



Building Bridges: Linking Practice and Research on Home Visitation



FALL ■ 2005

Maternal and Child Health



LeCroy & Milligan
ASSOCIATES, INC.

620 N. COUNTRY CLUB
TUCSON, AZ 85716
PHONE: (520) 326-5154
FAX: (520) 326-5155
www.lecroymilligan.com

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Healthier Babies, Healthier Moms: Spacing Births is the Key



By Craig W. LeCroy, Ph.D.

Birth spacing... This does not refer to having a baby in space, but that time will come. For now, birth spacing is an important factor that can improve the health and well being of children and mothers. And while many people identify a two-year spacing between children as the healthy interval, new research challenges that claim. New studies show that longer intervals are even better for maternal and infant survival and health.

How long is the ideal time to wait before having the next child? The new research and public campaigns state it like this: **Three to five years saves lives.** Or another way to help families think about spacing is when the first child goes to school, then it is the time for a second child. Here is what the findings have shown:

For Children: Children born 3 to 4 years after a previous birth compared to children born less than 2 years after a previous birth are:

- 1.5 times more likely to survive the first week of life
- 2.2 times more likely to survive the first 28 days of life
- 2.3 times more likely to survive the first year of life
- 2.4 times more likely to survive to age five

For Mothers: Mothers who give birth at 27 to 32-month intervals compared with mothers who have their babies at 9 to 14-month intervals are:

- 1.3 times more likely to avoid anemia
- 1.7 times more likely to avoid third-trimester bleeding
- 2.5 times more likely to survive childbirth

(Continued on page 2)

From the Editor:

This issue of *Building Bridges* is dedicated to maternal and child health. In only the last 100 years the lifespan of the average American has doubled. This is due, in part, to advances from research-based public health. Today, our nation's health is better. Yet, there is much more we can do. As this issue points out, home visitation can make a difference in the health outcomes of the families we serve. We know much more about how to prevent health care problems. We hope this issue puts basic health issues front and center of the Healthy Families program. Although much of our effort is on responding to the social problems our families bring to us, improving health is important to achieving other goals.

The articles in this issue present important new information based on solid research that can help us improve the health of our families. The simple act of touch can reap clear health benefits for premature infants. Birth spacing of at least three years between children can produce benefits to both mother and child. With careful planning, we can help prevent accidental injuries that take the lives of over 13,000 children every year. Immunizations have had a profound health impact that we take for granted because of the massive health benefits we have seen over the years. Better health for the families we serve is within reach. With this issue of *Building Bridges* we hope to stimulate a stronger commitment to obtaining better health outcomes. As always, we welcome your thoughts.

Craig W. LeCroy, Ph.D.

Spacing Births is the Key to Healthier Babies and Moms

(Continued from page 1)

What can home visitors do to help promote birth spacing? This new evidence suggests the need for home visitors to continue to place an emphasis on helping mothers and couples space births, especially for mothers who know they want to postpone their next pregnancy. Home visitors can deliver a message to all family members that explain the benefits of spacing births 3 to 5 years.

It is important to make sure mothers have good access to high quality family planning services. Successful use of a wide range of contraceptive methods will help families achieve this goal. It is also important to work within your community. Community norms help shape how people make decisions and set expectations about birth intervals.

We need to work broadly to help everyone understand the value of the 3 to 5 year intervals and create this as a social norm. ¶

**Homevisitors:
Deliver a message
to your families
that explains the
benefits of
spacing births 3 to
5 years. It's
healthy for mom
and baby.**

For more information, see:
Birth spacing: Three to five saves lives.
Population Reports, Series L, Number 13.



Immunization:

Weighing the Risks and the Benefits

By Judy Krysik, Ph.D.

IT'S THE LAW! ARIZONA LAW REQUIRES THAT CHILDREN ENTERING ANY SCHOOL MUST BE IMMUNIZED ACCORDING TO SCHEDULE. The Arizona Department of Health Services (ADHS) Division of Public Health Services has put forth a goal that at least 90% of all children are current with their immunizations by the year 2010 (see <http://www.azdhs.gov/phs/immun/index.htm>).

What this includes is:

- 4 doses of DtaP
- 3 doses of IPV
- 1 dose of MMR
- 3 doses of Hib
- 3 doses of Hep B (by 2 years of age)

What if someone has a religious or philosophical reason for not wanting their child immunized? These individuals can be exempt from the law. However, the law does not permit exemption for inconvenience or lost immunization records.

Has Healthy Families helped Arizona residents obtain these required immunizations? *Yes!* Many more of the families that participate in Healthy Families are immunized when compared to the general state level of immunization. Also, Healthy Families has improved its immunization rates over time:

Year	HFA immunization	Overall state immunization	Percent Improvement over state rate
1994	50%	46%	4%
2004	94%	77%	17%

Despite all of the good efforts to increase immunization coverage in recent years, there is one factor that has the potential to derail achievement of the 2010 goal of 90% immunization. There is a perception among some parents that it is better not to immunize children. This relatively small group of parents oppose immunization and often cite a

possible link between vaccines and a host of serious childhood conditions including autism, SIDS, ADHD, asthma, and diabetes. The home visitor is likely to encounter some of this resistance and may herself be unsure about the risks of immunization. How can a home visitor respond?

The argument in favor of immunization has parallels to the argument in favor of seatbelts.

Acknowledging parental fears is important, but it is equally important to provide parents with factual information about the safety of immunizations. To date, there have been a number of epidemiological studies exploring possible associations between immunization and serious conditions such as autism, ADHD, etc. At this point no scientific evidence exists to support that vaccines cause these conditions.

Another reason parents may question the importance of immunization is because they don't know the history of infectious diseases. In 1918-1919 the flu epidemic affected about one-quarter of the U.S. population and killed more people than WWI, WWII, and the Korean and Vietnam Wars combined (Gangarosa, 2000). During the flu epidemic, people were dying so quickly that in cities like Boston and Philadelphia they had to be buried in mass graves. In the pre-vaccine era, it was common for families to lose one or more children to infectious diseases such as tuberculosis, whooping cough (pertusis), measles, and mumps. As recently as the 1960s, it was common to see children pulling themselves along on crutches or who were confined to wheelchairs because they had been crippled by polio.

Vaccines are sometimes referred to as the most effective public health tool ever developed, and consequently, life expectancy and quality has improved. Due to vaccination policies, smallpox and polio have disappeared in the U.S., and cases of mumps, measles, tetanus, tuberculosis, and whooping cough are now rare. New vaccines for the

(Continued on page 7)

The Magic of Touch

By Craig W. LeCroy, Ph.D.



DOES PSYCHOLOGY MATTER?

PHILLIP ZIMBARDO, RENOWNED PROFESSOR AT STANFORD UNIVERSITY, RECENTLY WROTE AN ESSAY ANSWERING THIS QUESTION. IN HIS ESSAY HE DISCUSSES WHAT IS NOW REFERRED TO AS "THE MAGIC OF TOUCH."

Medical science now saves thousands of premature infants that would have died only just a decade ago. The costs for intensive care are enormous. One simple solution that psychology has helped advance is touch therapy which can send these premature babies home much sooner.

A psychologist (Field) and biologist (Shanberg) teamed up to examine the effects of touch.

At first they experimented by massaging infant rat pups that were motherless. The infant rats grew rapidly in response to the touch. Human preemies had the same response. Massaging them several times a day for 15 minutes stimulated the release of growth hormones.

The research found that infants receiving massage were able to go home **6 days sooner** than comparison preemies who were treated in the usual way. Given the cost of an intensive care unit this is a significant cost effective treatment.

Premature infants receiving massage were able to go home 6 days sooner than comparison preemies who were treated in the usual way.

As Zimbaro notes, the puzzling question is why this procedure is not standard operating procedure in all intensive care units. If you are working with prenatal clients who deliver a premature infant, encourage the hospital and parents to participate in massage or touch therapy — it can make a difference! ¶

For more information see:

Field, T. (1998). Massage therapy effects. *American Psychologist*, 53, 1270-1281.

What's this all about?

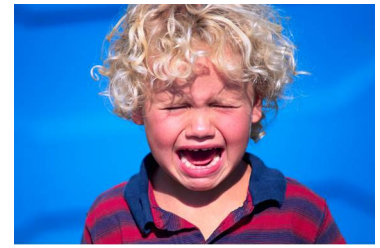
For more information about Healthy Families Arizona browse to:

www.healthyfamiliesarizona.org

We are pleased to provide this newsletter to family support programs, decision makers, and researchers through the partnership of the research team at LeCroy and Milligan Associates, Healthy Families Arizona, and the Western Regional Healthy Families America Center. It is our goal to encourage the integration of current research into practice to improve outcomes for children and families.

Healthy Families Arizona is a home visitation program designed to provide supportive services and education to parents of newborns who might benefit from support to strengthen their families at this crucial time. The goals of the program include: promoting positive parent/child interaction, improving child health and developing and preventing child abuse and neglect.

Home Visits Can Substantially Reduce Childhood Injury



By Craig W. LeCroy, Ph.D.

The United States is often boastful about its advances and successes in health care. New antibiotics, immunizations, genetic discoveries are all things that Americans can be proud of. Yet, as a special publication on unintentional injuries points out, "We remain stymied by the steady drumbeat of death and disfigurement attributable to childhood injuries.

Injuries, both violent and unintentional, are one of the most significant public health issues facing children today, but public outrage is absent. As a result, proven solutions go unused, and thousands of children die each year" (Deal, et.al., pg. 4).

Unintentional injuries are the leading cause of death for children and adolescents ages 1 to 19. Many of these injuries can be prevented. Effective prevention strategies are needed to reduce the tragic numbers of death and injuries. Home visitation is being recognized as an effective intervention for reducing unintentional injuries.

What Works for Children, an evidence-based group in the UK, concluded that **home visits can reduce the risk of accidental injuries in the home by around 26%**. A more detailed examination of research found that participants in treatment groups, compared with non-treatment groups resulted in families that were:

- **2.3 times** more likely to use safe hot water temperatures
- **1.7 times** more likely to use car seats
- **1.7 times** more likely to use smoke alarms

Car related injuries are the leading contributor to injury, mortality, and morbidity among children and adolescents. Studies suggest that education can accelerate the use of car seats. With increased use, however, we now need to focus on *proper* use. Families often quit the use of car seats before it is safe or legal to do so, so families should be educated

on the long-term use of car seats as well as their proper use. The current recommendation for length of car seat usage is 4 years and 40 pounds with all children under 12 riding in the backseat.

The leading cause of hospitalizations for burns among children under five years of age is scalds. Setting water heaters at or below 120 to 130 degrees can prevent hot water burns. Fires are the second leading cause of injury deaths among young children. Owning a smoke detector is estimated to reduce the risk of death in a fire by more than two-thirds.

General strategies for childproofing the home (protecting stairs, properly storing cleaning fluids, matches, and sharp objects, etc.) have not shown as strong of an effect. However, more research may reveal more favorable results in the future.

One important conclusion from randomized studies is that the greatest effect on safety practices comes from a combination of strategies including education with reinforcement of safety practices, demonstrations, and the provision of free safety devices. Education or counseling alone may not be sufficient to alter behavior.

Empirical evidence suggests that the three areas that home visitors can have the largest impact is monitoring:

- correct and consistent use of car seats
- installation and maintenance of smoke alarms
- testing and maintaining a safe hot tap water temperature. ¶

For more information, see the following sources:

What Works For Children at <http://www.whatworksforchildren.org.uk/>
Deal, L.W., Gomby, D.S., Zippiroli, L., and Behrman, R.E. [2000] Unintentional injuries in childhood: Analysis and recommendations, *The Future of Children*, 10, 4-22.
DiGuseppi, C., & Roberts, I. G. (2000). Individual-level injury prevention strategies in the clinical setting. *The Future of Children*, 10, 53-82

Each year, over
13,000
children die from
unintentional injuries.

- More than 250 child
deaths each week
- Approximately 37
child deaths each day



Health Benefits of Home Visitation

By Judy Krysik, Ph.D.

WE EXPECT HOME VISITATION TO IMPACT MANY FACTORS, BUT CAN IT PROVIDE HEALTH BENEFITS AS WELL?

A wide range of health benefits have been documented in relation to home visitation. A summary of the relevant studies include:

- A study of 100 randomized, high-risk families reported **no hospitalizations** in the home visitation group compared to five children hospitalized for serious injury and one for failure to thrive in the control group (Gray et al., 1979).
- Families that were randomly assigned to receive early home visits for the first year had **lower child accident rates and more complete immunizations** than did a group of families assigned to receive home visits between weeks 6 to 15 after birth, and compared to a group of families without any home visitation program (Larson, 1980).
- The results of this study found **fewer visits to the emergency department** per year than control families, higher rates of well baby visits over a 36-month period, and fewer infants born with one or more birth complications compared to the control group (Schellenbach, 1999).
- A study in Virginia found **fewer pregnancy risk factors** in the home visitation group compared to the control group (Galano, 2001).
- A study of 324, mostly White, first-time mothers in Elmira, New York, were followed for the first two years after the birth of their child. The program, the Prenatal/Early Infancy Project, was credited with **reducing subsequent pregnancies and substance abuse** (Olds et al., 1997).
- A study of 1,139 mostly Black women in Memphis showed a **reduction in pregnancy-induced hypertension, subsequent pregnancies, and childhood injuries and hospitalizations** (Kitzman et al., 1997).
- Another study involving a follow-up to age six with the Memphis mothers found that the nurse-visited mothers had **fewer subsequent pregnancies and births, and longer intervals between births** than control groups (Olds et al., 2004a).
- Another study examined the effects of prenatal and infancy home visiting by paraprofessionals and

nurses for children age two through four years with low-income first-time pregnant women in Denver. Results for the paraprofessionals indicated there were **fewer subsequent miscarriages and low birth weight newborns in the home visitation group**. Nurse visited moms had **greater intervals between births**, than did control groups (Olds, et al., 2004).

To summarize, **health benefits for children** include fewer accidents, hospitalizations, and emergency room uses; more completed immunizations; and more well-child visits. **Prenatal and neonatal health benefits** include fewer pregnancy risk factors, miscarriages, low birth weight babies, and birth complications. In addition, parents had less substance abuse. ¶
[Ed. Note: Impact on the mother's and father's mental health is excluded as it is the focus of an upcoming issue of this newsletter.]

For more information:

- Galano, J., Credle, W., Perry, D., Berg, S., Huntington, L. & Stief, E. (2001). Developing and sustaining a successful community prevention initiative: The Hampton Healthy Families Partnership. *Journal of Primary Prevention*, 21, 495-509.
- Gray, E. B., Cutler, C. A., Dean, J. G., & Kempe, C. H. (1979). Prediction and prevention of child abuse. *Journal of Primary Prevention*, 2, 138-152.
- Larson, C. P. (1980). Efficacy of parental and postpartum home visits on child health and development. *Pediatrics*, 66, 191-197.
- Kitzman, H., Olds, D. L., Henderson, C. R., Jr. (1997). Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated child-bearing: A randomized controlled trial. *Journal of the American Medical Association*, 278, 644-652.
- Olds, D. L., Eckenrode, J., Henderson, C. R., Jr., (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect: Fifteen-year follow-up of a randomized trial. *Journal of the American Medical Association*, 278, 637-648.
- Olds, D. L., Kitzman, H., Cole, R., Robinson, J., Disora, K., Luckey, D. W., Henderson, C., Hanks, C., Bondy, J., & Holmberg, J. (2004a). Effects of nurse home-visiting on maternal life course and child development: Age 6 follow-up results of a randomized trial. *Pediatrics*, 114, 1550-1559.
- Olds, D. L., Robinson, J., Pettitt, L., Luckey, D. W., Holmberg, J., Ng, R. K., Isacks, K., Sheff, K., & Henderson, C. R. Jr. (2004b). Effects of home visits by paraprofessionals and by nurses: Age 4 follow-up results of a randomized trial. *Pediatrics*, 114, 1560-1568.
- Schellenbach, C. & Pernice, F. (1999). *Healthy Start Oakland: A Final Report*. Prepared for the Skillman Foundation.

Immunization Risks and Benefits

(Continued from page 3)

flu and pneumonia are also saving thousands of lives of people of all ages each year.

Unfortunately the risk of infectious diseases has not passed, it has simply been effectively reduced. Research has documented that diseases such as measles and whooping cough return to areas where vaccination programs have been stopped or dropped significantly (Salmon et al., 1999).

Parents may also be concerned about the side effects of the immunization injection.

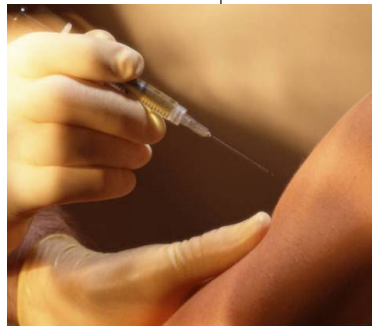
Typically the side effects, if any, involve low-grade fevers, slight swelling, redness at the injection site, and soreness which disappears in a couple of days. Complications involving disability, hospitalization, and even death are extremely rare, but do on occasion happen. What is important to understand, is that the risks and consequences of contracting the diseases are far greater than the risks associated with immunization. Children who are not immunized are at elevated risk. In one study, it was demonstrated that when measles returned to the community, those who had opted out of immunization were 35 times more likely to get the disease than those who had been immunized (Salmon et al., 1999).

The argument in favor of immunization has parallels to the argument in favor of seatbelts. Undoubtedly seatbelts save a lot of lives and are effective in preventing serious injury. On occasion and for a variety of reasons seatbelts may malfunction resulting in harm and even death. As sad as this is, it does not mean that we would be better off not to use seatbelts. No parent wants to return to the days of pre-vaccination when infectious diseases caused scores of agonizing deaths and permanent disabilities.

What can the home visitor do to promote immunization? Much of the evidence against immunization is anecdotal, involving testimony from parents whose children have suffered or died due to

immunization. These anecdotal stories are heart wrenching and convincing. Parents should be educated to base their decisions on scientific evidence rather than flawed studies or anecdotal evidence.

The home visitor should always encourage parents to discuss their specific concerns with their medical doctor before making the decision to exempt their child from immunization. Parents should be encouraged to talk to their doctor or health professional about vaccine safety if their child has a compromised immune system (has been sick prior to a scheduled immunization); or if they, their child, or other family members have had significant reactions to vaccinations in the past.



How can parents or home visitors get more information on the consequences of vaccines? Research on the risks associated with childhood vaccinations is

ongoing through the Vaccine Adverse Event Reporting System (VAERS). For additional information on VAERS or vaccine safety, visit the VAERS website at <http://www.vaers.org> or call 800-822-7967. ¶

Sources:

- Gangarosa, E. J. (2000). *Vaccinations: Modern lifesavers* retrieved from <http://www.altcorp.com/DentalInformation/lifesaver.htm> on August 24, 2005.
- Salmon, D. A., Haber, M., Gangarosa, E. J., Phillips, L., Smith, N. J., Chen, R. T. (1999). Health consequences of religious and philosophical exemptions from immunization laws: Individual and societal risk of measles. *JAMA*, 282, 47-53.

We want to hear from you!

This newsletter was designed with you in mind. If you have ideas for future newsletters, comments or suggestions about what you have read here, please send them to Kerry Milligan at: kerry@lecroymilligan.com.

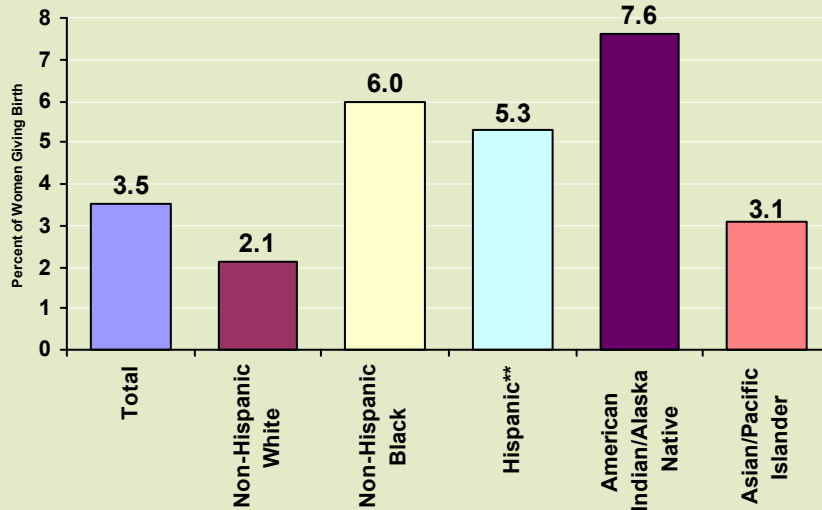
Thank you!

IT'S A FACT:

More mothers are receiving prenatal care in the first trimester of pregnancy.

Nationwide, since 1990, the total number of women receiving late or no prenatal care has dropped from 6.1 to 3.5 percent.*

Mothers Receiving Late or No Prenatal Care, by Race/Ethnicity, 2003*



However, the rate of **late or no prenatal care remains high** among Native American Indian women, Black women and Hispanic women.

In Arizona, the percent of mothers beginning prenatal care in the first trimester is **lower than the national average** (76.5%)

*U.S. Department of Health and Human Services, Health Resources and Services Administration (2005). *Women's Health USA 2005*. Rockville, Maryland: U.S. Department of Health and Human Services.

**Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F, Munson ML (2003). *Births: Final Data for 2002*, National Vital Statistics Report, Vol. 52, No. 10, December 17, 2003, Division of Vital Statistics, National Center for Health Statistics.

What's Next:

WINTER 2006
POST PARTUM
DEPRESSION
AND
CLINICAL
DEPRESSION

SPRING 2006
FATHERHOOD

Building Bridges:

Linking Practice
and Research on
Home Visitation

What's Inside:

HEALTHIER BABIES,
HEALTHIER MOMS: SPACING
BIRTHS IS THE KEY
PAGE 1

IMMUNIZATION SAFETY:
WEIGHING THE RISKS AND
THE BENEFITS
PAGE 3

THE MAGIC OF TOUCH
PAGE 4

HOME VISITS CAN
SUBSTANTIALLY REDUCE
CHILDHOOD INJURY
PAGE 5

HEALTH BENEFITS OF
HOME VISITATION
PAGE 6



LeCroy & Milligan
ASSOCIATES, INC.

620 N. Country Club
Tucson, AZ 85716