Breastfeeding and Infant Mortality in Indiana: Changing the Culture and Saving Lives: A Model for Other States

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INFANT MORTALITY is one of Indiana's most persistent health concerns. Our state has lost 3,000 infants before the age of one in the last 5 years.¹ In 2015 alone, 613 children died before their first birthdays. Our journey to find answers to this problem has spurred efforts to build a comprehensive and evidence-based plan to increase breastfeeding rates, a goal that will impact the health of all Hoosiers for generations to come.

It has taken a statewide effort to begin to move the dial. In 2013, infant mortality became the Indiana State Department of Health's (ISDH) primary focus. We needed to determine why Indiana infants were dying at such an alarming rate. What were the causes, who were the vulnerable populations, and what were the evidence-based strategies on which we could rely to protect our most vulnerable population?

One disturbing trend that we noted as we evaluated our data was that Indiana has an exceptionally high black infant mortality rate—more than twice as high as the white infant mortality rate. When it is considered that African Americans comprise just 9.6% of Indiana's population, this rate becomes even more alarming.¹ We also are unique in that our deaths tend to be very concentrated in a few select areas. One percent of our ZIP codes account for 20% of our deaths.²

As we began to collect and analyze more data, we realized that multiple factors were contributing to the deaths of these infants, including higher smoking rates during pregnancy and lower rates of early prenatal care. Another contributor that stood out was Indiana's breastfeeding rates.³

Breastfeeding is a key piece of the infant mortality puzzle. Breastfed babies have fewer respiratory illnesses, lower rates of sudden unexpected infant death, decreased risk of childhood cancers,⁴ and are less likely to develop chronic illnesses later in life.⁵ Indiana's breastfeeding rates, for both exclusivity and duration, fall below the national average.⁶ If 90% of U.S. families complied with medical recommendations to breastfeed exclusively for 6 months, the United States would save \$13 billion per year and prevent an excess of 911 deaths.⁷

Improving Indiana's breastfeeding rates has required a multipronged approach that focuses heavily on education to women and health providers and has required us to confront societal and cultural beliefs. Breastfeeding is not just a health issue. It is a parental issue, which can allow for deep divides

in practice, experiences, and thought. These divides exist not just within our patient population but also within the medical and health promotion communities. Often these conflicting experiences and viewpoints can lead to inconsistent messaging, inaccurate information, and missed opportunities.

Indiana is 1 of only 28 states that has laws related to breastfeeding in the workplace. However, many people, businesses, and even health and government entities are unaware of the law or lack policies to support women with lactation. The combined challenges of limited public knowledge, social norms that trend toward formula feeding, lack of access to evidence-based lactation services and education, and formula marketing practices can all be addressed through education about ways to provide a nurturing and loving environment in which all mothers feel they can nourish their infants.

Deeply held cultural and racial beliefs, familial practices, and economic barriers also impact efforts to change public health behaviors. Because these practices and beliefs are based on the identities of our patients, we must carefully and empathetically consider them while building and implementing our efforts. This requires regularly seeking the input of those within the most at-risk populations and working with them to craft marketing, prevention activities and programming. States must recognize that being culturally sensitive is critical, but it can result in a longer time line.

Until recently in Indiana, breastfeeding efforts were largely grassroots efforts led by community-based coalitions. Individual hospitals and hospital systems also worked independently to support breastfeeding in their communities. Many sought Baby-Friendly status, while others with more limited resources worked to improve general maternity care practices. The result of these individual efforts could be quite positive, but as the state began to find its voice on the matter and craft a model for leadership, the individual efforts (as opposed to a large collaborative effort) presented a challenge, because some communities had adequate lactation services, education, and support, and others had none.

In public health, we often reflect on our spheres of influence. We know that if we can move the dial at the top or bottom of the social ecological model, it will naturally have impact on the other levels. It is only when the dial begins to move, however, that we can truly start to identify whether the

impacts down the line are meaningful and positive. With issues such as breastfeeding, in which the “finish line” is hard to find and even difficult to define, it can be hard to track the moving dials and how they influence one another. Breastfeeding success is individual, cultural, social, and within policy and practice, and that can make it difficult to measure.

We also discovered a lack of awareness of lactation standards, practice, and support structures for health providers. Those working in a variety of areas, including physicians and nurses, home visitors, and staff in the Women, Infants, and Children (WIC) program, encounter many of the same patients, and it can be a challenge to ensure that the same education and message are being consistently received and communicated.

Like many other states, Indiana hopes to positively impact all of these areas by moving toward the Healthy People 2020 goals within a methodical and evidence-based frame. Ensuring that all mothers have the appropriate knowledge to make informed infant feeding decisions is a critical step in this process.

To facilitate this goal, in conjunction with efforts to reduce infant mortality, the ISDH created the position of breastfeeding coordinator in the Office of Women’s Health and developed the Indiana State Breastfeeding Plan, which was published in 2015. The plan, based on data gathered through an assessment conducted by the National Institute for Children’s Health Quality (NICHQ), links current initiatives, mobilizes key public health, hospital, and community stakeholders, and identifies feasible high-leverage changes to improve breastfeeding rates across the state of Indiana. Focuses include education of multidisciplinary healthcare providers, public education and awareness, postdischarge support, workplace lactation support, communication and coordination of breastfeeding improvement efforts, improvement in hospital breastfeeding policies and maternity care practices, and a call for action to reduce formula marketing in hospitals.

Our efforts in Indiana do not stop there. The ISDH established the Maternal Child Health (MCH) MOMS Helpline through the MCH division. The helpline provides valuable healthcare information and referral services to help reduce Indiana’s infant mortality rate. The helpline also promotes healthy lifestyle education and connects families with community resources such as breastfeeding classes and support groups with the goal of improving the health of Indiana’s women and children.

MCH also supported the Centers for Disease Control and Prevention (CDC) EPIC (Educating Physicians in their Communities) Best program, an online webinar that provides tools to keep clinicians current with the latest evidence-based research that supports breastfeeding initiation and duration. MCH offered Certified Lactation Counselor scholarships for hospital-based staff members at Levels 1 and 2 birthing hospitals to address the identified facility capacity gap. The MCH division also applied for and received the Pregnancy Risk Assessment Monitoring System (PRAMS), which has been operating for 25 years in the United States. In 1987, Congress appropriated funds for CDC to administer state-based programs of surveillance to collect data that would be helpful for reducing maternal and infant morbidity and mortality. Indiana has begun its data collection for this grant

and is looking forward to the large amount of useful data the PRAMS survey will provide.

Indiana is also finding ways to incorporate the model set by the National Action Partnership to Promote Safe Sleep into its best practice messaging. Advocates for breastfeeding often find themselves at odds with advocates for safe sleep in messages about room-sharing and pacifier use. It is imperative that we reconcile these messages and establish a collaborative approach to infant best practices.

The ISDH developed guidelines to support a collaborative approach and address the best practices. Increased breastfeeding in combination with safe sleep practices will reduce infant mortality and morbidity in Indiana, and both should be supported by all healthcare providers in Indiana. Introductions to these important health behaviors should begin as soon as prenatal care is initiated. Continued education and follow-up throughout pregnancy and the infant’s first 12 months will enhance compliance and outcomes.

Other Indiana efforts have focused on addressing breastfeeding challenges for minority communities in three urban counties, working with hospitals to promote consistent messaging and guidelines, and growing and honing our breastfeeding message, education, and support systems through our more than 140 WIC clinics, which serve nearly 140,000 women and children per month in Indiana.

We have not yet reached the Healthy People 2020 goals, but we are making progress, none of which would have been possible without first understanding the data and the challenge before us. The NICHQ assessment/community survey was an important step in giving ISDH a holistic view of the “state of breastfeeding” across a variety of disciplines and social sectors, as well as the challenges, strengths, and resources of those who impact breastfeeding rates in the state. Because we had such clear evidence of need, our path to developing supported programming was paved for us.

As with many other public health initiatives, breastfeeding support and promotion require flexibility. We must recognize that not everyone is on the same page and that progress can be incremental. Opportunities can arise that are unanticipated, or research denotes that we must shift to better align with new best practices. Allowing ourselves to be open to new ideas and research has allowed a simple state plan to become a living document that moves with the needs of the people in our state.

Indiana has made painstaking efforts to put the health and well-being of its mothers and babies in the forefront of our programming. We are proud of the progress that we have made. During the implementation of any plan, one can expect challenges and opportunities along the way. However, Indiana has truly capitalized on the opportunities, and we are eager to see the impact on mothers and babies for generations to come.

Disclosure Statement

No competing financial interests exist.

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