OHIO HOSPITAL ASSOCIATION

March 2014

Steps to Success: Improving Ohio's Infant Mortality Rate

Infant mortality is defined as the death of a baby before their first birthday. The infant mortality rate (IMR) is the number of babies who died in the first year of life, per 1,000 live births. This rate is considered an important indicator of the overall health of a society.[1]

Most infant deaths occur when babies are born too small and too early (preterm births are those before 37 weeks gestation), born with a serious birth defect, victims of Sudden Infant Death Syndrome (SIDS), Sudden Unexpected Infant Death Syndrome (SUIDS), affected by maternal complications of pregnancy, or victims of injuries (e.g., suffocation).[2] These top five leading causes of infant mortality together accounted for 63 percent of all infant deaths in Ohio in 2011.[3] Some risk factors, such as smoking, may lead to more than one of the conditions in the list above. It is estimated that 23-34 percent of SIDS and 5 to 7 percent of preterm-related deaths are attributable to prenatal smoking in the nation.[4]

There are also many non-medical contributors to the death of babies, including poverty, lack of education, under-resourced neighborhoods, poor nutrition and race.[1] Ohio hospitals are ideal partners to help address the state's IMR and engage patients and the community with effective clinical and professional resources.

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Ohio's National Ranking (2010) ** National Vital Statistics System, 2010*

1) Alaska	3.75	19) Wisconsin	5.84	37) Rhode Island	7.07
2) New Hampshire	3.96	20) Montana	5.89	38) Michigan	7.13
3) Vermont	4.18	21) Colorado	5.91	39) Pennsylvania	7.25
4) Massachusetts	4.43	22) Arizona	5.97	40) West Virginia	7.28
5) Minnesota	4.49	23) Texas	6.13	41) Arkansas	7.32
6) Washington	4.50	24) Hawaii	6.16	42) South Carolina	7.37
7) California	4.74	25) Kansas	6.22	43) Oklahoma	7.59
8) New Jersey	4.81	26) Georgia	6.42	44) Louisiana	7.60
9) Idaho	4.83	27) Florida	6.54	45) Indiana	7.62
10) Utah	4.86	28) Missouri	6.61	46) Delaware	7.66
11) Iowa	4.88	29) Wyoming	6.75	**47) Ohio**	**7.71**
12) Oregon	4.94	30) Maryland	6.75	48) Tennessee	7.93
13) New York	5.09	31) Illinois	6.77	49) Alabama	8.71
14) Nebraska	5.25	32) Kentucky	6.79	50) Mississippi	9.67
15) Connecticut	5.28	33) Virginia	6.80	**United States**	**6.15**
16) Maine	5.40	34) North Dakota	6.81		
17) Nevada	5.59	35) South Dakota	6.94		
18) New Mexico	5.64	36) North Carolina	7.01		

The last official ranking from the Center for Disease Control based on 2010 statistics.

Proposed Action Steps

OHA Areas of Focus (2014-2016)

- Safe sleep
- Eliminate elective deliveries before 39 weeks
- Progesterone for high risk mothers
- Eliminate health disparity
- Safe spacing
- Access to prenatal care
- Breast milk

OHA Quality Institute Focus Areas (2014)

Safe sleep is GOOD4BABY
An initiative of the Ohio Hospital Association

Areas of Focus Overview

Safe sleep
Work with member hospitals, ODH and others to integrate safe sleep practice into the hospital and community, develop a targeted media campaign for awareness and provide safe sleep tools to hospitals and new families.

Eliminate Elective Deliveries Before 39 Weeks
Work with member hospitals and the Ohio Perinatal Quality Collaborative (OPQC) to eliminate elective delivery before term by integrating this measure in hospitals' QM, peer review and ongoing professional practice evaluations.

Progesterone for High Risk Mothers
Work with member hospitals, OPQC and payers to standardize the process of identifying women at risk and providing them with appropriate treatment.

Health disparity
Work with member hospitals, the Ohio Collaborative to Prevent Infant Mortality (OCPIM), the Ohio Equities Institute, ODH, Battelle, and the Ohio data warehouse to identify racial disparities in each IMR reduction initiative and begin to address them.

Safe spacing
Work with member hospitals, OCPIM and payers to streamline the infrastructure and process to provide prepartum family planning and immediate postpartum access to long acting reversible contraception.

Access to Pre, Post and Inter Prenatal Care
Work with patient-centered medical home (PCMH) initiatives statewide to include care specific to women of childbearing age, as well work with the Ohio Association of Health Plans (OAHP) to improve coordination and access to care.

Breast milk
Work with member hospitals and OCPIM to develop and integrate baby-friendly processes and metrics into the hospital environment including accurate tracking and trending of breast feeding at discharge.

Safe Sleep

Safe sleep education and outreach is a major priority for ODH, OCPIM, the Ohio Injury Prevention Partnership, Child Fatality Review (CFR), Fetal and Infant Mortality Review, Cradle Cincinnati, March of Dimes, the American Academy of Pediatrics (AAP), Ohio Medicaid and many other organizations.

The Ohio Hospital Association (OHA) is providing the logistics to deploy a statewide hospital-led education and cultural awareness campaign on the importance of safe sleep. Working with ODH and a number of constituents represented by OCPIM, the Foundation's plan is to begin implementation of a coordinated and targeted campaign in Spring 2014. Using the local hospital as a focus for education and distribution, new mothers and their families will receive safe sleep counseling and products, such as a safe sleep jumper. More importantly, hospitals will be asked to participate in the campaign by naming an internal sleep champion, developing safe sleep committees and infrastructure, adopting (and auditing) in-hospital safe sleep practices and instructing employees, parents, families and the community on appropriate safe sleep practices. OHA plans to track these initiatives' processes and outcomes metrics through a regional score card currently in development. The CFR, conducted by each of Ohio's 88 counties and coordinated by the ODH, identified 148 sleep related deaths in 2010. It is not clear how many of these deaths are preventable, however, there is potential for vast improvements to infants saved annually.

Safe Sleep Recommendations (Ohio Department of Health)

ALONE: Always put baby in crib alone. They shouldn't sleep in a bed or have anyone else in theirs.
BACK: Always put the baby on their back to sleep—at night or even when they're just napping.
CRIB: Always make sure the only thing on their firm mattress is a fitted sheet. No blankets or stuffed animals.

Ohio Department of Health.

- Place infants to sleep wholly on the back for every sleep, nap time and night time.
- Use a firm sleep surface. A firm crib mattress with a tight-fitting sheet in a safety-approved crib is the recommended surface.
- Room-sharing without bed sharing – the infant's crib should be in the parents' bedroom, close to the parents' bed.
- Keep soft objects, loose bedding, and bumper pads out of the crib.
- Breastfeeding is recommended.
- Offer a pacifier at sleep time after breastfeeding has been established.
- Avoid overheating by excessive clothing, bundling, or room temperature.
- Avoid commercial devices such as wedges, positioners, and monitors marketed to reduce the risk of SIDS. None have been proven safe or effective.
- All infants should be immunized in accordance with AAP and CDC prevention recommendations.
- Women should receive regular prenatal and postpartum care.
- Do not smoke during pregnancy. Avoid exposure of infants and pregnant women to secondhand smoke.
- Not a single drop of alcohol or illicit drugs should be consumed during pregnancy.

Proposed Action Steps

Eliminate Elective Deliveries Before 39 Weeks

Eliminating elective deliveries before 39 weeks has been a target for the OPQC since 2007. Starting with Ohio's largest maternity and pediatric hospitals, this group has made dramatic improvements in this measure and plans to expand this effort to all maternity hospitals in 2014. OHA plans to work with hospital leadership on the issue and hard wiring quality improvement focus on eliminating preterm elective deliveries. Several state Medicaid programs no longer pay for these deliveries.

Although birth at 37 weeks has been associated with up to a two fold increase in IMR compared to term delivery, the prevention of early elective delivery primarily decreases neonatal morbidity rather than mortality. While the reduction of early elective delivery has not proven to make a large difference in infant mortality, most organizations promote it, including the Health Resources and Services Administration, Secretary's Advisory Committee on Infant Mortality, March of Dimes, Association of State and Territorial Health Officials, Collaborative Improvement and Innovation Network, Centers for Medicare & Medicaid Services, CDC and ODH. The OPQC's goal to decrease Ohio's elective delivery before 39 weeks from 7 percent to 5 percent will decrease neonatal morbidity, reduce cost, and save infant lives.[5]

Progesterone for High Risk Mothers

The OPQC decided to focus on providing progesterone to mothers at risk for preterm labor through its network for 2014 and 2015. Central Ohio's Ohio Better Birth Outcomes already has an aggressive program which can be scaled to the entire state, and sharing of best practice is well under way.

Universal cervical length screening and the provision of appropriate care for high risk mothers is predicted to save 22 infants/100,000 live births.[6] The provision of progesterone to high risk mothers is estimated to decrease the preterm birth rate by 2 percent. In 2011, Ohio's rate was 12.1 percent and would be reduced to 11.8 percent (16,731 to 16,316 or a reduction of 415 premature babies).[7,8]

Eliminating Health Disparity

Eliminating health disparity is a primary focus for the Ohio Equities Institute. Working with this group and others to target potential areas for improvement (e.g., providing cribs to mothers in need) promises to generate a significant return on investment. This can begin with something as simple as asking the question of infant race for all of the metrics that OHA hopes to improve.

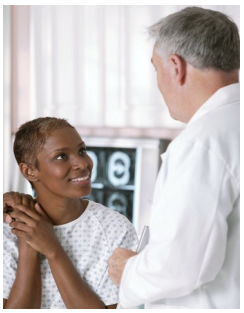
According to ODH, there is a substantial difference in how infant mortality impacts different races. For example, Ohio's black babies die at more than twice the rate of white babies. Ohio's 2012 death rate for white infants was 6.4 per 1,000, compared to 14.0 per 1,000 for black infants. While the large variation in the rates of black deaths from year to year may be explained by small counts, the disparity has been consistent. This difference in the death rate for black babies compared to white babies is also found at the national level. Eliminating the disparity is a goal at the national, state and local levels.

Safe Spacing

Safe spacing (allowing at least 18 months between children) can significantly improve IMR and improve mother and infant health. The opportunities include education and access to long acting reversible contraception (LARC). A number of organizations including Ohio Medicaid are interested in streamlining the process for both education and access to LARC. Spacing pregnancy to 18 months or more is estimated to decrease Ohio's infant mortality rate.[10,11]

Proposed Action Steps

Access to Prenatal Care



Improved access to early prenatal care and care for women of child bearing age before after and between pregnancies provides: an opportunity to educate, improve maternal health; confront and eliminate risk factors for prematurity and birth defect with smoking alcohol and drug abstinence; the mitigation of maternal obesity; and the early identification of prematurity risk and birth defects. It also establishes the opportunity for optimal control of chronic medical conditions prior to conception (including transitioning to the use of medications with less risk of congenital anomalies for some medical conditions).

In 2011, 29.4 percent of women (40,654) did not receive first trimester prenatal care, and could be predicted to have a two fold increase in IMR. The relationship between 1st trimester care and IMR is real but is probably not cause and effect. It may be related more to selection bias (the good pre-pregnancy health and low risk of women who seek early prenatal care versus the high risk of women who get no prenatal care), thus, improved IMR may not be fully realized.[12]

OHA is working with PCMH initiatives statewide to include care specific to women of childbearing age, as well working with the Ohio Association of Health Plans to improve coordination and access to care.

Baby-Friendly USA Compliance Policies

- Have a written breastfeeding policy that is routinely communicated to all health care staff.
- Train all health care staff in the skills necessary to implement this policy.
- Inform all pregnant women about the benefits and management of breastfeeding.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center.
- Help mothers initiate breastfeeding within one hour of birth.
- Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants.
- Give infants no food or drink other than breast-milk, unless medically indicated.
- Practice rooming in - allow mothers and infants to remain together 24 hours a day.
- Encourage breastfeeding on demand.
- Give no pacifiers or artificial nipples to breastfeeding infants.

Breast Milk

Many medical authorities, including the AAP and the American College of Obstetricians and Gynecologists, strongly recommend breastfeeding, as it has been found to be associated with a reduction in the risk of SIDS. Also, neonatal experts consider breast milk a medicine.

Implementation of “baby friendly” policies is an opportunity to improve IMR, and substantially improve infant health. Implementation of some if not all of the baby friendly policies by OHA’s member hospitals will be aggressively explored in 2014 and pursued as targeted goals in 2015.

Equally important is the coordination of community activities to ensure breastfeeding support is provided to new mothers after their discharge from the hospital. Coordinating and consolidating community activities will be essential going forward in this and other community-based activities (e.g. safe sleep, safe spacing and access). If all infants are breast fed, the estimated reduction in IMR would be 0.18/1000.[9]

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