

# Infant Mortality

STUDY



A REPORT TO THE  
CITIZENS OF  
JACKSONVILLE

SPRING 2008

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*On the cover and page 1:*

*Mitchell Echols and twins Portia and Althea Miralia were born on August 10, 2007 in Jacksonville, Florida. Mitchell is the son of Chandra and Marvin Echols. Portia and Althea are the daughters of Quilla and Teman Miralia.*

# EXECUTIVE SUMMARY

Too many babies—especially black babies—are dying in Jacksonville before their families can celebrate their first birthdays.

The statistic is called the Infant Mortality Rate (IMR), and Jacksonville’s IMR is higher than the Florida state average, which is higher than the United States national average, which is higher than nearly all the industrialized countries in the world. And the IMR for black mothers in Jacksonville is nearly double the rate for white and Hispanic mothers.

In addition, the number of babies dying does not complete the tragic picture of the problem, because babies born too early and too small—if they survive at all—have increased and life-long health, educational, social, economic, and employment problems. These increased problems incur great costs for individuals, families, and society. Tens of millions of dollars are expended in Jacksonville to meet the life-long needs of prematurely born babies, and fewer potential human capital contributions these adults could have made to society are realized.

The Infant Mortality Study Committee conducted a thorough examination of the problem. Seventeen weekly meetings were devoted to hearing from experts from around the state, across the country, and within the city. More than forty resource speakers shared their data and knowledge with the study group. The committee made two field trips to visit the Magnolia Project (a special Healthy Start program in Northwest Jacksonville designed to improve the health and well-being of women during their child-bearing years).

The committee examined in depth the immediate, intermediate and root causes of infant mortality. They delved into the statistics to better understand the scope of infant mortality; they heard from people running assistance programs and from women experiencing infant deaths. Small group meetings were conducted in neighborhoods with high infant mortality rates to better grasp how infant deaths are understood by black women, men, and their families and to discover their suggestions to improve birth outcomes.



The greatest direct cause of infant mortality is the birth of a premature and underweight baby, which disproportionately affects black mothers. The greatest contributor to prematurity and low birth weight of the baby, and to the higher IMR of black families, is poor health of the mother—long before she becomes pregnant, just prior to pregnancy, during pregnancy, and between pregnancies. Universal good health practices for girls and women—including good nutrition, healthy eating habits, and vitamin supplements; regular exercise and weight control; having a medical home (a central point to organize and coordinate women’s and girls’ health care based on their needs and priorities) and getting timely medical attention; avoiding tobacco, alcohol, and drug abuse; practicing responsible sexual behavior and planning and spacing pregnancies; and receiving good education about sex and parenting—could greatly improve birth outcomes.

Other practices that would help decrease infant mortality include understanding and using safe-sleep practices for babies, breast-feeding, and conscientious care of the baby. Ten percent of infant deaths in Jacksonville are due to abuse and neglect.

Stress from socio-economic inequalities and, especially, racism (the discrimination against and devaluing of people based on their perceived racial differences rather than their individual merits) in all its forms—institutionalized, interpersonal, and internalized—is a significant contributor to infant mortality. The cumulative, chronic stress experienced by black women causes physical, as well as psychological, changes that not only affect themselves and their unborn babies, but are carried into the adult life of that baby and into the next generation and the next.

# CONCLUSIONS

**The failure of our community to successfully address the longstanding issues of racism, poverty, and socio-economic disparities is killing our babies.**

The high infant mortality rate is not merely a health problem and not merely a black problem, it is everyone's problem. The Jacksonville community is largely uninformed about the magnitude, causes, and consequences of the high infant mortality rate.

Areas of the city which have high rates of unemployment, poverty, poor housing, educational underachievement, crime, health problems and a breakdown in the social fabric are the same areas with high infant mortality rates. Many JCCI studies have examined these underlying socio-economic and racial problems and made recommendations to address them—*Attracting and Retaining Talent* (2006), *Reducing Murder: A Community Response* (2006), *Race Relations Progress Report* (2007, 2006, 2005), *Public Education Reform: Eliminating the Achievement Gap* (2004), *Neighborhoods at the Tipping Point* (2004), and *Beyond the Talk: Improving Race Relations* (2002)—to name a few.

Racism, especially as related to black women and their babies, in Jacksonville as in the country as a whole—in addition to being unjust—causes cumulative, chronic stress; negatively impacts access to health care and other fundamental needs; and leads to poor health and poor birth outcomes.

Racism is experienced in many forms: institutionalized, interpersonal, and internalized. When all other maternal and family factors are the same—such as income, education, and socio-economic status—the infant mortality rate is still higher for black mothers than for white mothers. The cumulative, chronic stress (which Dr. Michael Lu calls “weathering”) faced by black women causes psychological and physiological harm not only to themselves and their unborn babies, but these effects are carried into the adult life of that baby and into the next generations. In addition to racism, sexism (the discrimination against and devaluing of people based on their sex rather than their individual merits) is another factor in the infant mortality rate.

The long-term societal, educational, economic, and personal costs for infant mortality and infants born with long-term illnesses and disabilities are unacceptable and largely preventable.

While acknowledging all the underlying socio-economic and racial problems of the city and the urgent need to address them, the Infant Mortality Study Committee was assigned the task of identifying specific actions that could help mitigate the effects of those problems and successfully lower the infant mortality rate. The committee recommends that Jacksonville accelerate its efforts to address the root causes of infant mortality, but we also need to take specific actions to improve birth outcomes.

Jacksonville needs to make identifiable changes to address the high infant mortality rate. The following conclusions are grouped into three areas: Public Policy, Community Systems, and Individual Actions.



# CONCLUSIONS

## Public Policy

Medical care, while very important, contributes to only 10 to 15 percent of pregnancy outcomes. Jacksonville must address the underlying societal and structural root causes of infant mortality, including but not limited to racism, poverty, poor housing, crime, education, access to medical care, drug abuse, and joblessness. All public policy decisions should be grounded in this standard.

## Community Systems

### **Enhance Health Systems:**

Jacksonville's Perinatal Period of Risk analysis indicates that the health of the mother before she becomes pregnant contributes to the largest proportion of poor birth outcomes in Jacksonville, and the health of the mother before pregnancy contributes to the greatest disparity in birth outcomes between black mothers and white mothers.

**Perinatal** (the time before and after the birth of a baby) **Periods of Risk (PPOR):** An analytic tool used to map fetal and infant mortality rates to assist communities in targeting interventions to the time periods when gaps exist in effective services.

Jacksonville lacks a holistic life-course approach to women's and girls' health, from early health and nutrition concerns, through puberty, to the time before, during, and after pregnancy. The health care and social service systems are fragmented, uncoordinated, and too often inaccessible, or unaffordable. Many coalitions and groups (see back cover) are working on initiatives and projects—all for the common good—but working independently rather than collaboratively. Funding for programs and individuals is inadequate and unreliable.

### **Improve Service Delivery:**

Accessing Medicaid and learning to navigate all the programs intended to help mothers and their children is difficult.

Poor nutrition is a contributing factor to poor health and poor birth outcomes. For too many Jacksonville residents—primarily those living in low socio-economic

areas of the city—access to a fully-stocked neighborhood grocery store is limited or non-existent, making it extremely difficult, expensive, and time-consuming for individuals and families to obtain nutritious and well-balanced meals on a daily basis. The cost of eating healthy meals is high.

## Individual Behavior

### **Change Individual Behaviors:**

Specific causes of infant mortality, including sleep-related deaths, abuse, neglect, accidents and homicides, provide opportunities for immediate public health actions to lower the infant mortality rate.

Too many males and females in Jacksonville fail to understand the importance of pregnancy planning and spacing. In addition, the low rate of contraceptive use and the high rate of sexually transmitted diseases in Jacksonville indicate that many people in Jacksonville do not behave in a sexually responsible manner.

The role of the male partner of a pregnant woman is important to the health of the woman and the baby. Insufficient attention is addressed toward the roles and responsibilities of males in the problem of high infant mortality rates and responsible sexual behavior.

Students lack complete, timely and vital evidence-based health education presented in a developmentally- and age-appropriate manner, starting in elementary school and repeated annually. The public school curriculum fails to adequately address the areas of sex and health education, family and consumer science—which used to be called home economics—and physical education for all students. Parents' provision of education in these areas for their children is similarly lacking.

Pregnancy provides a teachable opportunity to intervene with women, their partners and families. It is an excellent time to provide programs in education, job training, mental health services, and an orientation toward future goals.

# RECOMMENDATIONS

1. The City of Jacksonville should seed an Ombudsperson program, fashioned after the model of the St. Johns Riverkeeper, to represent and advocate for the interests of children and the women who will bear the children, at all levels of governmental policy and actions. The Ombudsperson should make regular reports to the community.
2. The Mayor, City Council, and the Duval Delegation should lead and support efforts, including funding, to expand access to health care services that are relevant, accessible, and available to all citizens to:
  - expand the Federally Qualified Family Health Centers in Jacksonville to provide greater access to pre-conceptional (prior to pregnancy) and interconceptional (between pregnancies) care for women, and
  - explore the possibilities of One-Stop Family Resource Centers, especially in low-income neighborhoods.
3. To eradicate food insecurity and “food deserts,” (areas of the city, most often in high poverty, predominantly black neighborhoods, where no large, completely stocked grocery store exists and fast-food, convenience stores, and “fringe food” proliferate, making a healthy well-balanced diet more difficult to obtain) the City of Jacksonville should encourage fully-stocked grocery stores to locate in zip codes and neighborhoods with high infant mortality rates through tax and other incentive packages so that nutritious food is available, accessible, and affordable to residents to encourage well-balanced diets, lower obesity rates, and better birth outcomes.
4. The Jacksonville Children’s Commission’s *Fathers Make a Difference* and the Urban League of Jacksonville should launch a community effort in collaboration with other men’s groups—fraternities, Mad Dads, etc.—to promote men taking responsibility in caring for and supporting women who are bearing children for better health outcomes for mothers and babies. Healthy Start and Healthy Families should stress the importance of men in the lives of women and families.
5. The Duval Delegation should support state legislation to expand evidence-based sex education for all students in public school to include a comprehensive curriculum taught by certified teachers that is age appropriate and medically accurate, including facts on contraception and how to avoid sexually transmitted infections.
6. The School Board and Superintendent of the Duval County Public Schools should:
  - establish policy requiring the teaching of a comprehensive, evidence-based, age and developmentally appropriate sex education curriculum based on the findings and recommendations of the Centers for Disease Control and Prevention;
  - ensure action is taken to determine community and other state statutory standards for curriculum in human growth and development, including sex and healthy living education; family and consumer science; and physical education for all students;
  - prepare and teach—employing a health education certified teacher—a developmentally and age appropriate curriculum to start in elementary school and be repeated annually to prepare all males and females to have healthy babies and become capable and responsible parents; and
  - prepare a simplified educational program—in booklet form—for parents, families, churches, and other agencies for the same purposes. (See the next two recommendations.)
7. The Jacksonville Juvenile Justice System should adopt and teach the above developmentally and age appropriate educational program to youth incarcerated or otherwise engaged in the Juvenile Justice System, and the Jacksonville Sheriff’s Office should provide similar instruction to incarcerated adults.

# RECOMMENDATIONS

8. The Duval County School Board should partner with various agencies—including WorkSource, The Women’s Center of Jacksonville and various other literacy, social service, mental health and faith-based programs—by making available the simplified educational booklet to be taught in conjunction with other adult education and training programs. A community-wide effort should be implemented to educate everyone on responsible sexual behaviors and other habits promoting good health.
9. The Duval County Health Department, in partnership with the Healthy Start Coalition of Northeast Florida, in order to reduce fetal and infant deaths, should:
  - organize and lead a task force to coordinate and collaborate with all agencies and programs—medical, social service, and governmental—providing services to potential mothers, pregnant women, and mothers with their babies, partners and families;
  - share information and coordinate programs so that every woman in Jacksonville has a full range of services to improve birth outcomes;
  - ensure that all programs schedule flexible evening hours convenient to working mothers; and
  - ensure that every woman has a personal medical home (the central point to organize and coordinate her health care based on her needs and priorities) using the Magnolia Project as a care model.
10. The Duval County Health Department, the Jacksonville Human Rights Commission (JHRC), and partners should:
  - bring together organizations in Jacksonville whose primary mission focuses on race relations to discuss the impact of racism and racial disparities on infant mortality;
  - coordinate community viewings of the documentary series, *Unnatural Causes*, to open discussions throughout Jacksonville’s CPAC areas and neighborhoods on the implications of inequities in health and infant mortality;
  - expand educational materials and programs of the JHRC Study Circles to focus on the disproportionate rate of infant mortality and its root causes based in racism and socio-economic inequities.
11. The Duval County Health Department—in partnership with the print, radio and television media, (especially African American focused media) universities, professional public relations groups, and any other appropriate group—should develop and deliver a series of messages, regarding making good choices for better birth outcomes and initiate and coordinate a community-wide education program. Topics to be covered should include, but not be limited to:
  - alcohol, tobacco, and drug abuse
  - contraception and family planning
  - exercise
  - life-course health stressors and strategies
  - male involvement in the family
  - nutrition, healthy diets, and the importance of taking vitamins
  - obesity, diabetes, and heart disease
  - prevention of sexually transmitted infections (STIs)
  - safe-sleep practices
  - strategies to mitigate the stresses of racism
  - the high infant mortality rate, especially for the black community
  - the importance of the health of young girls long before becoming pregnant

# RECOMMENDATIONS

12. The Duval County Health Department should work with area health-care associations and institutions to ensure that members are educated on current racial disparities in health-care outcomes and treatment and to train medical professionals in best practices to improve health-care delivery for all people. In addition, the Duval County Health Department should lead an effort by all health care professionals who treat women, mothers, and babies to promote and provide good preconceptional and interconceptional education and to care for their patients giving birth. All healthcare professionals should deliberately and explicitly discuss the importance of birth spacing (18 to 24 months), contraceptive practices, hygiene practices, breastfeeding, nutrition, and baby’s safe sleeping practices.

Other partners in these efforts should be:

- Northeast Florida Medical Society,
- Duval County Medical Society,
- Jacksonville Pediatric Society of Northeast Florida,
- Jacksonville Nurses Association, and
- Jacksonville Dietetic Association.

13. The Department of Children and Families should immediately restructure all Medicaid processes and retrain all personnel serving all people including pregnant women to assure expedited, encouraging, and respectful “customer-friendly” services, so that women may begin their prenatal (during pregnancy, prior to birth) medical attention without delay. All in-person and telephone contacts with pregnant women should ensure that women can receive prenatal benefits immediately.
14. Jacksonville’s hospital obstetric departments should stop automatically furnishing take-home baby formula and institute aggressive breast-feeding educational and support programs for new mothers. In addition, the hospitals and birth centers should seek the status of a Baby Friendly Hospital.
15. Black Infant Health Community Council of Duval County should lead a sustained effort to engage and mobilize the black community to address the problem of black infant mortality in Jacksonville. The council along with partners, such as the African American Sororities and Fraternities, and faith-based groups should:
  - initiate communication, awareness and education programs in the predominantly black neighborhoods which have the highest infant mortality rates based on the example of the community focus groups conducted by JCCI in the Black Infant Health Initiative community meetings; and
  - plan mentoring programs, Sister to Sister, Mother to Mother, Father to Father, Family to Family.



# FINDINGS

When a baby dies or is born unhealthy, it is a tragedy for the family, but it is also a tragedy for the entire community.

Besides the direct costs of medical care, the indirect costs to society of the death of infants who could have become contributing members is significant. In addition, studies have shown that infants born prematurely and at low birth weights have on-going struggles; they are more likely to require considerable societal resources over their entire life span. Some may be subject to continuing developmental, medical, educational, employment, and social problems. They are more likely to suffer chronic diseases. Prematurity, the leading cause of infant mortality, also accounts for one-half of neurological disabilities in the child. They are more likely to have lower educational achievement—many become school drop-outs—and tend to earn less in their working lives. In addition, women who experience preterm births have more health problems and die at a younger age than those with full-term births.

Despite the enormous efforts of many dedicated organizations and individuals, the Infant Mortality Rate in Jacksonville has been resistant to substantial improvement since 1995. The Infant Mortality Rate (IMR) measures the number of live-born children who die before their first birthdays, expressed as a rate per 1,000 live births. Within the definition of infant mortality, distinctions are made according to the point at which the baby dies.

In the course of studying infant mortality, it became

- A **neonatal death** is one that occurs within the first 27 days after birth (nearly 60 percent of babies that die do so within the first 24 hours).
- A **postneonatal death** is one that occurs from day 28 to day 364.
- A **fetal death**, as defined by the State of Florida, is one that occurs after the 20th week of gestation (pregnancy).

apparent that the problem was larger and had more dimensions than just infant deaths. For every baby that dies, many more suffer serious life-long health problems. In addition, the same serious health issues, the same problems that cause babies to die, also cause fetuses to die after 20 weeks of gestation, and these deaths are often invisible to the community. Therefore, in the course of this study the committee found it necessary at times to consider fetal deaths and long-term disabilities when they are linked to the same causes as infant deaths.

Florida's 2006 infant mortality rate of 7.2 deaths per 1,000 live births is higher than the national average of 6.3 (United Nations World Population Report), and Jacksonville's overall 2006 infant mortality rate is higher still, at 9.5 per 1,000 live births. The black infant mortality rate for 2006 was 12.7, and for whites it was 7.2. Together Jacksonville had 130 infant deaths in 2006. (See Table 1) For the school year 2010-2011 Jacksonville will have lost the equivalent of seven kindergarten classrooms of children who died before their first birthday.

**Comparison of U.S., Florida, and Jacksonville Infant Mortality Rates (IMR), 2006**

Infant Mortality	Rates
U.S.*	6.3
Florida	7.2
Jacksonville	9.5
Jacksonville Whites	7.2
Jacksonville Blacks	12.7
Duval County Health Department** Health Zone 1 (the urban core, see page 11)	17.2

Table 1 Sources: Florida Charts, \*United Nations World Population Report, 2006

\*\*Duval County Health Department, Infant Mortality, December 2004-2006.

The committee wanted to examine the infant mortality rates for Hispanics/Latinos living in Duval County; however, Florida Vital Statistics do not determine the rate per 1,000 for Hispanic fetal/infant deaths, and for Jacksonville, the numbers are too small to calculate valid statistics. Below are the *actual* (raw) numbers of fetal/infant deaths for 2006 in Duval County.

**Total Numbers of Fetal and Infant Deaths in Duval County, 2006**

	Total Deaths in Duval County	Total Hispanic	Mexican	Puerto Rican	Cuban	Central/South American	Other Hispanic	Haitian (non-Hispanic)
Fetal Deaths	99	9	2	4	0	1	2	0
Infant Deaths	130	9	5	1	0	2	1	4

Table 2 Source: Florida Vital Statistics Annual Report, 2006

Compared to other counties in Florida having large cities, Duval County has the highest total infant mortality rate. (See Table 3)

**Comparison of Duval County with other Florida Counties in Fetal-Neonatal-Infant Deaths in 2006**

2006 Deaths/ Rate per 1000 Live Births:	Fetal * (Stillborn) (20 or more weeks of gestation)	Neonatal * * (Under 28 days)	Infant * * (28 days to 364 days)	Total * * Neonatal + Infant Deaths
Broward	8.3	4.1	2.2	6.3
Miami-Dade	8.2	4.2	2.3	6.5
Duval	7.3	6.0	3.5	9.5
Hillsborough	7.3	5.7	2.1	7.8
Orange	8.0	5.5	3.0	8.5
Palm Beach	9.8	3.6	1.9	5.5

Table 3 Source: Florida Vital Statistics Annual Report

Rates per 1,000: \*Calculated on total number of deliveries. \*\*Calculated on total number of live births.

In addition to the tragedy of too many babies dying, the infant mortality rate is recognized internationally as a fundamental indicator—a core assessment—of a nation’s overall health. The same medical, health, behavioral, and socio-economic structural factors that affect mothers and babies affect all residents of the community.

Many individuals and organizations in Jacksonville have been working to reduce the infant mortality rate, and especially to reduce the disproportionate rates of black infant mortality as compared to the rest of the community. Yet, with all these many efforts of social service organizations and the medical professionals, for the last ten years the infant mortality rate and the disparity in the rates for blacks have been resistant to significant improvement.

## THE PROBLEM

According to the United States Central Intelligence Agency's *The World Fact Book*, the United States ranks below most industrialized nations in infant mortality. In addition, the rest of the world is continuing to improve its IMR while the U.S. rate has remained relatively constant for the past ten years. (See Chart 1)

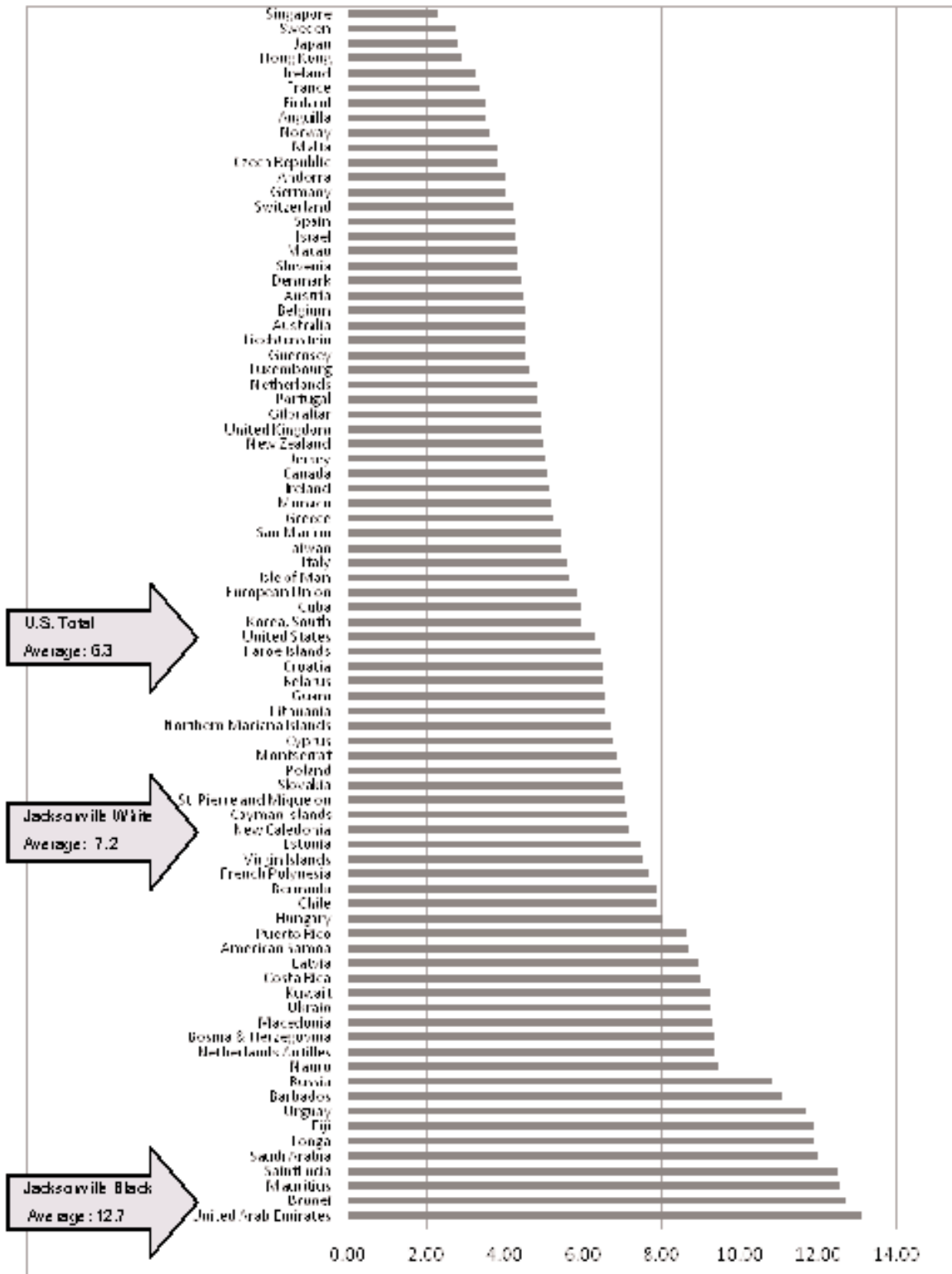


Chart 1 Deaths Per 1,000 Live Births

Source: United States Central Intelligence Agency, *The World Fact Book*, estimates for 2008

Historically, infant mortality rates declined in the United States from 20.0 per 1,000 in 1950 to 11.6 in 1975, to 6.3 in 2006. This decline in infant mortality is considered one of the ten greatest public health successes of the twentieth century. However, from 1995 to 2006 the U.S. rates have flattened out, and some public health officials worry that the rates may be increasing. In Jacksonville, despite a drop in rates in 2006 (See Chart 2), the infant mortality rates remain higher than the U.S. rates. Duval County showed a general decline through 1995 and an increasing trend until 2006.

**Infant Mortality Rates, Duval County**

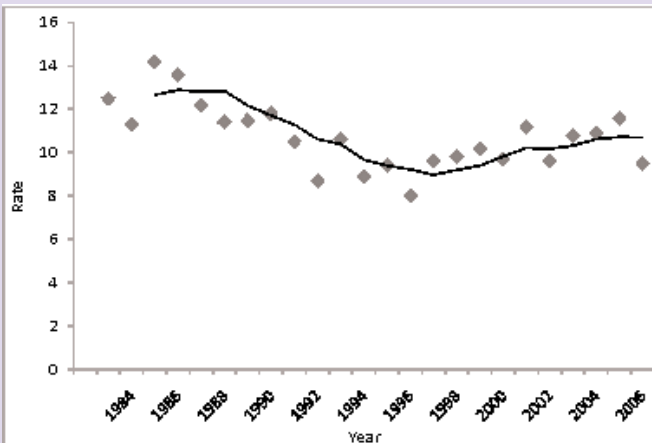


Chart 2 Source: Florida Department of Health. The trend line displays four-year rolling averages.

In this study the committee looked at the problem of infant mortality in Jacksonville and at the significantly higher infant mortality rate among blacks—which at 12.7 is equal to many developing countries. (See Chart 1). The infant mortality rates of the Hispanic/Latino community were also examined. In general, the Hispanic/Latino rates resembled those of the white community, with some differences noted in the Hispanic/Latino community in various races, ethnicities, countries of origin, and length of time in the United States. The greatest disparities, however, were represented between the black community and the white community (See Chart 3). The overall high rate of infant mortality as well as the significantly higher rates for blacks became the salient focus of the study.

**JCCI's Quality of Life Progress Report:  
Sustaining a Healthy Community Indicator: Racial Disparity in Infant Deaths in Duval County**

In 2006 infant mortality decreased not only in Duval County but in Northeast Florida, particularly among black people. While this decrease is good news, it is too early to know if the reduction is the beginning of a trend or if it is an anomaly. Between 2002 and 2005 infant mortality rates rose each year, and other years have shown dramatic one-year declines only to rise again in succeeding years, as shown in Chart 3.

As JCCI has found with other community problems, infant mortality and its associated risk factors disproportionately affect certain racial, ethnic, economic, and geographically isolated groups in Jacksonville. Disparities in infant mortality, like other health disparities, are wide. In Duval County the highest incidence of infant mortality occurs among black families and in zip codes 32202, 32204, 32206, 32208, 32209, 32254, and to a lesser extent 32219—

that are, according to the U.S. Census, predominantly black and of lower socio-economic status.

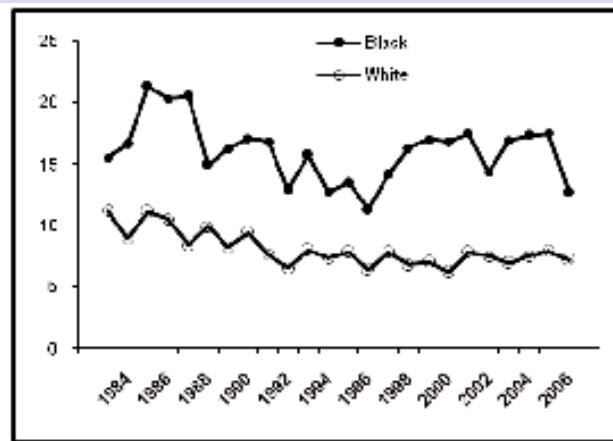
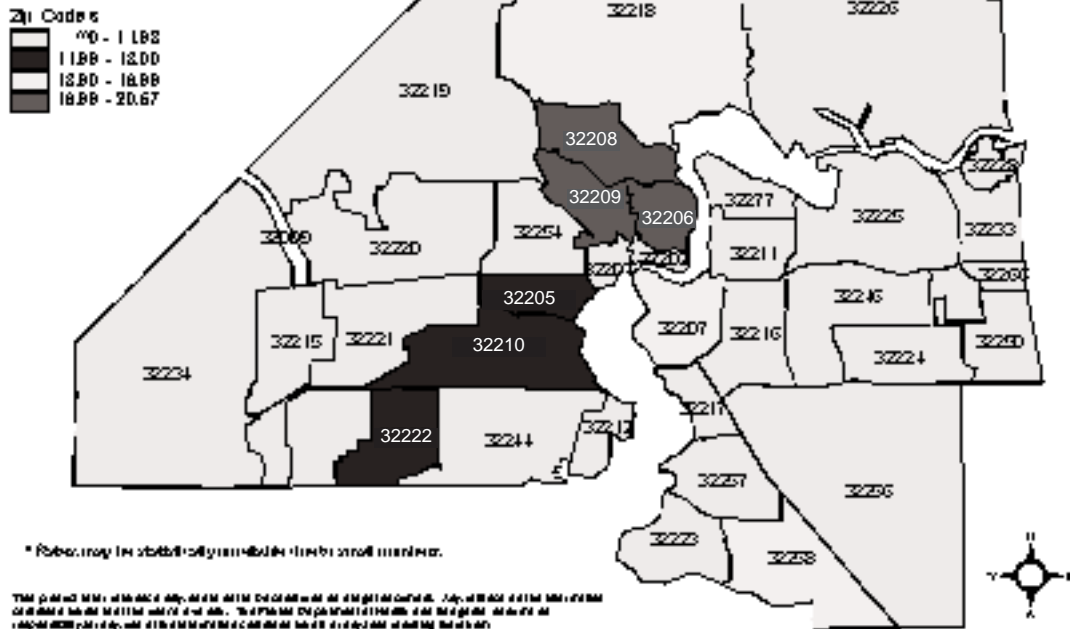


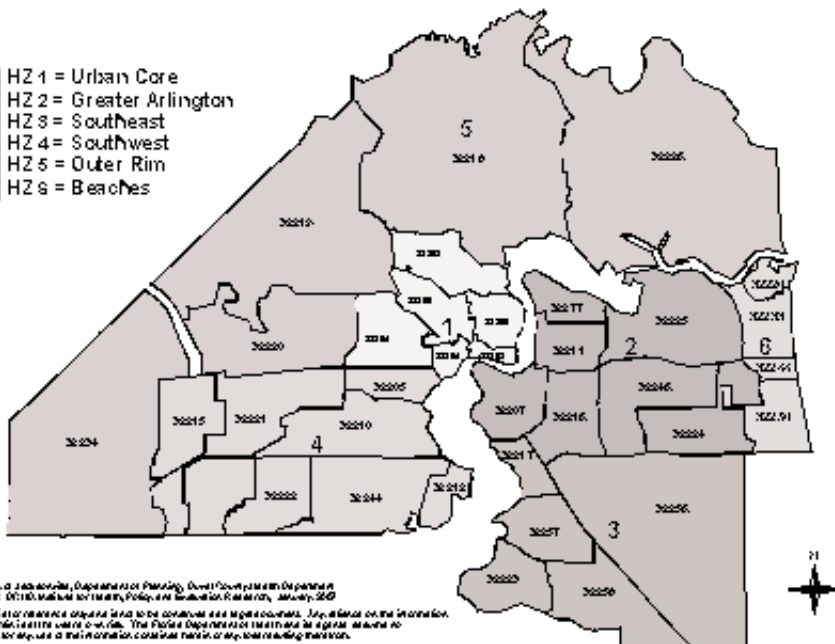
Chart 3 Source: Florida Department of Health

## Infant Mortality Rate by Zip Code, Duval County, 2003 - 2006



## Infant Mortality Rates by Duval County Health Zones, 2004-2006

- HZ 1 = Urban Core
- HZ 2 = Greater Arlington
- HZ 3 = Southeast
- HZ 4 = Southwest
- HZ 5 = Outer Rim
- HZ 6 = Beaches



2004-2006

Health Zones	IMR's
Health Zone 1 (Zip Codes: 32202, 32204, 32206, 32208, 32254)	17.2
Health Zone 4 and 5	12.4
Health Zone 2	9.7
Health Zone 3	7.5
Health Zone 6	7.4

Source: City of Jacksonville, Department of Planning, Duval County Health Department  
 Prepared by: OCHHS, Division of Health Policy and Evaluation Research, January 2007  
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Poverty, while being a contributing factor, is not the only cause of infant mortality. Dr. Michael Lu, Associate Professor at UCLA College of Health and a national leader in the field of infant mortality, wrote, “In fact, high SES [socio-economic status] African American women still have higher infant mortality [rates] than do low SES, non-Hispanic White women.”



In a study of 500 pregnant active-duty women in the U.S. military, the preterm delivery rate—the largest immediate cause of infant mortality—was twice as high for black women as for white women. This finding is significant because many factors are held constant: black military women and white military women experience the same fitness, the same integrated work environment, and the same access to preconceptional, prenatal, delivery, and postnatal (following birth) medical attention.

Both the infant mortality rates and racial disparities in infant mortality in Jacksonville have received “red flags” from JCCI’s *Quality of Life Progress Report* and *Race Relations Progress Reports* of 2005, 2006, and 2007. A national initiative of the U.S. Department of Health and Human Services—Healthy People 2010—upholds as Goal Two “to eliminate health disparities that occur by race and ethnicity, gender, education, income, geographic location, disability status, or sexual orientation.” Certainly health disparities exist in other parts of the United States, but those health disparities are more pronounced and disproportionately higher among blacks in the Southeastern states and Jacksonville.

## INFANT MORTALITY CAUSES

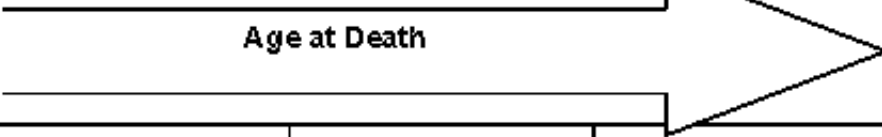

### *Mother, Baby, and Infant Care*



The **Perinatal Periods of Risk (PPOR)** is an analytic tool developed by Dr. Brian McCarthy at the Centers for Disease Control with collaborators from the World Health Organization. In 1997 CityMatCH—a national organization of city and county health departments—adopted this tool to map fetal and infant mortality rates and to assist a community in targeting interventions to the time periods where gaps in effective services exist. The PPOR is a useful tool for examining infant mortality because it is simple and standardized, allowing cross-community and inter-community comparisons; leads to actions by targeting specific areas for further study or prevention activities; and is easily communicated to community partners, which can stimulate community actions.

The PPOR has been used for decades to identify two major considerations of infant mortality: why babies are dying and when they are most at risk for death. The PPOR not only presents the numbers, but also suggests actions to be taken by communities to address problems. On the next page is a brief explanation of how the PPOR is used.

## When and Why Babies Die:

			
	<b>Stillborn Babies: Fetal Deaths</b> 24+ Wks in Gestation (5 ½ months of pregnancy)	<b>Newborn Babies: Neonatal Deaths</b> Less than 28 days of age	<b>Infants: Postneonatal Deaths</b> 28 to 364 days of age
<b>Why Babies Die:</b>			
<b>Weight at Birth:</b> 500-1499 grams (1 lb., 2 oz. to less than 3 lbs., 5 oz.)	<b>1 Woman's General Health Maternal/ Prematurity</b> This cell represents all fetuses and infants (weighing less than 3 pounds, 5 ounces at birth) who are stillborn or die <b><u>due to problems with the mother's health</u></b> <ul style="list-style-type: none"> <li>preconceptional health</li> <li>health behaviors</li> <li>perinatal care</li> </ul>		
<b>Weight at Birth:</b> 1500+ grams (3lbs., 5 oz. or more.)	<b>2 Maternal Care</b> This cell represents all stillborn babies (weighing 3 pounds, 5 ounces or more) who die after 24 weeks of gestation <b><u>due to problems with maternal care</u></b> <ul style="list-style-type: none"> <li>prenatal care</li> <li>high risk pregnancy</li> <li>obstetric care</li> <li>health behaviors</li> </ul>	<b>3 Newborn Care</b> This cell represents all infants who die (weighing 3 pounds, 5 ounces or more at birth) after birth within the first 28 days <b><u>due to problems with newborn care</u></b> <ul style="list-style-type: none"> <li>neonatal care &amp; management</li> <li>treatment of congenital anomalies</li> <li>pediatric surgery</li> </ul>	<b>4 Infant Care</b> This cell represents all infants who die (weighing 3 pounds, 5 ounces or more at birth) after the first 28 days <b><u>due to problems with infant care</u></b> <ul style="list-style-type: none"> <li>sleep position</li> <li>SIDS</li> <li>lack of breast feeding</li> <li>accidental injuries</li> <li>abuse and neglect</li> </ul>

*Chart 4 Source: Adapted by JCCI Staff from the Perinatal Periods of Risk (PPOR)  
Duval County Health Department*

The descriptions in Chart 4 within each shaded block indicate the time frame in which targeted interventions could help to improve birth outcomes by attending to the

- 1) Woman's General Health;
- 2) Maternal Care;
- 3) Newborn Care; or
- 4) Infant Care.



What does an analysis of the PPOR for Duval County tell us about infant mortality in Jacksonville? This Jacksonville PPOR is a summary of infant deaths over a three-year period, from 2003 to 2005. Each cell shows the comparative death rate for black and white babies by weight and by age at death.

### RACIAL DISPARITIES IN DEATHS OF BABIES IN JACKSONVILLE, 2003-2005

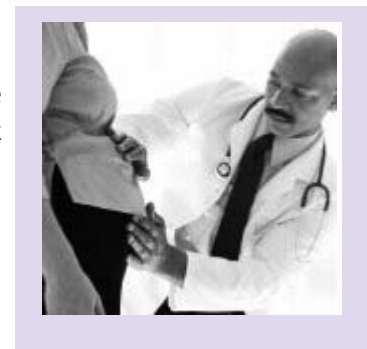
#### Age at Death:

	<b>Stillborn Babies: Fetal Deaths</b> 24+ weeks in gestation	<b>Newborn Babies: Neonatal Deaths</b> Less than 28 days of age	<b>Infants: Postneonatal Deaths</b> 28 to 364 days of age
<b>Birth Weight:</b> 500-1 499 grams (1 lb. 2 oz. to less than 3 lbs. 5 oz.)	<b>Woman's General Health Maternal/ Prematurity</b>  <b>Black Fetal/Infant Mortality Rate = 6.0</b> <b>White Fetal/Infant Mortality Rate = 2.8</b> All Ages – Birth Weight less than 3 lbs., 5 oz.		
<b>Birth Weight:</b> 1 500+ grams (3lbs. 5 oz. or more.)	<b>Maternal Care</b>  <b>Black Rate = 3.6</b> <b>White Rate = 1.9</b> Birth Weight greater than 3 lbs., 5 oz.	<b>Newborn Care</b>  <b>Black Rate = 1.4</b> <b>White Rate = 1.0</b>	<b>Infant Care</b>  <b>Black Rate = 2.7</b> <b>White Rate = 2.6</b>

Chart 5 Source: Adapted by JCCI Staff from Jacksonville's Perinatal Periods of Risk (PPOR) 2003-2005, Duval County Health Department

Notice that the rate is more than twice as high in the cell for **Woman's General Health** and almost twice as high in the cell for **Maternal Care** for blacks than it is for whites. In fact, **more than 70 percent of the deaths of black babies are in these two cells which represent the preconceptional general health of the woman and the mother's prenatal health and care.** These high rates reflect the inadequate attention to the health of the mother—both before conception and during pregnancy. For whites this rate is about **58 percent**—still quite significant. More than half the babies die because of the mothers' health and care before conception or during pregnancy.

Low birth weight is the largest risk factor, and approximately 80 percent of the racial disparity is due to a higher frequency of premature births among black women. Additional immediate causes of infant mortality include birth defects and congenital malformations.





**Focus on: Woman's General Health**

Good birth outcomes depend upon the general health of the woman not just immediately prior to pregnancy, but from childhood through adulthood.

According to Dr. Charles Mahan, Professor Emeritus, Department of Community and Family Health, University of South Florida, preconception care and interconception care are two periods of time that can make the quickest difference in maternal health and infant mortality. Dr. Mahan advocates a holistic approach to women's health and childbearing. It is important for the health care provider to ask questions, such as whether and when the woman and her partner are considering having a baby; if she needs help with contraception information and supplies; and if she is planning on having a baby, to suggest taking folic acid every day until she is ready to conceive. Preconception, pregnancy, birth and the first year of a baby's life provide unique opportunities to influence the long-term health of a family—but these opportunities are often wasted.



Many issues need to be addressed before pregnancy: genetic concerns; depression screening; sexually transmitted infections (including HIV) screening; behavioral issues, such as smoking, alcohol and drug use; nutrition and diet problems (underweight or overweight); and stressors, such as domestic violence and neighborhood safety.

The holistic approach to birth would involve—in a normal pregnancy—the care of the primary or family physician, midwives, and nurse practitioners. High-risk pregnancies would be co-managed by the same team along with a maternal fetal medical specialist. The intention is to establish and maintain a continuity of care with one provider—a doctor who provides the medical home and care for the whole family—along with a midwife or nurse practitioner to orchestrate the birth of the baby.

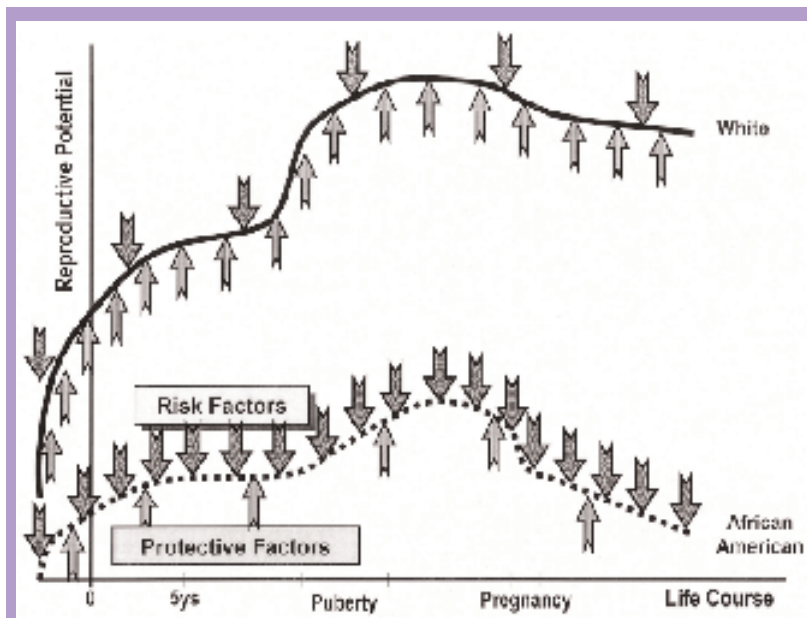


Chart 6 Source: Lu M.C., Halfon N. Racial and ethnic disparities in birth outcomes: a life-course perspective. *Journal of Maternal and Child Health* 2003; 7:13-30.

**A Life-Course Perspective**

Dr. Michael C. Lu, Associate Professor at UCLA Medical Center and Associate Director of the Child and Family Health Training Program, stated, “We have been looking at the problem in the wrong way; we have been looking at pregnant white women and pregnant black women to explain the disparities in outcomes. We need to look at the many years of women's lives leading up to pregnancy, a life-course perspective. We need to look at the risk and protective factors over a lifetime. Nine months of prenatal care is too late to make up for the cumulative disadvantages.”

Dr. Lu writes, “The life-course perspective consists of two components: an early programming component, and a cumulative pathways component. The early programming model posits that experiences early in life—when you were just a baby inside your mother’s womb—these early life exposures can influence your health and function for life.”

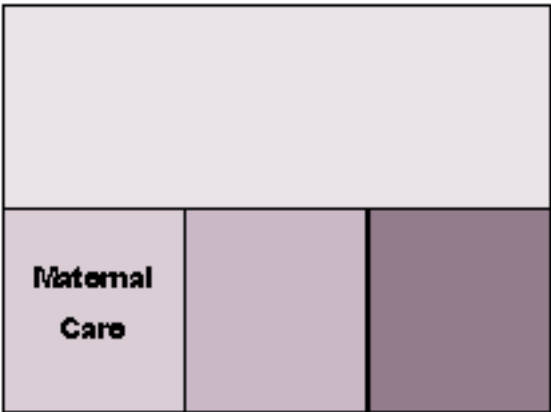
The cumulative pathways component is composed of your experiences after birth. Different racial groups—here whites and blacks—experience life in different ways. The upward pointing arrows indicate protective factors—such as the love of a family; good education, nutrition; employment and earnings; equitable treatment by the institutions of society; and equal access to the goods and services a society has to offer. Whites tend to have more of the protective factors. The downward pushing arrows are the risk factors—stressors—differentially experienced by whites and blacks. And what does stress do to your immune system? The effect of lifelong stress Dr. Lu refers to as “weathering,” which is the negative effects of social inequality on health outcomes over a lifetime. In general, stress depresses the immune system, which may explain why women who are chronically stressed are more susceptible to infections like bacterial vaginosis that could increase their risk for preterm labor during pregnancy. Vulnerability to preterm delivery may be traced to not only exposure to stress and infection during pregnancy but to stress and infection patterned over the life course.

**Thus we can reframe preterm birth not only as a children’s health issue, but as a women’s health issue.**

*Focus on: Maternal Care*

**Access to Quality Health Care**

Perinatal risks are affected by several aspects of medical care including: access, quality, and appropriateness. Among the disadvantages frequently shared by low-income black and white women is the lack of quality health care before, during, and after pregnancy. Lack of good health care and good nutrition throughout life endangers the mother and the child. Maintaining a quality health care system, including prenatal care, is largely dependent upon insurance coverage.



Eligibility and enrollment barriers to obtaining Medicaid coverage can delay or prevent low-income women from receiving timely and adequate prenatal care. A number of women have complained to government officials that applications are managed by unresponsive and indifferent representatives; such client treatment can also slow down the process of obtaining Medicaid coverage. In addition, current HMO contracts under Medicaid reform can prevent women with the highest risk pregnancies from being treated at the medical facilities equipped for highest risk care.



The United States spends twice as much on healthcare as other developed countries, yet the infant mortality rate is higher than those same countries. The Institute of Medicine has conducted studies that have shown that blacks often do not receive the same quality of medical care as their white counterparts and that the medical community is less aggressive in treating blacks than whites for the same conditions. Other health problems are disproportionately higher among blacks in the U.S.—for example, diabetes, asthma, and hypertension. Duval County experiences similar patterns of higher rates of disease for blacks.

## Maternal Medical Care

Specific medical problems affecting pregnant women include:

- intrauterine fetal growth restriction—in which a fetus does not reach its growth potential because of genetic or environmental factors including substance abuse;
- non-medically-indicated cesarean section delivery;
- preterm delivery, even after extraordinary medical interventions;
- premature rupture of membranes (prior to the onset of labor) from infections—including bacterial vaginosis which is considered an independent risk factor for premature labor;
- hypertension (high blood pressure);
- diabetes and obesity; and
- placental abruption—a complication of pregnancy wherein the placental lining has separated from the uterus of the mother. (It is also a significant contributor to maternal mortality). Placental abruption can be caused by a number of conditions including:
  - o high blood pressure;
  - o cocaine use;
  - o cigarette smoking;
  - o abdominal trauma (such as may occur with an automobile accident or physical abuse);
  - o certain abnormalities of the uterus or umbilical cord;
  - o being more than 35 years of age;
  - o being pregnant with twins, triplets or more;
  - o having too little amniotic fluid;
  - o having certain inherited disorders of blood clotting; or
  - o having an infection involving the uterus.

Diabetes and obesity—which present significant risk factors for infant mortality—are increasing among Americans, especially among blacks and Hispanics. Diabetes is the most common complication of pregnancy at a rate of 33 per 1,000 births. Gestational Diabetes Mellitus (GDM)—a condition in which women without previously diagnosed diabetes exhibit high blood glucose levels during pregnancy—can lead to preterm delivery as well as cesarean section births. Women with GDM have a 20 to 50 percent chance of developing Type 2 Diabetes within the next five to ten years of their lives, and their offspring have an increased risk of developing diabetes and obesity later in life. Obesity is a major contributing factor to the two most common medical risks of pregnancy, hypertension and diabetes.



### Provider Issues

Provider issues—such as poor doctor-patient communications, misdiagnoses, and/or lack of appropriate referrals—are contributing factors to infant mortality. Women with high risk pregnancies—due to any number of causes—should be seen by doctors specializing in monitoring and managing their treatments. Inappropriate referrals can lead to poor pregnancy outcomes.

While all obstetricians can accept Medicaid patients, many do not, and many will only see the mother through the delivery of the baby. Doctors hesitate to see the mother for interconceptional care or family planning because they do not consider the payment for those services to be adequate to compensate for their time.

Studies have also shown that many health care providers are leaving the practice of delivering babies—especially in the case of high risk pregnancies—because of the exposure to liability and the high cost of liability insurance. Some believe that Medicaid patients are more likely to sue doctors, although this has not been substantiated by studies.

**Focus on: Newborn Care**

As can be seen in the PPOR (Chart 5), **newborn infant mortality rates are approximately equal for blacks (1.4) and whites (1.0)**. These comparatively lower rates reflect the ability of the medical community, including Neonatal Intensive Care Units (NICU), to save babies.

**Prematurity and Low Birth Weight**

The leading causes of death among newborn infants are premature birth and low birth weight—babies are born too soon and too small. Birth weight is a significant determinant of infant survival. Born at less than 500 grams (about one pound), approximately 90 percent of babies die. The mortality rate declines as the birth weight increases, so that at 2500 to 4000 grams (about 5 pounds, 8 ounces to 8 pounds, 12 ounces) the death rate is two to three per 1,000 live births. Over 4000 grams the IMR begins to go back up. (See the Chart 6.)

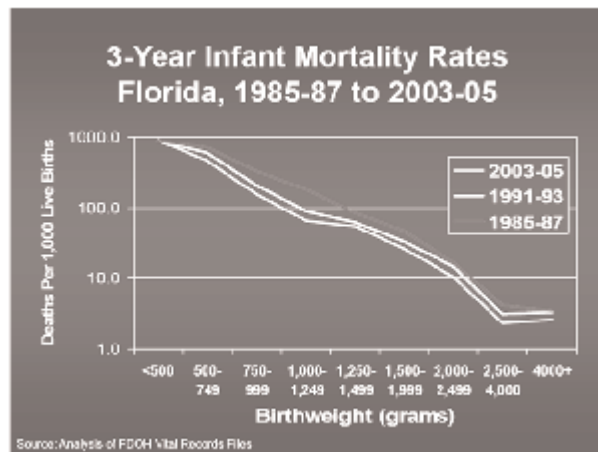


Chart 7 Source: Dr. William Sappenfield

Two-thirds of the racial disparity in IMR and 80 percent of neonatal mortality are caused by higher rates of very low birth weight (VLBW) babies born to black women. Four clinical conditions are responsible for most of the disparities in VLBW:

- hemorrhage (10 percent);
- hypertensive disorders (12 percent);
- spontaneous preterm labor (21 percent); and
- premature rupture of membranes (PMR) (38 percent) caused by chorioamnionitis—an inflammation of the chorion and the amnion, the membranes that surround the fetus and **the most important known contributor to racial disparities in very preterm deliveries.**
  - o Vaginal infections—chlamydia, gonorrhea, trichomonas, and bacterial vaginosis—have been associated with first trimester bleeding and preterm birth and present increased risk of PMR.

**Survival of the Newborn Baby**

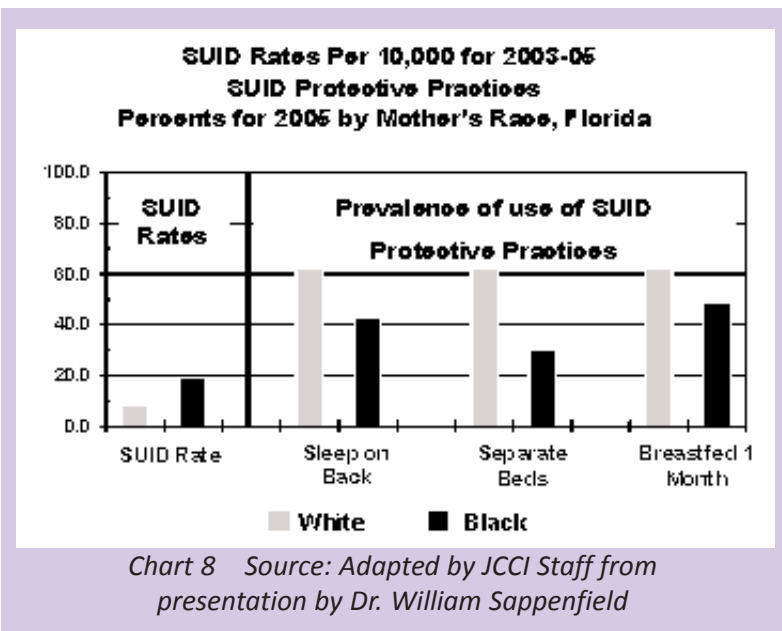
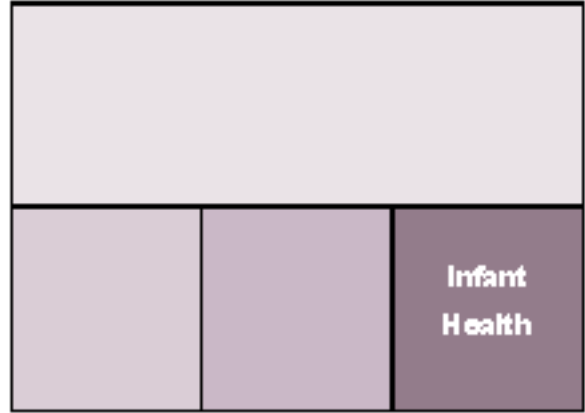
Through improvements in medical technology and care, more babies are living today at every birth weight than 20 years ago. Neonatal intensive care units have made it possible for many more infants to survive. However, some neonatologists have suggested that the available technology and medical care have nearly reached their capacity to lower the infant mortality rate. Therefore, other strategies will need to be employed to lower the IMR further. Regrettably, while more babies survive premature birth and low birth weight, some may be subject to a lifetime of developmental problems and continuing medical, educational, employment, and social costs.

**Focus on: Infant Health Care**

Looking again at the PPOR, one can see that the **death rates of infants older than 28 days for white infants are about the same as for black infants, 2.6 and 2.7 respectively.**

**Sleep-Related Deaths**

Major factors contributing to infant mortality are sleep-related deaths, including accidental overlays, accidental suffocation, and SUIDS (Sudden Unexplained Infant Death Syndrome) which includes SIDS (Sudden Infant Death Syndrome). Some differences exist between blacks and whites in sleep-related practices; studies have shown that more white mothers follow protective practices for SUIDS.



In Duval County, sleep-related deaths have caused 13 percent of infant deaths in the years 2002-2007. Of concern for the last few years is the fact that the percentage of sleep-related deaths has ranged from 13 to 19 percent, suggesting an upward trend. Contributing causes of sleep-related deaths are:

- the baby not being put on his or her back for sleep;
- having inappropriate bedding—such a loose blankets, pillows, stuffed animals, and crib bumper guards;
- not sleeping in an infant bed;
- never having been breast fed;
- sharing a sleep surface (co-sleeping); and
- inhaling second-hand smoke.

Safe sleep practices provide simple opportunities for improvement in the infant mortality rate through information and education initiatives. Some agencies in Jacksonville provide bassinets and cribs (*See list of local agencies located on back cover*) along with education on safe sleeping practices. Traditional sleeping preference for babies has been on the stomach, and traditional practices are difficult to change. Sometimes grandmothers and other older daycare providers need to be reminded about the importance of the above sleep-related hazards.

**Abuse, Neglect, Accidents and Homicide**

Child abuse and neglect account for about ten percent of infant mortalities. In Duval County in 2006, of the 130 infant deaths, twelve were determined by the Department of Children and Families to be due to abuse and neglect. Most of these deaths were caused by physical abuse such as cocaine-induced prematurity, drowning, gun neglect, hanging, smothering, overdose of medicine, and blunt head trauma. Child abuse, neglect, accidents and homicides exist in all racial and socioeconomic groups; however, victims and perpetrators are disproportionately represented in lower socioeconomic groups and in the black community.

Among all the causes of infant deaths, sleep-related hazards, unintentional injuries, abuse and neglect are among the most preventable.

# STRESS

## *Stress as a Medical Cause of Infant Mortality*

Maternal stress—often an underestimated contributor to infant mortality—is one of the main medical risk factors. Stress may decrease immune system functioning, lead to preterm labor, and may, in fact, be “learned” through biochemical changes to the fetus in the uterus. A difference in stress levels may explain why black women having the same or higher education level and income as white women still have higher IMRs than white women. Some causes of stress include interacting societal, economic, environmental factors and individual behavior choices:

- poverty;
- hunger;
- unhealthy diet;
- low socioeconomic status—and the inability to make decisions about one’s disposable income;
- lack of education;
- lack of adequate support systems;
- institutionalized sexism—women and their roles, including motherhood, devalued by the community;
- neighborhoods and workplaces excessively subject to environmental hazards, such as former waste disposal sites or areas in close proximity to high-volume traffic;
- neighborhoods with high crime rates;
- neighborhoods without adequate services, including fully stocked grocery stores;
- poor housing;
- racism—institutionalized, interpersonal, and internalized—at work, at school, shopping, and in services in the community;
- single motherhood (black women are twice as likely as whites to be single mothers);
- habitual unhealthy behaviors relating to food, alcohol, tobacco and exercise;
- substance abuse;
- unstable home circumstances or working situations;
- the “Immigrant effect”—the longer an immigrant group lives in the United States, the more their infant mortality rate comes to resemble the U.S. rates for their racial or ethnic group;
- no or inadequate prenatal care; and
- accumulated deficits experienced over a life time.



### Cumulative Chronic Stress

In Jacksonville historically, black infant mortality rates have been two to three times as high as white infant mortality rates. While all women and babies face risk factors, black women face increased risk factors. Throughout this study the committee found that the racial—black and white—disparities in the infant mortality rates were reflected in the disparities in the access to the goods and services of the community. This includes access to quality health care and neighborhood environments with more economic hardship, educational disadvantage, crime and violence, and less nutritional food sources.



Cumulative, chronic stress on the mother, including all the aforementioned stressors and the chronic stress associated with racism and perceptions of racism, has physiological consequences for the mother and the baby and may well have consequences that carry over from generation to generation.

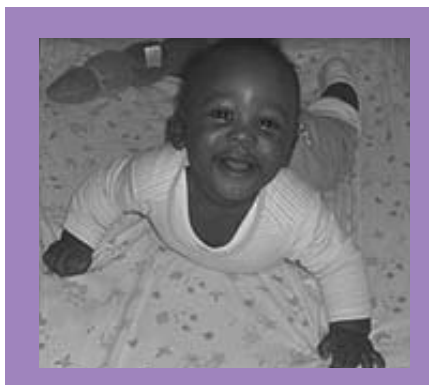
Researchers have looked at all the probable factors of infant mortality—behavioral differences, prenatal care differences, socioeconomic differences, stressful events, infections, and multiple risk factors—and found that the disparity (specifically between blacks and the rest of the community) in infant mortality persisted when these factors were held constant.

Hispanic infant mortality rates are a bit more complicated because Latinos can be from many differing countries, ethnicities, and racial origins. Generally speaking, the Hispanic infant mortality rates are lower the shorter time the immigrants have been in the U.S. and the more traditional are their family practices.

Race—and especially racism—provides a backdrop in the lives of black women that presents fewer protective factors and many more risk factors. The stress of racism—perceived and real—makes black women at higher risk for infant mortality as well as other diseases associated with stress.

### Fetal Programming

From animal models, scientists know that prenatal stress affects fetal programming. Hormones produced by maternal stress can pass through the placenta and increase the hormonal stress reaction—fight or flight reaction—while decreasing the sensitivity of the cells in the area of the brain that regulate learning and memory in the fetus. In a hostile and dangerous world, this preparation of the fetus would increase her/his survival chances, but the changes also make the baby more prone to be stressed. These hormonal changes can account for the way a baby's brain develops and can have an impact on the entire life course of the fetus. The changes may account for much of the Attention Deficit Hyperactivity Disorder (ADHD) as well as long-term disease propensities.



Similarly, gestational diabetes creates extra insulin in the mother which also crosses the placenta to create more fat cells in the fetus and more insulin resistance (a condition in which a normal amount of insulin secreted by the pancreas is not able to maintain a normal blood glucose level), and leptin (which signals the brain when you are full and to quit eating) resistance. Both processes program the infant for increased chances of obesity, diabetes, hypertension, and related diseases. Studies point to early programming from multiple maternal stress factors that contribute heavily to the infant mortality disparity. It has been shown that low birth weight is connected to adult coronary heart disease, hypertension, and insulin resistance syndrome.

### Other Impacts of Chronic Stress

Repeated chronic stress also depresses the immune system, makes a mother more susceptible to infections, and increases the inflammatory response. The end result is loss of the ability of the body to self-regulate responses to infections and often leads to preterm labor.

The implications of cumulative, chronic stress are that the mother can become **stressed out**—with hypertension, heart disease, glucose intolerance, insulin resistance, and infections—resulting in preterm birth, the biggest difference in black and white infant mortality rates. Prematurity, the leading cause of infant mortality, also accounts for one-half of neurological disabilities in the child. In addition, women who experience preterm births also have more health problems and die at a younger age.

The disparate stressors on African American women often include violence, poverty, and racism. Women who experience racism in three or more domains, like job, school, housing, or services are three times more likely to deliver a preterm baby. Racism exists in three forms: internalized, interpersonal, and institutionalized. Institutionalized racism is expressed in unequal access to the goods and services that society has to offer, such as education, housing, jobs, opportunities, and health care. Interpersonal racism is everyday, directly perceived, discriminatory interactions. Internalized racism—the most insidious of all—occurs when people targeted by racism come to believe and accept the distortions of racism. Racist attitudes are so harsh, so pervasive, and so damaging that the victims turn the racism inward, devaluing themselves. Internalizing the messages of racism, victims also come to mistreat one another in the same ways that they have been mistreated by mainstream society.

### *Stress of Socio-Economic Environment*

#### **Poverty**

For the low-income woman and family, every day is stressful. Food insecurity (i.e., obtaining enough food for the family), paying the rent, keeping the electricity turned on for another month, keeping gas in the car if there is a car, deciding which bills to pay and which to let ride another month, and constantly worrying about money are both stressful and destabilizing to families. In addition, routine tasks become more time-consuming; the poor often spend an inordinate amount of time negotiating basic needs. The limited nature of their resources means that everyday tasks take much longer, and usually end up costing more. For example, paying bills without a checking account, credit and debit cards, or on-line banking requires having to purchase money orders to pay necessary bills. Distances become significant barriers when relying on public transportation's service schedules, routes, holidays, and glitches.



#### **Poor Housing**

Substandard housing in poor, unsafe neighborhoods contributes to stress for the woman and mother and her family. Poverty may lead not only to having to accept poor housing but also may contribute to unstable living conditions in which the woman may move frequently because she cannot keep up with the rent. She may be neglected by the landowner who may pay little attention to security, repairs, sanitation, and pest control. Even her home does not give her respite from stress under these conditions.



### **Lack of Education**

Education can act as a protective factor by helping to prevent infant mortality through providing knowledge about pregnancy, prenatal care, birth control, infant feeding and parenting. Education can also act as a protective factor by increasing income and job security.

High infant mortality zip codes coincide with high dropout rates among residents. Lack of education limits economic opportunities. It also acts as a determinant of self-esteem and the knowledge and expectation of high quality medical treatment, child development, and knowledge and credentials necessary for breaking the cycle of poverty.

Lack of education on responsible sexual behavior and parenting from the schools can contribute to poor birth outcomes. For some women, school may be their only opportunity to receive factual information about parenting and caring for their overall health. Yet even graduating from high school provides no guarantee that one has had appropriate health instruction or received the necessary information to make informed choices.

### **Crime and Violence**

Crime and violence are associated with infant mortality. Living in neighborhoods with high crime rates creates both the real danger of becoming a victim of crime and the stress associated with the potential of becoming a victim. Living in high crime neighborhoods is often a function of living in poverty.

### **Food Deserts**

“Food deserts”—areas of the city, most often in low-income, predominantly black neighborhoods, where no large, completely stocked grocery store exists and fast-food, convenience stores, and “fringe food” proliferate—make the consumption of a healthy well-balanced diet more difficult. In these areas people must drive sometimes for miles to reach a well-stocked grocery store with fresh fruit and vegetables, as well as other nutritious and good quality food. If transportation is limited to a taxi, bus, or walking, good nutrition is more difficult to manage. Consumers are often faced either with buying higher-priced and often lower-quality goods in local markets, stopping at the nearest fast-food outlet, or figuring out some way to travel the miles to the supermarket and back, often with children in tow.



### *Stress of Social Relationships*

#### **Domestic Violence**

Domestic violence is another of the direct and indirect causes of infant mortality. Pregnancy is often a time when physical abuse starts, resulting in poorer outcomes for the mother and the baby. Pregnant women are at twice the risk for battery, and 40 percent of domestic assaults begin during the first pregnancy. Immediate effects on the pregnancy can include:

- blunt trauma to the abdomen;
- hemorrhaging (including placental separation);
- uterine rupture;
- miscarriage/stillbirth;
- preterm labor; and
- premature rupture of the membranes.

Teen mothers are especially at risk for violence from their partner. The partner may feel stress from the pregnancy and express that stress in violence to the pregnant young woman.

#### **Lack of support systems**

The most common reasons cited for lack of timely prenatal care are difficulties with transportation, funding, childcare, and physicians. A strong personal support network, including the woman’s partner, the family, friends, and the community are necessary for healthy mothers and babies to thrive. Pregnant women need social support, defined as emotional, instrumental, and informational support. They also need monetary and material support. With a support system women can become stronger and more resilient against the stresses of life; without those supports, she can become overwhelmed, isolated and alone.

## POTENTIAL ACTIONS

Potential actions to help reduce infant mortality can be derived directly from the PPOR. Interventions can be directed to meet the time frame of the deaths.

### What We Can Do About Babies Dying Age at Death:

	<b>Stillborn Babies: Fetal Deaths</b> 24+ weeks in gestation	<b>Newborn Babies: Neonatal Deaths</b> Less than 28 days of age	<b>Infants: Postneonatal Deaths</b> 28 to 364 days of age
<b>Weight at Birth:</b> 500-1499 grams (1 lb., 2 oz. to less than 3 lbs., 5 oz.)	Maternal General Health / Prematurity <b><u>POTENTIAL ACTIONS:</u></b> <ul style="list-style-type: none"> <li>• <i>Preconceptional &amp; Interconceptional Health Care</i></li> <li>• <i>Practicing Healthy Behaviors</i></li> </ul>		
<b>Weight at Birth:</b> 1500+ grams (3lbs., 5 oz. or more.)	Maternal Care <b><u>POTENTIAL ACTIONS:</u></b> <ul style="list-style-type: none"> <li>• <i>Perinatal Care</i></li> <li>• <i>Prenatal Care</i></li> <li>• <i>High Risk Referrals</i></li> </ul>	Newborn Care <b><u>POTENTIAL ACTIONS:</u></b> <ul style="list-style-type: none"> <li>• <i>Obstetric Care</i></li> <li>• <i>Perinatal Management</i></li> <li>• <i>High Risk Referrals</i></li> </ul>	Infant Care <b><u>POTENTIAL ACTIONS</u></b> <ul style="list-style-type: none"> <li>• <i>Pediatric Surgery</i></li> <li>• <i>Sleep Position</i></li> <li>• <i>Breast Feeding</i></li> <li>• <i>Injury Prevention</i></li> </ul>

This chart suggests some of the actions that can be taken to intervene at the various times in the birth process. Listed on the next page are some of the agencies in Jacksonville working on various parts of this picture.



## ***Agencies Working on Infant Mortality in Jacksonville***

### ***Maternal General Health / Prematurity:***

- **Azalea Project**—A special Healthy Start Coalition program focusing on pregnant and parenting substance-involved women.
- **Bridge of Northeast Florida**—A program to assist pregnant teens and promote healthy family functioning.
- **Hold Out the Lifeline**—An awareness and outreach project of the Jacksonville African Methodist Episcopal Ministerial Alliance, Inc. and community partners with the goal of reducing infant deaths in at-risk communities in Duval County by linking women and their families with available health and social services.
- **Magnolia Project**—A special Healthy Start Coalition of Northeast Florida, Inc. initiative to improve the health and well-being of women during their child-bearing years—recognized as a “best practice” by many in the field of infant mortality across the country.
- **Planned Parenthood**—A private non-profit agency, providing reproductive health care, counseling and education to women and men of all ages.
- **Volunteers in Medicine**—A free healthcare clinic provided by volunteer medical professionals for the working uninsured.

### ***Maternal Care:***

- **Centering Programs**—A complete interactive prenatal care program in a group setting that provides assessment, education, and support—delivered through Magnolia Project and Shands Jacksonville.
- **Healthy Start**—Programs to improve the health of participants between pregnancies, improve pregnancy outcomes, and promote positive parenting skills—delivered through the Duval County Health Department, Shands Jacksonville, The Bridge of Northeast Florida, The Children’s Home Society of Florida, River Region Human Services, and Healthy Mothers/Healthy Babies Coalition of North Florida.

### ***Newborn/Infant Care:***

- **Healthy Mothers/ Healthy Babies Coalition of North Florida, Inc.**—Affiliated with the national organization to improve the health and safety of mother, babies and families through education at Shands Jacksonville in collaborative partnerships with public and private organizations.
- **Noah’s Ark Community Outreach Initiative**—Began in 2006 to provide education on safe sleep practices for young mothers and teen mothers, organized by the Church of God and Saints of Christ, First Tabernacle in Jacksonville.

- **Northeast Florida Breastfeeding Coalition**—To encourage hospitals, physicians, nurses, and other providers to promote breastfeeding and to provide a supportive environment to mothers.
- **Project Moses**—An initiative of Hold Out the Lifeline to reduce the number of SIDS deaths in at-risk communities by providing a safe sleep bassinet for new born babies.
- **WIC (Women, Infants and Children)**—A Department of Health nutrition program for women who are pregnant or breastfeeding, infants under one year of age, and children under five years of age providing healthy foods, nutrition education and counseling, breastfeeding support, and referrals for health care, immunizations, and community services.
- **Healthy Families**—An initiative of the Jacksonville Children’s Commission. A community-based voluntary home visiting program intended to prevent child mistreatment by promoting positive parenting skills and helping parents set and achieve goals for themselves and their children.

### ***Fatherhood Initiatives:***

- **Boot Camp for New Dads**—A free workshop for new dads and dads-to-be coached by trained veteran fathers to address responsible fatherhood based on a national model.
- **Urban League**—Responsible Fatherhood Initiative.
- **Jacksonville Children’s Commission**—Project MALE (Men Advocating & Leading by Example) a project specifically designed by fathers for fathers.
- **Real Dad, Real Men**—A special Northeast Florida Healthy Start initiative in recognition of the importance of men ensuring a healthy birth outcome.

### ***Other:***

- **Promote Truth**—A web-based program of the Women’s Center of Jacksonville, in which trained advocates provide support and information on sex and sexual violence issues for teens and their communities. Teens can use the website to gather information or to send an anonymous message to a trained advocate who will respond within 48 hours.
- **Straight Talk**—A middle school town forum presented by the Jacksonville Jaguars Foundation in partnership with Jacksonville media, Blue Cross and Blue Shield of Florida, and the National Campaign to Prevent Teen Pregnancy. The program addresses issues such as peer pressure and the consequences of teen sex which include pregnancy and sexually transmitted infections such as HIV/AIDS.

## CURRENT POLICY ISSUES

### Costs

#### Providing Health Care to Mothers and Babies

The financial impacts of the high rates of infant mortality, prematurity and low birth weight are enormous. The cost for caring for a baby in a NICU is from about \$1,100 to \$1,500 per day and can amount to nearly half a million dollars for a three-month stay, including physicians' fees. Six months to one year in the hospital can cost more than one million dollars.

Neonatal mortality still represents up to 60 percent of infant mortality. Jacksonville has two Level Three NICUs at Shands Jacksonville and Baptist Hospital where medical personnel using current technology and medical care work to save newborn babies at a combined cost of \$50 million annually. The economic impact on hospitals from high-risk births is onerous. Hospital personnel report that the payments made by Medicaid for about forty percent of babies do not meet the hospitals' costs. Unreimbursed hospital and physician medical costs must be met. The costs often get spread among those who have insurance, raising the costs of health care and insurance for everyone.



Expensive malpractice liability insurance premiums for obstetricians have led many doctors to leave the practice of delivering babies, particularly in high risk pregnancies. Some OBs will not agree to be on Emergency Room call because of the high risk pregnancies that frequently appear at ER facilities, including mothers with no prenatal care. They present a high liability risk, and therefore services are diminishing.

Many working families make too much money to qualify for Medicaid but do not have employer-provided health care and find it difficult to find or afford insurance coverage and cannot afford to pay medical expenses out of their limited income. Women face challenges in getting into the Medicaid system due to the difficulty in providing the documentation required to qualify them for services and not having access to a computer for on-line application or for accessing the documentation (such as out of state birth certificates) that would meet the federal and state requirements. Women complain, also, that some personnel do not provide enough help in getting Medicaid and that some doctors will not accept Medicaid.

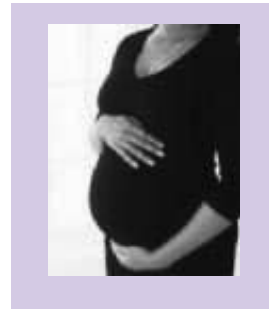
Besides these direct costs of medical care, the indirect costs to society of the death of infants who could have become contributing citizens is significant. In addition, infants born premature and at low birth weights who survive have difficulties over their lifetimes. They are more likely to suffer chronic diseases; more likely to have lower educational achievement—many become drop-outs—and tend to earn less in their working life. They are more likely to need extra societal resources over their entire life span. Beyond all of these problems, babies born to stressed-out mothers are more likely to have high stress reactions themselves and are 70 percent more likely to have learning disabilities.

#### Responsible Sexual Behavior

Lack of family planning and sexually transmitted disease prevention present other costs to the individual and to society. For every dollar spent on family planning, it is estimated that at least 24 dollars are saved in public assistance, health care, and child care.

## Costs of Teen Pregnancies

Teen pregnancy is high risk pregnancy. While teen pregnancies have been declining in Duval County, new national reports indicate that the downward trend in teen pregnancies may be in reversal. According to the National Campaign to Prevent Teen Pregnancy, the average annual cost to taxpayers associated with a child born to a teen mother aged 17 or younger is \$4,080. Duval County in 2006 had 475 children born to teen mothers. Planned Parenthood estimated 1,572 teen pregnancies in 2006 with associated additional costs. And teen pregnancies change the trajectories of the teen mothers' lives as well as often providing insufficient support for a child's development.



## Education

### Health and Parenting Education

In 2006-2007 Duval County Public Schools had 116 new student pregnancies, 117 deliveries, and 242 total school pregnancies of 123,000 total students (or about 62,000 females). Of those deliveries, 14 percent were low birth weight (LBW) babies. This is well above the overall Duval County LBW rate of 9.5 percent and the national LBW rate for mothers ages 15 to 19 of 9.9 percent. Seventy percent of the pregnant girls graduated and only one became pregnant again during the school year.

Florida Statutes require that students be “health literate” by which they mean that they have the ability to “research” health information that they might need. The statutes require instruction and dictate the content and course of study. The requirements are to teach abstinence and monogamy—that people have the power to control their behaviors or take the consequences. The Florida Statutes also require that local values and norms have the final say in local public school health education curriculum.

Teachers need more training and coaching in all the health topics including nutrition, exercise, obesity, diabetes, and epidemiology. In fact, most teachers are not qualified and certified to teach health and sex education. The complete curriculum is seldom taught because of lack of knowledge or willingness on the part of many teachers, lack of time in the regular curriculum, and lack of consensus on the part of the public to provide factual, evidence-based information. Many parents also lack the knowledge or willingness to teach this information at home.

Until recently, all high school students were required to take a Life Management Skills course as a requirement for graduation—with a complete health and life skills curriculum taught by a certified health educator. Now students are offered an elective (1 credit hour equivalent) in physical education with a health component called HOPE—Health Opportunities through Physical Education. The teacher, a physical education teacher, needs no health education skills or background, although it is allowed to be team-taught with a health educator. The Life Management Skills class is still offered as an elective for health majors—as well as a number of other courses offered as electives. But in four years of high school with increased requirements, little room is left in a student's schedule for this course. If students are under performing and behind in credits, then the one-hour class is currently waived to make more room for academic improvement classes.

Duval County Public Schools does not teach “abstinence-only,” but an “abstinence-based,” sex education. It teaches birth control in the context of monogamous marriage. The parenting and sex education program in Duval County is not provided to all students and imparts incomplete information. It does not teach the prevention of sexually transmitted infections.



## COMMUNITY PERSPECTIVES

As part of this study and in cooperation with Healthy Start, JCCI gathered information from five diverse groups of black men and women in the Jacksonville community regarding causes for the high incidence of infant death in Health Zone 1 and community based solutions for resolving this issue. Each catered meeting was held from 6:00 to 7:30 p.m. in a venue within Northwest Jacksonville. Three of the meetings included a speaker from *Hold Out the Life Line* so that participants would have some perspective on the issues that occur when front-line staff attempt to educate mothers whose children are at risk of dying at less than one year of age. The facilitator also provided data from the on-going JCCI study and highlights from the speakers who had participated in the JCCI Infant Mortality study. At least 45 minutes of every meeting was devoted to a structured conversation discussing community and neighborhood solutions that hold the potential for significantly reducing the number of infant deaths in Jacksonville's black community.

Each meeting was markedly different, from the composition of the room (ages, education levels, male to female ratio) to the energy generated when discussing the topic. Each group, without the prompting of the facilitator, spent time discussing distinctly different themes based on their interests and experiences.

In each setting, the participants clearly understood the connection between poverty, lack of education, and high infant mortality rates. The fact that all black women, despite their socioeconomic standing, still suffer from higher infant mortality rates than their white counterparts proved to be very troubling. Though many reasons for infant deaths were presented, many participants still had a desire for more information and greater insight on why this is such an overwhelming issue in the black community. Each discussion was thoughtful and full of insights about the causes and possible solutions for reducing infant deaths in the black community.

### ***Comments from Participants Regarding the Causes of Black Infant Mortality***

*What follows are observations, suggestions and recommendations made by individuals participating in the group discussions:*

- In Duval County, particularly in the black community, much of the public is unaware of the high rate of black infant deaths.
- Living in polluted neighborhoods (environmental racism) could be a key factor in the health of black women.
- Schools failing to focus on health education, physical education, and home economics reduces exposure to the need for exercise and proper nutrition.
- Women who struggle with body image issues during pregnancy may fail to gain enough weight or eat properly.
- The mental health of a woman is directly linked to how she treats her physical body, which affects the health of the baby. In some instances, the woman may be too young to have a baby, but is searching for "something" to love. In other instances, the woman may be older and feel the pressure of biology, so she decides to become pregnant despite the risks.
- Women knowing the health history of their families can lead to a greater understanding of their risks during pregnancy.
- As a society, girls and women are not taught to take care of their bodies in preparation for a healthy pregnancy. Exercise and nutrition education, when provided, focus on disease prevention and physical beauty.
- Female family elders are often too young to focus on the needs of young women (teens and twenties) who need woman-to-woman support before, during, and after pregnancy.
- Women who receive public assistance sometimes refuse to participate in Healthy Family programs because they distrust further intrusion into their personal lives.
- Young women who have a poor self-image are more likely to succumb to participation in risky sexual activity and/or sexual activity before they are ready.

- Disintegrating neighborhoods have isolated pregnant women from the “family” support they need during a very stressful time.
- Like school based health and sex education, community based education for young people about these topics is extremely limited.
- Black women in all socio-economic groups are receiving a lower standard of care from their health care providers as compared to white women.
- Older women are not sharing their birthing history with their younger family members. Knowing that a mother or an aunt has miscarried or had a child die at less than one year can prompt women to take better care of their bodies during pregnancy.
- Greater activism within the black community about infant mortality is necessary to make this a public policy concern.
  - Men play an essential role in making sure their partners seek prenatal care, whether or not they are the child’s father.
- Researchers are trying to determine whether a man’s health is a factor in the baby’s health. Is it possible that a father with poor health can contribute to the poor health of his baby?
- Access to Medicaid and learning to navigate all of the programs intended to help mothers and children appear to be extremely difficult to maneuver. Various stories were told indicating the confusion in the system, for example:
  - o After learning that she is pregnant it may take a woman needing Medicaid six months to receive assistance, at which time she is seven months pregnant and no obstetrician/gynecologist is willing to provide prenatal care at this point.
  - o A pregnant woman living with a man who makes too much money will not qualify for Medicaid even if her partner’s employer does not offer health insurance.
  - o A newborn does not automatically qualify for Medicaid even if his mother receives this benefit, which limits the child’s access to postnatal care.
- The prevalence of sexually transmitted diseases in the black community may be a contributing factor in the high incidence of infant death, hence the high infant mortality rate.
- Young men and women are engaging in sexual behavior before they are ready for the responsibility of taking care of a child. Once the baby is born they are ill-equipped to be parents.
- The high infant mortality rate is not being discussed by politicians on any level. Without efforts to make this a political issue it will remain unaddressed.
- Access to drug treatment is limited in Northwest Jacksonville as is access to mental health support, which leaves women suffering from addiction or mental illness with few options before, during, and after pregnancy.
- The prenatal health care focus is physical health, but many black women are also struggling with mental and spiritual demands that are never addressed. These stressors create less than ideal fetal health environments.
- Releasing new mothers from the hospital within 24 hours of giving birth cannot be best for the health of the mother or the child.
- Even though multiple programs exist that offer health care, pregnancy wellness, and parenting education for poor and working class women, some refuse to participate because they fear the intrusion of strangers who might judge their lifestyle or hold the power to take their children or limit their current level of public assistance.
- The concept of “mothering” new mothers is being lost in the black community. Traditionally, a mother, aunt, grandmother, or trusted friend would instruct the new mother on how to care for herself and her new baby. Some of the advice may have been “old-fashioned,” but this involvement was critical in providing the familial support needed by pregnant women and new mothers.

# GLOSSARY

- **Fetal death:** defined by the State of Florida Department of Health as one that occurs after the 20th week of gestation (pregnancy).
- **“Food deserts:”** areas of the city, most often in high poverty, predominantly black neighborhoods, where no large, completely stocked grocery store exists, and fast-food, convenience stores, and “fringe food” proliferate, making a healthy well-balanced diet more difficult to obtain.
- **Inflammatory response:** A fundamental type of response by the body to disease and injury, a response characterized by pain, heat (localized warmth), redness and swelling. The inflammatory process itself may cause tissue damage while it is engaged in healing and repair.
- **Interconceptional:** between pregnancies.
- **Neonatal:** newly born, under 28 days old.
- **Neonatal death:** one that occurs within the first 27 days of birth.
- **Perinatal:** the time before and after the birth of a baby.
- **Postnatal:** after the birth of the baby.
- **Postneonatal death:** one that occurs from day 28 to day 364.
- **Preconceptional:** prior to pregnancy.
- **Prenatal:** before delivery of a baby.
- **Racism:** the discrimination against and devaluing of people based on their perceived racial differences rather than their individual merits.
- **Sexism:** the discrimination against and devaluing of people based on their sex rather than their individual merits.



*Study committee members Alton Coles, Jan Morse, Carolyn Arnister, Wilma Starks, Beverly Legree and Bobbie O'Connor.*



*Catherine Christie (left) of Body & Soul and Clarence Brown and Karen Smithson with Project Moses were resource speakers.*



*Howard Korman, chair of Infant Mortality Study*



## ADDITIONAL READINGS

Biermann, J., Dunlop, A.L., Brady, Dubin, C., & Brann, A Jr., 2006. Promising Practices in Preconception Care for Women at Risk for Poor Health and Pregnancy Outcomes. *Maternal and Child Health Journal*, 10:S21-S28.

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[http://www.jointcenter.org/publications\\_recent\\_publications/health/race\\_stress\\_and\\_social\\_support\\_addressing\\_the\\_crisis\\_in\\_black\\_infant\\_mortality](http://www.jointcenter.org/publications_recent_publications/health/race_stress_and_social_support_addressing_the_crisis_in_black_infant_mortality)

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UNNATURAL CAUSES series, 2008: Episode 2 - When the Bough Breaks: How Racism Impacts Pregnancy Outcomes. WEB-EXCLUSIVE VIDEO, [http://www.unnaturalcauses.org/resources\\_video.php?res\\_id=70](http://www.unnaturalcauses.org/resources_video.php?res_id=70)



*There were nearly 130 people who attended one or more of the Infant Mortality study meetings. The group met Thursdays at Noon, from October 2007 to April 2008.*

## RESOURCE SPEAKERS

Ava - Ambassador for Azalea Project  
 Prinsetta - Ambassador for Azalea Project  
 Felix Acholonu, MD - University of Florida/Shands Jacksonville  
 Randell Alexander, MD - University of Florida, Div. of Child Protection  
 Carolyn Arnister - Healthy Start  
 Kris Barnes - Duval County School Board  
 Kathy Bowles - Duval County Public Schools  
 Clarence Brown - Moses Project  
 Carol Brady - Healthy Start Coalition of Northeast Florida  
 Joy Burgess - University of Florida/Shands Jacksonville  
 Thomas Chiu, MD - University of Florida/Shands Jacksonville  
 Catherine Christie - University of North Florida, Brooks College of Health  
 Claudette Christopher - Boot Camp for Dads, Shands Jacksonville  
 Marsha Davis - Community Council, Magnolia Project  
 Zelma Dickerson - Heal Thy People  
 Lucy Farley - Jacksonville Children's Commission  
 Larry Freeman - Wolfson Children's Hospital  
 Jeffrey Goldhagen, MD - University of Florida/Shands Jacksonville  
 Twanna Gould - Duval County Health Dept.  
 Robert Harmon, MD - Duval County Health Dept.  
 Loretta Haycook - Northeast Florida Breastfeeding Coalition  
 Kathryn Huddleston, MD - University of Florida/Shands Jacksonville

Helen Jackson, Ph.D. - Duval County Health Dept.  
 Laurie Lee - Coordinator, Fetal Infant Mortality Review  
 William Livingood, MD - Duval County Health Dept.  
 Michael C. Lu, MD - David Geffen School of Medicine at University of California, Los Angeles  
 Charles S. Mahan, MD - Lawton and Rhea Chiles Center, University of South Florida  
 Ana Martinez - Heal Thy People  
 Charles McIntosh, MD - Volunteers in Medicine  
 Ashley Morris - Centering, Magnolia Project  
 Sally Myrick - Healthy Mothers/ Healthy Babies of Northeast Florida  
 Judy Perkin - University of North Florida, Brooks College of Health  
 Jack Rinehart - Jacksonville Children's Commission  
 Nancy Robinson - Department of Children and Families  
 William Sappenfield, MD - Florida Department of Health  
 Karen Smithson - Project Hold Out the Lifeline  
 Carole Ann Steiger - Planned Parenthood of Northeast Florida  
 Debra Stiffler - Women's Services, Baptist Hospital  
 Sally Weerts - University of North Florida, Brooks College of Health  
 Derya Williams - River Region Human Services

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# PREVIOUS JCCI STUDIES

<u>STUDY</u>	<u>CHAIR</u>	<u>STUDY</u>	<u>CHAIR</u>
1977 Local Government Finance	Robert Davis	1996 Creating a Community Agenda: Indicators for Health & Human Services	Bruce Demps
1977 Housing	Thomas Carpenter	1996 Leadership: Meeting Community Needs	Bill Brinton
1977 Public Education (K-12)	Robert W. Schellenberg	1997 Improving Public Dialogue	Jim Crooks
1978 Public Authorities	Howard Greenstein	1997 Transportation for the Disadvantaged	Cathy Winterfield
1978 Strengthening the Family	Jacquelyn Bates	1997 Children with Special Needs	Virginia Borrok
1979 Citizen Participation in the Schools	Susan Black	1998 The Role of Nonprofit Organizations	Sherry Magill
1979 Youth Unemployment	Roy G. Green	1998 Incentives for Economic Development	Henry Thomas
1979 Theatre Jacksonville	Richard Bizot	1999 Improving Adult Literacy	Edythe Abdullah
1979 Civil Service	Max K. Morris	1999 Arts, Recreation and Culture in Jacksonville	Ed Hearle
1979 Planning in Local Government	I. M. Sulzbacher	2000 Affordable Housing	Bill Bishop
1980 Capital Improvements for Recreation	Ted Pappas	2000 Improving Regional Cooperation	Jim Rinaman
1980 But Not In My Neighborhood	Pamela Y. Paul	2001 Services for Ex-Offenders	Dana Ferrell
1980 The Energy Efficient City	Roderick M. Nicol	2001 Growth Management Revisited	Birchfield
1981 Coordination of Human Services	Pat Hannan	2002 Making Jacksonville a Clean City	Allan T. Geiger
1981 Higher Education	R. P. T. Young	2002 Beyond the Talk: Improving Race Relations	Brenna Durden
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1982 Downtown Derelicts	Earle Traynham	2004 Town & Gown: Building Successful University-Community Collaborations	J.F. Bryan IV
1983 Mass Transit	David Hastings	2004 Public Education Reform: Eliminating the Achievement Gap	Audrey McKibbin Moran
1983 Indigent Health	Care Linda McClintock	2005 River Dance: Putting the River in River City	Bill Mason
1984 Jacksonville's Jail	Eleanor Gay	2006 Attracting and Retaining Talent: People and Jobs for the 21st Century	Ted Pappas
1984 Growth Management	Curtis L. McCray	2007 Air Quality	Adrienne Conrad
1985 Visual Pollution	Doug Milne	2008 Infant Mortality	Quinton White
1985 Minority Business	Jack Gaillard		Howard Korman
1986 Private Delivery of Public Services	George Fisher		
1986 Mental Health and Drug Abuse Services for Children and Youth	Flo Nell Ozell		
1987 Child Day-Care Services	George W. Corrick		
1987 Infrastructure	Joan Carver		
1988 Local Election Process	Jim Rinaman		
1988 School Dropout Prevention	Gene Parks		
1989 Reducing the Garbage Burden	Jack F. Milne & James L. White III		
1989 Independent Living for the Elderly	Roseanne Hartwell		
1990 Future Workforce Needs	Yank D. Coble Jr.		
1990 Philanthropy in Jacksonville	Juliette Mason		
1991 Adequate Water Supply	Russell B. Newton Jr.		
1991 Positive Development of Jacksonville's Children	Henry H. "Tip" Graham		
1992 Long-Term Financial Health of the City of Jacksonville	Mary Alice Phelan		
1992 Young Black Males	Chester A. Aikens & William E. Scheu		
1993 Planning for Northeast Florida's Uncertain Military Future	David L. Williams		
1993 Public Education: The Cost of Quality	Royce Lyles		
1994 Reducing Violence in Jacksonville Schools	Dale Clifford		
1994 Jacksonville Public Services: Meeting Neighborhood Needs	Michael Korn		
1995 Teenage Single Parents and their Families	Afesa Adams		
1995 JAXPORT: Improvement and Expansion	Jim Ade		

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### ***About JCCI***

*Like every city, Jacksonville has its challenges and determining how to face those challenges is the role of JCCI. Every day, JCCI brings people together to learn about pressing issues in our community and to find solutions. All with the goal of making Jacksonville a great place to live. JCCI...citizens building a better community.*

### ***JCCI Studies***

*Each year, citizen volunteers and JCCI committees identify problems facing our city. With their input, issues are selected to become the subject of in-depth study. Committees, made up of ordinary citizens, meet weekly for six months to unravel the causes of a problem and make recommendations to resolve it. When the study is published, a JCCI volunteer task force presents it to the community at large, to government, to businesses and others advocating for the changes the study recommends. Since 1975, decision-makers have given these studies the consideration they deserve and taken action to make our area a better place for all residents.*

## Agencies in Jacksonville

### ***Maternal General Health / Prematurity:***

- **Azalea Project** — 904-359-2520
- **Hold Out the Lifeline** — 904-359-6124
- **Planned Parenthood** — 904-399-2800
- **Magnolia Project** — 904-353-2130
- **Volunteers in Medicine** — 904-399-2766

### ***Maternal Care:***

- **Centering Programs** — through Magnolia — 904-353-2130 and Shands — 904-244-4843
- **Healthy Start** — 904-253-1019

### ***Newborn/Infant Care:***

- **Healthy Mothers/ Healthy Babies Coalition of North Florida, Inc.** — 904-854-7100
- **Project Moses** — 904-359-6124
- **WIC (Women, Infants and Children)** — 904-253-1500
- **Healthy Families** — 904-630-4986

### ***Fatherhood Initiatives:***

- **Boot Camp for New Dads** — 904-244-4843
- **Jacksonville Children's Commission Project MALE** — 904-630-7264
- **Real Dads, Real Men** — 904-723-5422 ext. 123

### ***Other:***

- **Promote Truth** — [www.promotetruth.org](http://www.promotetruth.org)
- **Planned Parenthood** — 904-399-2800
- **Women's Center of Jacksonville** — 904-722-3000
- **Other Referrals:** Call — 211 — United Way



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