the science inside
HAVING HEALTHY BABIES

The Pittsburgh Area Project
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Science Inside Having Healthy Babies AAAS Staff
Maria Sosa, Principal Investigator, msosa@aaas.org
Kirstin Fearnley, Project Manager, kfearnle@aaas.org

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The Pittsburgh Area Project

In some Pittsburgh area neighborhoods, the infant mortality rate is 3-4 times the national average. While pregnant women and young mothers have access to local health services, many families do not use them. Although part of a fairly large city, these are lower income, closely knit communities that take care of their own. Knowledge about pregnancy, breastfeeding and infant care is passed among family members from generation to generation.

Yet the choices these Pittsburgh parents and caregivers make, at this critical juncture, affect their children’s health and well being for their entire lives. And many of those choices are made with little medical knowledge of what it takes to have a healthy pregnancy, birth and baby. For example, maternal smoking rates in some neighborhoods are among the highest in the nation. When asked why they smoke during pregnancy, many girls and women say, “My mother and grandmother did and I turned out OK.”

With a grant from the Heinz Endowments, the American Association for the Advancement of Science (AAAS) set out to educate Pittsburgh families about the scientific concepts behind having healthy babies. AAAS had developed seven plain language books written with input from medical professionals through its Healthy People Library Project, a five year grant from the National Institutes of Health. The books explained the science behind maternal health, as well as common chronic illnesses among lower income populations, such as diabetes, asthma, and hypertension. The books not only informed people about how to live healthier lives, they explained the reasons why how they took care of themselves mattered.

With the Heinz funding, AAAS wanted to edit its *The Science Inside: Having Healthy Babies* book into concise chunks of information and create a booklet customized to the needs of Pittsburgh families. The book provides explanations of pregnancy warning signs, explains how to build a safe environment for a newborn, the best ways to cope with at-risk pregnancies, breastfeeding, the importance of exercise and diet, and much more. But its also more than 70 pages long, making widespread distribution unlikely.

Educators at AAAS believed that a shorter, customized series of booklets could be widely distributed throughout southwestern Pennsylvania. Many local groups including The Birth Circle/East Liberty Family Health Center, the Greater Pittsburgh Literacy Council, the Carnegie Library and Healthy Start participated in what became known as The Healthy Babies Pittsburgh Area Project.

AAAS and its Pittsburgh partners held focus groups with local birth advocates and potential users to determine what was needed by mothers in its communities. They told them that the booklets should:

- Reflect Pittsburgh with photos of people and places women would recognize
- Stress the natural process of pregnancy rather than mostly discussing risk
- Address each phase of pregnancy, birth, and new baby development
- Include worksheets so that women would use them through birth
- Be even more concise, clearly written, and easy to read than the original book.

As a result of what was learned, three 20-page booklets were developed, using photographs of Pittsburgh mothers, each addressing an important time in the birth process. These are currently distributed throughout southwestern Pennsylvania in venues such as health fairs (one of which was created and sponsored by AAAS),
local education programs, libraries, churches, and medical facilities. Women keep and use them throughout their pregnancies. In total, more than 9,000 booklets were printed and three quarters were distributed as of December 2007.

The booklets work. Leaders at The Birth Circle, one of the partners, echo the sentiments of other local groups in explaining how the booklets have helped. The Birth Circle employs doulas, or birth advocates, who support an expectant mother through her pregnancy and delivery.

“I use all three of the booklets – the first two prenatally and the third after the birth. We fill them out together, and the women I work with jot down questions as they think of them,” said Cinnamon Faulkner, a community-based doula. “The pictures are detailed, the explanations are simple and concise, and they’re small enough to fit in a purse.”

AAAS plans to take what it learned in the Having Healthy Babies Pittsburgh Area Project to gain wider dissemination for the information in the other books, potentially developing multiple plain language booklets and resource materials customized to the needs of communities across the nation. This report explains the process that AAAS used in Pittsburgh and its successes, challenges, and recommendations for employing a similar approach in other communities.

In any community-based program, working with local groups is critical to success. Local people are out in the field every day, talking to women, delivering a variety of services, and they know best what will work and what will not. AAAS conducted focus groups to develop a product that Pittsburgh mothers would embrace and use. The first was with providers to discuss needs, topics, and potential formats. Others were held with Pittsburgh mothers and staff from local partner organizations to test first drafts of the three booklets.

Local partners knew what kind of publication they wanted. There were a lot of hand-outs available, but many were at higher reading levels than the intended users. In addition, handing out stacks of documents often meant they were thrown away rather than read.

“What we really needed were lower reading level materials, addressing a fourth to ninth grade education level,” said Denise Graham, director of the Homewood Branch at the Carnegie Library. “We needed hand-outs for our teen and prenatal classes to be used in our main library and four other satellite locations.”

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Here are some key things learned from the focus groups:

**Teen pregnancies**
- Make the information relate to their own experiences. Teens should identify and understand why “I feel this way.”
- Personalize the information for them. They’re much more likely to respond positively if they can recognize themselves in the situation.
- Recognize that this is a big event for them. The pressure to get pregnant is big. A baby is an accessory you want. It’s a rite of passage.

**Family Dynamics**
- These kids are raised in households where smoking and drinking are common. It is normal in some of the communities to have little or no home supervision.
- Pittsburgh has the highest rate of maternal smoking in the country. The problem to address is “Why are they smoking and why can’t we reduce this rate?”
- Families have their own ideas about how to take care of their babies. The influence of parents on their teens is huge.
- Problems run deep among a whole family. When things are wrong in a family, it’s not just mom and dad.

**Healthcare**
- About 65% of the materials seen are written at the appropriate level – so staff and tutors must be trained to translate the rest of them into plain language.
- Many members of these communities don’t access health care even though it’s easily available.
- The problem is a mistrust of health providers and others based on negative experiences. It’s about getting past the “You stay within your community and family and take care of your own” attitude.
- There are many materials available on the Internet such as video clips, colorful posters, games, and literature.
- There are many old wives tales that girls follow because their moms did. For instance, if their mothers smoked while they were pregnant, they think it’s OK for them too.
- Sometimes people misunderstand the instructions for medication. When you tell them it’s OK to take medication on an empty stomach, people actually put it on their stomach. Materials must address literacy, culture, and language issues.
- Many girls don’t have pre-natal check-ups and have no access to vitamins.
Writing and designing the plain language booklets

The consensus was that the booklet drafts, even though based on a plain language book, needed to focus more on what was important to Pittsburgh moms, and the text needed to be less wordy and scientific, using more visuals to help explain the content. Some of the suggestions that local partners offered included:

• Give them something more substantial than a flyer – a maternity workbook with space to write in.
• Highlight each part of the birth process including pregnancy, birth, and taking care of a newborn.
• Don’t point out that low income women are more susceptible to problems with pregnancy and birth, treat this as a natural, positive experience.
• Highlight breastfeeding and talk about how natural and important it is.
• Customize the booklets for a Pittsburgh audience.

AAAS developed three booklets. One booklet focused on having a healthy pregnancy, a second on the birth process, and the third on post-natal care and breastfeeding. The science covered in each booklet uses plain language to explain what happens at conception, development during each trimester of pregnancy, and what mothers should eat in order to have healthy babies. The text was personalized so that women could picture themselves in the booklets and relate better to their own experiences of pregnancy.

Explaining Pregnancy to Pittsburgh Mothers
Here’s an example of how second-trimester development of a fetus was discussed in the Science Inside: Having Healthy Babies book and then adapted for the Having a Healthy Pregnancy booklet that was used in Pittsburgh.

Copy from the Science Inside: Having Healthy Babies Book

The second-trimester. During the second-trimester, the baby further develops the complex systems it will need to survive on its own. Healthy babies call more and more attention to themselves during their fourth, fifth, and sixth months in the womb. Mothers and their doctors can hear the baby's heartbeat and determine its sex and age. Second-trimester babies begin moving their muscles, stretching, and kicking. The skeletal, muscular, and other systems grow stronger at an ever-increasing rate. By the end of month five, a healthy baby weighs about one pound. It weighs two pounds or more by the end of month six. By the end of the second-trimester, the fetus still almost completely relies on the placenta for nourishment and waste disposal. But the baby has begun swallowing, digesting, and breathing on its own.

Copy from the Having a Healthy Pregnancy booklet

What’s happening in your body
• You begin to feel better and have more energy.
• You will continue gaining more weight. It is normal to gain 3 or 4 pounds a month.
• Your health care provider may order special tests, like an ultrasound to see how your baby is growing.

What’s happening in your baby’s body
• Your baby will begin to move, stretch, and kick.
• Its skeleton and muscles grow stronger.
• You hear its heartbeat during prenatal visits.
• A healthy baby will weigh about 2 pounds by the end of the second-trimester.
Community Outreach and Dissemination

AAAS DEVELOPED A DISSEMINATION PLAN for getting the booklets into the hands of pregnant women in southwestern Pennsylvania. Community-based organizations acted as partners in this effort. There were multiple options considered for an outreach event including whether it would be more productive to hold one large event such as a health fair featuring attractions like immunization clinics and WIC evaluations, or to hold several smaller events at various locations around the area, each tied to the launch and topic of one of the booklets.

After consulting with local partners, the decision was made to hold a single event at the Homewood Branch of the Carnegie Library. A library was chosen because 70% of the city’s residents between the ages of 13-36 have a Carnegie Library card. The 93 year-old Homewood building was recently restored, near a bus stop, and had a lot of foot traffic from nearby neighborhoods, including many mothers and infants.

The Having Healthy Babies Health Fair was held in the late spring on a Saturday afternoon from 11:00 AM to 3:00 PM. Four six foot tables were set up on the sidewalk directly in front of the library.

To advertise the fair, the Homewood Branch had neighborhood teens put up signs and also publicized it in the Pittsburgh Post Gazette. Becky Carpenter of the Greater Pittsburgh Literacy Council recalls talking to grandmothers raising grandchildren with ADHD, young mothers who smoke, and a wide array of neighborhood families.

About 150 people attended the Health Fair and 1500 of the booklets were distributed. A local doula came by and talked about the role she played in pre-natal care and delivery and librarians discussed the types of health information available inside. A brief true or false quiz for children determining how much they knew about moms and babies was successful in getting the attention of local families.

Another group that shared the booklets was The Birth Circle, which uses them in its ambassador and doula programs. Ambassadors receive eight hours of training and help with breastfeeding as well as pre- and post-natal care. They see over 100 women a month. “We have made an effort to be proactive handing these out to people, to make sure they get used,” said Irene Frederick, a doctor at The Birth Circle.

Almost 7,000 booklets were shared with Pittsburgh mothers, the majority in childbirth education classes. Dissemination through partners is ongoing.

AAAS Outreach Strategy – Maximize Pittsburgh Partnerships

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<th>Libraries</th>
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<th>Health and Literacy Educators</th>
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<td>• Carnegie Library – main facility and four satellite locations</td>
<td>• The Birth Circle – East Liberty Family Health Care Center (9 family practices)</td>
<td>• Greater Pittsburgh Literacy Council (9 area offices)</td>
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<td>• Magee-Womens Hospital</td>
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Results

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Lessons Learned

There were several lessons learned that can be used to build upon what was accomplished in the Having Healthy Babies Pittsburgh Area Project. Here are a few.

Dissemination

Three of the local groups that participated in the Project emerged as its leaders – The Birth Circle, Magee Women’s Hospital and the Carnegie Library’s Homewood Branch. These were the organizations that had the most need for the booklets and have disseminated them most widely.

One of the advantages of the booklets is that they are timeless, so they will not become dated. However, the process of getting them into the hands of the right groups and to the right people is cumbersome particularly as the project winds down. Many of the groups ran out of their supplies and did not ask for more. In the future, it might be helpful to have an online ordering mechanism set up, or to send a blast email periodically asking if other booklets are needed.

Booklet Research

When the first drafts of the booklets were tested with Pittsburgh mothers, their main concern was that there was no mention of fathers in the text. Pittsburgh moms wanted to educate their babies’ fathers about the experiences of pregnancy, birth, and caring for newborns, as well as learn about these processes themselves. Booklet content was changed so that fathers could see themselves in the text, understand how they could help, and learn that their participation and support is vital to having healthy moms and healthy babies.

The original booklets explained that lower income women were more prone to problems during pregnancy and birth. Although this is true, local leaders felt that the tone and information in the booklets should highlight that pregnancy and birth are wonderful, natural processes. As a result, risks were explained in brief sidebars, or call-outs in the text, rather than attributing them to a specific group or income level. This helped minimize the perception that risks were a bigger concern than healthy pregnancies.

Community Outreach

While the Carnegie Library was an excellent choice in terms of attendance for a health fair, many of the mothers and families reached were above the literacy level the booklets were intended for. Most attendees were already good readers. In future projects, it will be important to pick health fair sites that reach the broadest possible group of pregnant girls and women, such as community or medical centers.