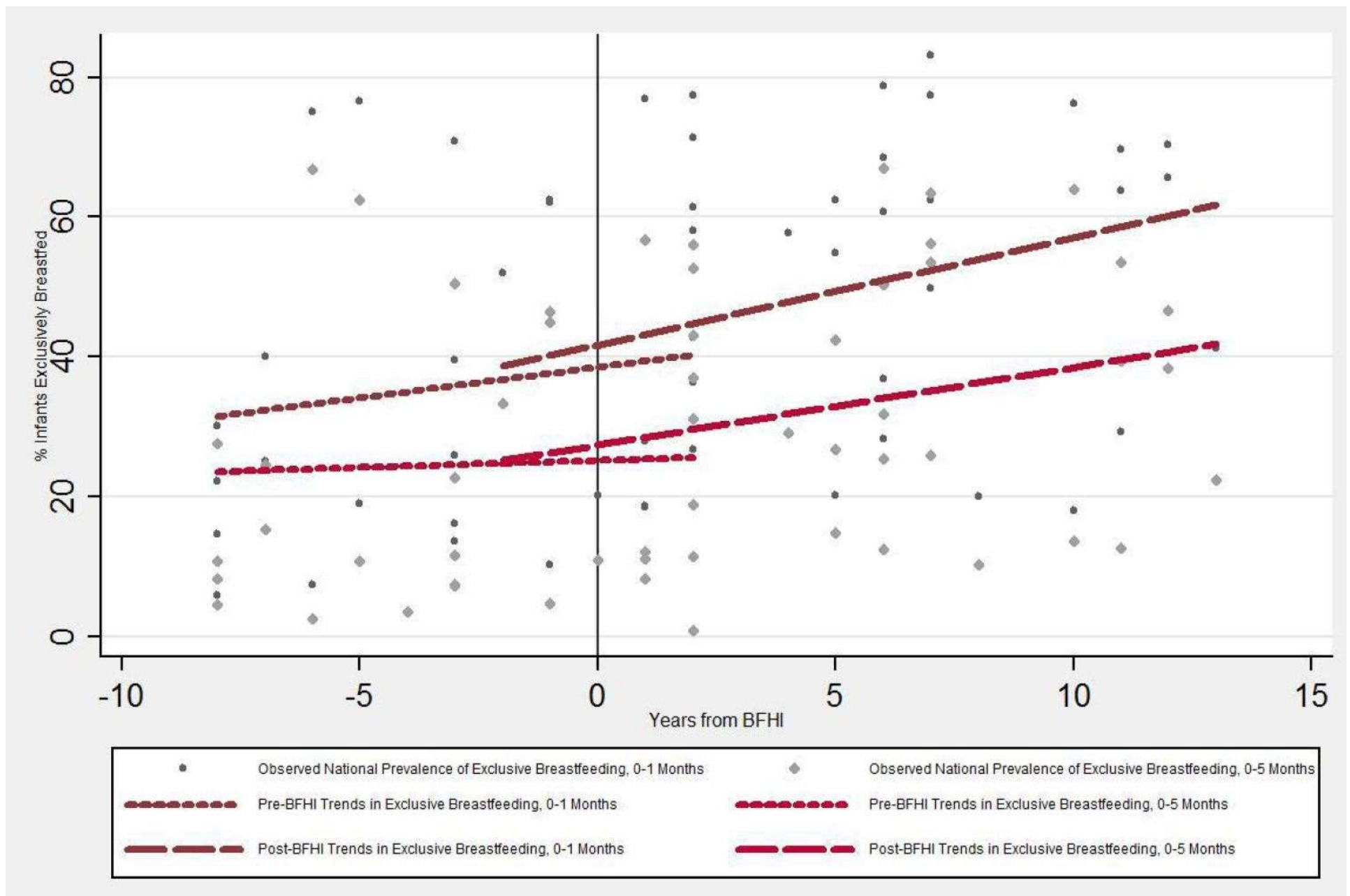


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# Baby Friendly

- WHO and UNICEF launched the Baby-friendly Hospital Initiative (BFHI) in 1991.
- Comprehensive, global strategy to protect, promote and support breastfeeding.





Abrahams, S.W. and Labbok, M.H. "Exploring the impact of the Baby-Friendly Hospital Initiative on trends in exclusive breastfeeding." 2009

# Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within the first hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.





# Ten Steps to Successful Breastfeeding

6. Give newborn infants no food or drink, other than human milk, unless medically indicated.
  7. Practice rooming-in—that is, allow mothers and infants to remain together 24 hours a day.
  8. Encourage breastfeeding on demand.
  9. Give no artificial nipples or pacifiers to breastfeeding infants.
  10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.
- 



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# Do the Ten Steps to Successful Breastfeeding make a difference?



## Promotion of Breastfeeding Intervention Trial (PROBIT) A Randomized Trial in the Republic of Belarus

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Natalia Bogdanovich, MD, PhD  
Lydia Ovchinnikova, RN  
Elisabet Helsing, PhD  
for the PROBIT Study Group

**B**REASTFEEDING HAS BEEN WIDELY reported to reduce the risk of infection<sup>1-11</sup> and atopic disease<sup>1,12-15</sup> in the recipient infant and child. The effect of breastfeeding in protecting against infection is more striking, and thus easier to demonstrate, in settings where poverty, malnutrition, and poor hygiene are preva-

**Context** Current evidence that breastfeeding is beneficial for infant and child health is based exclusively on observational studies. Potential sources of bias in such studies have led to doubts about the magnitude of these health benefits in industrialized countries.

**Objective** To assess the effects of breastfeeding promotion on breastfeeding duration and exclusivity and gastrointestinal and respiratory infection and atopic eczema among infants.

**Design** The Promotion of Breastfeeding Intervention Trial (PROBIT), a cluster-randomized trial conducted June 1996–December 1997 with a 1-year follow-up.

**Setting** Thirty-one maternity hospitals and polyclinics in the Republic of Belarus.

**Participants** A total of 17 046 mother-infant pairs consisting of full-term singleton infants weighing at least 2500 g and their healthy mothers who intended to breast-feed, 16 491 (96.7%) of which completed the entire 12 months of follow-up.

**Interventions** Sites were randomly assigned to receive an experimental intervention (n = 16) modeled on the Baby-Friendly Hospital Initiative of the World Health Organization and United Nations Children's Fund, which emphasizes health care worker assistance with initiating and maintaining breastfeeding and lactation and postnatal breastfeeding support, or a control intervention (n = 15) of continuing usual infant feeding practices and policies.

**Main Outcome Measures** Duration of any breastfeeding, prevalence of predominant and exclusive breastfeeding at 3 and 6 months of life and occurrence of 1 or more episodes of gastrointestinal tract infection, 2 or more episodes of respiratory tract infection, and atopic eczema during the first 12 months of life, compared between the intervention and control groups.

**Results** Infants from the intervention sites were significantly more likely than control infants to be breastfed to any degree at 12 months (19.7% vs 11.4%; adjusted odds ratio [OR], 0.47; 95% confidence interval [CI], 0.32-0.69), were more likely to be exclusively breastfed at 3 months (43.3% vs 6.4%;  $P < .001$ ) and at 6 months (7.9% vs 0.6%;  $P = .01$ ), and had a significant reduction in the risk of 1 or more gastrointestinal tract infections (9.1% vs 13.2%; adjusted OR, 0.60; 95% CI, 0.40-0.91) and of atopic eczema (3.3% vs 6.3%; adjusted OR, 0.54; 95% CI, 0.31-0.95), but no significant reduction in respiratory tract infection (intervention group, 39.2%; control group, 39.4%; adjusted OR, 0.87; 95% CI, 0.59-1.28).

**Conclusions** Our experimental intervention increased the duration and degree (exclusivity) of breastfeeding and decreased the risk of gastrointestinal tract infection and atopic eczema in the first year of life. These results provide a solid scientific underpinning for future interventions to promote breastfeeding.

JAMA. 2001;285:413-420

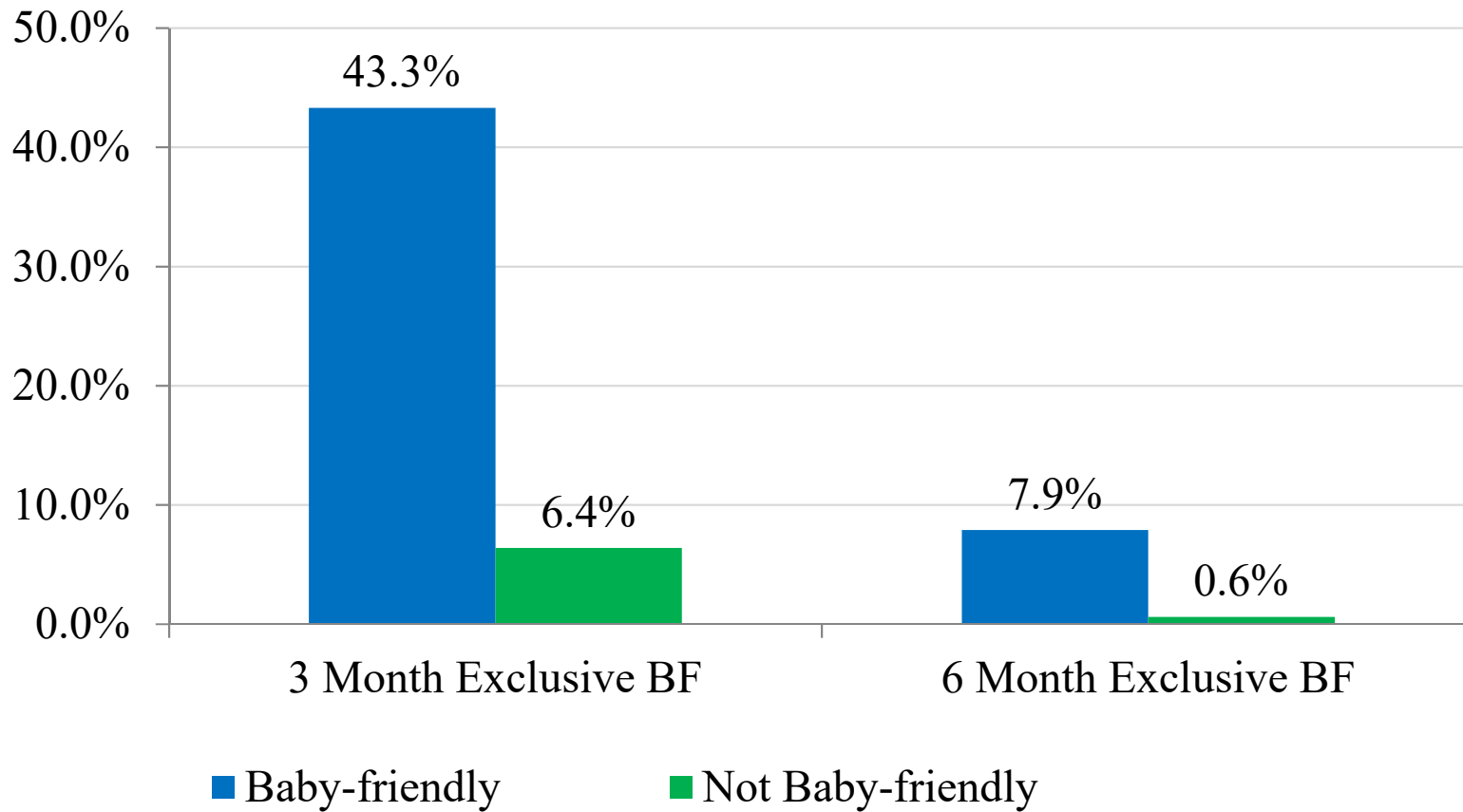
www.jama.com

See also p 463 and Patient Page.

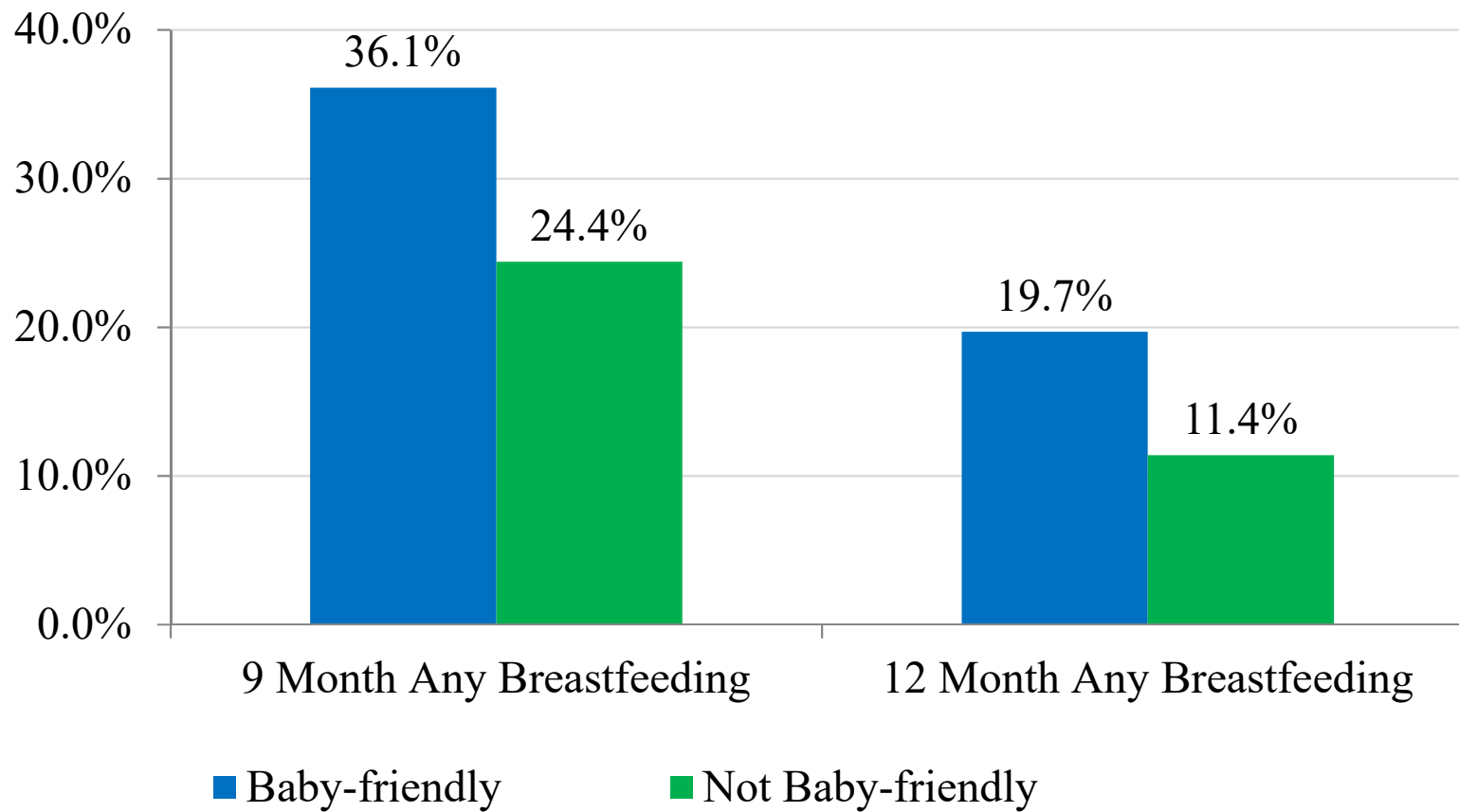
Author Affiliations and other participating members of the PROBIT Study Group are listed at the end of this article.

Corresponding Author: Michael S. Kramer, 1020 Pine Ave W, Montreal, Quebec, Canada H3A 1A2 (e-mail: mkramer@po-box.mcgill.ca).

## Exclusive Breastfeeding



## Any Breastfeeding



# Do the Ten Steps make a difference?

SUPPLEMENT ARTICLE

## Effect of Maternity-Care Practices on Breastfeeding

Ann M. DiGirolamo, PhD, MPH<sup>a</sup>, Laurence M. Grummer-Strawn, PhD<sup>b</sup>, Sara B. Fein, PhD<sup>c</sup>

<sup>a</sup>Hubert Department of Global Health, Emory University, Atlanta, Georgia; <sup>b</sup>National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia; <sup>c</sup>Center for Food Safety and Applied Nutrition, Food and Drug Administration, US Department of Health and Human Services, College Park, Maryland

The authors have indicated they have no financial relationships relevant to this article to disclose.

- Initiate breastfeeding within 1hr after birth (Step 4).
- Not provide formula to breastfed infant (Step 6).
- Not provide a pacifier to breastfed infant (Step 9).



## Hospital Practices and Women's Likelihood of Fulfilling Their Intention to Exclusively Breastfeed

Eugene Declercq, PhD, Miriam H. Labbok, MD, MPH, Carol Sakala, PhD, MPH, and MaryAnn O'Hara, MD, MPH

Exclusive breastfeeding through at least the first 6 months is the physiologically appropriate approach to infant feeding.<sup>1</sup> Mixed or formula feeding carries with it increased risks of infection, developmental problems, mortality, and long-term ailments such as diabetes and cancers for mother and child.<sup>2-5</sup> In support of the evidence, the American Academy of Pediatrics,<sup>6</sup> American College of Obstetrics and Gynecology,<sup>7</sup> the American Public Health Association,<sup>8</sup> the World Health Organization,<sup>9</sup> and many other medical and health professional organizations<sup>10-12</sup> recommend that infants consume only mother's milk (exclusive breastfeeding) for at least the first 6 months of life, followed by continued breastfeeding with age-appropriate nutrient-rich complementary foods. The revised US Healthy People 2010 national objectives call for 17% of new mothers to be exclusively breastfeeding at 6 months.<sup>13</sup> Nonetheless, national statistics indicate that less than 12% of mother-baby pairs achieve this goal.<sup>14</sup>

The "Ten Steps for the Protection, Promotion and Support of Breastfeeding"<sup>15</sup> are the central part of the Baby-Friendly Hospital Initiative, along with adherence to the *International Code of Marketing of Breast-Milk Substitutes* and subsequent World Health Organization resolutions.<sup>16</sup> These practices have been reported to support breastfeeding behaviors and influence outcomes,<sup>17,18</sup> though in some cases they have been subjects of political disputes.<sup>19</sup> However, with the exception of a recent Centers for Disease Control and Prevention study<sup>20</sup> and some data from hospitals that have achieved "Baby-Friendly" status, little is known about the prevalence of these practices in hospitals across the United States.

Grizzard et al.<sup>21</sup> assessed Massachusetts hospitals and noted that hospitals with high or moderately high levels of implementation significantly differed from hospitals with partial implementation with respect to pacifier usage ( $P=.002$ ) and postpartum breastfeeding

**Objectives.** We sought to assess whether breastfeeding-related hospital practices reported by mothers were associated with achievement of their intentions to exclusively breastfeed.

**Methods.** We used data from Listening to Mothers II, a nationally representative survey of 1573 mothers who had given birth in a hospital to a singleton in 2005. Mothers were asked retrospectively about their breastfeeding intention, infant feeding at 1 week, and 7 hospital practices.

**Results.** Primiparas reported a substantial difference between their intention to exclusively breastfeed (70%) and this practice at 1 week (50%). They also reported hospital practices that conflicted with the Baby-Friendly Ten Steps, including supplementation (49%) and pacifier use (45%). Primiparas who delivered in hospitals that practiced 6 or 7 of the steps were 6 times more likely for achieve their intention to exclusively breastfeed than were those in hospitals that practiced none or 1 of the steps. Mothers who reported supplemental feedings for their infant were less likely to achieve their intention to exclusively breastfeed: primiparas (adjusted odds ratio [AOR]=4.4; 95% confidence interval [CI]=2.1, 9.3); multiparas (AOR=8.8; 95% CI=4.4, 17.6).

**Conclusions.** Hospitals should implement policies that support breastfeeding with particular attention to eliminating supplementation of healthy newborns. (*Am J Public Health.* 2009;99:929-935. doi:10.2105/AJPH.2008.135236)

instruction ( $P<.001$ ). Acceptance of free formula was significantly associated ( $P=.03$ ) with overall Ten Steps implementation. Although several international studies have concluded that even some progress toward "Baby-Friendly Hospital" status is associated with increases in breastfeeding, available US data<sup>20</sup> on the achievement of exclusive breastfeeding in relation to the number of steps in place are limited.

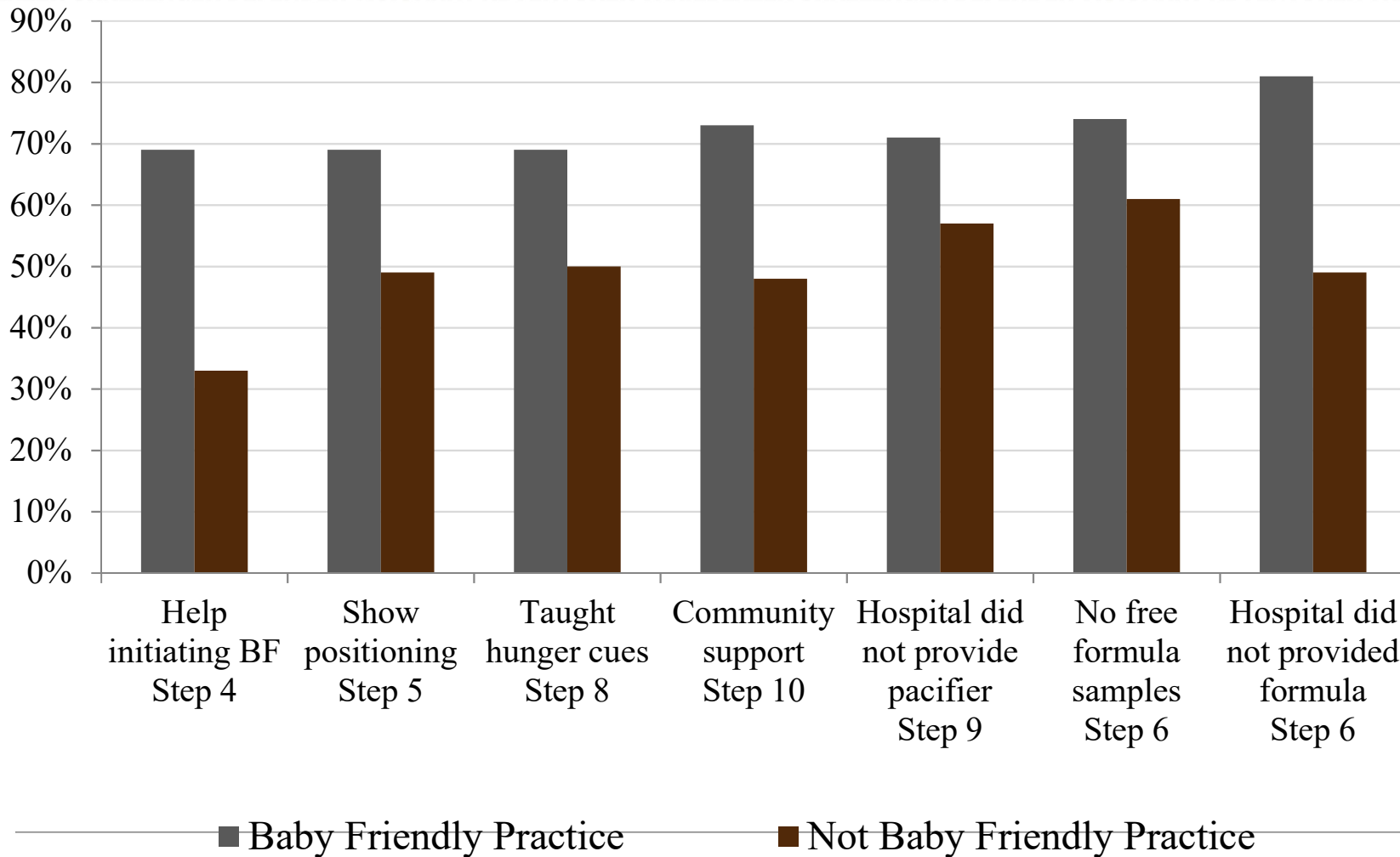
The goal of our study was to provide clinical and hospital administrative decision-makers with the information they need to institute policies and practices that enhance a woman's ability to achieve her intended duration of exclusive breastfeeding. We examined the results of a national survey that asked mothers about their feeding intentions "as [they] came to the end of [their] pregnancy" and their actual feeding patterns 1 week after the birth. We also asked mothers to report on their experiences with hospital practices known to influence breastfeeding success. Based on past research, we expected that hospital practices would be related to the fulfillment of a plan to exclusively breastfeed.

### METHODS

We present results from a 2006 national survey of 1573 women aged 18 to 45 years who had given birth in 2005 in a hospital to a singleton, still-living infant. The survey, entitled Listening to Mothers II,<sup>22</sup> was developed through a collaboration between Childbirth Connection and the Boston University School of Public Health and was conducted by Harris Interactive. The standard telephone sampling approach of random-digit dialing, though advantageous for reaching a diverse population, is not feasible for a national survey of new mothers because the number of US births (4 million annually) is small in proportion to the number of households (111 million); therefore, respondents were drawn from 2 other sources.

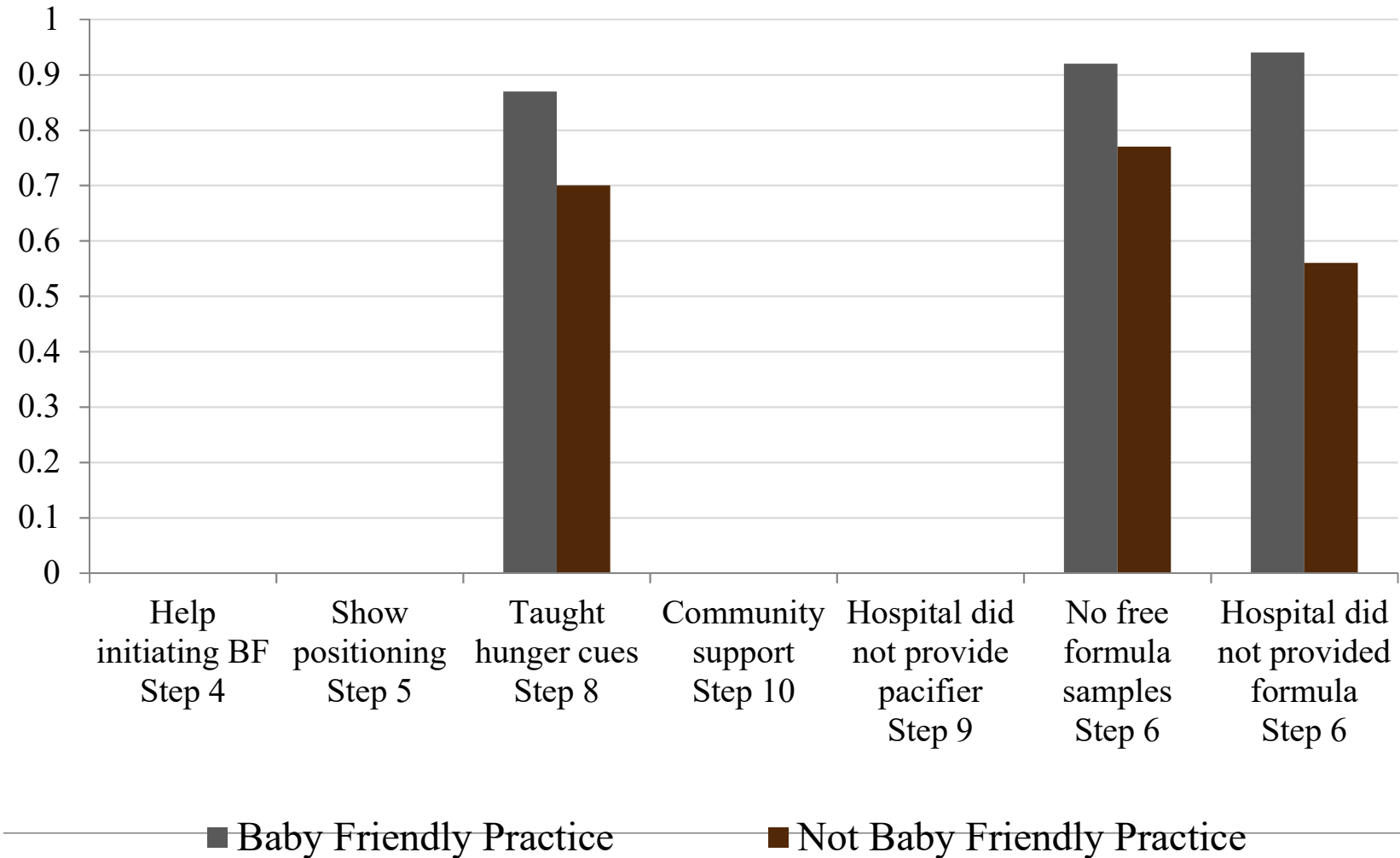
The Internet portion of the sample was drawn from Harris Interactive's ongoing Internet panel of more than 5 million individuals who agree to periodically participate in their surveys. To ensure a more representative overall sample, a telephone sample was also drawn. Respondents in this sample were

# % Exclusive Breastfeeding at 1 Week: 1<sup>st</sup> time mothers





# % Exclusive Breastfeeding at 1 Week: Multiparas



# Do the Ten Steps make a difference?

*Original Research*

## **The Extent that Noncompliance with the Ten Steps to Successful Breastfeeding Influences Breastfeeding Duration**

**Nathan Christopher Nickel, MPH, PhD<sup>1</sup>, Miriam H. Lobbok, MD, MPH, IBCLC<sup>2</sup>,  
Michael G. Hudgens, MS, PhD<sup>3</sup>, and Julie L. Daniels, MPH, PhD<sup>4</sup>**

For Example:

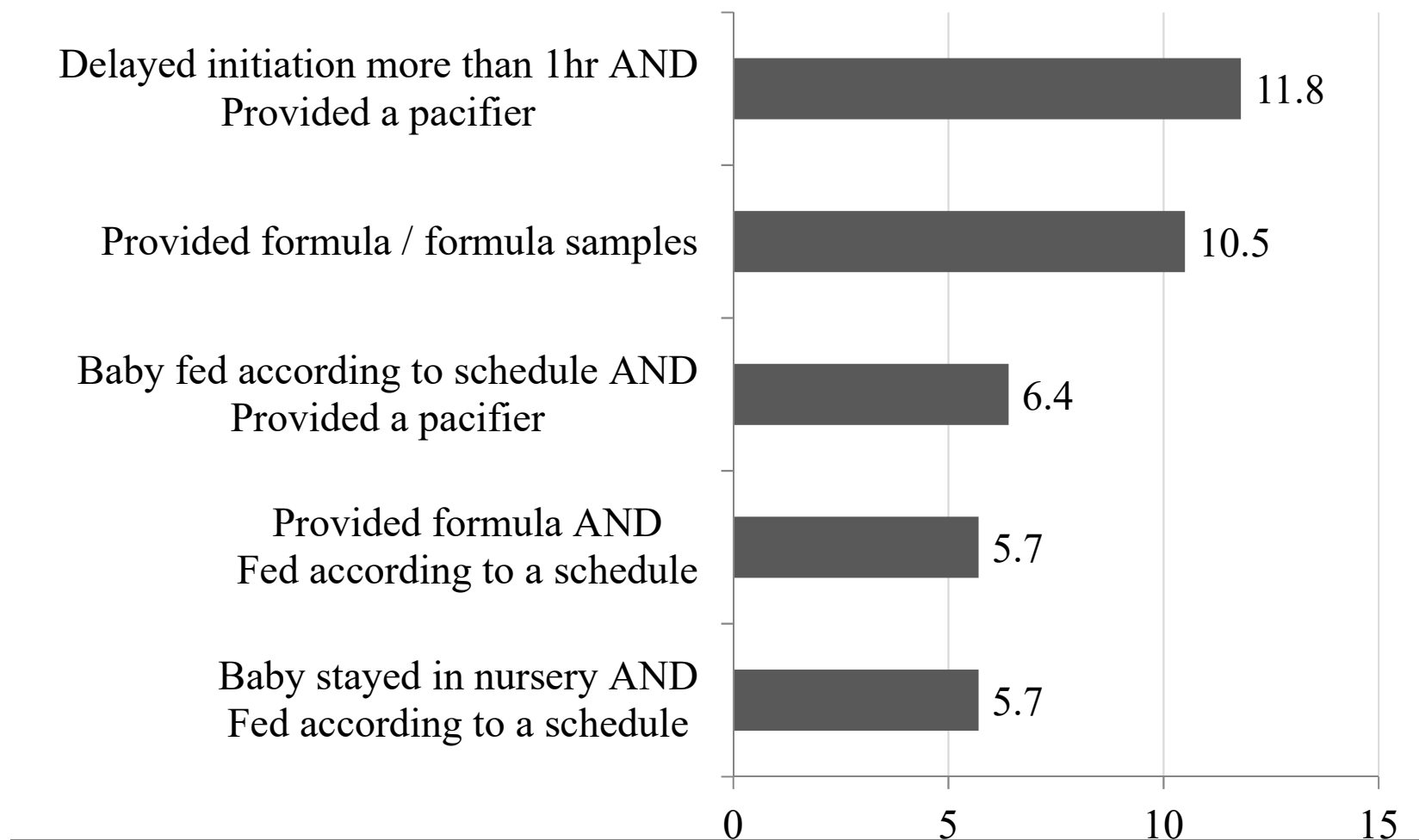
Is feeding an infant according to a schedule associated with reduced duration of breastfeeding compared with feeding an infant according to hunger cues (Step 8)?



Journal of Human Lactation  
29(1) 59–70  
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DOI: 10.1177/0890334412464695  
<http://jhl.sagepub.com>



## Reduced Duration in Weeks



# Do the Ten Steps make a difference?

- Taken together, the Ten Steps are a set of maternity practices that protect, promote, and support breastfeeding.
- Failing to provide the care outlined in the Steps creates barriers for the mother-infant dyad re: breastfeeding
- Individually, and in combinations of two, the Steps have a sustained impact on breastfeeding.



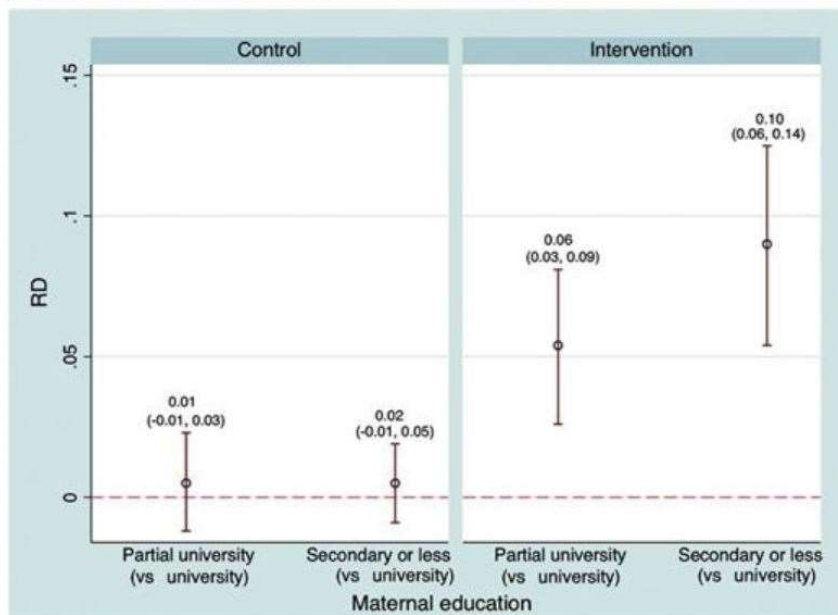
# Do population-based interventions widen or narrow socioeconomic inequalities? The case of breastfeeding promotion FREE

Seungmi Yang ✉, Robert W Platt, Mourad Dahhou, Michael S Kramer

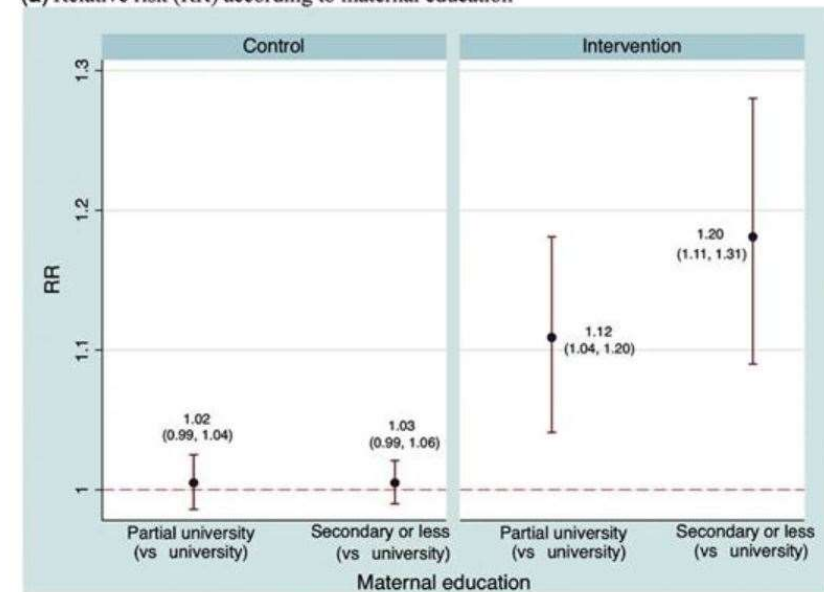
*International Journal of Epidemiology*, Volume 43, Issue 4, 1 August 2014,  
Pages 1284–1292, <https://doi.org/10.1093/ije/dyu051>

**Published:** 15 March 2014 **Article history** ▼

**(b)** Risk difference (RD) according to maternal education



**(a)** Relative risk (RR) according to maternal education



**(b)** Risk difference (RD) according to maternal education



# Strategies to Address Inequities

## “Shift and Squish”

- SHIFT: Universal Programs
- SQUISH: Targeted Programs



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# IMPLEMENTING THE STEPS TO REDUCE INEQUITIES

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# Overview of CHAMPS

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Emily Taylor MPH

Andrea Serano, CLC < IBCLC

Renee Boynton-Jarett, MD, ScD

Lori Feldman-Winter, MD, MPH

# Overview of CHAMPS

- Goal was to improve maternal child practices guided by the Ten Steps to Successful Breastfeeding and reduce racial disparities



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CHAMPS

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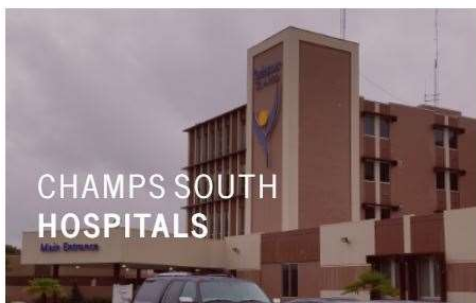
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## CHAMPS SOUTH

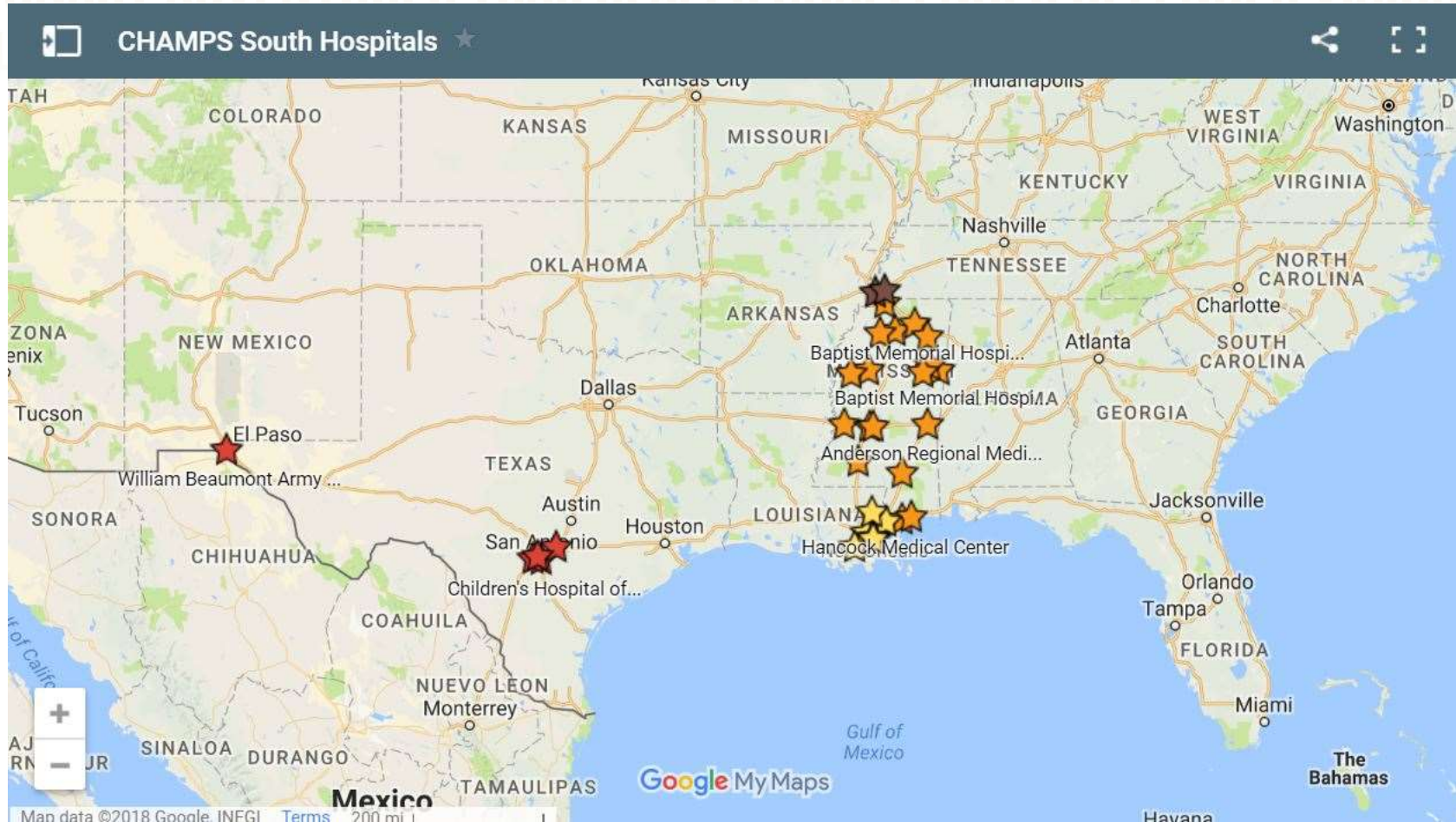


[ity.org/champs-south-communities.html](http://ity.org/champs-south-communities.html)



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# Overview of CHAMPS

- Goal was to improve maternal child practices guided by the Ten Steps to Successful Breastfeeding and reduce racial disparities
- Worked intensively in the community to improve support



# Overview of CHAMPS

## Quality Improvement Model

- Teams from hospitals brought together on regular basis





# Mississippi CHAMPS Conference



Wednesday, April 11th, 2018, Courtyard by Marriott Gulfport Beachfront



**Keynote Speaker:**

**Camara Phyllis Jones, MD, MPH, PhD**

A conference for all Mississippi CHAMPS hospitals and their community partners to learn, collaborate, network, and share experiences. Includes "Train-the-Trainer" sessions on the CHAMPS 4-hour competency training for nursing staff.

**Free to CHAMPS hospital teams and community partners.**

**Register online at:** <https://mschampsconference.eventbrite.com>

**Questions?** Email the CHAMPS Team at [CHAMPSbreastfeed@gmail.com](mailto:CHAMPSbreastfeed@gmail.com)

**Funded by:** The W.K. Kellogg Foundation & The Bower Foundation

**Organized by:** Communities and Hospitals Advancing Maternity Practices (CHAMPS), a program of the Center of Health Equity, Education, & Research (CHEER)



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In God we trust ...

All others must bring data.

*W. Edwards Deming*



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# Overview of CHAMPS

## Quality Improvement Model

- Teams from hospitals brought together on regular basis
- Technical coaches work with hospitals to train around quality improvement
- Designed and implemented a data collection tool
  - Clinical Practices
  - Breastfeeding Initiation
  - Exclusive Breastfeeding at Discharge



# Data Collection

- Chart audits of records
- Infant feeding indicators
  - Initiation within an hour
  - Formula supplementation
  - Exclusive formula
- Baby Friendly Practices
- All stratified by race / ethnicity



## PDSAs in Brief


1. Develop a change that will result in improvement
2. Test the change idea on small scales
3. Implement only when:
  - There is a **shared high degree of belief** that the change will lead to the desired improvement.
  - There is a **shared level of commitment** to implementing the change
  - There is **minimal concern** about the cost of failure.



# PDSAs: Plan One!

1. Gather at least you and one person.
2. Bring a blank copy of your PDSA form.
3. Decide on the first change you think might lead to an improvement.
4. Use the form to make a plan.

PDSA Cycle #  Dates: beginning  ending  Cycle to: Develop / Test / Implement



**Change Being Tested:**

**SMART Objective for this Cycle:**

**Plan**  
 Question(s) to answer for this cycle   
 Plan to carry out the cycle (4Ws + H)   
 Plan for data collection (4Ws + H)   
 Predictions for each question

**Do:**  
 Carry out the plan   
 Document problems and unexpected observations   
 Begin analysis of the data

**Study**  
 Complete the analysis of the data   
 Compare data to predictions   
 Summarize what was learned

**Act**  
 What changes are to be made? Adopt, adapt, or abandon the change?   
 Plan for next cycle

Modified from: *The Improvement Guide 2nd Ed.* Langley GJ, Moen RD, Nolan KM, Nolan TW, Norman CL, Provost LP, page 447: Jossey-Bass, San Francisco, 2009.

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## PDSAs: Do On

1. Carry out your plan.
2. Document problems & observations on your form right away.



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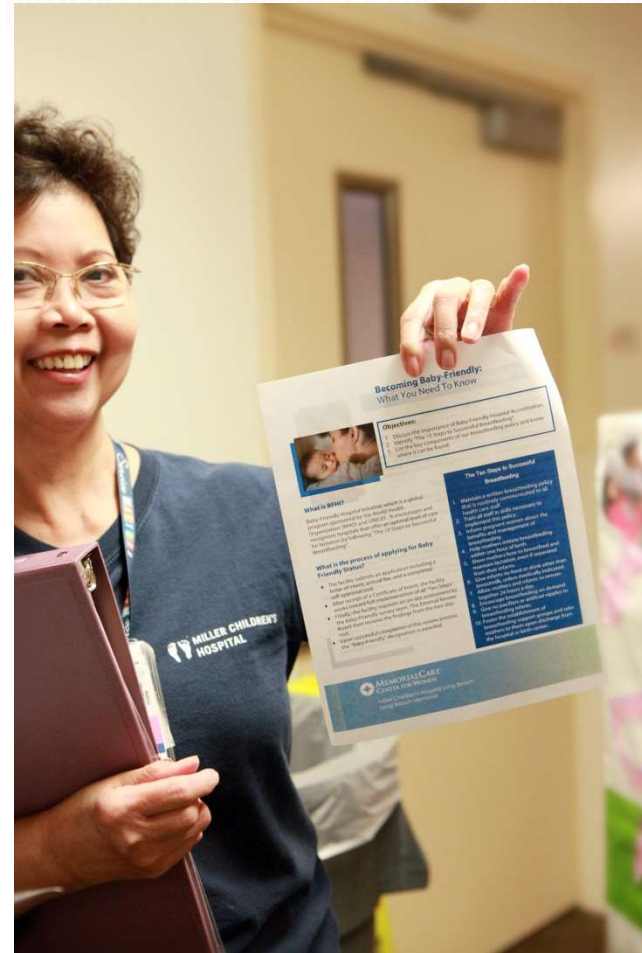
# PDSAs: Study One!

1. Look back at the measures you thought will help you know whether your change was an improvement.
2. Summarize what was learned.




# PDSAs: Acting On One

1. Decide what factors need to be changed for the next round; **or** decide how much to scale up if it was perfect.
2. Repeat the process until you are ready to implement (high belief, high commitment, low concern about cost of failure)



PDSA Cycle # 1 Dates: beginning 11/02/14 ending 11/02/14 Cycle to: Develop / Test / Implement

# PDSAs: Example Cycle 1


	<b>Change Being Tested:</b> Develop a change. Reduce dyad separation due to newborn bath.
	<b>SMART Objective for this Cycle:</b> Detail current procedure for one newborn bath this morning.
<b>Plan</b> Question(s) to answer for this cycle Plan to carry out the cycle (4Ws + H) Plan for data collection (4Ws + H) Predictions for each question	1. How much time is the dyad separated for bath? 2. What materials are needed to give the bath? 3. Were there unnecessary delays in the process? 4. How did family feel about process? 5. What does RN like / not like about current process? Plan: Observe. Reflect after dyad reunification. RN1 to record discreet variables. RN2 to report in qualitative.
<b>Do:</b> Carry out the plan Document problems and unexpected observations Begin analysis of the data	Observation. Significant delay due to newborn temperature drop, and current policy to use warmer rather return to mom for StS.
<b>Study</b> Complete the analysis of the data Compare data to predictions Summarize what was learned	83m separation. 6m-bathing. 7m-transport (people stop to see baby). 10m-preparing (running water to temp, gathering towels, etc.), 60m spent under warmer, until 2 normal temps recorded (took 30m to warm & next temp taken 30m later). Mom showered "glad & worried why it took so long."
<b>Act</b> What changes are to be made? Adopt, adapt, or abandon the change? Plan for next cycle	RN1 & 2 were surprised to see how long it actually took. RN1 wants to "create a cart for bathing in-room," but RN2 wants to observe 2 more to see if this is the norm. RNs agree to do 2 more, since census is low.

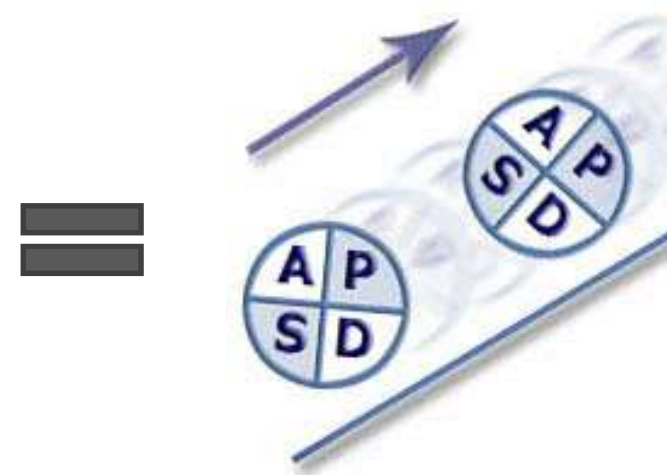




# PDSAs: Example Cycle 2

PDSA Cycle # 2      Dates: beginning 1/15/2014 ending 1/22/2014      Cycle to: Develop / Test / Implement

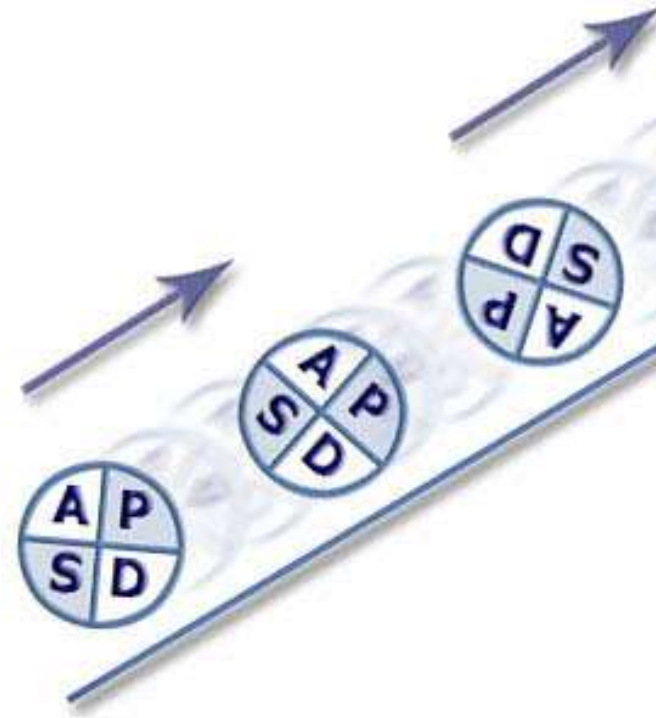
	<b>Change Being Tested:</b> Develop a change. Reduce dyad separation due to newborn bath.
	<b>SMART Objective for this Cycle:</b> Detail current procedure for 2 more newborn baths this morning.
<b>Plan</b> Question(s) to answer for this cycle Plan to carry out the cycle (4Ws + H) Plan for data collection (4Ws + H) Predictions for each question	1. How much time is the dyad separated for bath? 2. What materials are needed to give the bath? 3. Were there unnecessary delays in the process? 4. How did family feel about process? 5. What does RN like / not like about current process?  Plan: Observe. Reflect after dyad reunification. RN2 to record discreet variables. RN1 to report in qualitative.
<b>Do:</b> Carry out the plan Document problems and unexpected observations Begin analysis of the data	Observation.
<b>Study</b> Complete the analysis of the data Compare data to predictions Summarize what was learned	Baby 1 required warmer, then showed signs of cold stress, and RN2 fed formula (to EBF baby). Mother upset: "He was fine when you took him out." Baby 2 went smoothly, but still took longer than predicted (29 minutes) due to prep and transport time.
<b>Act</b> What changes are to be made? Adopt, adapt, or abandon the change? Plan for next cycle	RN1 and RN2 disagree re: solution. RN1 = in-room cart. RN2 = make "no-stop policy" and create a bath station in the NBN. They agree to set out all supplies and warm water, get baby w/o stopping, and try again.



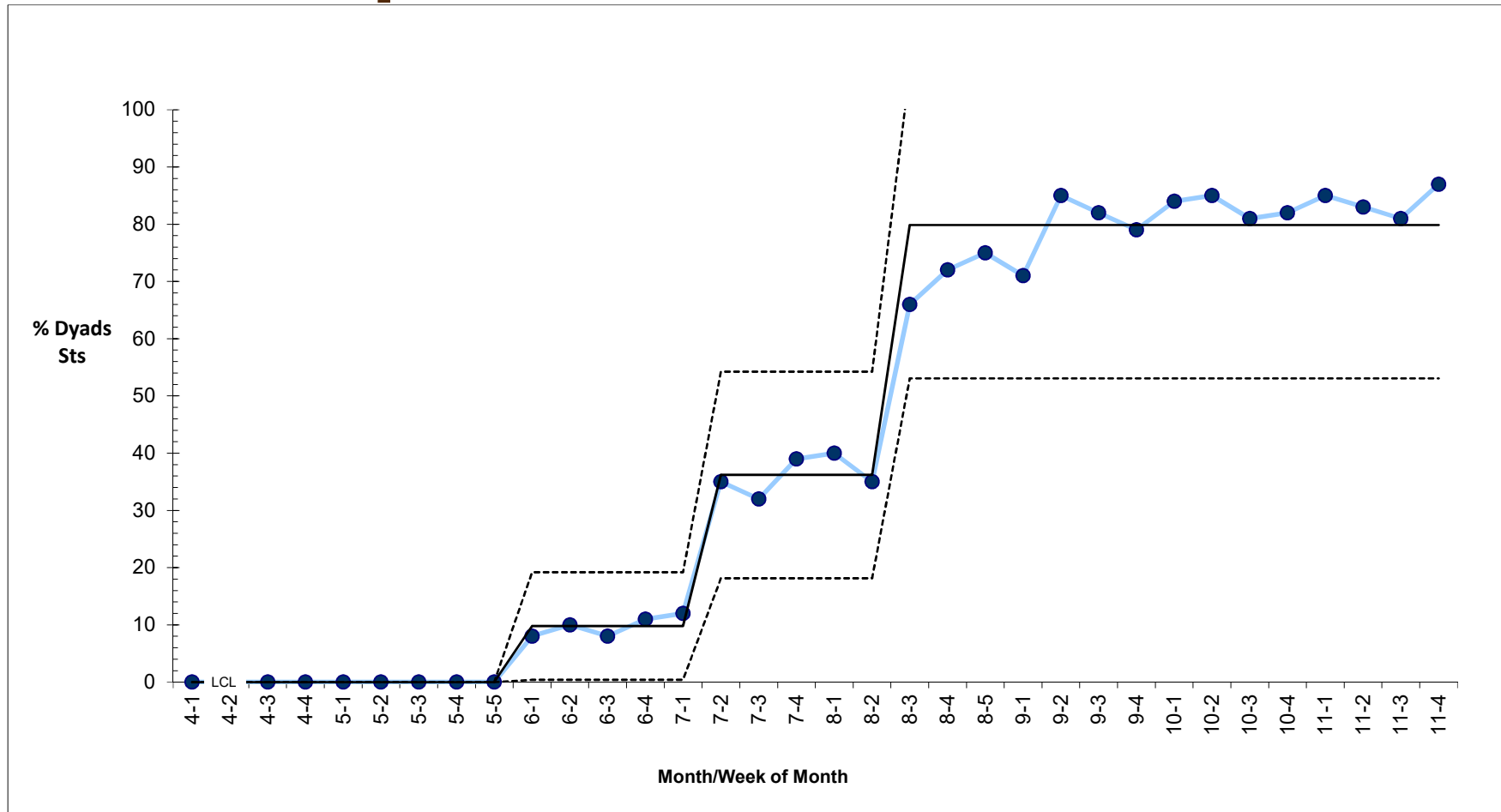
PDSA Cycle # **3** Dates: beginning **11/12/2013 AM** ending **11/12/2013 AM** Cycle to: **Develop / Test / Implement**

# PDSAs: Example Cycle 3

	<b>Change Being Tested:</b> Reduce dyad separation due to newborn bath with "no-stop" transport and prepped bathing area.
	<b>SMART Objective for this Cycle:</b> Test whether "no-stop" transport and prepped bathing area in NBN will decrease duration of separation, improve patient satisfaction, decrease cold temps.
<b>Plan</b> Question(s) to answer for this cycle Plan to carry out the cycle (4Ws + H) Plan for data collection (4Ws + H) Predictions for each question	1. How much time is the dyad separated for bath? 2. What materials are needed to give the bath? 3. Were there unnecessary delays in the process? 4. How did family feel about process? 5. What does RN like / not like about current process? Plan: Prep. Observe. Reflect after dyad reunification. RN2 to record discreet variables. RN1 to report in qualitative. x3 to see how it is once "kinks are out."
<b>Do:</b> Carry out the plan Document problems and unexpected observations Begin analysis of the data	Observation. Water warms up, and is cold by the time baby returns to NBN b/c of various delays (BFing, visitors, etc.). Having supplies as "bath kits" was positive.
<b>Study</b> Complete the analysis of the data Compare data to predictions Summarize what was learned	Average of 3: 2m - transport; 3m - prep, 4m bathing, 4m drying, diapering and taking temp, 2m transport. Mom 1: "I would like to do it in here so I can learn." Mom 2: "I like choice; I rest while baby goes to spa." Mom 3: "I don't understand why we have to bathe him at all."
<b>Act</b> What changes are to be made? Adopt, adapt, or abandon the change? Plan for next cycle	RNs agree - bathing in-room should be considered AND bathing in NBN should have "no-stop policy" and NBN bath kits prepped. RN2 will work on NBN scale-up to get best practice. RN1 will develop in-room test.



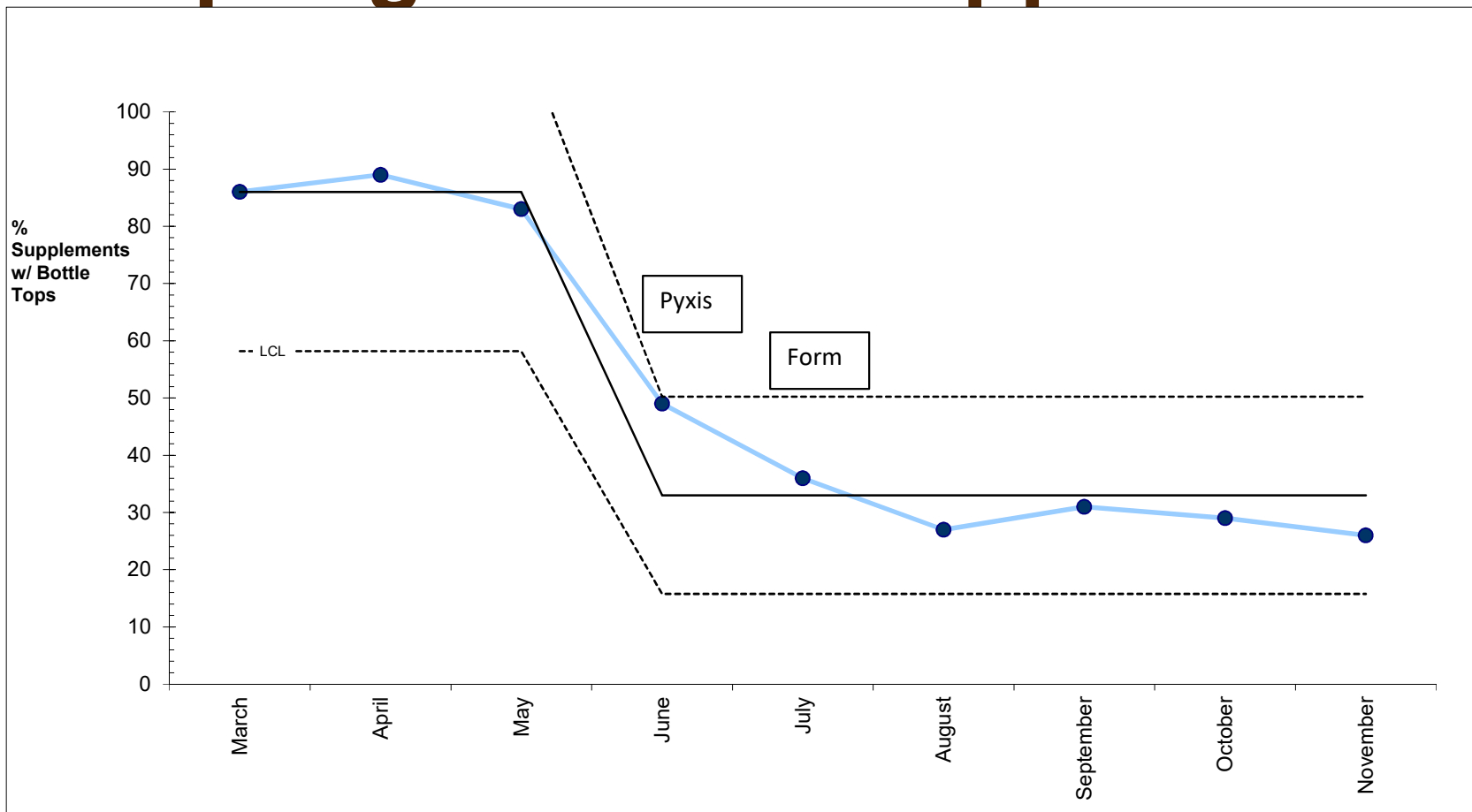
# Step Four: Skin-to-Skin



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# Step Eight: Bottle-Nipple Use



# Keys to Success Gleaned and Lessons Learned

- Intervention needs to be context specific; cannot be rigid.
- Training resulted in improvements, but only so far.
- Coaching is paramount.
- Shadowing is a great way to learn about current practice, and test changes.
- Scale up happens quickly when nurses are excited about their own discoveries, and are eager to share.



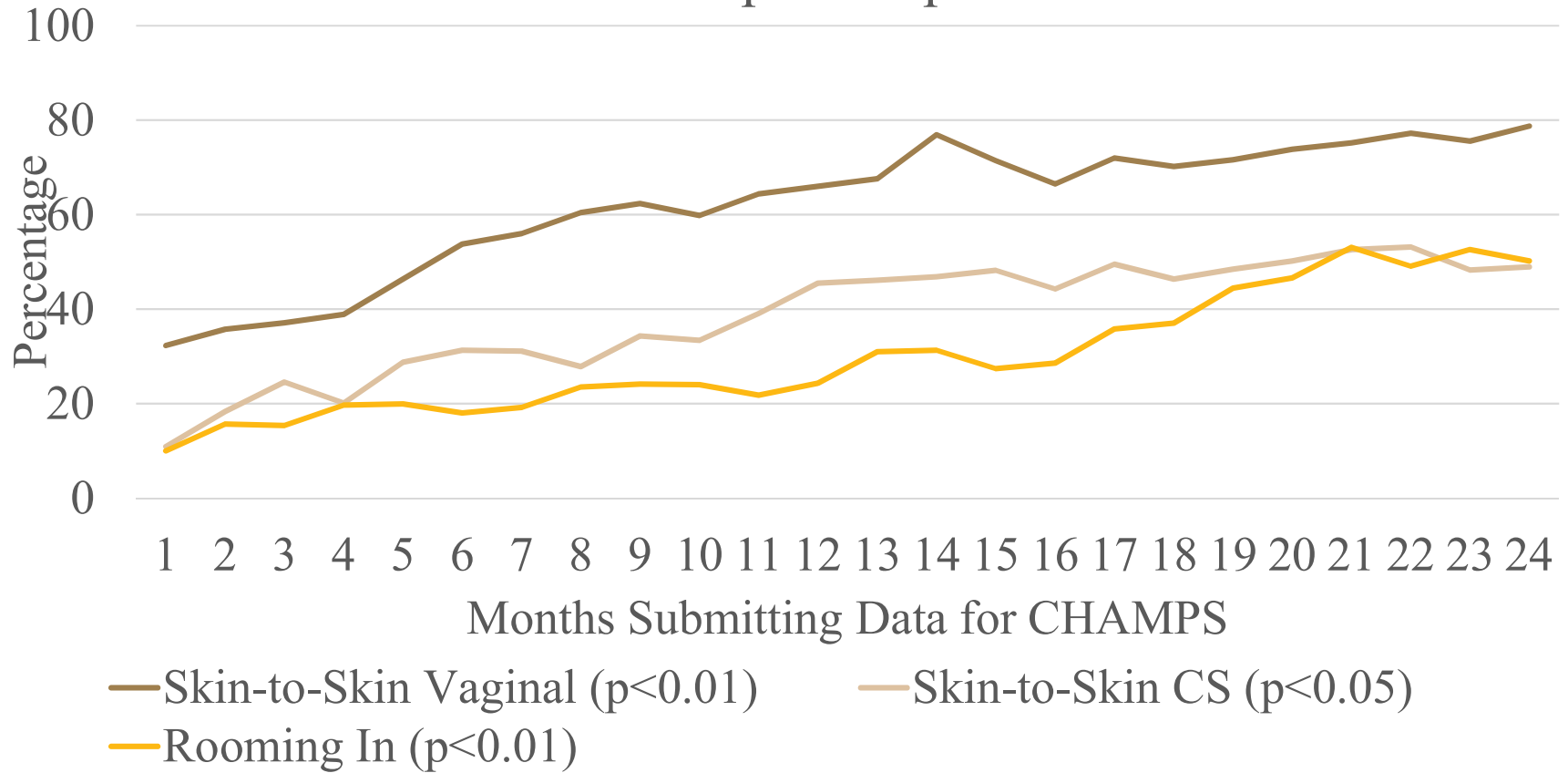
# Overview of CHAMPS

- After 3 years, 100% of hospitals had entered the Baby-Friendly Pathway
- As of today, 3 hospitals have been designated and many more are awaiting assessment and results



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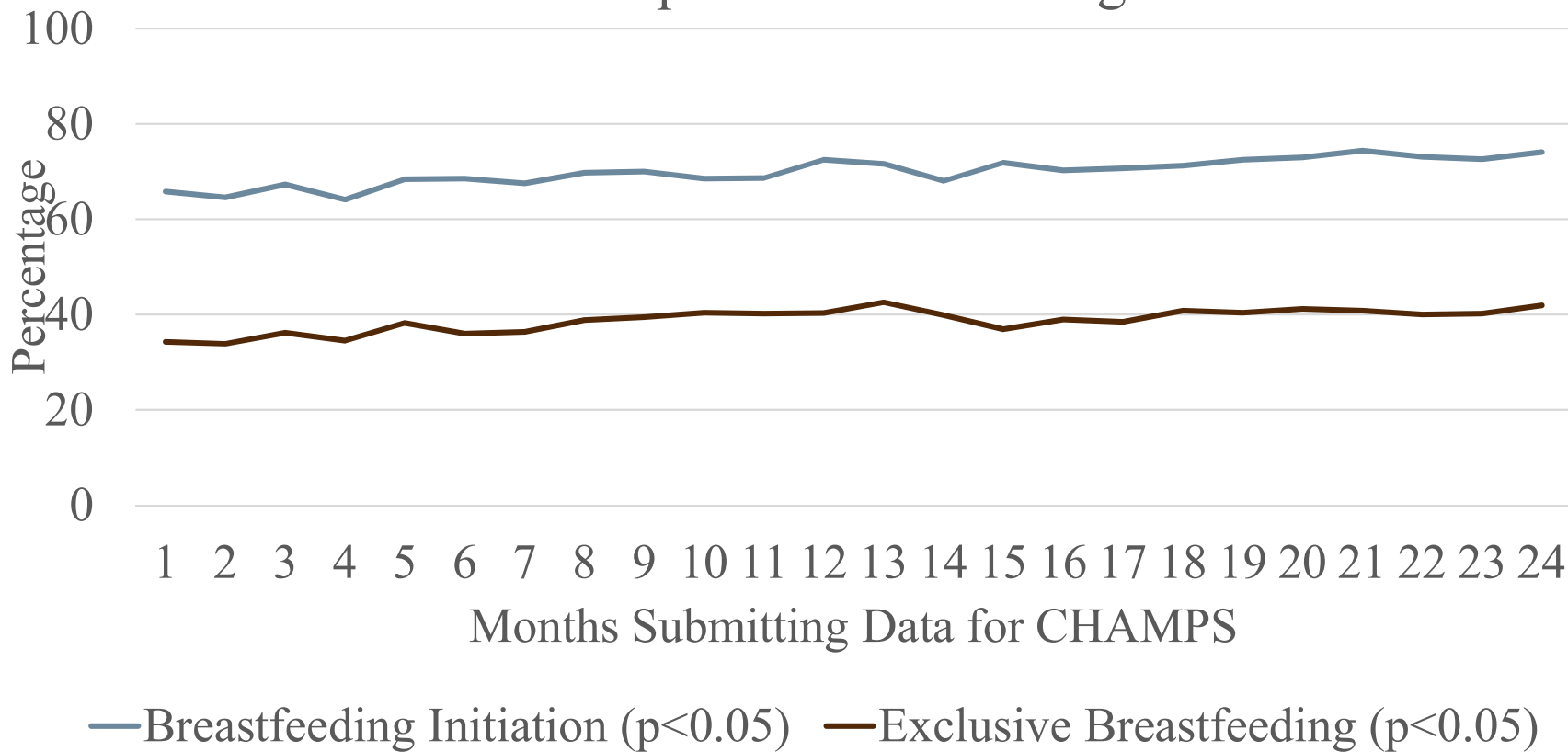
## CHAMPS Hospital Improvement



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## CHAMPS Hospitals Breastfeeding Rates



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# CHAMPS Conclusions

- CHAMPS hospitals significantly improved MCH practices
- This is one of few studies to demonstrate a significant impact of rooming in
- Impacts were greatest in minority populations
- Partnered with community development groups
- Baby Friendly Practices have strong benefits for marginalized populations



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Pediatrics  
January 2019  
Quality Report

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## Addressing Racial Inequities in Breastfeeding in the Southern United States

Anne Merewood, Kimarie Bugg, Laura Burnham, Kirsten Krane, Nathan Nickel, Sarah Broom, Roger Edwards, Lori Feldman-Winter

Article

Figures & Data

Supplemental

Info & Metrics

Comments

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# Surveillance of Breastfeeding Duration

- Much of the hospital-based research focuses on breastfeeding initiation
- Few studies have access to routinely collected duration data
- Manitoba is piloting the development of total population breastfeeding duration data system



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## ***Manitoba Infant Feeding Database***



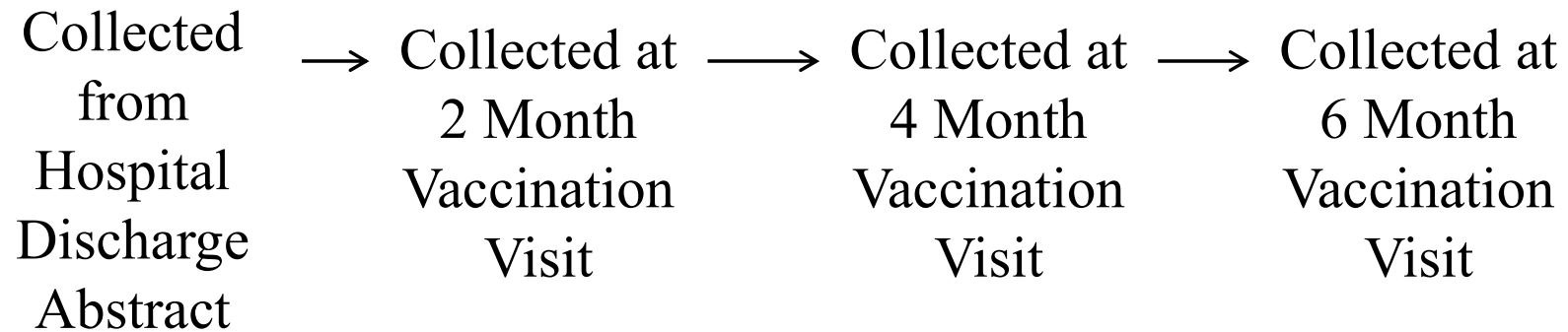
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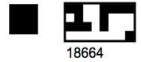
# Data Collection

- Opportunistic data collection at routine vaccination visits
- Collect personal health identifiers to facilitate linkage with Manitoba Health Insurance Registry
- Final Destination: Population Health Research Data Repository at MCHP

# Data Collection

- Opportunistic data collection at routine vaccination visits





SITE ID:

# Manitoba Infant Feeding Database Study TeleForm

Please print numbers neatly within squares without touching the lines, and fill in circles completely, using INK. Shade circles like this: ● Not like this: ⊗ ⊙ Once complete, please fax to 204-948-3768

01. Please enter TODAY's date:  2 0   
DAY MONTH YEAR

02. What is your relationship to the baby:  Mother  Father  Other caregiver

03. In the boxes provided, please print **baby's** 6-digit Health Registration Number:

04. In the boxes provided, please print **baby's** 9-digit Personal Health Identification Number:

05. In the boxes provided, please print **mother's** 9-digit Personal Health Identification Number:

06. Please enter baby's birth date:  2 0   
DAY MONTH YEAR

07. Please enter the first 3-characters of your 6-character postal code:

08. Is your baby a girl or a boy?  Boy  Girl

09. What has your baby been fed?  
*Please select all that apply.*  
 Breast milk  
 Formula  
 Other liquids (juice, cow's milk, goat's milk, tea, etc)  
 Solids / Other foods

10. Has your baby ever had formula?  Yes  No

11. When was your baby fed formula?  
*Please select all that apply.*  
 In hospital  At home  Never

12. How many weeks old was your baby when you first fed formula/other liquids/other food?  Since birth  weeks old  Not applicable

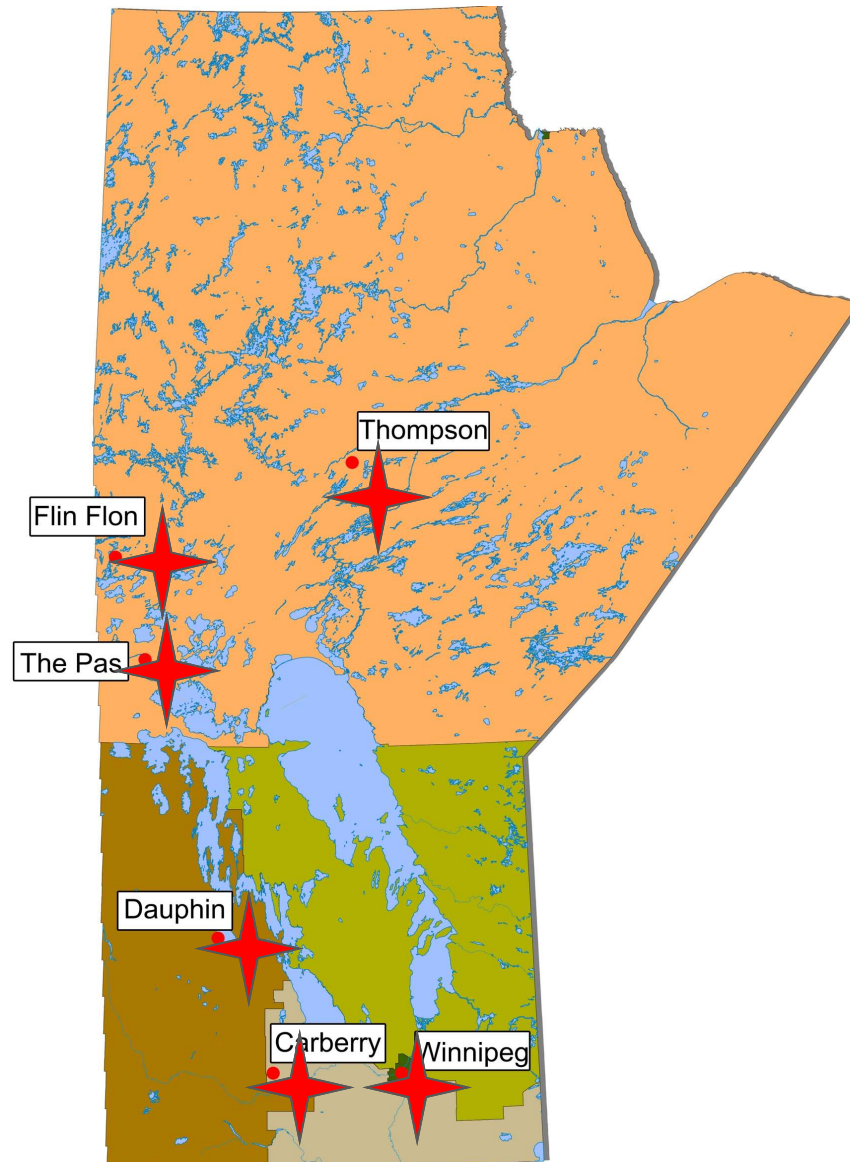
13. How many weeks old was your baby when you completely stopped breastfeeding?  weeks  I am still breastfeeding  I have only formula fed

# Infant Feeding Variables

- Age when infant was first introduced something other than human milk
- Age when infant stopped breastfeeding altogether
- Supplemented only in hospital – exclusively breastfed after discharge
- Did not initiate during hospital stay – initiated after discharge

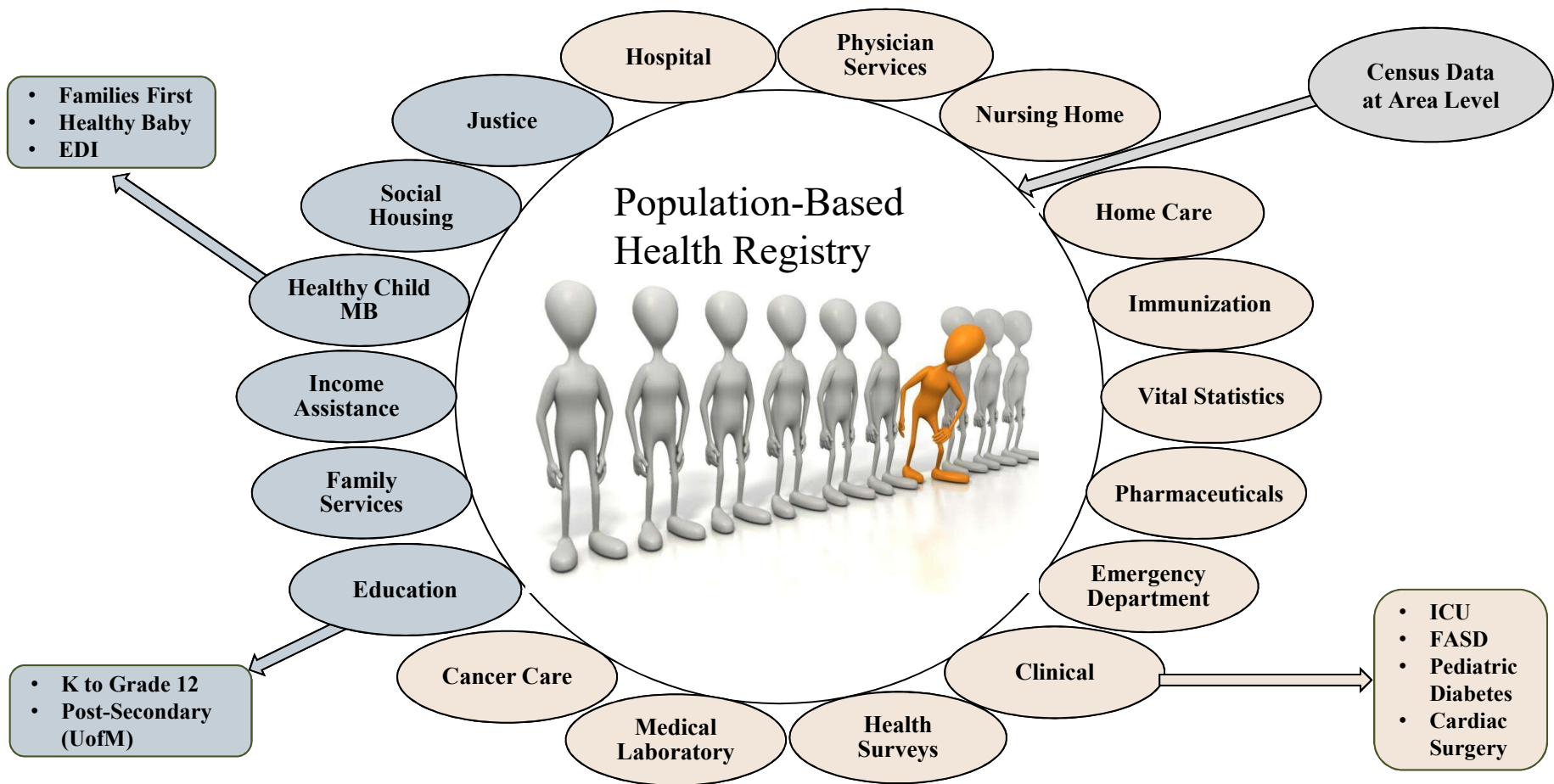


## Manitoba Infant Feeding Study Sites



# MCHP Houses the De-Identified

## Manitoba Population Research Data Repository



# Linked Data for Health Research

- Routinely collected information going back decades
- Total-population data allows us track health equity and marginalized populations
- Look at impact policies on health



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Open Access Protocol

# BMJ Open Protocol for establishing an infant feeding database linkable with population-based administrative data: a prospective cohort study in Manitoba, Canada

Nathan Christopher Nickel,<sup>1,2</sup> Lynne Warda,<sup>3,4</sup> Leslie Kummer,<sup>5</sup> Joanne Chateau,<sup>1</sup> Maureen Heaman,<sup>6</sup> Chris Green,<sup>1,7</sup> Alan Katz,<sup>1,2,8</sup> Julia Paul,<sup>9</sup> Carolyn Perchuk,<sup>7</sup> Darlene Girard,<sup>7</sup> Lorraine Larocque,<sup>10</sup> Jennifer Emily Enns,<sup>1,2</sup> Souradet Shaw,<sup>11</sup> The Manitoba Infant Feeding Database Development Team

To cite: Nickel NC, Warda L, Kummer L, *et al.* Protocol

**ABSTRACT**  
**Introduction** Breast feeding is associated with many

Strengths and limitations of this study



# Data in Repository

- 4,900 mother-infant dyads over 2 years' data collection
- We have a 98.2% data linkage rate
- Follow half of these for 6 months
- Can use to identify when supports are needed after hospital re: breastfeeding



# Concluding Remarks

- Several interventions have supported breastfeeding dyads
- Need to measure what is happening with respect to inequities
- Target interventions to address structural determinants of inequities

# Thank You / Questions



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