



Breastfeeding Programs

Division of Family and Community Health Services
Office of Title V and Family Health

Topic: Evidence-based practices to improve breastfeeding outcomes

Health Outcomes Associated with Breastfeeding:

Breastfeeding provides complete nutrition and immune protection for infants. Babies who do not receive breast milk are at increased risk for a host of infectious diseases, sudden infant death syndrome, and necrotizing enterocolitis (a debilitating and often fatal intestinal condition of the preterm infant), as well as long-term risk for obesity and overweight, type 1 and type 2 diabetes, asthma, childhood leukemia, atopic dermatitis and other adverse outcomes.

Mothers who do not breastfeed are at increased lifetime risk for type 2 diabetes, breast and ovarian cancers, cardiovascular disease, and rheumatoid arthritis. Not breastfeeding or early weaning is associated with an increased risk of maternal postpartum depression. Protection against poor maternal and infant health outcomes is greatest when infants exclusively receive breast milk for the first six months of life and continue to be breast fed to one year of age, with appropriate complementary foods added to the infant's diet in those last six months.

U.S. cost impact studies¹ estimate that suboptimal breastfeeding results in annual excess costs including \$31.2 billion in pediatric and maternal costs; 911 pediatric deaths; 4,981 maternal breast cancer cases; 53,847 maternal hypertension cases; and 13,946 maternal myocardial infarction cases.

Breastfeeding Activities:

The department offers a continuum of initiatives, technical assistance, educational materials, and in-person and online trainings to support birthing facilities and health professionals in implementing practices supportive of breastfeeding. In addition, DSHS offers direct- and population-based breastfeeding support services and coordination activities to promote and support improved infant feeding outcomes in Texas. All breastfeeding support activities are coordinated through the DSHS Infant Feeding Workgroup. These efforts are supported and complemented by activities of other DSHS health promotion initiatives, including the Healthy Texas Babies Initiative.

Continuum of Ten Step Initiatives to increase practices supportive of breastfeeding in birthing facilities

- **The Right from the Start campaign** aims to increase awareness among key decision-makers in Texas birthing facilities about their role in improving breastfeeding outcomes. Materials illustrate the impact that hospital policies and practices have on breastfeeding outcomes, and include an informational booklet including state and national data related to hospital practices, information on the Texas Ten Step and Baby-Friendly USA programs, a self-assessment guide, resource list, and a hospital-specific one-page report for all facilities in Texas attending 30 or more births. The campaign, released in November 2011, encourages hospitals to assess their current practices and consider opportunities for improvement. The released briefing is available from the bottom of this web page: <http://texastenstep.org/why-texas-ten-step/policies-shape-outcomes/>. A second stage of the campaign is currently in development with an anticipated release in Fall 2015.
- **The Texas Ten Step (TTS) Program** recognizes hospitals that have adopted policies which address 85 percent of the Ten Steps to Successful Breastfeeding (Ten Steps), and encourages facilities to pursue Baby-Friendly Hospital designation. Currently there are 107 TTS facilities (~40% of all birthing facilities). The DSHS designation, developed in 1999 by DSHS and the

¹ Bartick, M. Reinhold, A. The burden of suboptimal breastfeeding in the United States: A pediatric cost analysis. *Pediatrics*. 2010; Bartick, M. Stuebe, A. et al. Cost Analysis of Maternal Disease Associated With Suboptimal Breastfeeding. *Obstetrics & Gynecology*. 2013.



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Texas Hospital Association and endorsed by the Texas Medical Association, is entirely voluntary and self-reported. TTS facilities recertify every two years, and DSHS provides on-going guidance on areas for improvement to integrate the Ten Steps. Participating facilities are encouraged to work toward Baby-Friendly designation through Baby-Friendly USA Program information is available here: <http://texastenstep.org/>.

- **The TTS Star Achiever Initiative**, launched in December 2012, is designed to assist Texas birthing facilities to more fully integrate the Ten Steps. The Initiative provides technical assistance, training, collaborative opportunities, and tools to assist participating facilities to implement rapid cycle quality improvement processes to assure delivery of recommended care for lactating mothers and infants. Participating hospitals experience improved outcomes including improved performance on the Joint Commission Perinatal Care Core Measures for exclusive breast milk feeding.
 - At the center of the Initiative is the Texas Breastfeeding Learning Collaborative (TBLC). The TBLC is facilitated through a contract with the National Initiative for Child Healthcare Quality (NICHQ) uses the Institute for Health Care Improvement's Breakthrough Series collaborative model for achieving improvement. Three cohorts of hospital improvement teams from a total of 81 birthing facilities across the state will participate in the TBLC from 2013-2017. Hospital teams include hospital change leaders, front-line staff, a parent representative, and a local WIC agency representative. Cohorts A and B, currently in progress, are comprised of 41 facilities in Health Service Regions (HSRs) 1-7. Cohort C, launching in Fall of 2015, will include up to 40 hospitals focusing on facilities in HSRs 8-11.
 - Supporting activities include communication with local community partners to encourage development of systems that support continuity of care from pregnancy through postpartum.
 - More information about the TTS Star Achiever Initiative is available from these web links:
 - Texas Ten Step Star Achiever overview: <http://texastenstep.org/starachiever-texastenstep/index.html>
 - Texas Ten Step Star Achiever Training Toolkit: http://texastenstep.org/starachiever-texastenstep/Star_Achiever_Ten_Step_Modules/resources-and-tools/
 - Texas Breastfeeding Learning Collaborative: <http://breastfeeding.nichq.org/Projects/Texas%20Ten%20Step%20Star%20Achiever%20Breastfeeding%20Learning%20Collaborative/Overview.aspx>
- DSHS participates in the Association of State and Territorial Health Official's (ASTHO) **Breastfeeding Support Learning Community**. In order to address the national priority to implement practices supportive of breastfeeding in birthing facilities, DSHS, in partnership with NICHQ, held the *Texas Hospital Summit: Improving Infant Feeding, Advancing Maternity Care Practice* in June 2015. These two 1-day events held in San Antonio and Dallas convened a group of key decision makers and hospital staff from maternity care facilities in Texas to improve maternity care practices statewide. The focus of the Texas Hospital Summit was to engage executive leaders and other key influencers that facilitate decision making for facilities that have not yet prioritized adoption of recommended care practices for lactating mothers and their babies. Successful practice models from a variety of facilities were show-cased, and presentations highlighted the wealth of resources available to Texas birthing facilities to support them in implementing quality improvement for in-hospital care practices and for community linkages to support continuity of care from the prenatal period through delivery, the immediate postpartum, and the infant's first year and beyond. The summit served



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as a call to action to non-designated facilities to begin to take steps toward adoption of the Ten Steps to Successful Breastfeeding (Ten Steps), and to designated facilities to continue to commit toward movement along the continuum of improvement and maintenance of designation.

Initiatives to increase access to breastmilk in Neonatal Intensive Care Units

Breastmilk use among fragile and ill infants is particularly important and is incorporated throughout the initiatives described in this document. Increased access to breastmilk for vulnerable infants is specifically supported through a variety of activities.

- The **Neonatal Committee of Texas Collaborative for Healthy Mothers and Babies** (TCHMB) plans to launch a **statewide learning collaborative** beginning in 2015 to increase access to and use of breastmilk in NICUs. TCHMB is a program of DSHS' Healthy Texas Babies initiative.
- DSHS coordinates with Texas Pediatric Society and with HHSC through the Better Birth Outcomes initiatives and through the DSHS HHSC Lactation Support Workgroup to explore opportunities for increased **access to human donor milk**.
- DSHS partners with Human Milk Banking Association of North America-affiliated mother's milk banks to provide health professionals with **training opportunities** to learn about human donor milk and milk banking.
- DSHS administers the **WIC Breast Pump Program** and coordinates with Medicaid through the DSHS **HHSC Lactation Workgroup** to facilitate timely access to appropriate pumps, education, and support for establishment and maintenance of milk supply among WIC and Medicaid participants whose infants are in the NICU.

Initiatives to increase access to health professionals who are knowledgeable about breastfeeding

- **DSHS Breastfeeding Training Courses** are designed to prepare health-care providers to appropriately and adequately support breastfeeding women and their infants. Continuing education credits are provided. The material is presented at a level to fill the gaps in professional education, and can be used in preparation for the International Board of Lactation Consultant Examiner's exam.
 - Available two-day courses include *Principles of Lactation Management* and *Lactation Counseling and Problem Solving*.
 - One-day courses may be scheduled on request, including *Breastfeeding Management* and *Breastfeeding the Compromised Infant*.
 - Three 1.5 hour physician's breastfeeding courses may also be scheduled.
 - DSHS partners with WIC lactation support centers, Texas' two Human Milk Banking Association of North America-affiliated mother's milk banks and hospitals to host an experiential training, the *Clinical Lactation Practicum for Health Professionals*.
 - A *Peer Counselor Trainer Workshop* is available to prepare participants to initiate a breastfeeding peer counselor program in their community.
 - Other trainings related to breastfeeding support, including *Power of Influence* (a course on using marketing principles to influence behavior) and *Baby Behavior* (a course about reading and understanding infant cues and state organization) are also available through Texas WIC.
 - In addition to WIC-led trainings, a one-hour breastfeeding module for healthcare professionals is available on the Texas Health Steps Online Provider Education portal.



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- San Antonio neonatologists, Drs. Alice Gong and Alex Kenton, presented a DSHS Grand Rounds entitled *The Importance of Breast Milk Use in the NICU* on May 6, 2015. CE were provided, and the presentation recording and accompanying materials are available online: <http://www.dshs.state.tx.us/grandrounds/presentations.shtm#may6>
- Additional online continuing education resources are in currently in development to support health care professionals in obtaining the knowledge and skills necessary to implement the Ten Steps to Successful Breastfeeding.
More information about current DSHS breastfeeding training courses is available online:
 - WIC Trainer-Led Courses: <http://www.dshs.state.tx.us/wichd/lactate/courses.shtm>
 - Texas Health Steps Modules: <http://www.txhealthsteps.com>

- **The Statewide Lactation Support Hot Line** serves as a referral system for people in need of breastfeeding information and support. The toll-free line is available to anyone in Texas. Lactation specialists provide answers to breastfeeding questions to health care professionals and to consumers. They will also give referral numbers of lactation specialists local to the Texas caller. The number is 1-855-550-6667.
- **The Health Care Provider's Guide to Breastfeeding App:** includes guidance on lactation assessment, drug interactions and treatment of common maternal and infant conditions as well as resources for training staff and improving hospital maternity care practices. Reference citations are included for all content. The application is currently available for iPhones, iPads and pdf readers. An Android version is also available. The application can be accessed from here: <http://texastenstep.org/tools-and-resources/health-care-guide-to-breastfeeding/>
- **The WIC Health Care Providers Resource Webpage** includes access to WIC print and audiovisual breastfeeding support materials (including resources specific to care of preterm infants), position statements, and other useful resources, The webpage may be accessed from: <http://texaswic.dshs.state.tx.us/wiclessons/english/healthcare/resources.asp>

Initiatives to increase breastfeeding support for mothers and their families in the community

- **WIC Clinic Services:** WIC Services are provided to approximately 61% of Texas infants and their families as well as to pregnant women. Breastfeeding support services include:
 - **Breastfeeding Education:** All pregnant WIC participants receive breastfeeding education at their first prenatal WIC appointment, regardless of how they intend to feed their baby. This includes individual counseling and education on the importance of exclusive breastfeeding for at least the first month and a list of local contacts to call in case of breastfeeding questions. In addition, each client receives targeted education and reinforcing materials. WIC participants also receive ongoing breastfeeding education and encouragement through group classes, individual lessons, online video lessons, posters, and support groups. Additional information about WIC breastfeeding education is available here: <http://texaswic.dshs.state.tx.us/wiclessons/english/healthcare/prenatal-education.asp>. Print and audiovisual educational materials may be viewed, downloaded, and/or ordered in limited quantities from the Texas WIC Catalog, available: <http://www.dshs.state.tx.us/wichd/WICCatalog/contents.shtm>
 - **WIC Peer Counselor Program and Lactation Support-**WIC peer counselors are mothers who have participated in the WIC program and have successfully breastfed an infant. Peer counselors have completed the USDA **20-hour training**, *Loving Support Makes*



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Breastfeeding Work, which includes breastfeeding basics, counseling skills, and emphasis on the role of the peer counselors in making referrals for circumstances outside the realm of normal breastfeeding. Approximately 600 WIC peer counselors (330 FTEs) currently provide mother-to-mother breastfeeding support in WIC local agencies across the state. Some WIC clinics employ International Board Certified Lactation Consultants (IBCLCs) to provide support and training for peer counselors. More information about the program is available here: <http://www.dshs.state.tx.us/wichd/lactate/peer.shtm>.

- **WIC Peer Dads** visit with fathers in the WIC clinics, teach breastfeeding classes in the clinic and hospitals, and even provide prenatal breastfeeding education to WIC mothers when female peer counselors are not available. There are currently four Peer Dad Programs including two programs funded by WIC in Dallas and Cameron County and two programs funded through the Office of Title V and Family Health in San Antonio and the Brazos Valley (Bryan).
- **WIC Breast Pump Program:** Breast pumps (manual-, personal use electric-, or multiuser hospital grade electric breast pumps) may be issued to WIC-enrolled breastfeeding mothers who are unable to obtain a pump from another source (e.g. their health plan). Breast pump are issued to mothers who will be separated from their babies for reason such as premature or sick infant and return to work or school. The program is promoted to clients, hospitals and health care professionals through educational materials.
- **Primary Health Care Settings:** The DSHS Exceptional Item - Primary Health Care Expansion proposes to increase primary, preventive and screening services to women age 18 and above whose income is at or below 200 percent of the federal poverty level (FPL). Outreach and direct services will be provided through community-based clinics under contract with DSHS. Community health workers (CHWs) will help ensure women access the preventive and screening services appropriate to them. The program will also support the integration of lactation consultants in primary health care settings. More information about Primary Health Care Expansion is available here: <http://www.dshs.state.tx.us/ephc/Expanded-Primary-Health-Care.aspx>
- **WIC Lactation Support Center Services (LSCS)** include Mom's Place in Austin, The Lactation Foundation in Houston, the Lactation Care Center in Dallas, and the Lactation Care Center of the Rio Grande Valley-McAllen. All four centers act as lactation support and resource centers for WIC families and health care professionals and as training centers for WIC staff and health professionals who have completed the DSHS trainings to become a Trained Breastfeeding Educator. All centers are available to any Texas WIC family. Each center staffs a full-time Registered Nurse, an IBCLC, and WIC peer counselors. Lactation specialists are available for breastfeeding-related issues ranging from basic information to advanced lactation management.
- Beginning in FY15, the Office of Title V and Family Health funds the **Lactation Support Center Services - Strategic Expansion Program (LSCS-SEP)** to expand services provided at the LSCS to include:
 - Provision of lactation education, counseling and referral services to non-WIC participants;
 - Development and implementation of locally-appropriate activities to engage and mobilize community partners in assessment, planning, and coordination to improve coordinated systems of care for lactation support consistent with recommendations of the Surgeon



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General's Call to Action to Support Breastfeeding, the Centers for Disease Control Guide to Strategies to Support Breastfeeding Mothers and Babies, and other best practice resources.

- Conducting outreach, training, and education programs to increase the competencies and skills of maternity service direct care staff, clinicians and other health professionals who care for women and children.
- Providing enabling services (e.g. transportation services; child care; extended hours; mobile clinics; home visiting; language services; etc.) to increase access to family centered, culturally relevant, timely care.
- DSHS has funded local communities to develop **Baby Cafes** to provide community-based breastfeeding support on a drop-in basis. Community examples are featured at these links:
 - <http://www.dshs.state.tx.us/obesity/babycafe.shtm>
 - <http://www.dshs.state.tx.us/obesity/San-Antonio-Baby-Cafe.doc>
- **The Statewide Lactation Support Hot Line** serves as a referral system for people in need of breastfeeding information and support. The toll-free line is available to anyone in Texas. Lactation specialists provide answers to breastfeeding questions to health care professionals and to consumers. They will also give referral numbers of lactation specialists local to the Texas caller. The number is 1-855-550-6667.
- DSHS works through a variety of **community-based partnerships** to expand access and linkages for breastfeeding support
 - **Food Banks pilot:** Through a partnership between Texas WIC and the HHSC SNAP-Ed Program, two food banks are incorporating breastfeeding promotion and support into their SNAP Nutrition Education and Obesity Prevention activities.
 - **Breastfeeding Support in Nurse Family Partnership:** In partnership with Texas WIC, the state's Nurse Family Partnership (NFP) program is coordinating to have NFP local program staff participate in breastfeeding support **trainings**. DSHS also works to facilitate ongoing coordination between NFP local programs and WIC local agencies.
 - **Texas Ten Step Star Achiever Community Partner Meetings** convene community service providers to share information and resources and foster community planning and systems of referral for increased breastfeeding support. Office of Title V and Family Health is currently coordinating with the Texas Breastfeeding Coalition and the state's network of local **breastfeeding coalitions** to host a breastfeeding support strategic planning meeting for community partners to develop common goals and strategies for strengthening statewide systems of breastfeeding support.
- **Texas WIC Breastmilk. Every Ounce Counts Campaign** is a statewide awareness campaign to encourage moms to breastfeed. The campaign includes a variety of traditional and new media and communication strategies, and includes breastfeeding promotion materials such as Breastfeeding Friendly Establishment decals, WIC Peer Counselor program and Texas Ten Step materials, and Right to Breastfeed cards. A website (<http://breastmilkcounts.com/>), prepares new moms on what to expect, helps current breastfeeding moms continue breastfeeding, gives working moms tips on how to continue breastfeeding once they've gone back to work, and other resources.



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Initiatives to support continued breastfeeding among working mothers:

The DSHS Mother-Friendly Worksite Program provides technical assistance, tools, resources and recognition to encourage and support employers to establish and maintain comprehensive, high-quality lactation support programs for their employees who are separated from their infants during the workday. DSHS has also developed a training curriculum and an online breastfeeding continuing education module for childcare providers.

- **The Texas Mother-Friendly Worksite Program** is a recognition program for businesses with worksite lactation support policies that was developed to fulfill requirements of Texas Health and Safety Code 165. DSHS was directed to establish recommendations supporting the practice of worksite breastfeeding and to maintain a registry of businesses that have a written breastfeeding policy addressing the recommendations, including provision of: work schedule flexibility for expression of milk, accessible locations allowing privacy, access to clean running water, and access to hygienic storage alternatives for storage of mother's breast milk. There are currently over 1,700 registered Mother-Friendly Worksites, up from 233 in 2009. More information about the program is available at <http://texasmotherfriendly.org/>.
- The Texas Mother-Friendly Worksite program was recently boosted through the **Texas Mother-Friendly Worksite Policy Initiative (MFWPI)**, a two and one-half year project funded by the Center for Disease Control and Prevention through a competitive Communities Putting Prevention to Work grant. The initiative facilitated development and implementation of worksite policies that support breastfeeding statewide by providing funding, training, technical assistance, educational materials, and additional best-practice resources for the development of Mother-Friendly Worksites in state agencies and other employment settings across the state. This initiative includes a social marketing campaign to disseminate breastfeeding support strategies to a broad variety of employment sectors. The number of Mother-Friendly Worksites increased by 630% as a result of the first phase of the Initiative. A second phase of marketing, funded through the Office of Title V and Family Health, will be launched in 2015 to continue to advance the reach and spread of the Initiative. The Initiative was recently recognized as a Practice Tested Best Practice by the Center for Training and Research Translation (Center TRT). More information is available from: <http://www.centertrt.org/?p=intervention&id=1182>.
- The MFWPI will be boosted in FY16 with a **MFWPI public awareness campaign** including targeted marketing to key employment sectors. In addition, a new **MFWPI Technical Assistance** contract was launched in the final quarter of FY15 to expand the capacity of the program for outreach and recruitment of new worksites.
- A **child-care training curriculum**, *How to Support a Breastfeeding Mother: A Guide for the Childcare Center* is available from the DSHS website: <http://www.dshs.state.tx.us/wichd/bf/childcare.shtm>. The curriculum is featured as a resource to implement the Let's Move Child Care Goal for Infant Feeding: <http://www.healthykidshealthyfuture.org/content/hkhf/home/nutrition/infantfeeding.html>.
- *Supporting Breastfeeding in the Child Care Setting* is an **online continuing education module for child care professionals** hosted on Agrilife Extension's Online Child Care Courses page in both English and Spanish. This one-hour course helps child care providers gain a better understanding of the benefits of breastfeeding and how to support mothers who want to continue breastfeeding their children after returning to work or school. The course may be accessed from: http://extensiononline.tamu.edu/courses/child_care.php.



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Initiatives to coordinate and plan breastfeeding support priorities:

- **DSHS/Medicaid Lactation Workgroup:** DSHS and the Health and Human Services Commission Texas Medicaid staff work together to identify opportunities to increase collaboration and synergy in breastfeeding support services. The workgroup is currently reviewing existing policies and services related to increasing access to breast pump equipment, lactation support services, and donor human milk.
- **DSHS Infant Feeding Workgroup:** DSHS breastfeeding activities are coordinated through the DSHS Infant Feeding Workgroup. The DSHS Infant Feeding Workgroup is comprised of staff from DSHS programs (the Office of Title V, the Nutrition Education Branch, the Community and Worksite Wellness Program, etc.) with performance measures related to improving breastfeeding outcomes, and seeks to address the determinants and barriers to breastfeeding within a comprehensive strategic action framework for the coordination, integration, and evaluation of breastfeeding support messaging, programs, and policies. DSHS IFW collaborators include regional MCH staff, the Health Texas Babies Initiative, the Texas Health Steps Program, the State Agency Wellness Coordinator, the Cardiovascular Disease and Stroke Prevention Program, and other chronic disease prevention program areas. External partners include other state agencies, WIC Local Agency directors, breastfeeding coordinators and peer counselors, TCHMB, DSHS-funded HTB community coalitions, the Texas Breastfeeding Coalition, local breastfeeding coalitions, other state agencies, hospitals, local health departments, local chronic disease prevention coalitions, Texas Baby Cafés, WIC Lactation Resource and Training Centers, designated Healthy Texas Communities, Building Health Texans information network worksites, Texas non-profit milk banks, state health professional organizations, community based MCH and public health organizations, and others. The State Breastfeeding Coordinator and Texas WIC Breastfeeding Coordinator also regularly communicate and coordinate through a variety of venues with national partners and partners in other states. DSHS breastfeeding staff members participate in national workgroups including the *National Collaborative for Advancing the Ten Steps* the *National Collaborative for Advancing Breastfeeding in Child Care*, and the State Breastfeeding Coordinator is the only state public health department representative participating in the United States Breastfeeding Committee's Continuity of Care Advisory Group. Breastfeeding activities are also coordinated with other state agencies through the **Interagency Obesity Council** and the **Early Child Health and Nutrition Interagency Council**.
- **Breastfeeding Research, Monitoring and Surveillance Activities:** DSHS conducts multiple breastfeeding surveillance activities including through WIC programmatic data, Behavior Risk Factors Surveillance System, the Pregnancy Risk Assessment Monitoring System, the Texas Hospital Association Survey, the Texas birth certificate, the Newborn Screening Demographic Form, the biennial Texas WIC Infant Feeding Practices Survey, and others. DSHS has funded breastfeeding research related to breastfeeding experiences and practices in hospitals, worksites, public, and child care settings as well as a Baby-Friendly Hospital cost-analysis. DSHS staff have presented research and surveillance findings in published journal articles and at state and national conferences. More information about these activities is provided in the below listing of DSHS Breastfeeding Data Sources.



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Texas Breastfeeding Data Sources

Texas WIC Infant Feeding Practices Survey (IFPS)

The Texas WIC IFPS is a biennial survey administered through Texas WIC Local Agencies to collect information regarding beliefs, attitudes, practices, and experiences (including experiences related to hospital policies, breastfeeding and working, social support, and breastfeeding in public) surrounding infant feeding among women receiving WIC services. Data are frequently used in state and local agency planning efforts and initiatives. The 2013 state report is available here: www.dshs.state.tx.us/wichd/bf/pdf/IFPSSStateReport.pdf. Findings have also been disseminated nationally in refereed publications and presentations:

- **Stagg J.** Using a Systems Approach for Statewide Improvement in Maternity Practices in Infant Nutrition and Care: The Texas Ten Step Star Achiever Initiative. *AMCHP Annual Conference*. Washington, DC, 2015.
- Vaaler ML, Stagg J, Parks SE, Erickson T, Castrucci BC. Breast-feeding attitudes and behavior among WIC mothers in Texas. *J Nutr Educ Behav*. 2010;42(3 Suppl):S30-8.: <http://www.ncbi.nlm.nih.gov/pubmed/20399407>
- Stagg J, Saxton D, Mirchandani, G, Schiefelbein T, Erickson, T. The role of hospital and workplace support in meeting WIC Participant breastfeeding goals: from the birthplace to the workplace--Texas, 2009. Poster Presentation. *16th Annual Maternal and Child Health Epidemiology Conference*, San Antonio, TX, 2010.
- Schiefelbein E, Mirchandani, G, Stagg, J. Differences in breastfeeding initiation, duration, and exclusivity based on hospital experiences among WIC women in Texas, 2009. Oral Presentation by Schiefelbein E. *16th Annual Maternal and Child Health Epidemiology Conference*, San Antonio, TX, 2010.
- Mirchandani G, Castrucci BC, Springer A, Erickson T, Hovis A. Racial/ethnic differences in initiation and continuation of breastfeeding among WIC participants-the role of acculturation, Texas, 2007. Oral Presentation (Mirchandani G). *14th Annual Maternal and Child Health Epidemiology Conference*, Atlanta, GA, 2008.
- Stagg, J, Gossman, GL, McDermott, C, Brooks, C, Lewis, K, Castrucci, B. Early introduction of complementary foods: Findings from the 2007 Texas survey of WIC participants. Poster Presentation. *14th Annual Maternal and Child Health Epidemiology Conference*, Atlanta, GA, 2008.
- Lewis KL, Castrucci BC, Gossman GL, Mirchandani G, Vaaler ML. Breastfeeding initiation and duration among Texas WIC women: Is there a difference between encouragers and promoters of breastfeeding. Poster Presentation. *14th Annual Maternal and Child Health Epidemiology Conference*, Atlanta, GA, 2008.
- Vaaler ML, Lewis KL, Castrucci BC. Ethnicity, Language, and border residence patterns in attitudes towards breastfeeding. Poster Presentation. *14th Annual Maternal and Child Health Epidemiology Conference*, Atlanta, GA, 2008.

Behavioral Risk Factor Surveillance Survey (BRFSS)

The state of Texas has added breastfeeding specific questions to the BRFSS survey questionnaire in multiple survey years. Questions included intent to breastfeed for pregnant women, prevalence of breastfeeding initiation for women who had at least one child, and questions related to knowledge, attitudes and beliefs regarding breastfeeding, including about breastfeeding policies and environments in birthing facilities, the workplace, and in public. Findings have been disseminated nationally in refereed publications and presentations:



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- Johnson M, Stagg J, Puga E, Wood R. Predictors of Attitudes Towards Breastfeeding Among Texas Residents, Texas Behavioral Risk Factor Surveillance System, 2012. *Texas Public Health Association Annual Education Conference*. Austin, TX, 2015.
- Vaaler ML, Castrucci BC, Parks SE, Clark J, Stagg J, Erickson T. Men's attitudes toward breastfeeding: findings from the 2007 Texas Behavioral Risk Factor Surveillance System. *Matern Child Health J*. 2011 Feb;15(2):148-57. : <http://www.ncbi.nlm.nih.gov/pubmed/?term=Texas+Behavioral+Risk+Factor+Surveillance+System+breastfeeding>
- Clark J, Sullivan K, Lewis K, Stagg J, Erickson T, Castrucci B. Breastfeeding awareness and attitudes of Texans, 2007. Oral Presentation by Clark J. *Maternal and Child Health Epidemiology Conference*, Tampa, FL, 2009.

Pregnancy Risk Assessment Monitoring System (PRAMS)

PRAMS is an on-going state specific population based surveillance system designed to identify and monitor selected maternal experiences before, during and after pregnancy. Infant feeding questions are asked regarding breastfeeding initiation and duration, reasons for non-initiation and/or discontinuation, timing of initiation of complementary foods and hospital policies and practices related to breastfeeding.

U.S. Standard Certificate of Live Birth

Information is collected from the birth facility's medical records and includes a question on whether the newborn is being breastfed at the time of discharge from the birth facility. (Is the infant being breastfed at discharge?: Yes; No; Infant transferred, status unknown).

Newborn Screening Demographic Data

The form includes a feeding-type (breastmilk, formula, or both) variable that can be used for population-based monitoring of any- and exclusive breastfeeding and formula supplementation of the breastfed newborn between 24 - 48 hours of birth and two weeks after birth. These data may be linked with data from the certificate of live birth to derive additional information.

State, regional and hospital specific data have been disseminated to birthing facilities across the state in a report card accompanying this report: Right from the Start: How Texas Hospitals Can Reduce Obesity through Breastfeeding Policies: A Brief on Hospital Policies and Texas Breastfeeding Rates. DSHS. 2011. <http://texastenstep.org/why-texas-ten-step/policies-shape-outcomes/>.

Analyses have been disseminated nationally in refereed abstract presentations:

- Stagg J. Association with adherence to the Ten Steps to Successful breastfeeding and any and exclusive breastfeeding in Texas hospitals. Oral Presentation. *18th Annual Maternal and Child Health Epidemiology (MCH Epi) Conference Cohosted with the 2012 CityMatCH Urban MCH Leadership Conference*. December, 2012.
- Schiefelbein E, Mirchandani G, Sullivan K, Stagg J, Castrucci B. Evaluation of breastfeeding surveillance: Using newborn screening data to monitor breastfeeding initiation—Texas, 2005-2008. Poster Presentation. *Maternal and Child Health Epidemiology Conference*, Tampa, FL, 2009.

WIC Client Data

These “point-in-time” encounter statistics comes from client-level data collected during new mothers’ first visits to WIC clinics. Initiation data are reported by month, and show a steady month-to-month increase in the Texas WIC population’s breastfeeding initiation rate. Obesity and overweight data among WIC enrolled children are also available through this data collection system.

Texas Ten Step Star Achiever Breastfeeding Learning Collaborative QI Data

Aggregated data on hospital practices collected through chart review and reported monthly by hospital teams to NICHQ/DSHS as a component of the Texas Breastfeeding Learning Collaborative. The data have been aggregated across teams to assess progress of the Cohorts toward the Collaborative Aim and measures.

- **Stagg J, Usitanov J.** Star Achievers: Improving and Sustaining Breastfeeding Practices through a State-Wide Learning Collaborative. *Association of Women's Health, Obstetric, and Neonatal Nurses (AHONN) Annual Conference.* Long Beach, CA, 2015.
- **Stagg J, Usitanov J.** Star Achievers: Improving and Sustaining Breastfeeding Practices through a State-Wide Learning Collaborative. *Association of Women's Health, Obstetric, and Neonatal Nurses (AHONN) Annual Conference.* Long Beach, CA, 2015.

Texas Hospital Association Survey

A state added question about number of International Board Certified Lactation Consultants FTEs is included beginning with the 2009 AHA survey. "How many International Board Certified Lactation Consultant (IBCLC) full-time equivalents (FTEs) does your facility have on staff?: # budgeted FTEs; # filled FTEs."

DSHS Studies Related to Breastfeeding:

- **Baby-Friendly macro- and micro-cost analyses** funded by DSHS Office of Title V and Family Health. Findings are nationally disseminated:
 - Project report: http://www.breastfeedingor.org/wp-content/uploads/2012/10/baby_friendly_cost_analysis.pdf
 - DelliFraine J, Langabeer J 2nd, Williams JF, Gong AK, Delgado RI, Gill SL. Cost comparison of baby friendly and non-baby friendly hospitals in the U.S. *Pediatrics.* 2011;127(4):e989-94.: <http://www.ncbi.nlm.nih.gov/pubmed/21422086>
 - DelliFraine J, Langabeer J 2nd, Delgado R, Williams JF, Gong A. A transition strategy for becoming a baby-friendly hospital: exploring the costs, benefits, and challenges. *Breastfeed Med.* 2013 Apr;8:170-5.: <http://www.ncbi.nlm.nih.gov/pubmed/23249129>
- **The Brownsville-Matamoros Sister City Project for Women's Health**
Findings are disseminated nationally in refereed journals and presentations:
 - Castrucci BC et al. Attempted breastfeeding before hospital discharge on both sides of the US-Mexico border, 2005: The Brownsville-Matamoros Sister City Project for Women's Health. *Prev Chronic Dis.* 2008;5(4):A117.: <http://www.ncbi.nlm.nih.gov/pubmed/18793505>
 - Casstrucci B et al. Attempted Breastfeeding prior to hospital discharge on both sides of the U.S.- Mexico border: Findings from the Brownsville/Matamoros Sister City Project. *14th Annual Maternal and Child Health Epidemiology Conference,* Atlanta, GA, 2008.
- **Social marking research and formative assessment studies**, such as these examples:
 - African American Breastfeeding Campaign—The Campaign Pilot Program (see reports of qualitative research): http://www.dshs.state.tx.us/wichd/bf/african_americanbf.shtm
Information also disseminated in a national presentation of a refereed abstract:
 - Sayegh A, Lewis K, Gossman G, Erickson E, Castrucci B. The effects of a breastfeeding outreach campaign on rural adolescent African American women. Oral Presentation by Schifelbein E. *13th Annual Maternal and Child Health Epidemiology Conference,* Atlanta, GA, 2007.

- Breastfeeding Disparities Impacting African American & Hispanic Women (2014). When final, the report will be posted: <http://www.dshs.state.tx.us/wichd/bf/surveysreports.aspx>
- Breastfeeding Peer Counselor Evaluation, 2011. <http://www.dshs.state.tx.us/wichd/bf/surveysreports.aspx>
- Healthy Eating Habits Baseline Study for State Nutrition Action Plan: <http://www.dshs.state.tx.us/wichd/nut/pdf/HealthyEatingHabitsBaselineStudyForSNAP.pdf>
- Mother-Friendly Worksite Policy Initiative formative and summative assessment reports: <http://www.texasmotherfriendly.org/public-health-partners>. Information has also been disseminated in presentations including national presentations of refereed abstracts:
 - AMCHP
 - Stagg J. Partnership and Systems Building for Breastfeeding Support: Lessons Learned from the Texas Mother-Friendly Worksite Policy Initiative. Oral Presentation. *USBC Fifth National Breastfeeding Coalitions Conference*. August, 2014.
 - Stagg J. Systems building for breastfeeding support: Lessons learned from the Texas Mother-Friendly Worksite Policy Initiative. Poster Presentation. *AMCHP Annual Conference*. Washington, DC, 2014.
 - Stagg J, Roffidal-Blanco, C. Leading, engaging, and transforming businesses for better health. Poster Presentation. *Weight of the Nation*. Washington, DC, 2012.
- Public Breastfeeding: A Texas Study of Attitudes and Actions in the General Public and Business Community. 2006. <http://www.dshs.state.tx.us/wichd/bf/surveysreports.aspx>
- Understanding Low Breastfeeding Initiation Rate among San Antonio WIC Client, 2006. <http://www.dshs.state.tx.us/wichd/bf/surveysreports.aspx>
- Texas Ten Step Evaluation, 2008. <http://www.dshs.state.tx.us/wichd/bf/surveysreports.aspx>
- **Texas Infant Sleep Study** (2009) included questions about infant feeding practices.
- **Perinatal Periods of Risk Analyses** include analyses of suboptimal breastfeeding as a risk factor/correlate for infant mortality: <http://www.dshs.state.tx.us/healthytexasbabies/data.aspx>

National Data Sources Used by DSHS:

CDC Report Card

An annual report including process and outcome measures that CDC has determined to be key indicators of state and national breastfeeding support.

<http://www.cdc.gov/breastfeeding/data/reportcard.htm>

FDA Infant Feeding Practices Survey II

The Food and Drug Administration (FDA) and Centers for Disease Control and Prevention, in collaboration with other federal agencies, conducted a longitudinal consumer-based research study from 2005-2007. This study collected information from mothers using a series of questionnaires administered from the woman's seventh month of pregnancy through the infant's first year of life. <http://www.cdc.gov/ifps/>

National Immunization Survey (NIS)

The NIS is a national survey of caregivers of children 19-35 months of age. National and state specific information is available at: http://www.cdc.gov/breastfeeding/data/NIS_data/index.htm



Breastfeeding Programs
Division of Family and Community Health Services
Office of Title V and Family Health

Maternity Practices in Infant Nutrition and Care (mPINC)

The mPINC is CDC's biennial systematic data collection system for the continued assessment of nationwide breastfeeding-related maternity care practices. The survey is mailed to hospitals and birth centers with the request that the survey be completed by the person most knowledgeable of the facility's infant feeding and maternity practices. <http://www.cdc.gov/breastfeeding/data/mpinc/index.htm>

National Survey of Children's Health

This survey, sponsored by the Maternal and Child Health Bureau of the Health Resources and Services Administration, examines the physical and emotional health of children ages 0-17 years.

Findings of an analysis were disseminated in a national presentation of a refereed abstract:

- Almazora, N, Saxton D, Vaaler M, Jones J, Sullivan K, Clark J, Schiefelbein E, Stagg J. The Influence of Education and Family Structure on the Risk and Timing of Breastfeeding Cessation: Findings from the National Survey of Children's Health, 2007. Oral Presentation by Almazora, N. *16th Annual Maternal and Child Health Epidemiology Conference*, San Antonio, TX, 2010.

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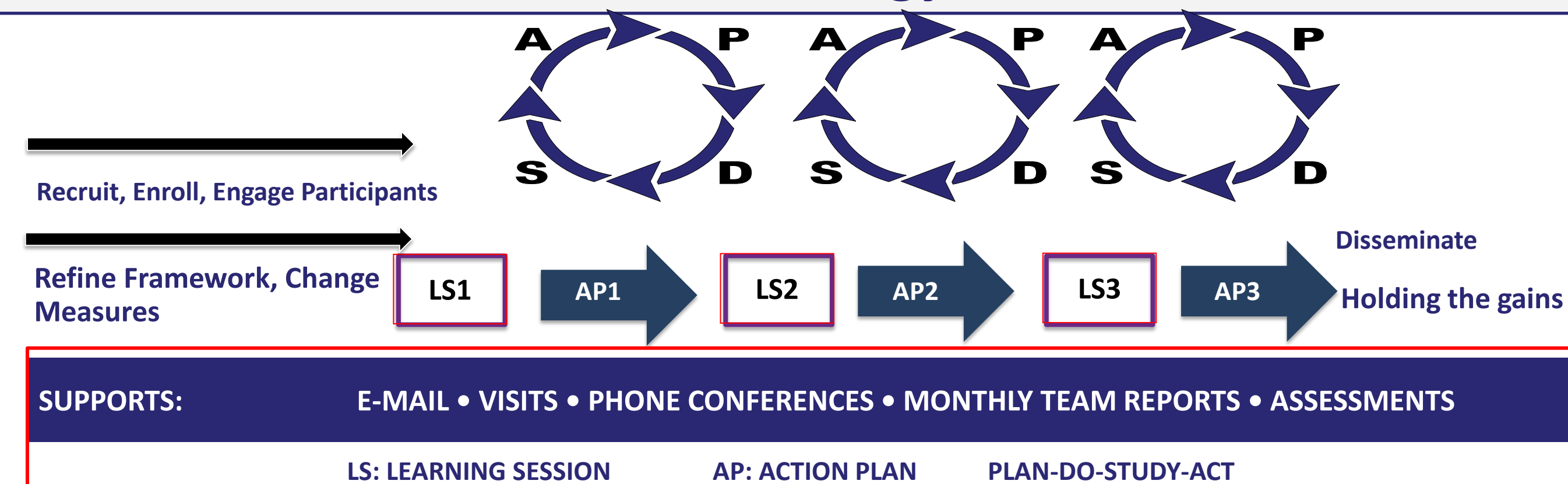
Star Achievers: Improving and Sustaining Breastfeeding Practices through a State-Wide Learning Collaborative



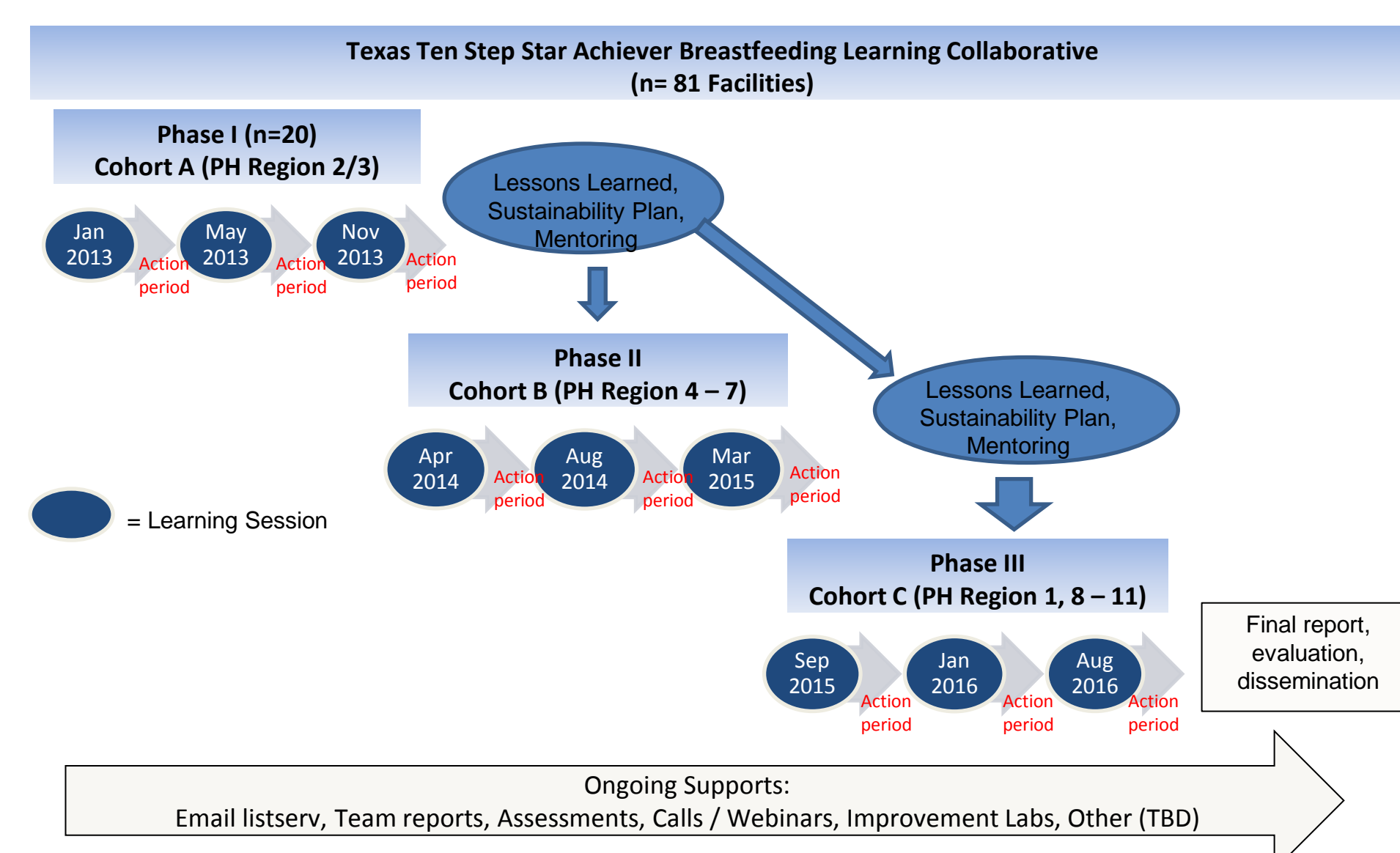
Julie Stagg, MSN, RN, IBCLC, RLC, Office of Title V & Family Health, Texas Department of State Health Services, Austin, TX and **Jennifer Ustianov, MS, BSN, RN, IBCLC**, Programs Department-Perinatal, National Institute for Children's Health Quality (NICHQ), Boston, MA

Background and Context: Though most Texas mothers choose to breastfeed, only 46% of newborns exclusively breastfed at hospital discharge. The Texas Breastfeeding Learning Collaborative (TBLC) aims to increase the average aggregate performance for exclusive breastfeeding throughout the hospital stay (percent of newborns fed only breast milk during the newborn's entire hospitalization) to $\geq 65\%$ by June 2017 among participating facilities through three sequential regional Quality Improvement (QI) learning collaborative cohorts of up to 81 birthing facilities. The WHO/UNICEF Ten Steps to Successful Breastfeeding (Ten Steps) is a bundle of evidence-based practices demonstrated to result in improvements in hospital delivery environments and breastfeeding outcomes. The TBLC, funded by DSHS and coordinated by NICHQ, utilizes Institute for Healthcare Improvement's Breakthrough Series (BTS) and Model for Improvement (MFI) to facilitate Ten Steps uptake. Cohorts A and B include 41 hospital improvement teams in two geographic regions cumulatively accounting for 99,000 births (26% of Texas births and 2.5% U.S. births) annually. Participating facilities include a diverse mix of urban/rural, large/mid-sized/small, and public, private, and academic center settings at varying stages of Ten Step implementation. Recruitment is currently underway for Cohort C.

Methodology

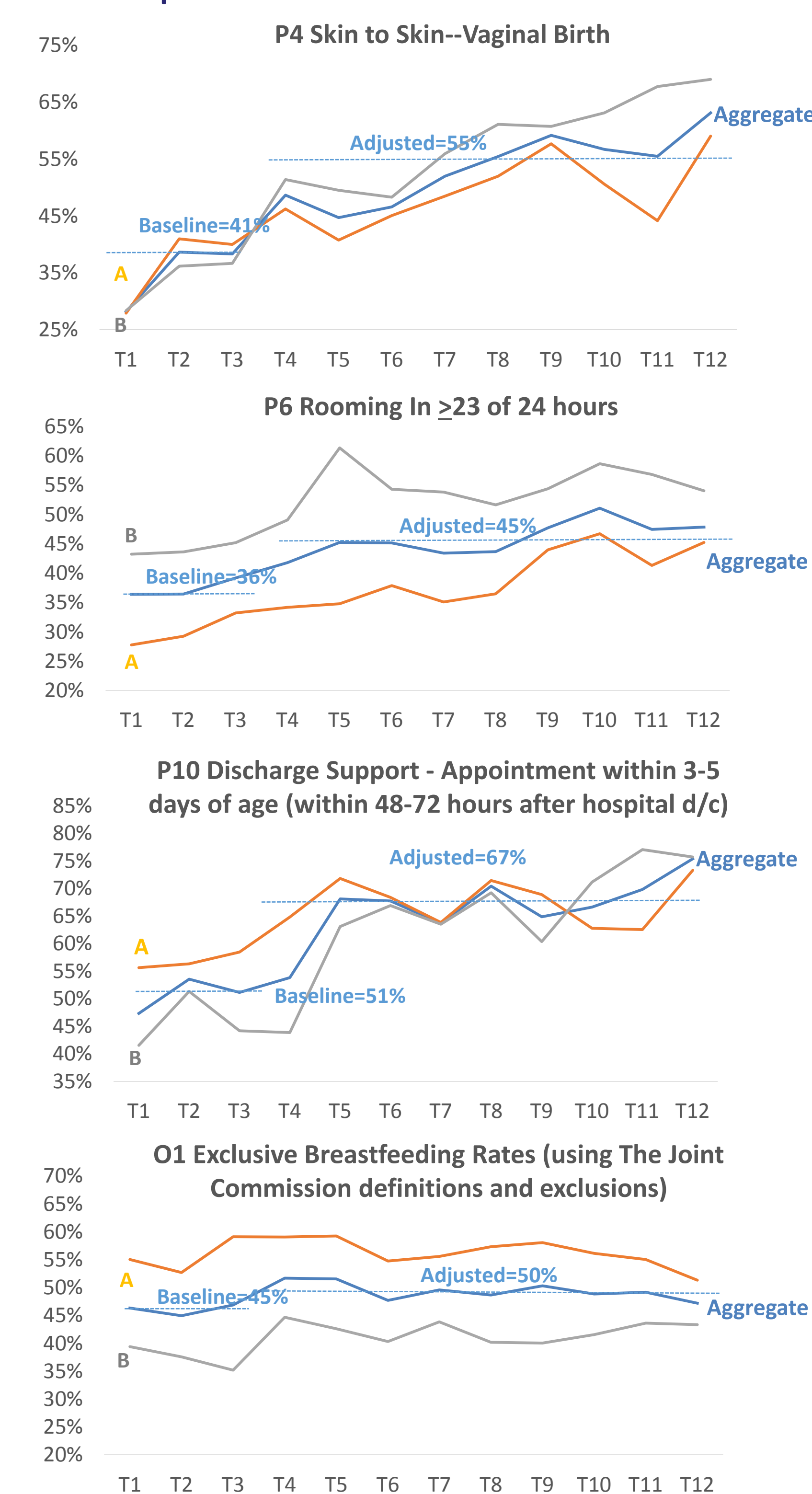


- The TBLC utilizes the BTS, MFI and complementary supports to facilitate implementation of the Ten Steps within participating facilities (see diagram above).
- Twenty hospital teams (Cohort A) were guided through a BTS Learning Collaborative employing components including: data collection; self-assessment surveys; discussion forums; support calls; leadership events; face-to-face Learning Sessions (LS); and virtual Action Periods (AP) calls.
- Each team includes multi-disciplinary hospital leaders, mother representatives to “keep it real” and a WIC representative to foster community connections. Hospital leaders and mothers meet regularly in their own “Communities of Practice” to share successes and challenges.
- Community partners are engaged to build bridges to outpatient services.
- Cohort B builds upon Cohort A successes and collective learning is spread to hospital teams through cross-cohort collaborative mentorship and continuous quality improvement within the project structure (see diagram below).



Results

The following run charts show aggregate improvements of TBLC Cohorts A & B through April 2015 on selected measures.



Conclusion and Implications for Nursing Practice

Multidisciplinary teams engaged in a quality improvement learning collaborative to accelerate adaptation of recommended maternity practices across diverse hospital settings have achieved rapid improvements in both process and outcome measures.

- Improvement on key process measures of the Ten Steps to Successful Breastfeeding including prenatal breastfeeding education, skin to skin, assistance and support with breastfeeding, feeding on cue, education on pacifier and/or artificial nipple use, and linkages to community support.
- Progress on outcome measures for any- and exclusive breastfeeding and of reduction in formula supplementation among breastfed newborns.

- Improvement strategies and lessons learned are transferable to other projects and settings.
- Hospital to hospital mentorship is important to hospital progress in implementing the Ten Steps.
- Leadership track with hospital leaders allows for the sharing of successes and challenges with Ten Steps implementation.

Predictors of Attitudes Towards Breastfeeding Among Texas Residents



Texas Behavioral Risk Factor Surveillance System, 2012



Mihaela Johnson, PhD; Julie Stagg, MSN, RN, IBCLC, RLC; Ella Puga, MPH; and Rebecca A. Wood, MSHP

Texas Department of State Health Services

Background

- The benefits of breastfeeding versus formula or mixed breast-milk/formula feeding for infants' and mothers' health have been well documented. Babies who are sub-optimally breastfed are at increased risk for developing diarrhea, ear infections, type 2 diabetes, asthma, and childhood obesity.¹ Sub-optimal breastfeeding also increases the risk for breast cancer, ovarian cancer, type 2 diabetes and cardiovascular disease in mothers.²
- Though most women choose to breastfeed, few will breastfeed according to medical recommendations.⁴ Studies document that a majority of mothers who stop breastfeeding report that they did not breastfeed for as long as they wanted.⁵
- Nevertheless, a mother's decision to breastfeed her child can be greatly influenced by other people's attitudes toward breastfeeding.⁶
- Understanding and addressing these attitudes may help improve initiation and duration of breastfeeding.

Objectives

- To provide an overview on attitudes on infant feeding decisions.
- To describe demographic-related characteristics that may affect attitudes towards breastfeeding among Texas residents.

Methods

- The Texas Behavioral Risk Factor Surveillance Survey (BRFSS) is a statewide landline and cellular telephone survey of the non-institutionalized civilian Texas population.
- Seven questions about Breastfeeding Awareness and one question about Childhood Breastfeeding were asked on one half of the 2012 Texas BRFSS.
- A design weight was calculated to adjust for the probability of selection and a method called iterative proportional fitting (raking) was used to modify the design weight to adjust for the distribution of the population by 12 margins (age group by sex, race/ethnicity, education, marital status, tenure (own or rent home), sex by race/ethnicity, age group by race/ethnicity, phone ownership, region, region by age group, region by sex, and region by race/ethnicity).
- Rates and 95% confidence intervals were calculated for responses to each of the eight questions for totals and also by demographics (sex, age group, race/ethnicity, education, income group, health care coverage, marital status, and geographic stratification.)

Survey Questions

Breastfeeding Awareness Questions

- Question 1:** What is your personal reaction when you see a woman breastfeeding in public? (*Possible responses are read and respondents could choose more than one answer.*)
Questions 2 through 6 are about peoples' attitudes toward breastfeeding. Respondents are asked to agree slightly or strongly, or disagree slightly or strongly.
- Question 2:** A woman should be able to breastfeed her baby in public even if it makes another person uncomfortable.
- Question 3:** In general, people in your community think it is important for women to breastfeed.
- Question 4:** Some formulas are just as healthy for babies as breast milk.
- Question 5:** Hospitals should not advertise baby formula for formula manufacturers.
- Question 6:** Breastfeeding saves money in health care costs.
- Question 7:** When it comes to infant feeding, healthcare providers should promote: only breastfeeding, only formula feeding, both breast and formula feeding, or health care providers do not have a role in infant feeding decisions.

Childhood Breastfeeding Question

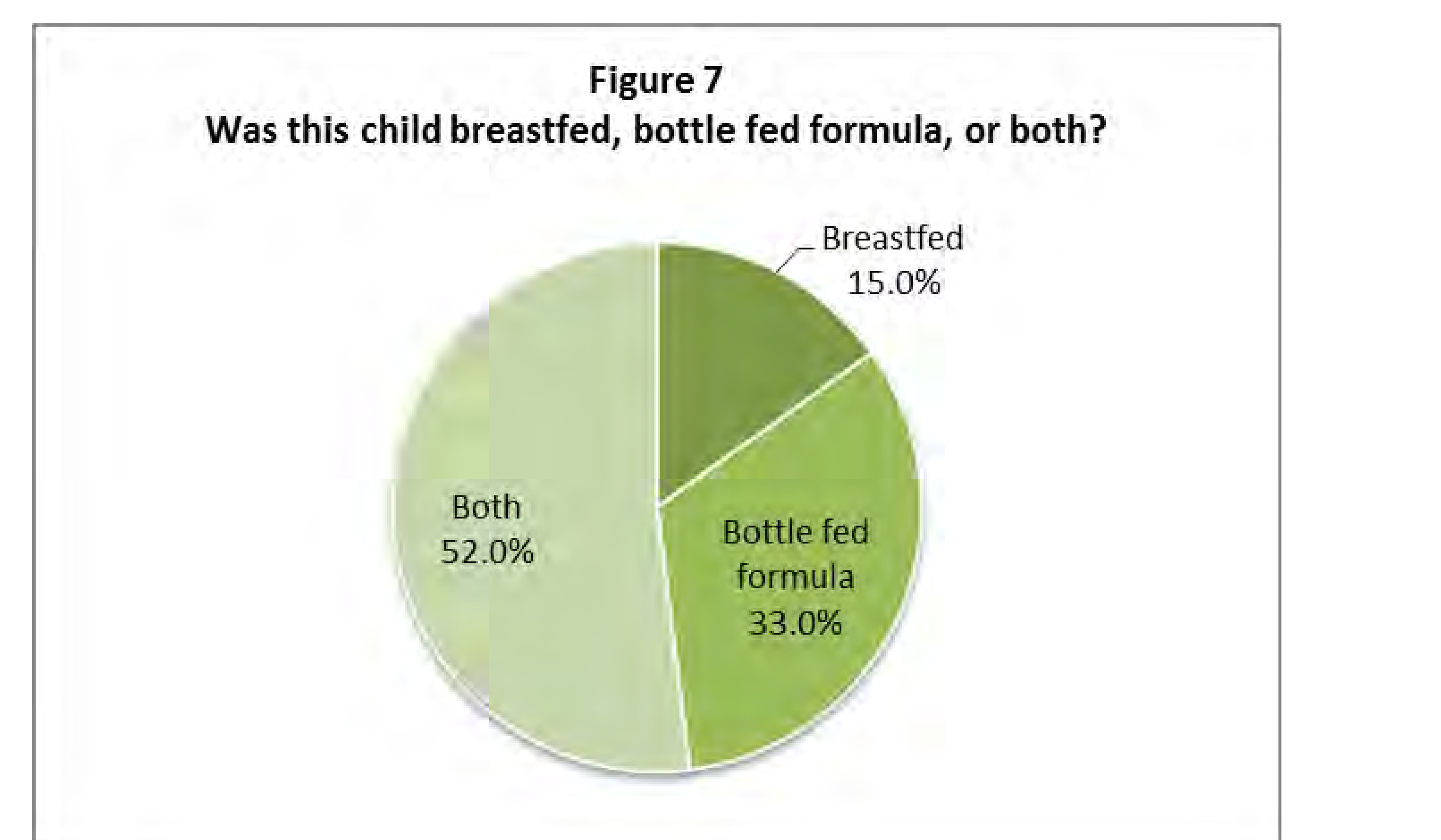
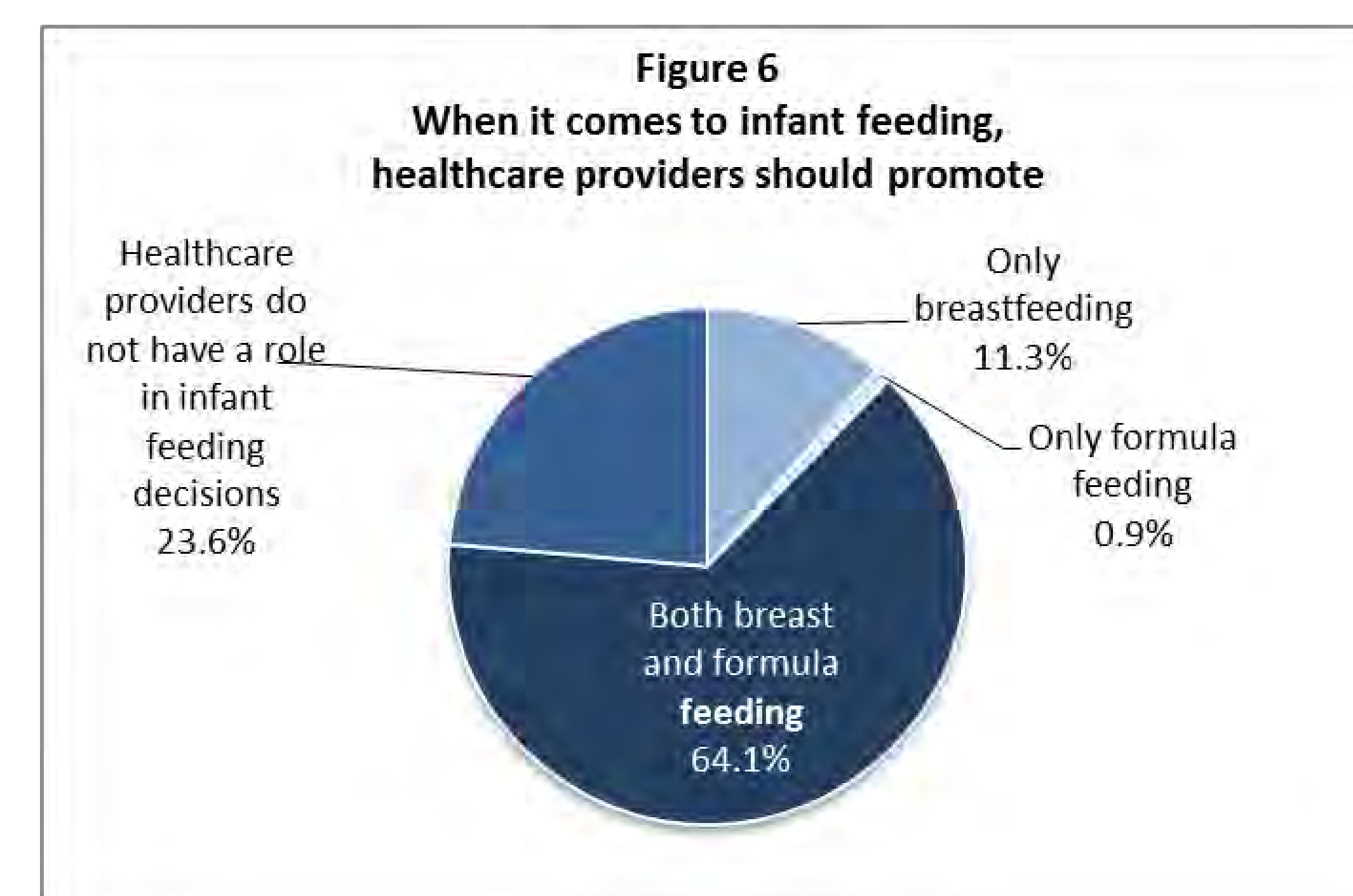
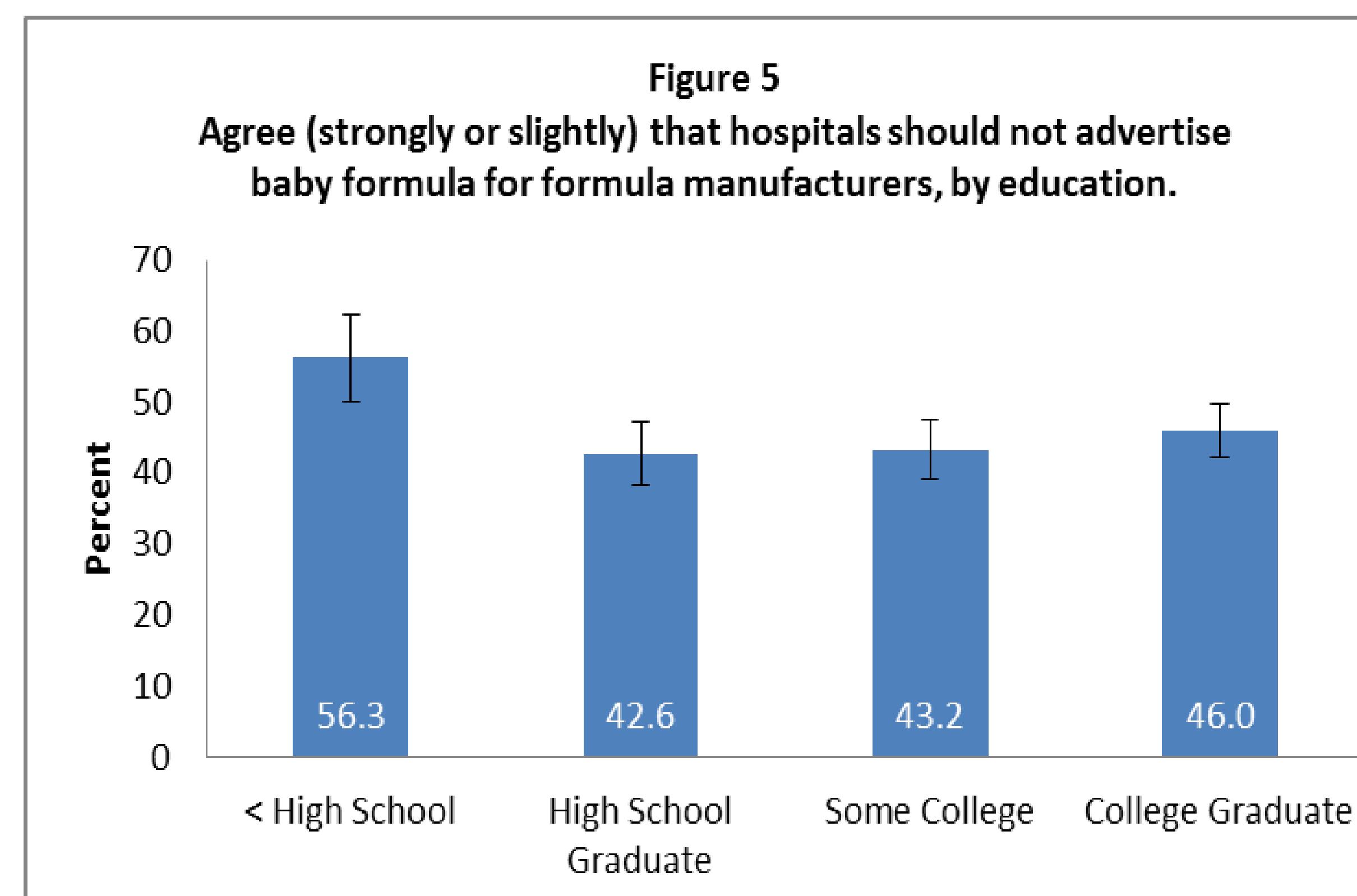
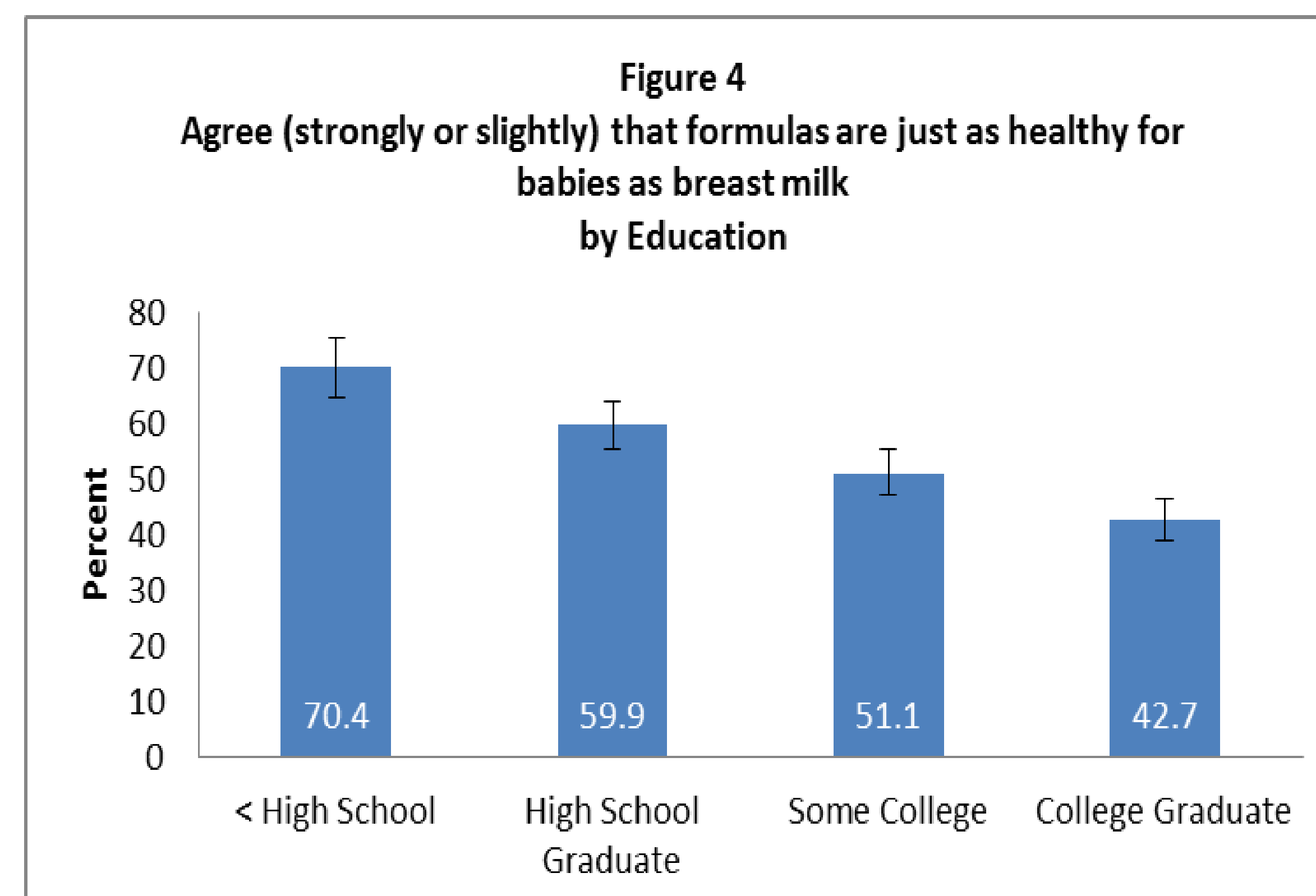
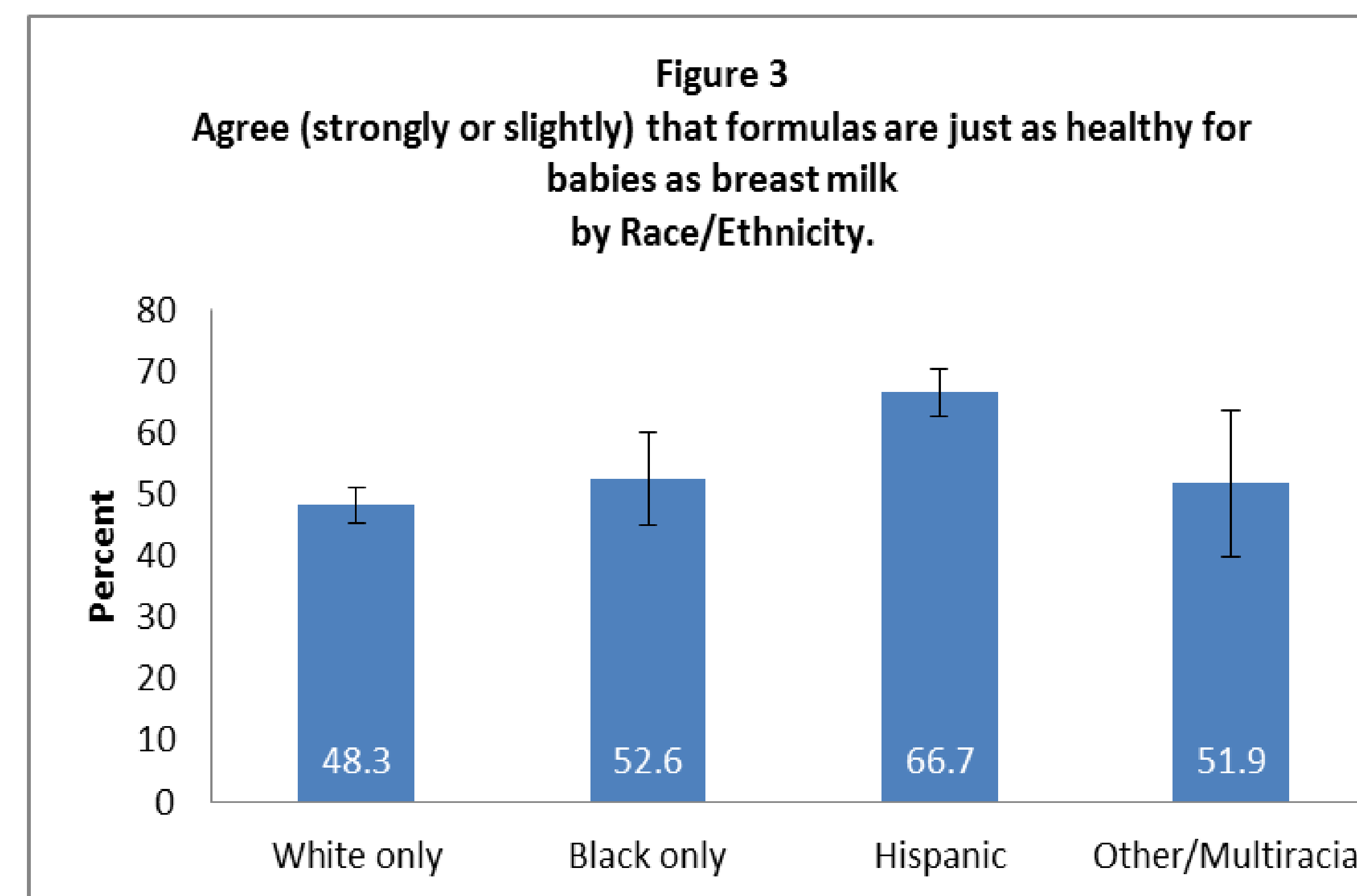
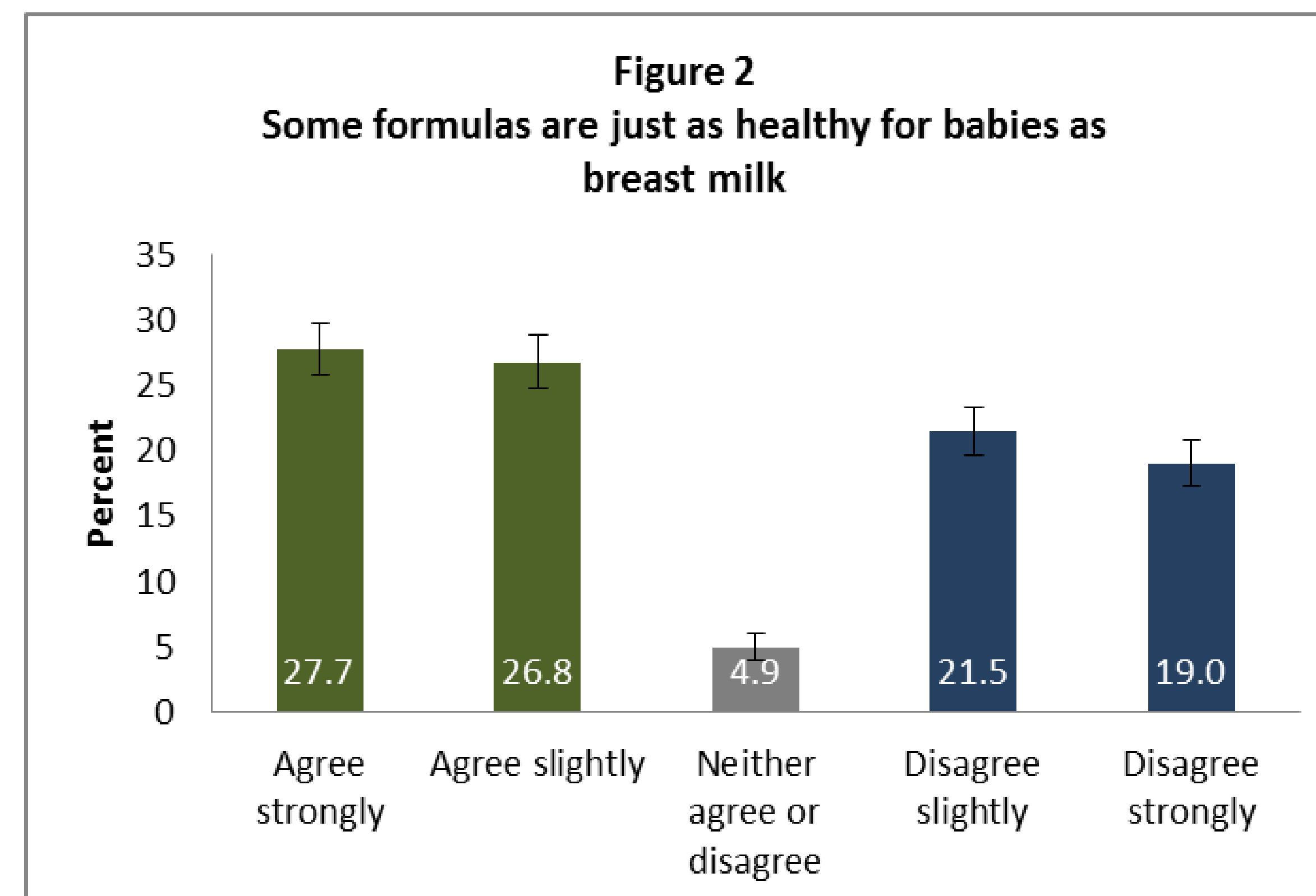
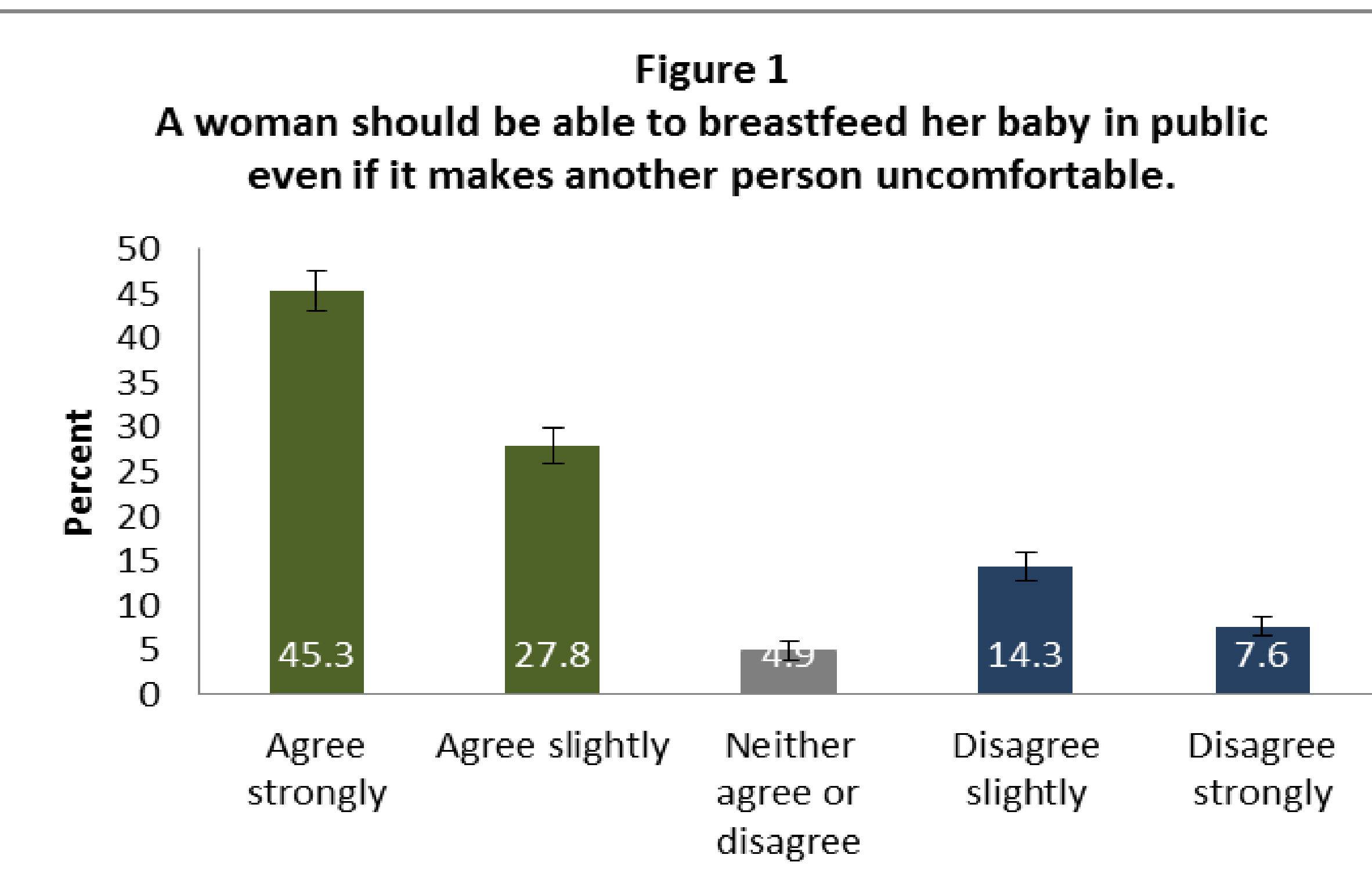
- Question 1:** Was this child breastfed, bottle fed or both?

Contact Information

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Results

	%	95% Confidence Interval
I think it is very positive	15.8	(14.2 - 17.5)
I think it is normal and appropriate	19.6	(17.9 - 21.4)
It does not bother me	35.4	(33.3 - 37.5)
It doesn't bother me if she covers herself up or is discreet	21.7	(20.0 - 23.4)
I do not think it is appropriate	1.8	(1.3 - 2.4)
I think she should go to the nearest restroom	1.3	(.9 - 2.0)
I wish there was a more appropriate and private place for women to breastfeed other than a restroom	4.2	(3.3 - 5.2)
I wish a manager security guard would make the woman leave the location	0.3	(.2 - .7)



Results

- This study found that the majority of Texans (92.5% overall) have a positive attitude towards breastfeeding in public, with 15.8% thinking it is very positive, 19.6% thinking it is normal and appropriate, 35.4% thinking it does not bother them, and 21.7% thinking it does not bother them if the woman covers herself or is discreet (Table 1).
- Most Texans agree, either slightly or strongly (72.8%), that a woman should be able to breastfeed her baby in public even if it makes another person uncomfortable (Figure 1). The rate of agreement was significantly higher for females than for males and significantly higher for middle age groups (30 to 44 and 45 to 64) than for younger (18 to 24) and older age groups (65 and older).
- A majority of Texans also agree (85.5%) that people in their community think it is important for women to breastfeed. Statistically significant differences were seen between married (85.3%) and unmarried (80.6%) Texans and between those with children in the household (87.2%) and those without children in the household (80.0%). The rate of agreement was significantly lower than the state rate for Texans in Public Health Region 8 (74.9%) and significantly higher than the state rate for Texans in Public Health Region 10 (93.5%).
- Just over half (54.5%) of Texans, however, believe some formulas are just as healthy as breast milk (Figure 2) with significantly higher rates for females (58.9%) than males (50.3%), and significantly higher rates for Hispanics than White only or Black only (Figure 3). Agreement was highest for the lowest education group and lowest for the highest education group with significant differences between each group (Figure 4). Agreement was also higher for those with a household income of less than \$25,000 (63.1%) than those with household incomes between \$25,000 to less than \$50,000 (53.5%) and higher for those with children in the household (60.0%) than those without children in the household (51.5%). Texans in Public Health Region 7 had a significant lower level of agreement (45.7%) than the state.
- Just under half of Texans agree (45.9%) that hospitals should not advertise baby formula for formula manufacturers. Hispanic Texans had significant higher rate of agreement at 51.5% compared to Black Texans at 36.7%. Agreement of Texans with less than a high school education were significantly higher in than Texans in other education groups (Figure 5).
- Most Texans (85.1%) believe that breastfeeding saves money in health care costs with females (88.4%) having a significant higher rate of agreement than males (81.5%) and married Texans (88.2%) having a significant higher rate of agreement than unmarried Texans (81.9%).
- Almost a quarter (23.6%) of respondents reported that health professionals should not be involved in infant feeding decisions (Figure 6).
- Texans with a child under the age of 18 still living in the home reported that 15.0% were breastfed, 33.0% were bottle fed formula, and 52.0% were both breastfed and bottle fed formula (Figure 7).

Conclusions

- It is encouraging to note that most respondents held positive attitudes towards breastfeeding, however some still have misconceptions about the benefits of breast milk versus formula and hospital and health care professional's role in promoting breastfeeding.
- Obstetricians play a major role in guiding the infant feeding choices of their pregnant patients³ and support from health professionals could have a significant impact on breastfeeding initiation.
- At the same time, health experts say formula samples in hospitals can influence women away from breastfeeding and hospitals shouldn't be a marketing avenue for formula companies.
- Health programs should continue to emphasize the benefits of breast milk, and aim to improve people's understanding of health care providers' role in breastfeeding decisions and address the potential implications of formula marketing in hospitals.

Sources

¹ US Department of Health and Human Services. (2011). The Surgeon General's call to action to support breastfeeding. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General.
² Schwartz EB, Ray RM, Stuebe AM, Allison MA, et al. (2009). Duration and lactation of risk factors for maternal Cardiovascular disease. *Obstetrics and Gynecology*. 113(5):974-982.
³ Bartick, M., Stuebe, A. et al. Cost Analysis of Maternal Disease Associated with Suboptimal Breastfeeding. *Obstetrics & Gynecology*, 2013.
⁴ Lawrence, RA. (2000). Breastfeeding: Benefits, Risks and Alternatives. *Current Opinions in Obstetrics and Gynecology*. 12:519-24.
⁵ National Immunization Survey, Centers for Disease Control and Prevention, Department of Health and Human Services.
⁶ Odom E, Li R, Scanlon KS, Perrine C, Grummer-Strawn LM. Reasons for earlier than desired cessation of breastfeeding. *Pediatrics*. 2013;131:e726-3732.
⁷ Odom E, Li R, Scanlon KS, Perrine C, Grummer-Strawn LM. Association of family and health care provider opinion on infant feeding with mother's breastfeeding decision. *Journal of the Academy of Nutrition and Dietetics*. 2013; 114(8):1203-7.

Using a Systems Approach for Statewide Improvement in Maternity Practices in Infant Nutrition and Care: The Texas Ten Step Star Achiever Initiative

Julie Stagg MSN, RN, IBCLC, RLC¹, Tracy Erickson RD, IBCLC, RLC², Veronica Hendrix LVN, IBCLC, RLC²

¹Texas Department of State Health Services, Division of Family and Community Health Services, Office of Title V and Family Health, ²Texas Department of State Health Services, Division of Family and Community Health Services, Nutrition Services Section



Background and context: While the vast majority of Texas mothers choose to breastfeed, fewer than half will breastfeed for as long as they want to. More than 42% of Texas' healthy, term singleton newborns will be fed formula by the second day of life, compromising lactation and increasing risk of poor health outcomes. Only 24% of WIC moms report asking for the formula their babies were fed while in the hospital. Implementation of a bundle of evidence-based maternity practices (Ten Steps) is demonstrated to improve breastfeeding outcomes across all races, ethnicities and income levels, to increase continuity and, ultimately, to result in improved health outcomes. DSHS developed the Texas Ten Step Star Achiever Initiative to accelerate uptake of Ten Steps implementation to increase exclusive breastfeeding prevalence, reduce in-hospital formula supplementation, increase equity, and improve quality using team-based rapid cycle improvement and community engagement.

DSHS Comprehensive Program of Breastfeeding Support

All state breastfeeding activities are planned and implemented within the context of a comprehensive, synergistic program of breastfeeding support. Activities are coordinated with oversight by members of the DSHS Intra-agency Infant Feeding Workgroup.



From Pre-Contemplation to Full Integration of Ten Steps to Successful Breastfeeding

DSHS offers a continuum of initiatives to support maternity practice improvement in infant nutrition and care



Right from the Start Campaign

- Targets facility decision makers to increase awareness and inspire action.
- Presents evidence and hospital data to demonstrate that facility policies and practices can have a profound impact on breastfeeding outcomes.
- Introduces audience to Ten Steps to Successful Breastfeeding
- Encourages incremental practice improvements

Breastfeeding trainings and resources (live and online training offerings, print and electronic materials, websites, smart phone app, technical assistance, and coordination with state and local community service providers) facilitates uptake of recommended practices.

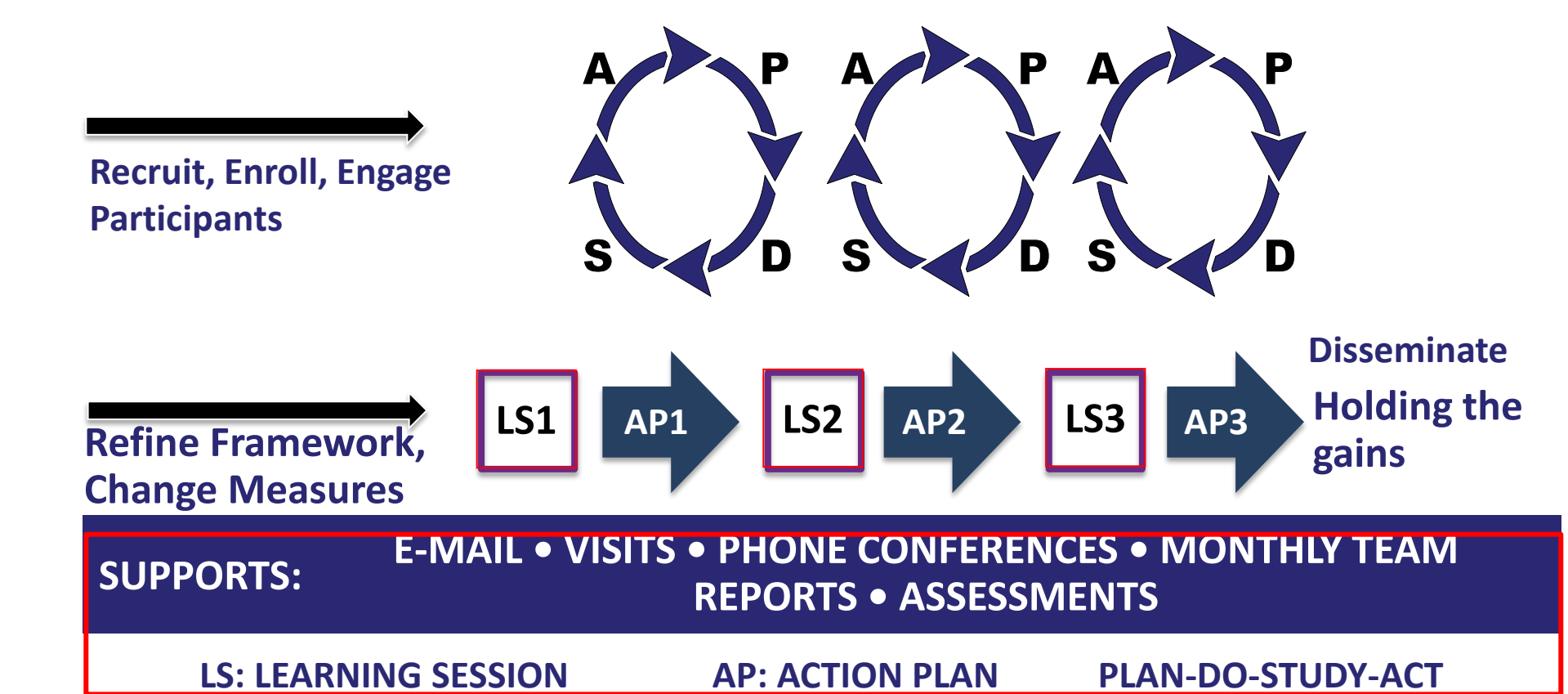
The **Texas Ten Step Program** (TTS) recognizes achievement towards the Ten Steps.

- Designation awarded to birthing facilities that address ≥ 85 percent of the Ten Steps and are a designated Texas Mother Friendly Worksite
- Currently 108 designated Texas Ten Step Facilities (a 50% increase from 74 facilities EOY FY09)

The **TTS Star Achiever Initiative** aims to improve infant feeding outcomes and decrease breastfeeding disparities through accelerated integration of the Ten Steps and increased continuity of care from the hospital to the community. the initiative offers:

- The Texas Breastfeeding Learning Collaborative (via contract with NICHQ) to facilitate rapid cycle quality improvement
- training, tools, and ongoing technical assistance for facilities to improve policies and processes that impact infant nutrition & care
- Community partner meetings to facilitate systems development for coordinated continuity
- Up to 81 facilities will participate across three cohorts from 2012-2016.

Texas Ten Step Star Achiever Initiative



- Three geographically distinct, sequential cohorts of ≥ 20 hospital teams plan small tests of rapid cycle change for improvement toward the Ten Steps, track data, and share experiences and learning.
- Each team includes multi-disciplinary hospital leaders, mother representatives to “keep it real” and a WIC representative to foster community connections.
- Mentors from previous cohorts spread learning and remain engaged in leading change.
- Individualized technical assistance (TA), training, TA site visits, expert faculty, a comprehensive QI toolkit, and interactive communication platforms are available to teams as they work to achieve their facility's and the collaborative Aims to improve practices and outcomes.
- Community partners are engaged to build bridges to outpatient services.
- Teams achieve demonstrated improvements across all process and outcome measures.

Selected process and outcome improvements for Cohort A (20 hospitals in North Texas) over 18 mo period active collaborative period	$\geq 10,000$ more infants skin-to-skin	$\geq 8,000$ more infants rooming-in	$\geq 1,400$ more infants exclusively breastfed throughout entire hospital stay
	Baseline median: 34%	Baseline median: 26%	Baseline median: 53%
	Adjusted median: 55%	Adjusted median: 43%	Adjusted median: 56%

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www.TexasTenStep.org

Systems Building for Breastfeeding Support: Lessons Learned from the Texas Mother-Friendly Worksite Policy Initiative

Julie Stagg, MSN, RN, IBCLC, RLC

Texas Department of State Health Services • Office of Title V & Family Health



Background and context: Breastfeeding is a national public health priority. Recent studies estimate that suboptimal breastfeeding in the U.S. results in an annual loss of >\$31 billion from excess maternal and child health care costs and lost productivity. Healthy People 2020 and the Surgeon General's Call to Action to Support Breastfeeding call for employers to implement comprehensive worksite lactation support programs. The Texas Mother-Friendly Worksite (MFW) Program was established in 1995 to recognize employers with worksite lactation support policies. Department of State Health Services was awarded a Communities Putting Prevention to Work-Special High Impact Initiative grant to increase reach and impact of the MFW Program. From February 2010 to August 2012, the MFW Policy Initiative used a social marketing approach to bring the MFW Program to full scale. The Fair Labor Standards Act was amended in March 2010 to include the "Reasonable Break Time for Nursing Mothers" provision.

UNDERSTANDING AUDIENCES

Return to work is the leading barrier to breastfeeding among working mothers



61% moms with children under 3 years of age are in the U.S. labor force

34% TX working moms' main reason for not breastfeeding was need to return to work

38% TX working moms' main reason for weaning was related to work

62% TX working moms did not meet their own breastfeeding goals

Key Informant Interviews & Focus Groups

Working moms

- Have many challenges but very few "asks"
- Perceive job insecurity/scrutiny after maternity leave
- Are often afraid to ask for time and space to pump
- Are unaware of FLSA requirement and are only somewhat reassured by knowledge of the law
- Think Mother-Friendly worksite policies would give them confidence to ask their employers for support

Employers

- Value their employees & want to "do the right thing"
- Are unaware of specific needs of breastfeeding employees but believe needs are being met
- Do not hear from their employees and so do not perceive a need for Mother-Friendly policies
- Want customizable turn-key implementation tools

Outreach partners

- Want customizable, streamlined turn-key outreach tools and structured support.

EXISTING SUPPORTING STRUCTURES

Texas Mother-Friendly Law/Program

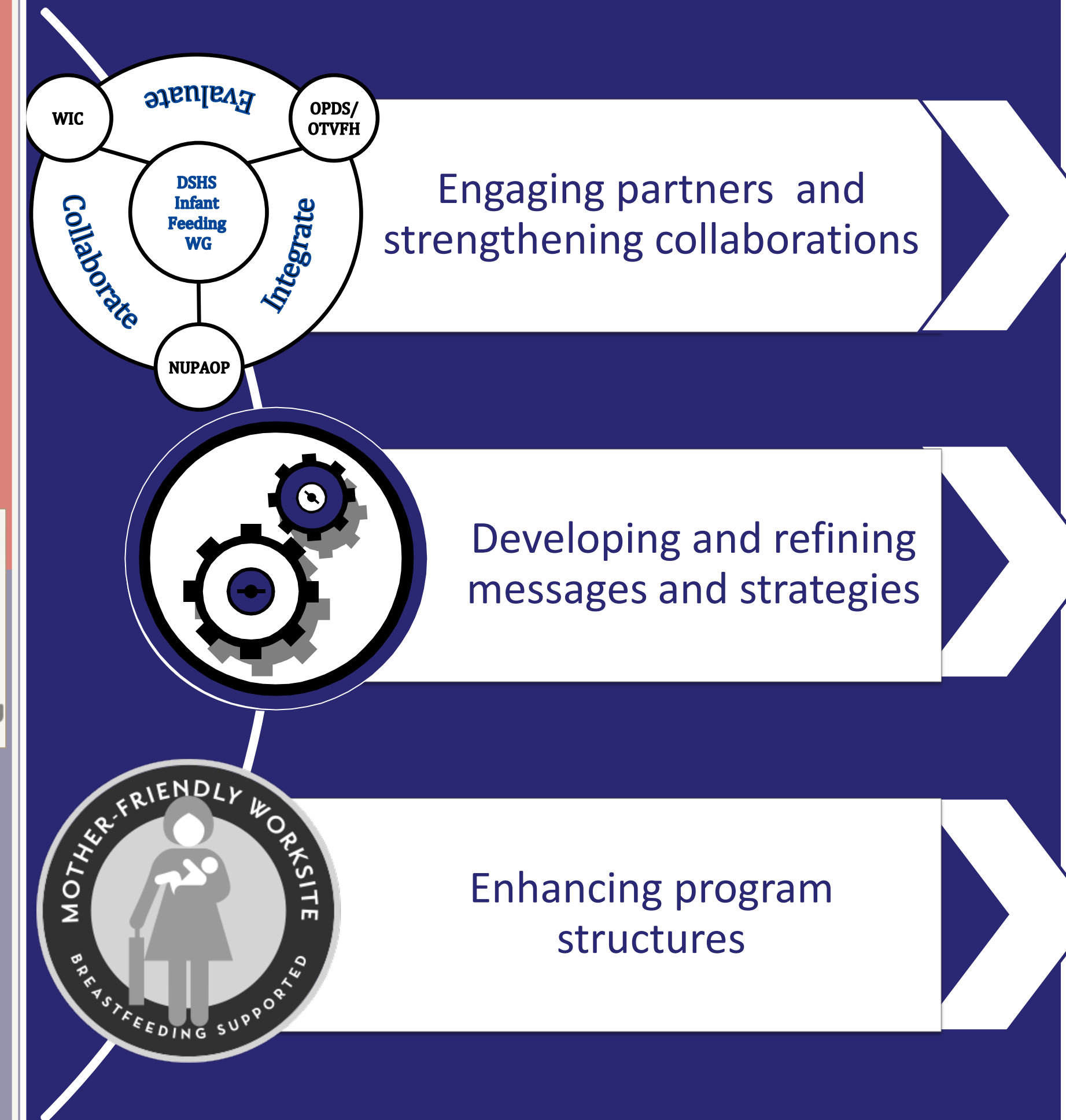
Internal Partnerships and Strategic Planning

CDC CPPW Special Funding
Communities Putting Prevention to Work

Federal Initiatives (BCFB, HP2020, SGCTA)

Federal FLSA "Reasonable Break Time" Policy

BUILDING CAPACITY AND RAMPING UP



State Agency Wellness Program & Advisory Council

WIC Local Agencies & Texas Association of Local WIC Directors

Regional and Local Health Services

DSHS Texas Ten Step Program

Mother-Friendly Employer TA Pilot Program

State agencies, WIC Local Agencies, Local Public Health Departments, and Public Hospital Districts tested technical assistance tools & processes while developing Mother-Friendly policies



Marketing and Media Strategies

- Print, Outdoor, and Online Media
- Direct "Business Influencer" Campaign
- "Role Model Employer" Campaign
- MFW Outreach Partner Campaign
- Employment/Facilities Mgmt. Meetings and Expos

↑ Awareness

More than 200,000,000 impressions

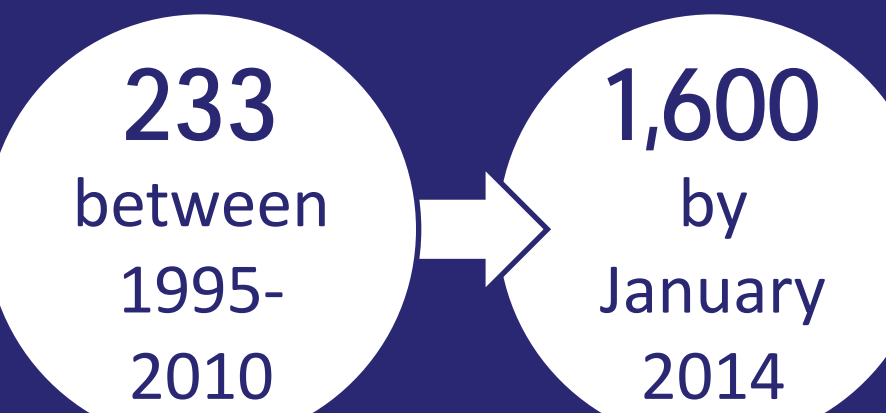
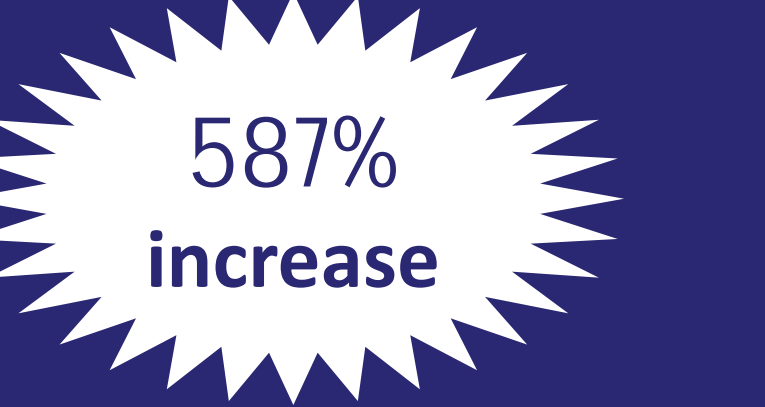
Program Enhancements

- 3-tiered designation criteria & FLSA minimum standards are formalized in Texas Administrative Code
- Employer Toolkit, Outreach Partner Toolkit, and comprehensive website enhance TA capacity
- Program communication and marketing tools enhance outreach capacity
- Online application reduces administrative burden
- EveryOunceCounts.com includes info for moms/families

Expanded and Sustainable Structure

SUSTAINING AND SPREADING THE GAINS

The number of Mother-Friendly Worksites continues to grow



Including



3 municipalities

State Programmatic and Policy Integration

- Lactation space required in all new HHS buildings
- Designation requirement for all Texas WIC Local Agencies
- Designation prerequisite for Texas Ten Step Program
- Indicator added to Heart & Stroke Healthy City Program
- Included as strategy in Healthy Texas Babies
- Included in Community Transformation activities/metrics
- Included in two interagency councils' reports to legislature
- TX breastfeeding coalition received grant to highlight MFW employers

Local Integration

- MFW Campaigns in local Community Transformation strategies
- Included as strategy in local WIC breastfeeding promotion plans
- Public hospital districts are building upon MFW policy successes to expand uptake of the Ten Steps to Successful Breastfeeding

National Dissemination

- Evaluated and recognized by Center for Training and Research Translation as a **Practice-Tested Best Practice**
- Highlights shared nationally via meetings, webinars, calls, email
- Manuscript in progress

Keys to success: A social marketing approach shapes effective message and strategy development to motivate behavioral, environmental, and systems changes. Strategically developed partnerships help maximize impact and sustain momentum, reach and spread. Strategically selected pilot employers serve as community models and ongoing outreach partners to spread development of comprehensive worksite lactation support programs. Extensive outreach increases linkages with community coalitions and new partners. Strengthened partnerships increase cross-program collaboration and integration.

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WIC Participants Meeting Their Breastfeeding Goals: Relationship of Support in the Birthplace and the Workplace -- Texas, 2009

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Introduction

Women's opportunity to achieve their own breastfeeding goals are determined by a variety of factors including individual, cultural, socio-political, and health system determinants.

Texas women participating in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) have lower prevalence of breastfeeding than the general population.

Several specific interrelated maternity care policies and practices have been demonstrated to significantly impact breastfeeding outcomes across populations.

Factors relating to return to work, including access to programs that provide accommodation and support for lactation in the workplace, have been demonstrated to significantly impact breastfeeding duration and exclusivity.

Healthy People 2020 objectives for infant care include breastfeeding measures relating to maternity care and workplace factors.

Healthy People 2020 Breastfeeding Objectives

- Increase the proportion of infants who are breastfed ever, at 6 months, at 12 months, and exclusively through 3 months and 6 months.
- Increase the proportion of employers that have worksite lactation support programs.
- Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life.
- Increase the proportion of live births that occur in facilities that provide recommended care for lactating mothers and their babies.

Research Questions

Among a population of Texas mothers who received WIC benefits during pregnancy and through the first year postnatally:

- 1) What is the association between maternity care experiences and achievement of individual breastfeeding goals?
- 2) What is the association between work experiences and achievement of individual breastfeeding goals?

Methods & Measures

From April to July 2009, mothers of one-year olds receiving Texas WIC services were surveyed regarding their infant feeding knowledge, attitudes, and practices.

The 2009 Texas WIC Infant Feeding Practices Survey, was self-administered to 6,795 respondents in 73 local WIC agencies across Texas. The survey was administered in both English and Spanish.

After eliminating non-biological mothers and women who did not receive WIC services while pregnant, a convenience sample of 5,427 met inclusion criteria and comprised the final sample.

Chi-square tests of association and multivariate logistic regression were used to examine hospital and work factors associated with a mother reporting she did not breastfeed as long as she wanted to, adjusting for maternal socio-demographic characteristics including age, race/ethnicity, and acculturation as measured by mother's place of birth.

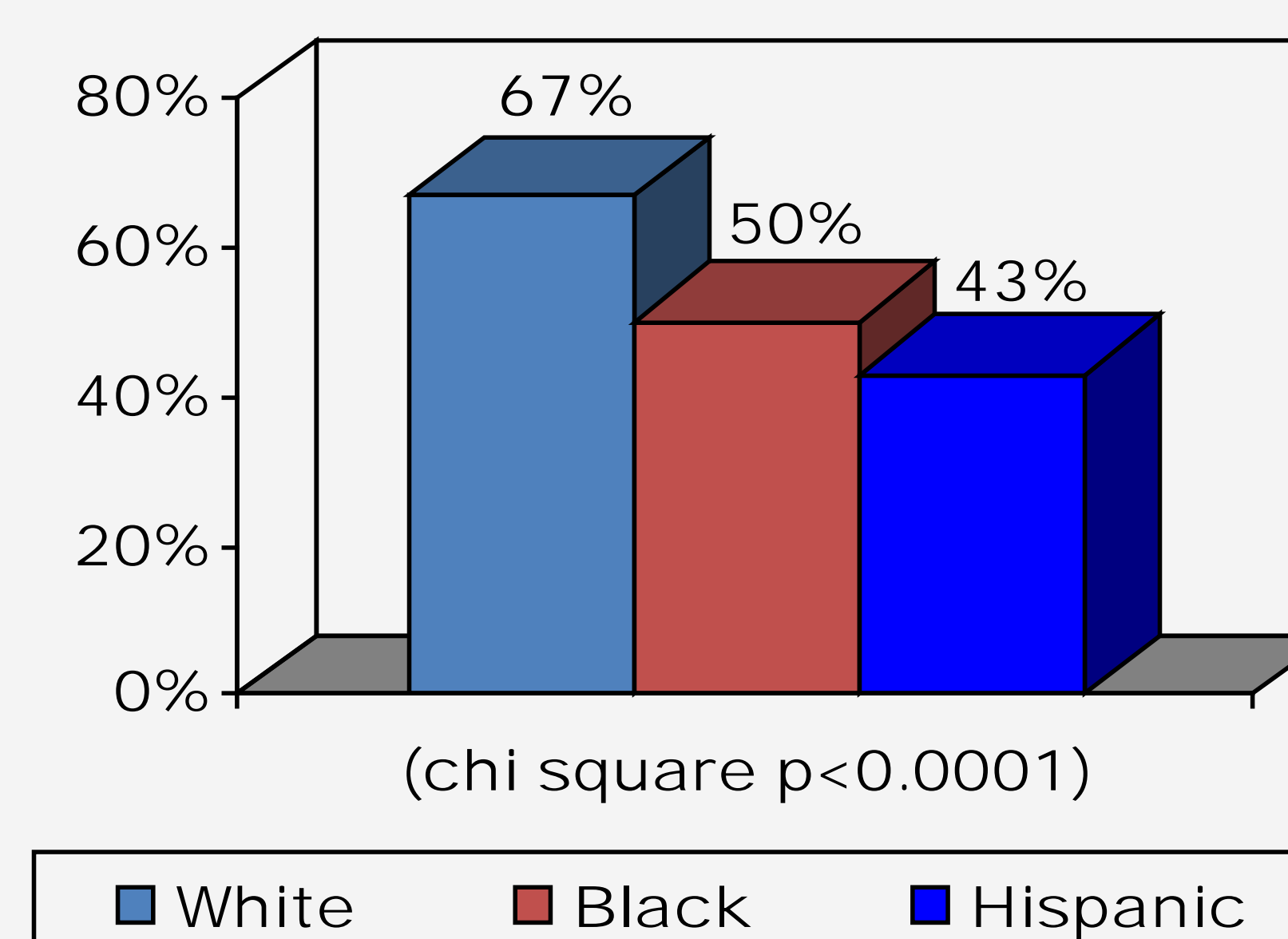
Results

The prevalence of breastfeeding initiation for the sample population was 73.4%.

Almost half of respondents (48%) who breastfed reported that they did not breastfeed for as long as they wanted.

Hispanics were most likely, and whites were least likely to meet their personal breastfeeding goals.

Percent women answering "No" to the question "Did you breastfeed as long as you wanted to?"



Results, cont'd

Maternity Care Experiences

While the majority of respondents experienced certain practices known to be supportive of breastfeeding, fewer than half reported their babies experienced certain evidence-based care practices such as breastfeeding in the first hour after birth, receiving breast milk at the first feeding, exclusive breastfeeding during the hospital stay, and avoiding pacifiers.

Though most respondents reported that they were told how to recognize when their baby is hungry and were also encouraged to breastfeed whenever their baby wanted, 57.9% reported that they were told to limit the length of time their baby spends breastfeeding. Free formula samples were given to 83.6% of respondents.

Maternity care practice	% reporting desired outcome (response)
Breastfed baby in first hour	37.6% (Yes)
Received breast milk at first feeding	45.9% (Yes)
Exclusively breastfed during entire hospital stay	22.4% (Yes)
Assisted with breastfeeding	67.2% (Yes)
Roomed-in through out hospital stay	53.3% (Yes)
Baby spent one or more night out of room	57.6% (No)
Told how to recognize when baby is hungry	77.2% (Yes)
Told to breastfeed whenever the baby wanted	61.1% (Yes)
Told to limit length of breast feedings	42.1% (No)
Baby given pacifier while in hospital	26.8% (No)
Mother given phone number for support	58.9% (Yes)
Received free samples of formula	16.4% (No)

In the adjusted model, women who reported they were given instruction to breastfeed whenever their baby wanted (AOR: 0.81, 95% CI: 0.67-0.97) and women reporting that their infants were exclusively breastfed at the hospital (AOR: 0.79, 95% CI: 0.66-0.96) were less likely to report that they did not breastfeed for as long as they wanted.

Work Experiences

The prevalence of breastfeeding initiation among women who returned to work postpartum was 71.5%.

Return to work or school was the leading response reported to the questions, "What was the **main reason** you did not breastfeed?" (33.0%) and What was the **main reason** you started feeding your baby formula?" (27.3%).

Results, cont'd

The majority of women who returned to work postpartum did not meet their breastfeeding goals, with 56.2% responding "No" to the question, "Did you breastfeed for as long as you wanted to?"

Women who returned to work postpartum for 10 or more hours per week (AOR: 1.3, 95% CI:1.1-1.6) were more likely than those who returned to work for fewer than 10 hours per week to report that they did not breastfeed for as long as they wanted.

Discussion

Most Texas WIC recipients report experiencing maternity practices that are not consistent with recommended care during the postpartum period. These experiences are significantly related to women's ability to breastfeed for as long as they wanted.

Significant barriers related to combining work and continued breastfeeding exist for the Texas WIC population, and return to work for 10 or more hours a week negatively impacts women's ability to breastfeed for as long as they wanted.

Public health efforts should actively encourage birthing facilities to adopt recommended maternity care policies and practices and employers to increase workplace support and accommodations for maintenance of breastfeeding after return to work.

Increasing maternity care and workplace policies and environments that support and do not pose barriers to optimal breastfeeding outcomes are required to achieve Healthy People 2020 targets and to empower women to achieve their own breastfeeding goals.

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