

## The Role of the Louisiana FIMRI in Post-Hurricane Relief Efforts

*Lyn Kieltyka, PhD, Annelle Tanner, EdD, RN, Ragan Canella, Mary Craig, MSN, MS*

Louisiana continues to have one of the highest infant mortality rates (IMR) in the nation, with crude IMR of 9.3 infant deaths per 1,000 live births in 2003 and 10.3 per 1,000 in 2004. National rates were 7.0 and 6.9 per 1,000 in 2003 and 2004, respectively. The Louisiana Fetal and Infant Mortality Reduction Initiative (FIMRI) was formed in 2001 to address these high rates and develop effective programs to reduce mortality and improve pregnancy outcomes.

A key component of this initiative is the Louisiana Fetal and Infant Mortality Review (FIMR) network, a state-wide coalition comprised of nine regional FIMR teams whose geography covers the 64 Louisiana parishes (a parish is a local government entity comparable to a “county” in other states). The first FIMR cases under this new state-wide initiative were reviewed in September, 2003. This process of reviewing fetal and infant deaths through a community-based, community-owned collaborative effort such as our FIMR network helps our clinical community leaders better understand and identify key circumstances surrounding deaths occurring in our communities. Members of this network also help provide input into core Maternal and Child Health (MCH) processes, such as the Title V-MCH needs assessment. As a result, our MCH community leaders take timely, relevant information back into their communities. The network also provides a mechanism by which our MCH stakeholders can join together to plan interventions to address MCH problems and to stay current with local, regional, and state-wide MCH occurrences and events. Through our FIMR network, Louisiana MCH communities have built a stronger infrastructure to effectively address the health issues of our MCH population.

### **Hurricanes Katrina and Rita**

The Louisiana FIMR network continues to demonstrate its strength and commitment to serving Louisiana’s MCH population in the wake of the two recent hurricanes, Katrina and Rita, which resulted in 30 of the 64 Louisiana parishes being declared federal disaster areas. Two regions, Alexandria and Baton Rouge, immediately took the lead for MCH assessment and recovery during the first days and weeks post-catastrophe.

### **The Alexandria Community Experience**

The Alexandria regional Fetal and Infant Mortality Review program started reviewing cases and identifying risk factors contributing to fetal and infant deaths parish-wide in September 2003. Alexandria is located in the central, rural part of the state, about 200 miles northwest of New Orleans. Two part-time employees conduct data abstraction and case summaries and coordinate efforts of a broad community forum for case reviews and community action. The Case Review Team meets odd months (Jan, Mar, etc) while the Community Action Team meets even months (Feb, Apr, etc) of the year. Over the past two years, this team has become identified as the community Perinatal Forum where issues are addressed without territorial boundary or private or political agenda such as those that might be relevant to a particular hospital, provider, community agency, or organization.

In the days just before hurricane Katrina came ashore, we watched the weather forecast warily. The weather forecaster was talking about a storm of epic strength heading directly for New Orleans. On the morning of August 29, after Katrina came ashore a few miles East of New Orleans, we breathed a collective sigh of relief that New Orleans had again dodged the proverbial bullet – until NBC newscaster Brian Williams, shown standing at the entrance to the French Quarter, began discussing the mysterious rising water, presumably from the middle-of-the-night breaks in the levee. We had a sense of foreboding as to what this meant for the city.

Even as evacuees were fleeing westward from a flooded New Orleans, Rita was heading our way less than one month after Katrina. When she hit, multitudes of Katrina evacuees headed inland to our Central Louisiana area. Our community, usually home to 50,000, was now providing shelter and feeding an estimated additional 10,000, a 20% increase in population within one week. There was no time for infrastructure expansion to accommodate such a rapid influx. Much heavier traffic, crowded restaurants, slower internet, empty store shelves (milk, bread, diapers, underwear, etc.) became a way of life. Additionally, Rita caused considerable damage locally, with debris in yards and on roadways and loss of electricity for several days.

Individuals responded to other individual's needs and long-distance partnerships were created. For example, a church group in Mt Olive, North Carolina partnered with First United Methodist Church in Alexandria, caring for babies and children of families who had been housed in its shelter. A Jewish Synagogue in Ohio paired with the local Temple, sending an 18-wheeler truckload of goods to meet basic needs as well as supplies for an art therapy program for children evacuees who had lost all semblance of familiar comforts in their lives.

Because the Alexandria FIMR Coalition was well-established and trusted as a resource for perinatal issues in the community, it was a natural “fit” to address the serious concerns of emergency relief efforts as they related to pregnant women and infants in our community. A Coalition meeting gathered healthcare providers and agencies that provided services for displaced pregnant women in our region. All delivering hospitals as well as representative private providers from these hospitals were in attendance. Nurses, social workers, physicians – obstetricians, pediatricians, neonatologists, physicians from the local family practice residency training program – joined social service agencies (Volunteers of America, Shepherd Center, March of Dimes, The Rapides Foundation, United Way, faith-based groups who were sheltering hundreds of evacuees, and other groups including the relatively new Parish Nursing Society) to discuss services provided and identify additional needs of pregnant women who had evacuated to our area.

The Alexandria area FIMR prepared a resource guide for emergency relief agencies that were established specifically for hurricane relief. This complemented the Resource Guide for Pregnant Women and Women of Childbearing Age that the FIMR Community Action Team had published earlier in the year. Although the Guide had been updated, funds were not available for printing until we applied for funding to the Central LA Katrina Response Fund. This fund had been established through a generous donation from The

Rapides Foundation, a local foundation that funds healthcare programs in the area. The resource guide provided information for new guests in our area who knew nothing about our community. The list, accompanied by a marked map of our communities, gave newcomers directions to sites for necessary relief.

Our March of Dimes office prepared a brightly-colored brochure on hurricane relief tips and resources for Katrina evacuees that we distributed around the area. The MCH Partners for Healthy Babies' toll-free help line (1-800-251-BABY) offered contact information for providers who accepted Medicaid, locations for obtaining WIC supplies, information on other free or low-cost supplies for infants and pregnant women displaced by the storms, along with a friendly, sympathetic voice for pregnant or newly-delivered women. The helpline staff collaborated with MCH state staff, often daily, to identify needs statewide and to intervene in supplying these needs.

Working with the state MCH Epidemiology program, we developed a consumer assessment tool to identify changes in access to healthcare for pregnant women resulting from storm displacement. In a separate assessment tool, we asked providers how their practice had been impacted since the hurricanes hit the state. Responses varied according to time lapsed since evacuation – recovery phases tended to follow Maslow's hierarchy of needs with physical safety needs of food and shelter comprising initial relief efforts, followed by mental health concerns.

We learned that our community saw a 7.6% increase in number of deliveries in the month since Hurricane Katrina hit New Orleans when compared to the same time frame the previous year. Similarly, the two neonatal intensive care units experienced a 16.7% increase in daily average census of NICU beds.

Unlike our counterparts in the larger city of Baton Rouge, who had many more deliveries to displaced women than here, we found there was not a compelling need for a shelter designated for pregnant or newly-delivered women and their families. Local hospital labor and delivery units were finding protected environments – other than shelters with hundreds of evacuees sharing sleeping and bathing activities in one large room – for their displaced postpartum women and their families. They were also finding infant supplies – either from the United Way/Salvation Army/Red Cross Distribution Center or from private donors. Participants in the Consortium offered information about additional resources for hospitals and other agencies that were providing a variety of services to the displaced pregnant women and their families.

The Alexandria area FIMR group has become synonymous with a community-wide network of organizations providing services to pregnant women as well as working toward the health of all women of childbearing age. We still have additional evacuees in our midst, and our hospitals are still delivering babies for them, but many are beginning to return home or closer to home. Our FIMR will continue to assess needs of women new to the area due to the hurricanes, particularly acknowledging the normal stress of pregnancy which is now intensified by unplanned and unwelcome change in living environment.

### **The Baton Rouge Community Experience**

The Baton Rouge Regional Fetal and Infant Mortality Review program is based in Family Road of Greater Baton Rouge where it is part of the Healthy Start Program. The Greater Baton Rouge area FIMR Program began in 2002 with a planning phase to develop policies, procedures and protocols for the FIMR process. Case review began in March 2004. One full-time employee conducts data abstraction, summarizes cases, and coordinates efforts of the Case Review Team (CRT) and Community Action Team (CAT). These teams have been working diligently to identify trends through case review and are beginning to plan and implement community awareness projects based on identified trends.

Since the Baton Rouge FIMR Program began, we have had very positive experiences. There is a strong commitment from physicians and the larger medical community to address the concerns and impact of fetal/infant deaths in Baton Rouge. We have also been able to strengthen the relationship between hospitals, community organizations and government entities by using a team approach to work on the psychosocial and medical issues brought forth by the CRT. The CRT has been able to increase their knowledge on the risk markers and behaviors that can lead to death and have identified community resources to assist grieving mothers and their family members. Both teams are more knowledgeable of support groups and counseling that is available to the families they serve; they have a better understanding of what a family experiences with a loss. Also, the CRT and CAT are working together to address the Perinatal Local Health System Action Plan by developing universal tools regarding the FIMR process for the region/state and organizing educational campaigns on risk reduction behaviors for the community.

The Friday before Katrina hit, Baton Rouge, located 85 miles north of New Orleans, was preparing for the usual occurrence of contraflow (traffic flows the same direction on the interstate on both sides from New Orleans when a mandatory evacuation is issued). Many were not aware of the magnitude of Katrina. By Saturday, Baton Rouge was receiving the “normal” (in hurricane events) traffic and rush to stores to gather supplies. We were preparing for power outages, sewage interruption, etc. Public health nurses were being prepared to staff shelters if needed, and staff was ready to provide services to those in need. By Sunday, everyone understood the magnitude of the storm, but no one was sure of its direction. Baton Rouge received strong winds and tornadoes. New Orleans received the same, but with a greater impact and storm surges. Baton Rouge experienced power outages, school closings, sewage interruption, etc. By Monday, everyone believed the worst was over. Some even returned to New Orleans to survey damage and to go back to business as usual. By early Tuesday, it was clear that New Orleans had not been spared. The water was rising in parts of New Orleans and in some areas, the levees had given way. In that moment, the city of New Orleans and the state of Louisiana were changed forever. So, too, was Baton Rouge. Roughly half of the state’s \$18 billion budget is funded by state taxes and fees. Until Katrina, New Orleans accounted for one in three Louisianans and the cities tourist industry contributed more than its share of sales taxes.

Conservatively, early estimates indicated that 30-40% of the states revenues may have disappeared in Katrina's floods. According to Senator Jay Dardenne, "Nothing as we know it in state government will ever be the same over the next 10 years."

Even prior to hurricane Katrina coming ashore, the Baton Rouge area grew tremendously in population. It was initially assumed that this increase would last for the usual two to five days. With the news of an uninhabitable New Orleans, many attempted to extend hotel reservations and find more semi-permanent housing arrangements. Although Baton Rouge was spared much of the destruction seen in other areas of the state, the population more than doubled almost over night to over one million. There was no time for infrastructure expansion to accommodate this incredible change. Over 50 shelters, including Public Health-Special Needs, Red Cross, and church shelters were opened, Public Health nurses and staff were deployed to Special Needs Shelters. Communication by telephone became a huge challenge; stores became empty of food, ice and other basic necessities; travel time that normally took 30 minutes took over an hour. Then with the devastation of Rita following, additional help and assistance was needed.

As the headquarters for state emergency operations post-storm, local Baton Rouge organizations began massive efforts to provide relief alongside federal and state agencies. Many agencies such as Capital Area United Way and Family Road of Greater Baton Rouge gathered and continually updated information on available community resources, including donations, shelters, food, housing, clothing, etc, to be provided to evacuees and residents. Fact sheets and links on websites were created to help with Katrina-related efforts. Community meetings were conducted in order to coordinate Baton Rouge area resources for long-time residents and evacuees. Family Road employees began visiting shelters and the area health unit to distribute resource information to evacuees.

Assessments were devised to screen pregnant and non-pregnant women and their families in order to identify their needs. Family Road began providing a leading voice and service coordination in the area, along with organizations including the Baton Rouge Area Foundation, Capital Area United Way, Office of Public Health, Capital Area Human Services District and over 100 other agencies. Many of the individuals affiliated with these separate organizations were already active partners and members of the Family Road Consortium and Baton Rouge FIMR Network. The Medical Chair of the Baton Rouge FIMR was directly involved and responsible for the helicopter evacuations of the New Orleans NICU babies to Woman's Hospital in Baton Rouge. A FIMR Community Action Team member from the Baton Rouge March of Dimes coordinated the reuniting of the helicopter evacuated babies with their birth mothers.

Due to the increase in the number of deliveries, shelters specific to pregnant and parenting mothers with newborns and special needs infants were needed. Once pregnancy shelters began to close, these women had to be transitioned to larger shelters where there was a decrease in the supply of powder formula and mothers had no place to refrigerate the ready to feed formula once it was opened. There was no sterile water to clean baby bottles and women were having to wash them in the same sinks as they were washing clothes and taking baths.

With Baton Rouge being the state capital, many of the state services were interrupted due to the first responders being deployed. For parish residents as well as evacuees, systems were overwhelmed and understaffed for the number of the people in the city. Over time, and without pay, many volunteered to help all those in need. There was also an increase in the number of pregnant Medicaid eligible women with no physician or prenatal care initially. Family Road took applications of many evacuees who were in need. Many physicians transitioned from New Orleans, other states in the United States, and internationally to Baton Rouge and began providing prenatal care in hospitals and local clinics. Woman's Hospital, the largest birthing hospital in Baton Rouge, reported that they would handle an additional 6,000 births in the next six months.

In addition to the shelters, many residents who had relatives from New Orleans were housing up to 20-30 people in their homes. Family Road knew that evacuees had to be reached in shelters and communities. Due to the need of case management services for evacuees in the area, Family Road of Greater Baton Rouge submitted a grant proposal to the U.S. Department of Health and Human Services and Baton Rouge Area Foundation for additional funding for case management services for pregnant and parenting evacuees a week after the hurricane. Family Road knew the great need in the shelters from vast prior experience in the community. Family Road was awarded a grant through Baton Rouge Area Foundation and Merci Corp. to provide case management services to evacuees. The case management program is entitled "Pregnancy to Parenthood." This program is a community-based program, designed to help pregnant and parenting mothers and their babies and toddlers affected by Hurricanes Katrina and Rita, to have the best possible start in life, by improving families' access to health care, social services and information in Baton Rouge. It is based on the Family Road Healthy Start Program. Family Road is also collaborating with Louisiana Family Recovery Corps (LFRC) to provide case management to displaced residents in the two trailer parks being developed in the Baton Rouge area. CRT and CAT members continue to collaborate on these efforts.

With its pulse on the community, Family Road of Greater Baton Rouge took the lead on coordinating the relief efforts of both Hurricane Katrina and Hurricane Rita. For the past two months since the first "wave" of disasters, Family Road has been hosting and coordinating weekly meetings of local non-profit organizations combined with local, state, and federal agencies to gather and exchange information. According to Dena Morrison, Executive Director of Family Road, "these informational meetings are meant to bring together organizations at all levels to see who is doing what and what is going on in social and health services." From these meetings, Family Road has designed a Social Service Matrix to illustrate how each organization can serve the needs of children and their families who were displaced by the two hurricanes.

Family Road of Greater Baton Rouge in conjunction with several other agencies, began working together to create a strategic plan, which coordinated social services for evacuees and parish residents in the Greater Baton Rouge Community. At these meetings, agencies began working together with the Red Cross to combine efforts and eliminate service duplication and improve service coordination and delivery. The lead agencies

were identified that were providing services to evacuees. This group became known as the Greater Baton Rouge Katrina Relief Network.

The Maternal Child Health subcommittee of the Greater Baton Rouge Katrina Relief Network was developed to provide focus on this special population. A MCH matrix was also developed. This subcommittee's purpose was to explore and identify significant issues in the perinatal health system that have the capacity to impact positive birth outcomes. Representatives from the Office of Public Health, area hospitals and agencies specific to pregnant and parenting women attend this subcommittee. A needs assessment was developed for MCH service providers to identify and assess the changes in service delivery, including the number served, coping skills of staff and patients and trauma response. One existing network available for the dissemination and collection of these surveys was the FIMR team. Many providers reported an increase in sleep disturbances; symptoms of depression and anxiety; regressive and aggressive behaviors in children; and social withdrawal and emotional withdrawal and isolation. The area hospitals reported a 30% increase in the number of deliveries; a 10% increase in the number of infants admitted to the NICU; an increase in the number of preterm births; mothers with no prenatal care; increase in the number of women with STD's, HIV and AIDS; and an increase in the number of fetal and infant deaths. These monthly meetings now have been folded back into the FIMR-CAT, continuing to improve perinatal health services and access and to address ongoing MCH needs in the Baton Rouge area.

### **The Louisiana FIMR Network Effort Continues**

The return of cell phone service and email post-hurricanes enabled the beginning of communication that has resulted in a successful effort to serve our MCH community.

Weekly teleconferences funded by Centers for Disease Control and Prevention (CDC) for Louisiana's Maternal Child Health Program staff and partners provided much-needed communication among MCH staff as well as NFP and FIMR partners across the state. Continued collaboration and meetings with national partners including the CDC, Association of Maternal Child Health Programs (AMCHP), Maternal Child Health Bureau (MCHB), American College of Obstetricians and Gynecologists (ACOG), American Academy of Pediatrics (AAP), and others will continue to provide the support and resources that will be required for successful recovery and advancement.

A statewide MCH Infant Mortality Reduction Initiative meeting was initially planned for October and included presentations from a national March of Dimes leader on, bereavement care and counseling. A more appropriate topic for discussion could not be found, considering the sorrow resulting from the destruction experienced by our state's families. We have rescheduled the conference for the summer 2006, funds permitting, to include updates on FIMR activities since the hurricanes as well as providing bereavement counseling guidance for MCH staff and clients, all of whom have witnessed devastation in their lives personally and professionally.

### **Lessons Learned**

In the time immediately post-Katrina, the greatest need was for communication, identification of needs, and coordination of services. One resource accessible throughout this process was our Partners for Healthy Babies help line (1-800-251-BABY). The benefit of their assistance in coordinating services for Louisiana women and children has been invaluable during this time of great need and concern. We found that areas with a strong, intact FIMR were able to respond more quickly to needs. The FIMRs also provided the infrastructure for leaders within community and medical organizations to be able to respond quickly to colleagues and their needs. One of the issues identified post-hurricanes was that women went to a new prenatal provider and/or emergency labor and delivery without any medical histories/laboratory results. A major outstanding issue is the tracking of those pregnant women who evacuated from the hurricane areas. Efforts are ongoing to obtain funding to provide for a tracking system, for the current population, as well as to prepare for the future. We are hoping to transition our FIMR program to the web-based Basinet system used in Florida to track fetal and infant deaths, to enable more timely sharing of critical information. Additional coordination of services is ongoing with Medicaid, ACOG, Louisiana Department of Health and Hospitals' Office of Mental Health and Office of Addictive Disorders.

Our basic needs have been met; we are confident that our future challenges will be overcome with proper understanding of our priorities, coordinated planning to meet our needs, and careful implementation of interventions. We look forward to the information obtained through our ongoing needs assessment process. Our FIMR network and state-wide partners remain ready to pursue the promise of improving the health of Louisiana women and children.

Acknowledgement: Joan Wightkin, DrPH, Title V Program Director and Rodney Wise, MD, Maternity Program Medical Director, Louisiana Office of Public Health