ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4507 HHES HEALTH CARE MEETING: MATERNITY & INFANT (10-22-87) 79

ATTACHMENT A

IMPRINT OR OTHER IDENTIFYING DATA

PRECONCEPTIONAL HEALTH APPRAISAL

DATE _____

Place an "X" mark next to any item that is true for you.

I. **FAMILY HISTORY: Does anyone in your family have:**

___ High Blood Pressure
___ Diabetes ("Sugar" Diabetes)
___ Hemophilia ("Free Bleeders")
___ Jewish Background (Tay Sachs Disease)
___ Sickle Cell Disease or Trait
___ Birth Defects
___ Mental Retardation
___ Spinal Defects

II. **SOCIAL HISTORY: Do you:**

___ Have questions about children whose mother and father are blood relatives
___ Smoke cigarettes
___ Drink beer, wine or hard liquor
___ Work with lead or chemicals
___ Use lead or chemicals in hobbies or at home (such as oven cleaners, paint strippers, pesticides, ceramics)
___ Own a cat

Are You:

___ Age 18 or less
___ Age 34 or greater

III. **NUTRITION: Do you:**

___ Eat less than three meals some days
___ Practice vegetarianism (eat few or no meats)
___ Practice fasting (avoid eating for 24 hours or longer)
___ Eat laundry starch, clay or dirt on occasion
___ Vomit more than once a month
___ Take or plan to take birth control pills
___ Eat a special diet

Appraisal development supported by a grant from the Public Health Service, Office of Family Planning

INITIALS _____

IV. **MEDICAL HISTORY: Do you now or have you ever had:**

___ Genital Herpes
___ Gonorrhea
___ Syphilis
___ Epilepsy (seizures or spells)
___ Diabetes ("Sugar" Diabetes)
___ High Blood Pressure
___ Heart Disease
___ Other (such as PKU, Kidney Disease, Venereal Warts)

V. **REPRODUCTIVE HISTORY: Have you had any of the following:**

___ History of "female" surgery (ovaries, tubes, uterus, cervix)
___ History of an abnormal uterus or cervix
___ History of your mother receiving DES (a drug to stop miscarriages) when she was pregnant with you
___ Two or more abortions after 14 weeks of pregnancy
___ Three or more miscarriages
___ Five or more pregnancies
___ Less than 12 months since last birth
___ One or more infants weighing more than 9 pounds at birth
___ One or more infants weighing 5½ pounds or less at birth
___ One or more fetal deaths (stillborn)
___ One or more neonatal deaths (baby died before one month old)
___ One or more infants with a birth defect
___ One or more infants requiring a stay in an intensive care nursery
___ History of vaginal bleeding late in pregnancy

VI. **DRUG HISTORY: Do you ever use:**

Prescription Drugs
___ Drugs that do not need a prescription
Street Drugs
Vitamins
Birth Control Pills

VII. **FOR YOUR DOCTOR OR NURSE**

No history of rubella or immunization
Weight greater than 120% of ideal for height
Weight less than 85% of ideal for height
Hct less than 36% or Hgb less than 12 gms

Attachment B

PRECONCEPTIONAL LEARNING CONTRACT

ALTHOUGH I AM NOT NOW PLANNING TO BECOME PREGNANT, I WANT TO LEARN MORE ABOUT HOW _____ COULD AFFECT A FUTURE PREGNANCY.
(area of interest)

ONE WAY I WILL DO THIS IS BY READING THE PAMPHLET _____ (title of pamphlet) _____ DURING THE NEXT _____ (period of time).

ANOTHER WAY I WILL DO THIS IS BY _____

_____

_____
SIGNATURE

_____
DATE

Attachment C

NAME_____ DATE_____

LOOKING AHEAD . . . SMOKING

Read the pamphlet on Smoking and then try to answer each of the questions (Q) below. On the back of the sheet are sample answers (A) written for each question. Try to answer the questions on your own before looking at the sample answers.

Q 1. Your niece finds out she is pregnant. She is very nervous and says she has to smoke to calm her nerves.
YOU MIGHT TELL HER . . .

Q 2. Your sister is pregnant and smokes a pack a day. She is worried because she had to be put in the hospital in her last pregnancy for bleeding problems.
YOU MIGHT TELL HER . . .

Q 3. A good friend who smokes a pack of cigarettes a day discovers she is pregnant. Her last baby was born small and had to stay in the hospital a long time.
YOU MIGHT TELL HER . . .

Q 4. The woman down the road is pregnant. You talk to her one day about how smoking can harm an unborn baby. She tells you she smoked during her other three pregnancies and all three of her kids are fine.
YOU MIGHT TELL HER . . .

Q 5. Your cousin is seven months pregnant. She is worried that her smoking may have already harmed the baby and tells you it is too late for her to stop now.
YOU MIGHT TELL HER . . .

Q 6. A neighbor quit smoking during the first six months of her pregnancy. Now she has started again.
YOU MIGHT TELL HER . . .

Q 7. Your best friend is pregnant and smokes two packs a day. She has tried to stop before but could not.
YOU MIGHT TELL HER . . .

Q 8. Your cousin is thinking about having a baby and wants to do everything she can to help it be healthy.
YOU MIGHT TELL HER . . .

LOOKING AHEAD . . . SMOKING

A 1. Smoking in pregnancy can cause problems for the mother and the baby. A pregnant woman might go for a walk, talk to a friend or take a bath to help her relax.

A 2. Bleeding problems are more common for women who smoke. The safest choice is to stop cigarettes. If stopping is not possible, cutting down to less than ten cigarettes a day will help.

A 3. Women who smoke have smaller babies and small babies have more problems. The safest choice is to stop cigarettes. If stopping is not possible, cutting down to less than ten cigarettes a day will help.

A 4. Cigarettes can affect each pregnancy differently. An unborn baby is not safe because its mother smoked without problems in other pregnancies.

A 5. It is never too late in pregnancy to stop smoking. Stopping cigarettes will keep problems for the mother and baby from getting worse.

A 6. The baby is growing fastest in the last months of pregnancy. Smoking during this time can keep it from reaching its healthiest size.

A 7. Some women cannot stop all cigarettes. They can still help themselves to have a healthy baby by smoking as few cigarettes as possible.

A 8. Cigarette smoking can cause many problems for the pregnant woman and her unborn baby. The safest choice is to stop all cigarettes at the same time you stop using birth control.

Attachment C

NAME_____ DATE_____

LOOKING AHEAD . . . DRUGS AND CHEMICALS

Read the pamphlet on Drugs and Chemicals and then try to answer each of the questions (Q) below. On the back of the sheet are sample answers (A) written for each question. Try to answer the questions on your own before looking at the sample answers.

Q. 1. Your sister is two months pregnant and has a bad cold. She is taking large doses of a cold medicine she got last year.
YOU MIGHT TELL HER . . .

Q. 2. Your niece has been taking medicine for "spells" ever since she was a child. She tells you that she has stopped taking it now because she wants to get pregnant. She has heard that drugs may be harmful to her baby.
YOU MIGHT TELL HER . . .

Q. 3. Your best friend has just told you that she is pregnant. She wants to celebrate by smoking some marijuana (grass, pot).
YOU MIGHT TELL HER . . .

Q. 4. Your co-worker at the factory never wears her mask or gloves when mixing chemicals. She says that it is too hot. She tells you that she will start wearing them once she knows she is pregnant.
YOU MIGHT TELL HER . . .

Q. 5. Your neighbor is three months pregnant and stops by to ask if she can use your bug spray for her garden. She says that the insects are eating all of her tomatoes.
YOU MIGHT TELL HER . . .

Q. 6. The woman down the street is hoping to become pregnant. She cleans her oven every week and sprays her house for bugs once a month.
YOU MIGHT TELL HER . . .

Q. 7. Your sister-in-law is using the birth control pill. She is thinking about getting pregnant.
YOU MIGHT TELL HER . . .

Q. 8. Your best friend is thinking about having a baby and wants to do everything she can to help it be healthy.
YOU MIGHT TELL HER . . .

LOOKING AHEAD . . . DRUGS AND CHEMICALS

A. 1. When a pregnant woman takes a drug, her unborn baby takes the drug too. Drugs or medicines can harm an unborn baby even before a woman knows she is pregnant. The best way to get rid of a cold is to get plenty of rest and drink lots of liquids. If your sister does not feel better in three days, she should talk to her doctor or nurse.

A. 2. Drugs can cause problems in pregnancy but so can some illnesses. A woman who takes prescription medicines should talk to her doctor about drugs and pregnancy before she stops her method of birth control. A doctor will help her find the safest treatment for her and her future children.

A. 3. Marijuana and other street drugs, even early in pregnancy, can keep an unborn baby from growing healthy and strong. Can you think of other ways to help your friend celebrate?

A. 4. Chemicals can harm a baby even before a woman knows that she is pregnant. Using gloves and a mask when around chemicals are good ways for a woman to protect herself and her unborn baby.

A. 5. The amount of a chemical that will harm a baby is not known. Your neighbor should try to avoid chemicals, like bug sprays, during pregnancy. You might try to offer to spray the garden for her or suggest that she find someone else to help.

A. 6. All women use chemicals every day . . . at home, at work, and at play. A woman cannot avoid all chemicals. She can still help herself and her unborn baby by using as few as possible.

A. 7. Birth control pills can change the way your body uses some foods. The safest choice is to stop the pill and use another method of birth control for at least three months before trying to become pregnant.

A. 8. The amount of a chemical or drug that will harm an unborn baby is unknown. If a woman is not using a method of birth control, she should talk to a doctor or nurse before taking any medicines. She should also be as careful as she can about using chemicals. These two steps will help her have a strong and healthy baby.

Attachment C

NAMES_____ DATE_____

LOOKING AHEAD . . . NUTRITION

Read the pamphlet on Nutrition and then try to answer each of the questions (Q) below. On the back of the sheet are sample answers (A) written for each question. Try to answer the questions on your own before looking at the sample answers.

Q 1. Your neighbor is very thin and always seems to be on a "new diet". She tells you she wants to get pregnant.
YOU MIGHT TELL HER . . .

Q 2. Your friend at work is trying to get pregnant. She says she doesn't have time for breakfast so she takes two multivitamin pills, a Vitamin C pill and an iron pill.
YOU MIGHT TELL HER . . .

Q 3. Your niece stopped eating meat three years ago. She tells you she wants to get pregnant but doesn't know if the baby will be healthy.
YOU MIGHT TELL HER . . .

Q 4. Your best friend has been on a special diet since childhood. She tells you she is thinking about getting pregnant.
YOU MIGHT TELL HER . . .

Q 5. Your sister is now two months pregnant and tells you she has a taste for clay from the riverbed. She ate clay even before she got pregnant.
YOU MIGHT TELL HER . . .

Q 6. Your sister-in-law is using the birth control pill. She is thinking about getting pregnant.
YOU MIGHT TELL HER . . .

Q 7. The woman down the road is overweight. She wants to get pregnant soon, but she also wants to lose some weight. She has tried many crash diets. Today she shows you her new diet pills.
YOU MIGHT TELL HER . . .

Q 8. Your best friend is thinking about having a baby and wants to do everything she can to help it be healthy.
YOU MIGHT TELL HER . . .

LOOKING AHEAD . . . NUTRITION

A 1. Women who are too thin may have more problems in pregnancy and their babies may not grow well. The safest plan is to reach your best weight before stopping your method of birth control.

A 2. Vitamin pills should not take the place of three meals a day because too many vitamin pills, even before pregnancy, can harm a woman and her unborn baby. Ideas for a quick breakfast are cheese or peanut butter on toast.

A 3. Babies need protein to grow. A woman who doesn't eat much meat can get enough protein by eating certain foods at the same time. Extra milk, milk foods, and eggs can also help. Talking to a nutritionist will help a woman learn how to combine foods so that she can get all of the kinds of nutrients she and a growing baby need.

A 4. Special diets may need some changes around the time of pregnancy so that both the mother and growing baby get all of the kinds of foods they need. Women on special diets should talk to a doctor about their plans for a pregnancy before they stop their method of birth control.

A 5. Eating clay or dirt or starch can keep a woman and growing baby from getting the foods they both need. A nutritionist, nurse, or doctor can help a woman with special tastes get all of the different kinds of foods she and a growing baby need.

A 6. Birth control pills can change the way your body uses some foods. The safest choice is to stop the pill and use another method of birth control for at least three months before trying to get pregnant. During this time, a woman should eat extra foods with Vitamin C (like oranges and tomatoes), Folic Acid (like dried beans and leafy green vegetables), Vitamin B_6 (like meat and peanuts), and Zinc (like liver and blackeyed peas).

A 7. Crash diets and diet pills are never safe ways to lose weight. They can cause problems for a woman and her future children. A nutritionist or nurse can help a woman find healthy ways to lose weight before she gets pregnant.

A 8. An unborn baby gets all of the foods it needs to grow healthy and strong from its mother. Problems for the baby can start even before a woman knows she is pregnant. The safest choice is for a woman to eat a "balanced" diet both before and during pregnancy, so that she and her baby can be as healthy as possible.

Attachment C

NAME_____ DATE_____

LOOKING AHEAD . . . ALCOHOL

Read the pamphlet on Alcohol and then try to answer each of the questions (Q) below. On the back of the sheet are sample answers (A) written for each question. Try to answer the questions on your own before looking at the sample answers.

Q 1. A good friend of yours discovers she is pregnant. She wants to celebrate the news with a six-pack of beer.
YOU MIGHT TELL HER . . .

Q 2. A co-worker is pregnant. She likes to party on weekends and loves cocktails. She doesn't drink during the week so she thinks her baby will be safe.
YOU MIGHT TELL HER . . .

Q 3. The woman down the road is very pregnant. You talk to her one day about how alcohol can harm an unborn baby. She tells you that she drank during her other three pregnancies and all three of her kids are fine.
YOU MIGHT TELL HER . . .

Q 4. Your neighbor's daughter is pregnant. At a party, you see her drinking beer. You ask her if she knows that alcohol can damage an unborn baby. She laughs and says only hard liquor can do that.
YOU MIGHT TELL HER . . .

Q 5. Your neighbor is pregnant. She drinks a "few beers" every evening after her two kids are in bed. She says the beers help her to relax.
YOU MIGHT TELL HER . . .

Q 6. Your niece finds out she's pregnant but doesn't want to be. She begins to drink to help forget her troubles. She'd like to talk with someone but doesn't know where to turn.
YOU MIGHT TELL HER . . .

Q 7. Your cousin is seven months pregnant. She is worried that her drinking may have already harmed the baby and tells you it's too late for her to stop now.
YOU MIGHT TELL HER . . .

Q 8. Your sister is thinking about having a baby and wants to do everything she can to help it be healthy.
YOU MIGHT TELL HER . . .

LOOKING AHEAD . . . ALCOHOL

A 1. Early pregnancy is a very important time for the baby. Drinking alcohol during this important time could cause serious birth defects. Can you think of other ways to help your friend celebrate?

A 2. Drinking only on weekends will not protect an unborn baby. Several drinks at any time during pregnancy can cause problems.

A 3. Alcohol can affect each pregnancy differently. An unborn baby is not safe because its mother drank without problems in other pregnancies.

A 4. Beer and wine are NOT safer than hard liquor. A can of beer, a glass of wine, and a regular mixed drink all contain about the same amount of "pure alcohol". All of these can harm an unborn baby.

A 5. Many people relax by having a drink. But there are other ways to relax. A pregnant woman can try taking a bath, a walk, or a nap. Maybe talking with a friend or watching TV would help. Can you think of other ways to help your neighbor relax?

A 6. Sometimes people drink because they are unhappy or they drink too much but do not know it. Often these people need someone to talk to so that they can find new ways to look at their problems. Churches, family service agencies, mental health programs, and health departments are all good places to find someone willing to listen and offer help.

A 7. It is never too late to stop drinking in pregnancy. Problems caused by alcohol in early pregnancy will not go away if a woman stops drinking. But once a woman stops, the problems will not get worse and new problems will not begin.

A 8. Alcohol use during pregnancy can cause birth defects, mental retardation and learning and behavior problems for a baby. These problems can begin even before a woman knows she is pregnant. The safest choice is to stop drinking alcohol at the same time you stop using birth control.

TEENAGE PREGNANCY: A PROBLEM WORTH DEALING WITH

Dee Breeden, M.D.

I want to emphasize three central themes today: the first is prevention; the second is understanding adolescent behavior so we can better focus interventions on it; and the third is acknowledging that interventions after conception are too late.

Both the Carter Center and Institute of Medicine address many issues of prevention. I want to reiterate the developmental issues facing adolescents today. They have to think about making a living, developing an ethical code of their own, developing a sexual identity of their own, and learning to accept their parents as people. All of these issues turn adolescents into adults. It is normal for them to take risks; that's how they learn. It is our responsibility to teach them how to take risks without dire consequences.

Many are concerned about adolescent pregnancy and its ensuing problems, yet a national focus on prevention has yet to be developed. We as health care providers know how to manage a pregnancy, but most of us know little about normal adolescent development and survival needs. We do not focus on understanding our young people's motives; it is not so much what they do, but why they must do it. Understanding the developmental tasks of adolescence will help us understand much of the behavior that has us so worried. If we focus on these issues and on prevention, adolescents may have fewer problems in the future.

Scope of the Problem

In 1981, South Carolina spent over $13 million in public funds on first live births to teens. That sum amounted to $5,350 per teen mother and her baby. If we add to that amount AFDC and food stamps for the next 10 years, we will spend $36,853 for each of these babies born in 1981. And 1981 was not unusual; the costs over accumulated years will be enormous.

PUBLIC SECTOR COST OF TEEN LIVE BIRTHS, SOUTH CAROLINA —1981

ESTIMATED PUBLIC SECTOR COST OF FIRST LIVE BIRTHS TO TEENS (UNDER 20 YEARS) IN SOUTH CAROLINA IN 1981 (medical & welfare benefits)	$13,147,030 ($5,350.00 per teen mother/first baby)
ADD AFDC AND FOOD STAMPS FOR 10 YEARS TO ABOVE	$90,585,378 ($36,853.00 per teen first live birth in 1981)

The Division of Family Planning and the Office of Public Health Education of the South Carolina Department of Health and Environmental Control issued a report in October 1983 called "Teenage Pregnancy in South Carolina: Everybody's Problem." It includes a review of the literature, statistics, descriptions of interventions, and recommendations. It is both a worthy source of information and a model project for other states.

Improved Child Health Program

In 1978, the Pee Dee Health District, comprised of 3 counties and 120,000 people, received an Improved Child Health Project grant of $300,000 a year for 4 years to reduce infant mortality. The grant provided for increased nursing, social work, health education, nutrition, clerical, and clinical services. We offered continuing education in perinatal health for doctors, other health professionals, and the community. We loaned cribs, infant seats, high chairs, and sterilizers to mothers. We organized outreach efforts to get pregnant women in for early care. But we found that if we wait until they are pregnant, it is too late. We also conducted a study of nutrition to quantify pregnant women's protein intake to see whether we could predict poor pregnancy outcomes. At the end of 4 exhilarating years, we could show no effects on low birth weight or pregnancy outcome, nor could we identify high-risk pregnancies based on our nutrition research. We did not meet the goal of a lower infant mortality set in our grant. Infant mortality declined, only to increase near the end of the project, which was very disappointing. Perhaps we did not know

how or what to measure, or perhaps we did not allow enough time for results to show. I was left to believe that more of the same interventions would not solve the problem; we needed new approaches.

In our final report to the federal government, I wrote that if I could do it over again, I would set up the best school-based health education program in the country. Medical and public health interventions to reduce infant mortality have brought us to where we are today. We have made great advances with technology, but now technology will solve fewer and fewer of the remaining problems. Our focus should be prevention.

Reproductive Health Education for Teens, Teachers, and Adults (RHETTA)

During our Improved Child Health Project, we initiated a reproductive health education course for ninth graders in one county. Because most of the increase in teen pregnancy occurred in the tenth grade, the community was receptive to our trying interventions just before pregnancy occurred. We have since expanded the program to the seventh and eighth grades and from one to four counties, encompassing six school districts. We have directly reached more than 7,000 young people and indirectly reached another 8,000 through the 126 teachers we have trained. In addition, we have generated excitement among school boards, school administrators, and students in these communities.

Incidently, although school administrators and teachers have been wary about teaching sex education in the schools, about 97% of the area's parents have signed letters permitting their children to participate in these classes. I strongly believe that teachers and administrators are reacting to a small but vocal minority who oppose school-based sex education.

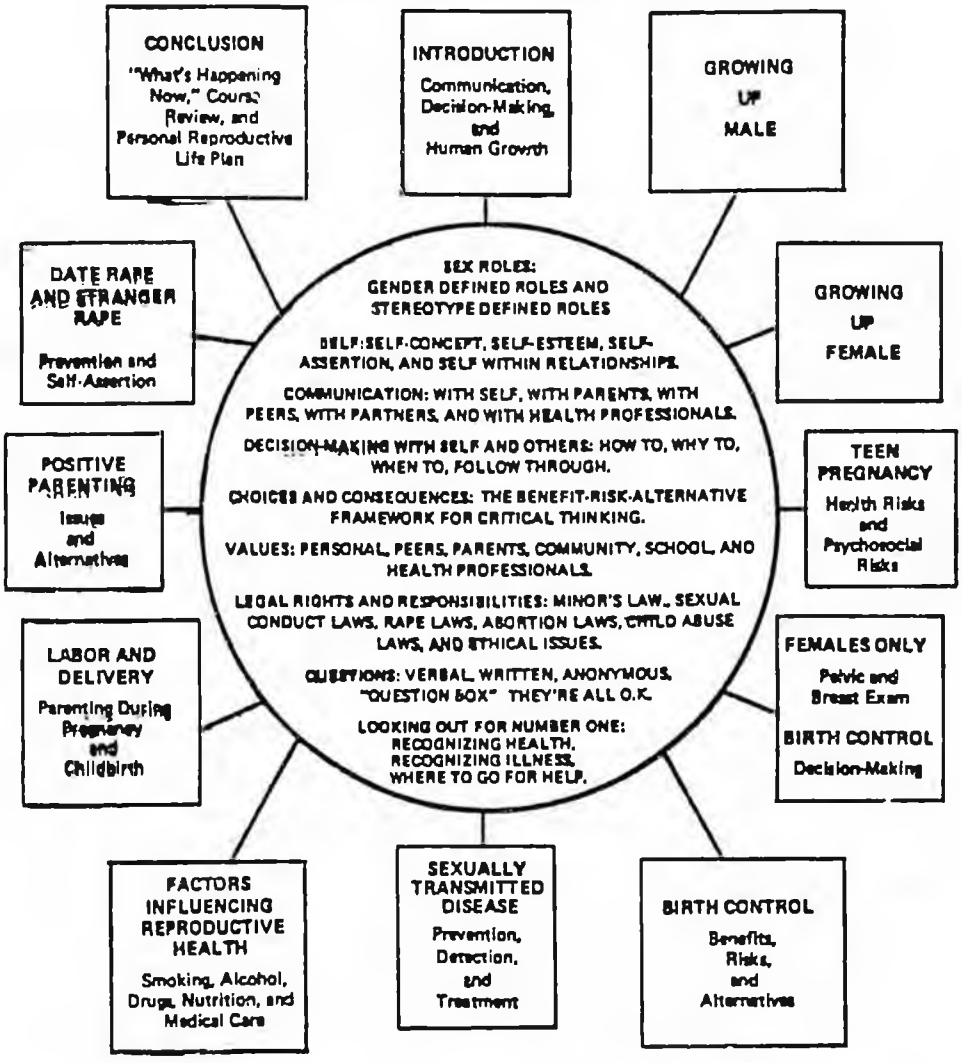
Two public health educators, or teachers we trained, have offered 15 2-hour units of comprehensive reproductive health education over a 2-year period to eighth and ninth graders. We call the program RHETTA for Reproductive Health Education for Teens, Teachers, and Adults.

Our comprehensive curriculum is geared toward the developmental level of adolescents and includes segments on communication, decision making, growing up male and female, teen pregnancy, pelvic and breast exams, birth control, sexually transmitted diseases, risk factors influencing reproductive health, labor and delivery, teen parenting,

pregnancy alternatives, health laws, date rape, and stranger rape. It could be called an adolescent survival course.

Reproductive Health Education Series

CURRICULUM GUIDE II

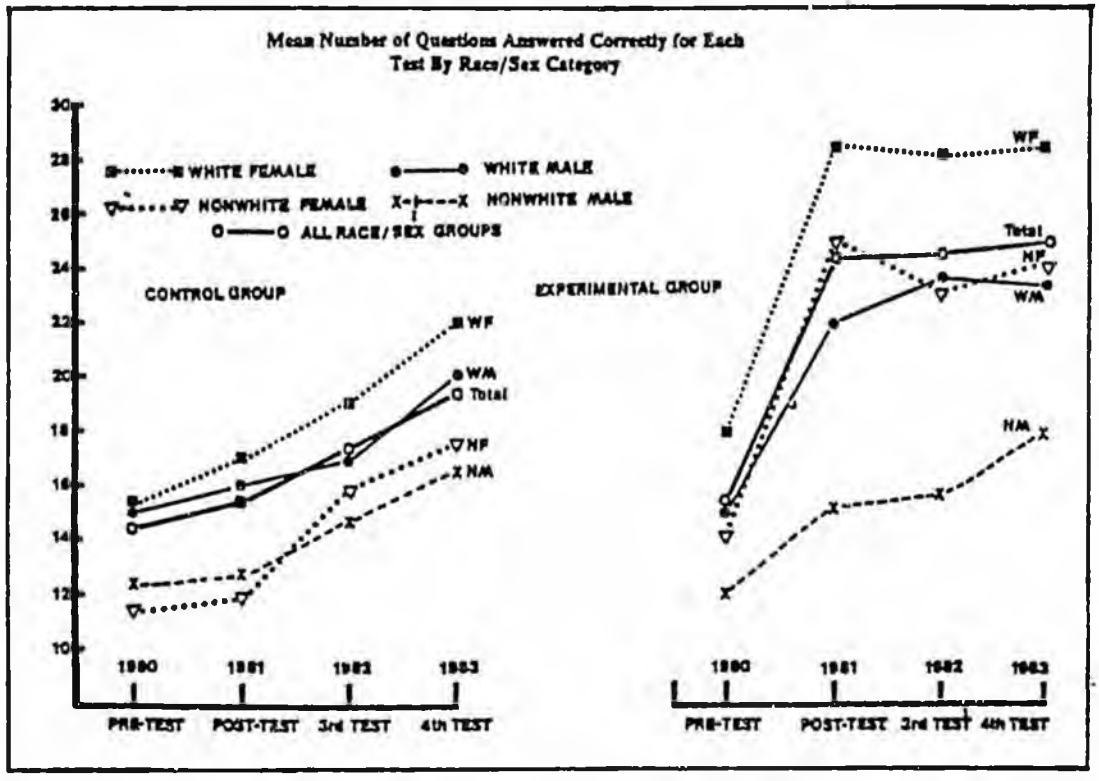


S. C. DHEC PEE DEE II – SWAT TEAM PUBLIC HEALTH EDUCATION PROGRAM

Evaluation of RHETTAs Impact

An experimental group and a control group were tested over a 3-year period to see whether students could learn the material and retain the knowledge. The 155 students in the experimental group showed an increase in knowledge at the time of the post-test and maintained this knowledge for the following 2 years. The 98 students in the control group showed a gradual increase in knowledge over the period, but it was less than for the experimental group. Both groups in the pretest answered about 15 of the 38 questions. Upon entry to the teacher training, teachers scored about 30 out of 38, which indicates the difficulty of the test.

Nonwhite female students in the experimental group showed the greatest percentage of increased knowledge, while white females attained the highest scores. A striking result was that the nonwhite males showed little improvement after taking the course; they had virtually the same scores as their counterparts in the control group.



Outcomes related to changes in behavior are always difficult to demonstrate, but we tried. We compared enrollment in family planning clinics of 14- to 17-year-olds in Darlington County, where we did most of our work, to those in eight surrounding counties and to the state as a whole between 1978 and 1984. Darlington County experienced a 138% increase in enrollment, compared to 22% for the eight other counties and 13.9% statewide. In 1981, we reached about 18% of the 14- to 17-year-olds in Darlington County, in 1982 between 40 and 42%, and by 1983, about 60% of this group. When the 1984 data become available, we will have reached about 90%. Pregnancy rates for this age group in Darlington County have gradually decreased. The strongest statement I want to make is that we clearly did not cause an increase in teenage pregnancy, the great unfounded fear of opponents to school-based sex education.

Understanding Adolescent Sexual Behavior

In 1982, we conducted confidential interviews with 297 high school females in Darlington County to collect information about adolescent sexual behavior. It was not a scientific random sample; we interviewed students during a study hall. The proportion of girls having had sex increased with age. Thirty-one percent of the 13-year-olds said they had had sex; more girls become sexually active with every year. The trend for girls who were currently sexually active is similar, but at a lower level. We think these numbers represent the minimum of sexual activity for the group interviewed.

We found that over 70% of these teens said they had had their first sexual intercourse in "a parent's home." White girls used a relative's home less often than black girls. It was surprising that only 3% of the sexually active girls said they had been "pressured into" having intercourse.

Forty-two percent of those who claimed they had ever had sex said they had used some type of birth control at first intercourse. While this number is probably inflated, the point remains that 58% said they used no method. In addition, 64% said they were not aware of the risk of pregnancy at first intercourse. Zelnick and Kantner reported that half of all premarital teen pregnancies occur in the first 6 months after initiating intercourse, which shows the need for education, and demonstrates that adolescents really believe "It can't happen to me."

Opportuntities for Intervention

Family planning clinics and other health facilities offer education and primary prevention, but reach only a small portion of the teens at risk. Churches are also good sites for sex education. The literature indicates that children who attend church are more likely to delay sexual activity--but churches may not reach those teens at greatest risk.

The home is a perfect place for primary intervention because role model sex education occurs there all the time, either consciously or unconsciously. But parents vary in their interest and ability to teach their children about sex. Further, having parents as sex educators is diametrically opposed to the need for adolescents to achieve separation from parents. To be successful, sex education at home probably has to occur before children reach adolescence. Most corporate media are of no help since they use sex to market products or simply to profit from sex exploitation, as in the many made-for-adolescents movies.

On the other hand, schools have the advantage of being able to reach all young people before the initiation of sexual activity with quality-controlled reproductive health education, including health promotion, risk reduction, and "teenage survival."

In addition to improving access to services for young people, we need to teach them good communications skills and to evaluate how marketing and media influence their lives. In addition to improving access to services for young people, we need to teach them good communications skills, Jean Kilbourne's educational movie Killing us Softly raises consciousness about marketing. Dr. Robert A. Hatcher of Emory University has developed a conference package called "Bridging the Gap" to teach parents and their children about the tasks of adolescence and communication within the family. The response to this conference in the Pee Dee II Health District was so good that people had to be turned away during preregistration.

Summary

We have an obligation to provide our young people with responsible, quality, and developmentally appropriate health education. If we do, I believe we will have a significant effect on many health and social problems, not just teenage pregnancy.

HIGH SCHOOL-BASED SERVICES: THE ST. PAUL EXPERIENCE

Phillip Porter, M.D.

Twenty years ago, I became Chief of Pediatrics at Cambridge City Hospital and was involved with providing medical services to over half of the city's children. These children did not have private physicians. Over several years, we developed a school-based primary care service that was accessible to every child in the city. It provided services for about 95% of the children who did not previously have a private physician. It was financed by existing municipal funds, including the school health and well-child budgets. This program ultimately saved the city about 6% in medical costs.

Two years ago, I began a search for other communities that had developed innovative child health services. St. Paul is one of the cities that has a remarkable program. I also found 3 other jurisdictions that have exemplary projects. Let me briefly describe them before discussing St. Paul's program.

For 6 years, Sarasota County, Florida, has had a public/private contract for all public maternal and child health services. All migrant, low-income, Medicaid-eligible, and some other disadvantaged families are cared for by private pediatricians and obstetricians. The program has been so successful that today the county has a unique problem: Many more community physicians want to participate than the program needs.

In Gainesville, Florida, a pediatrician and a state official realized that certain handicapped children were getting poor quality care and the costs of their health care were much higher than those of other children with comparable diagnoses. They found that these children lived in a 16-county, poor, isolated area in north-central Florida. These two people hired a public health nurse in each of the 16 counties and trained them as nurse practitioners. Each was assigned a panel of 50 children, money for gas, and a two-way radio. The nurse practitioners then visited the children at home and managed their health care. They were able to consult with pediatric subspecialists when necessary.

The total cost for a nurse practitioner and consulting physician is $30,000 per year, or $600 per patient. At the University of Florida Hospital, the hospital day rate is $500, the basic emergency room fee is $100, and the outpatient clinic rate is $50. The nurse practitioner can recover these costs by keeping each patient out of the hospital for one day and out of the clinic once a year. The Children's Medical Service has adopted this program as part of its statewide program.

In Great Barrington, Massachusetts, the only pediatrician in rural Berkshire County decided to care for patients wherever they could be seen--in schools, churches, or other local meeting places. He found that because the area is so isolated, his visits became a social event. He organized mothers and local groups to start nursery schools while he provided health care. What he began was a combination health care and social enrichment program for preschool children in the county. Part of the funds come from the state; part come from bake sales, bike-a-thons, and other traditional fundraisers. The program has since been included in area towns' budgets, so its support comes from a variety of sources.

The St. Paul Experience

The Chief of Obstetrics and Gynecology at St. Paul-Ramsey Hospital was upset about 3 things:

- That 15-year-olds would come into his prenatal clinic 9 months pregnant and having had no prenatal care;
- That the same girls came back 1 year later with their second pregnancies; and
- That he had an adolescent family planning and gynecology clinic in the hospital that nobody used.

He decided something had to be done. Coincidentally, the principal of a local high school asked him to begin day care services in the hospital for the young children of the high school teachers. The obstetrician agreed, on the condition that he could establish family planning services in the high school. After 2 acrimonious years of trying to convince the community to accept his idea, he got the school committee to agree to try it for 1 year. That was 7 years ago.

Family planning services were initially located in the high school basement next to the cafeteria. The location was a mistake because students had no privacy; as a consequence, no one used them. The services were then expanded to include primary care, that is, immunizations, obesity treatment, skin

care, and athletic and work physicals, as well as prenatal care and contraceptive counseling. The clinic grew and ultimately had to move to a larger space. The program is now located in four of six city high schools. A number of professionals are involved in the effort--health educators, social workers, nurse practitioners, obstetricians, dental hygienists, nutritionists, and pediatricians. They have weekly or even daily contact with the student. All student records are confidential.

Although it delivers comprehensive adolescent services, the clinic's real focus is preventing pregnancy. Being in the school, they have a remarkable ability to ensure compliance. All prescriptions given out during the day can be filled at the county hospital pharmacy. During the day, the staff calls prescriptions in to the pharmacy. The next day the pharmacy lets the clinics know which prescriptions have not been filled, so the staff can easily follow up with students.

Outcomes

The results are impressive. In 1980-81, 68% of enrolled students used the high school clinics; 29% of these visits were for confidential services. The percentage of female students seeking family planning services increased from 7% in 1976-77 to 23% in 1981-82. Fertility rates for this group have dropped from 90 per 1,000 to 28 per 1,000. Recidivism in this population is less than 2% compared to a national average of 25% at 1 year. Eighty-five percent of the young women who deliver babies receive their high school diplomas, compared to a national average of 50% for girls who become pregnant. Day care has been established in two of the four high schools, so young mothers can go to school and be close to their babies. Finally, this program has saved Medicaid and the welfare department $3 million a year. It is clear why elected officials in St. Paul support this effort.

INTERVENTIONS AFTER BIRTH

SOUTH CAROLINA'S STATEWIDE PERINATAL RISK PROGRAM

Robert Jackson, M.D.

Although a beautiful state with many natural resources, South Carolina suffers from pervasive poverty. For almost any socioeconomic indicator, South Carolina is usually 48th, 49th, or 50th in the U.S. A low percentage of our population completes high school (54% versus 66.3% for the U.S); the per capita income is low (77% of the national average), unemployment is high (9.8% in 1983), and a high percentage of our population is black females (31.5% versus 12.6% in the U.S.). Access to health care is limited. The fact that socioeconomic indicators correlate closely with health problems is very true for South Carolina.

Defining the Infant Mortality Problem

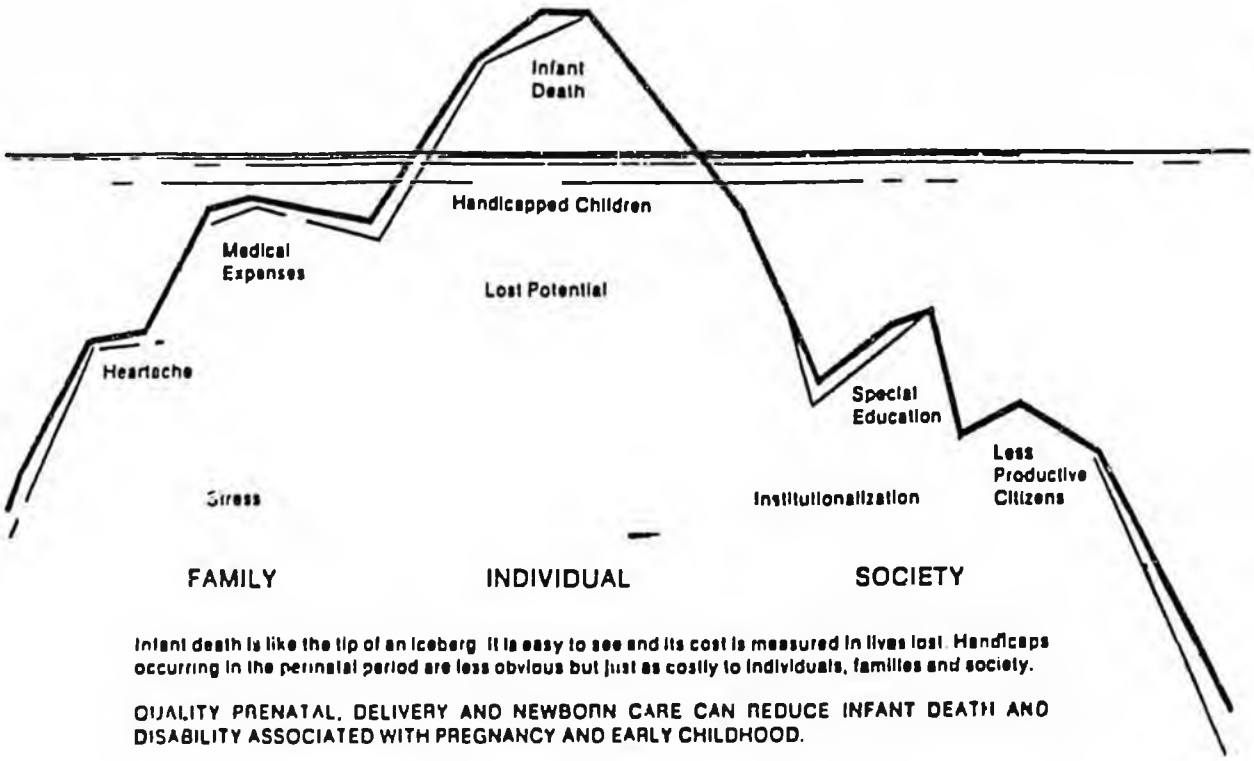
For several years, South Carolina has had the highest or second highest infant mortality rate in the U.S. In 1983, we had the first significant decrease in infant mortality rates in 4 years, from 16.1 per 1,000 in 1982 to 15.0 per 1,000 in 1983. That decrease makes us 49th, just above Mississippi.

In the late 1970's, maternal and child health programs in the Department of Health and Environmental Control (DHEC) were limited to outpatient prenatal care in most counties and well-child care in all 46 counties. The program contained little or no emphasis on a system to provide continuity throughout the perinatal cycle. A big gap existed between prenatal care and entry into child health care or family planning. The high-risk prenatal program was available for a limited number of patients, but it was still not perceived as part of a "system" of care.

We began by defining the problem statistically. Using an epidemiological approach, we learned that many of our perinatal health problems occurred during the part of the cycle we were not addressing: late pregnancy, labor, delivery, and care of the newborn. A study of matched birth-death certificates, in conjunction with the Improved Pregnancy Outcome project,

South Carolina

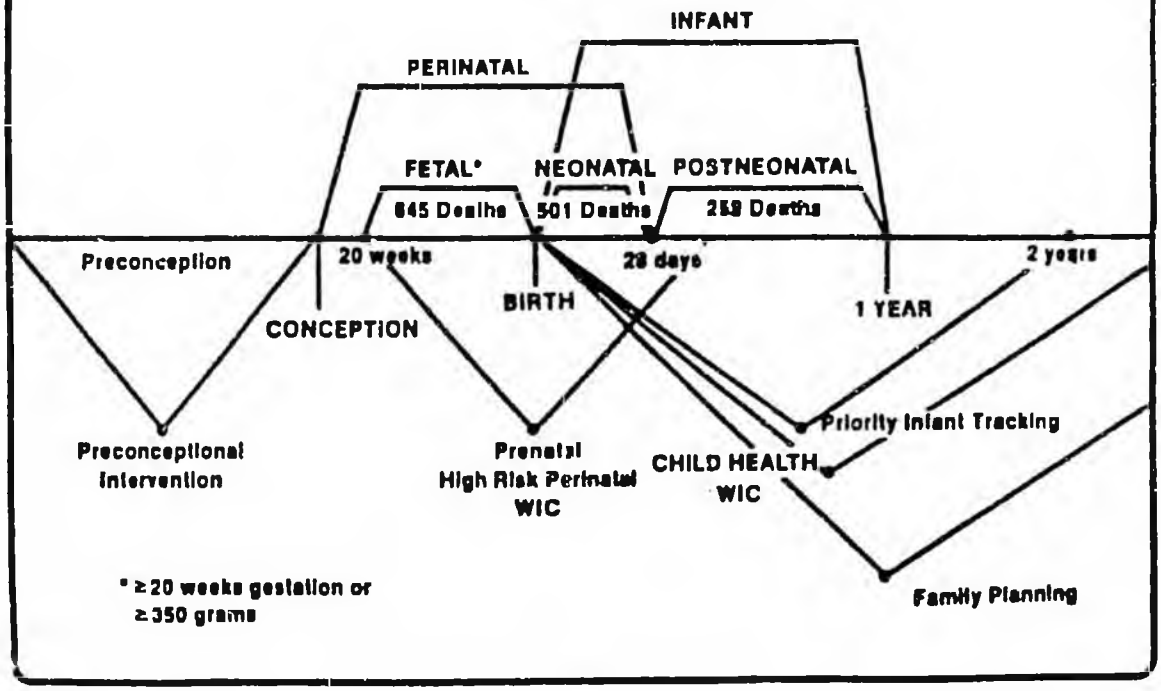
INFANT MORTALITY PROBLEM



Infant death is like the tip of an iceberg. It is easy to see and its cost is measured in lives lost. Handicaps occurring in the perinatal period are less obvious but just as costly to individuals, families and society.

QUALITY PRENATAL, DELIVERY AND NEWBORN CARE CAN REDUCE INFANT DEATH AND DISABILITY ASSOCIATED WITH PREGNANCY AND EARLY CHILDHOOD.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
FETAL, NEONATAL AND POSTNATAL DEATHS (1983) AND
HEALTH SERVICES FOR MOTHERS AND CHILDREN



indicated that the risk factors identifying infants at highest risk of death in the first year were of low birth weight and their mother had had fewer than five prenatal visits.

Using this approach and having firm data to define the problem made perinatal care and high infant mortality rates a public issue, which has helped all of us to focus on the problem and to identify our roles and possible solutions.

Statewide High-Risk Perinatal Program

Our program comprises of multiple components, including some innovative networks of prenatal care and a plan to establish adequate technical and human resources to provide tertiary intensive care units for infants.

The specific problems addressed by the Statewide High-Risk Perinatal Program include access to appropriate care for pregnant women at highest risk of a poor pregnancy outcome and access to appropriate care of the highest-risk newborns. The program's goal is to reduce fetal and neonatal mortality through regionalized strategies. It uses a two-pronged approach--obstetrical care for high-risk mothers and newborn care for high-risk infants.

- The goal of the obstetric portion is to ensure that infants are born healthy or at least ensure that when high-risk births occur, optimal neonatal care is available.
- The goal of the neonatal portion is to prevent death and disability of high-risk newborns.

Obstetric Care for High-Risk Mothers

County health departments assess pregnant women's risk for current medical complications or poor pregnancy outcomes with their last pregnancies. Patients are also referred by private physicians for risk assessment and program assistance. If the patient is at high risk, has an income less than 150% of the poverty level, and is ineligible for Medicaid, an application for special care and funding is processed. When a previous pregnancy has resulted in a poor outcome, gestation must be less than 30 weeks for the program to consider the patient's application because of the time needed for intervention.

The special care provided by the program includes follow

up by a public health nurse and, evaluation and intervention plan by a nutritionist and social worker. Obstetrical, antepartum, and intrapartum care is provided by a board-certified or eligible obstetrician, and delivery is authorized in a level II or III hospital. The patient can be authorized for sterilization at the time of delivery if she chooses, and all federal guidelines are met. The county health department follows the case for 1 year postpartum for family planning intervention.

The program pays for prenatal care, testing and drugs ordered, up to 3 days for each predelivery hospital admission, and 3 days for delivery. The obstetrician is usually paid a clinician's fee and a fee for the delivery.

Care for High-Risk Infants

The infant portion of the program pays for some hospital care for the highest-risk infants and an assessment of all newborns of mothers enrolled in the program. For infants of mothers in the high-risk program, the program pays for a newborn evaluation by the pediatrician and one day of hospital care. If an infant of a program mother is sick and needs intermediate care, an application for the infant must be submitted before the program will pay for extended hospital and pediatric coverage based on the risk of the newborn.

The program contracts with five level III Neonatal Intensive Care Units (NICUs) for intensive care of a predetermined number of infants who require that specialized care and whose family incomes are less than 150% of the poverty level. The number of infants whose care is paid for by the program is based on the percent of the total statewide number of very low birth weight infants (under 1,500 grams) each institution cared for in the previous year. We pay a flat rate up to $5,000 for each infant, which includes hospitalization and care by a physician.

Regional level III hospitals are also paid a minimal amount for outreach education, neonatal transport, and neonatal developmental follow-up if these services are provided in the region. To receive funds, the level III facilities must commit themselves to accept referrals from within their region and/or to find a bed for the infant if the regional center cannot accept it.

Facility Classification

Recognizing that apopropriate perinatal facilities need to be available for pregnant women and newborns, the program offers perinatal capabilities, reviews, and consultation to all hospitals with a delivery service. If requested, the program assembles a team of an obstetrician, obstetric nurse, neonatologist, neonatal nurse, social worker, and administrator to perform an onsite review of the facility. A survey is completed before the visit and is reviewed during the visit. Specific patient records are reviewed and the facility and protocols evaluated. A full written report is submitted to the hospital, which includes observations about current perinatal functional capabilities and recommendations for improving perinatal care.

Program Costs and Outcomes

The budget and the number of prenatal patients and infants the program can pay for vary from year to year. As funding fluctuates and hospital care costs escalate, payment for certain services has changed, and risk factors have been closely analyzed and altered as necessary. (Table A presents data on program costs and patients served from FY 1979 through FY 1984.) Screening of all recipients of Women, Infants, and Children (WIC) services and the Low Birth Weight Prevention Program have brought many more eligible high-risk women and patients at risk for preterm labor to our attention. About 52,000 births occur in the state, of which 21,000 are eligible for the WIC program. We have access to a substantial number of children and have had a fourfold increase in the number involved in the program.

Table A

HIGH-RISK PERINATAL PROGRAM FINANCIAL DATA
AND PATIENTS SERVED

	Average Payment For Mother and Infant Care*	Approximate Total Program Expenditures	Number of Prenatal Patients Served
FY'79	$1,406.00	$ 826,113.00	470
FY'80	$1,539.00	$1,158,100.00	599
FY'81	$1,910.00	$1,719,268.00	834
FY'82	$1,991.00	$2,564,765.00	927
FY'83	$1,895.00 Program changes made	$3,243,516.00	769
FY'84	$2,086.00	$4,243,825.00	1,325

NOTE: In addition to patient care, the program also funds health department high-risk clinics and NICU contracts.
* Amounts exclude neonatal intensive care paid by contracts.

The High-Risk Perinatal Program has been shown to be effective. In the September 1983 issue of Obstetrics and Gynecology, Henry Heins, M.D., reported the findings of a matched pair analysis undertaken to determine whether infants of women in the program had less perinatal mortality and higher birth weight than infants of women outside the program. The number of fetal and neonatal deaths was twice as high for the nonprogram group, but no statistical difference in birth weight distribution was apparent in the two groups. Postneonatal mortality was also less for infants of women in the program.

Table B

FETAL, NEONATAL, AND PERINATAL MORTALITY RATES
BY PROGRAM PARTICIPATION
Deaths per 1,000

	Program	NonProgram
Fetal	15.2*	23.3*
Neonatal	15.5*	27.5*
Perinatal	30.5**	53.2**

* $P < 0.05$, analysis of variance, program VS nonprogram
** $P < 0.05$, analysis of variance, program VS nonprogram
From "Benefits of a Statewide High Risk Perinatal Program," an evaluation study by H. Heins, J. Miller, A. Sear, N. Goodyear, and S. Gradner, published in Obstetrics and Gynecology, September 1983.

Priority Infant Tracking System

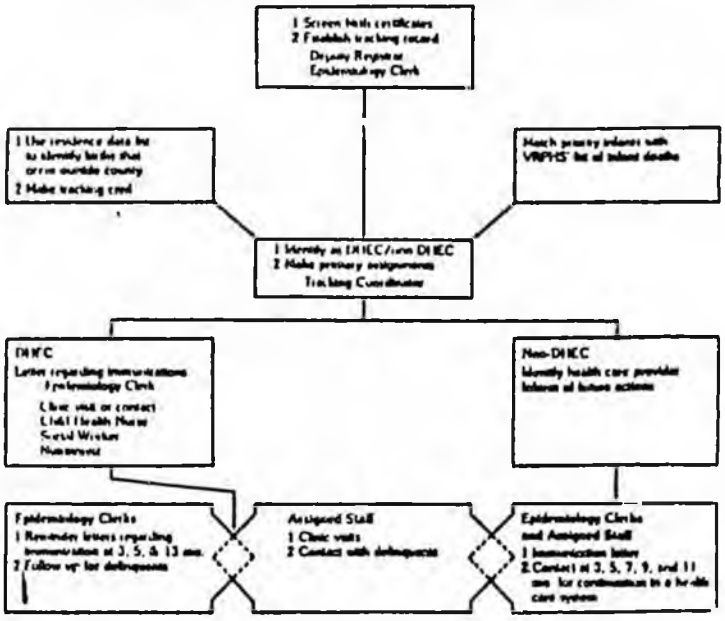
This program was developed a number of years ago as an additional outgrowth of the IPO project and cohort analysis. It was designed as a strategy to affect our postneonatal mortality problem. Not only has it helped us to identify infants who need close follow-up, but it has also helped us identify many multiproblem families that need public health interventions.

Birth certificates are reviewed and infants identified who have one of the following problems:

- birth weight below 2,500 grams,
- mother under age 18,
- fewer than five prenatal visits or care started after the sixth month of pregnancy.
- fewer than 12 years of education for the mother,
- mother who had a previous child born alive but is now dead.

The infant's family is contacted and offered preventive infant care, including immunizations, WIC services, etc. If the family does not have a primary care provider, the health department closely follows the infant for a year. Local arrangements with private physicians have been coordinated and relationships strengthened by this approach. (The following chart depicts this process.)

FOLLOW—UP SYSTEM FOR PRIORITY INFANTS



Medically Needy Program

Our recent initiatives to improve access to care involve working with other parts of the government and through the political process. Because we are a poor state with a miniscule Medicaid program, both in terms of eligibility and benefits, we have a very large medically indigent population. Legislators and politicians are more receptive to expanding Medicaid than to providing direct state assistance, because Medicaid would provide a lot more federal assistance to the program. Even with an expanded program to include the medically needy, we still have not caused a substantial increase in the number of people who are covered. It is still a major dilemma.

This year we are going to initiate a new $65 million medically indigent program that will draw upon some funds from the existing provider system. Hospitals will actually have to contribute $10 million in seed money for this project.

Surprisingly, this idea actually came from the hospitals, because they realized that part of the problem of access has been caused by the reimbursement system.

The large regional hospitals, usually associated with universities, provide an overwhelming majority of care for the indigents. To cover their costs, they need to shift costs from public to private payers. As a result, many community hospitals and proprietary hospitals are able to operate without responsibility for providing indigent care. When the regional hospitals raise their prices to cover their additional costs, the profit-making hospitals are also able to do so and realize an even greater profit. They have been under enormous pressure to equalize their contribution and participation in this very inequitable system, and they have now volunteered to participate in this multimillion dollar fund.

We are also seeking assistance from South Carolina's 46 counties. Only five of them currently make a significant financial contribution to indigent care for their populations. Those five have contributed almost $10 million annually, and they are now very reluctant to serve indigent nonresidents who come into the counties for care at the referral centers. The traditional referral process has broken down. Providers in adjacent counties who used to refer their patients to tertiary care centers no longer can, which also is contrary to our department's initiatives to maximize referrals of high-risk babies to these specialized centers. Our program was the only thing between high-risk babies and no care. We believe it will benefit from this new system when it is in place.

In addition to addressing funding problems, this program will also resolve some of the political issues caused by inequity between participating and non-participating counties and patient care issues caused by the lack of appropriate care for women who had bad pregnancies and sick babies.

Medicaid Waivers

A remaining problem relates to our application for a freedom of choice waiver that would allow us to direct our Medicaid-eligible population to the right kind of care for their needs. Title XIX provisions, which do not allow us to limit freedom of choice of provider, also do not allow us to prioritize our Medicaid dollars. We are not permitted to direct high-risk cases to facilities best equipped to treat their problems. Directing patient care is an important part of our program, and we need the Reagan administration's cooperation.

In conclusion, the programs we have initiated in South Carolina as an outgrowth of careful analysis of our infant mortality problem allow us to channel our resources to the target population where we can expect to achieve the greatest improvement in outcome. Although we have a long way to go, we are encouraged by the progress we can see resulting from the approaches we are taking.

HEALTHY START—A LOCAL APPROACH to CONTROLLING INFANT MORTALITY

Darrel Newkirk, M.D.

We are located in Kansas City, Kansas, not Kansas City, Missouri, although we have many similar demographic and health problems. We serve a city of 172,000 people with a large ethnic population that is 75% white. It is a blue-collar, industrialized city, and it has the highest poverty rate in the state of Kansas. We also have a number of health problems, including a high infant mortality rate. From 1976 to 1979, we had the highest infant mortality rate in the state, averaging 17.2. And child abuse and neglect were increasing.

Our health department is a city-county department that offers traditional environmental and public health services. In addition to prenatal care, family planning, and well-baby services, we have the largest WIC program in the state. The health department's services are heavily used. In 1983, approximately one in six city and county residents used our services.

Healthy Start

The Healthy Start program is a postpartum program to reduce infant mortality in Kansas City. It is a hospital visitation program to identify mothers at high risk with follow-up visits by public health nurse, and paraprofessionals. We developed Healthy Start in conjunction with the state health department. Our goal was to ensure that every infant born of a county resident in any of the hospitals in the county had an opportunity for a healthy start in life. The objective was to decrease infant mortality and abuse and neglect rates, and to promote the health of mothers and infants in our county.

Our strategy was to identify, at the time of birth, mothers whom we felt were at risk for infant mortality, neglect, and abuse. After identifying them by reviewing birth certificates, we provided them with intensive services and follow-up during the first year of the baby's life. The emphasis was on prevention; we wanted to identify and prevent

potential problems from developing between mothers and their infants. We began to identify high-risk infants and mothers by reviewing birth certificates. However, we generally did not get the birth certificates until 6 weeks after birth. The babies were already in a dangerous period by the time we could identify them.

We then decided to visit hospitals just after babies were born to identify high-risk mothers. Both nurses and paraprofessionals were trained to make these hospital visits. They explained the program to new mothers and conducted interview assessments to identify needs and potential problems. For example, had the mother made arrangements for the baby to go home? Did she have formula, diapers, and other supplies? What was her family situation?

Determination of risk was another element of the assessment. Using various factors, we categorized mothers according to three levels of risk. Criteria included the mother's age, whether she was a migrant or refugee, whether she spoke English, whether she had a support system at home, her feelings about the pregnancy and the baby, her economic and health insurance status, the mother's and infant's health status, and, most important, the subjective impressions of the hospital visitor. The mothers determined to be at the highest risk, Level Three, received the highest level of services. During the hospital visit, a follow-up home visit was scheduled. In many cases, the same hospital visitor went to the home within a week.

During the home visit, needs were assessed again referrals were made to WIC or other programs; transportation was arranged for well-baby visits; and family planning and well-baby care visits were encouraged. The visitors also tried to find out why mothers might have missed postpartum visits. The home visitor essentially served as a link between the mothers and the health care system.

One of the most important components of the home visits was establishing a rapport and supportive relationship with the client, which the paraprofessional could often accomplish more quickly than the professional nurse. The thrust of the program was for the mothers in the county to know they had a friend and advocate they could call if they were in trouble or needed help. If, however, the home visitor suspected child abuse or neglect she was obliged to report it, according to state law. At that point, we would have to step aside and turn the case over to the local child protective services team.

Outcomes

In 1983, of 2,820 births to county residents about 90% were visited in the hospital. Over 2,500 visits were made to the hospital during which needs and risk were assessed. We originally estimated 15% of our patients would be classified as high-risk. Last year, 26% were considered to be at risk and were followed for 1 year. Our case load then was about 838 mothers and their children.

We are now evaluating outcomes for the last 3 years and are encouraged by the first year's results. In 1978, 420 infants were referred to the courts because they were abused or neglected; in 1979, that number was 368. In the first year of our program, that number dropped to 164. And, substantially fewer children had to be removed from their homes during the first year of the program. By providing support services to mothers in the home, we believe we are able to keep children safely in the home.

Infant mortality rates have dropped in the last several years, from 17.2 countywide to 14.0 as an average for the last 3 years. In addition, within the Healthy Start high-risk group, the rate is lower than the county average. Immunization for these children is up-to-date. Other health care workers regard, program positively, and the attitudes of the participating mothers are very positive.

This visitation program is only one part of Healthy Start, however. In the last few years, we have expanded it to include prenatal risk assessment. We also believe it is a cost-effective program.

Most important, Healthy Start is a community program. We have involved private pediatricians in town, who have allowed us to visit their patients in the hospital. Our next step is to involve all of the obstetricians and gynecologists in the city and county and to identify high-risk prenatal patients early. We then will be able to provide transportation for their prenatal care and help them into the WIC program.

MARICOPA COUNTY'S PRIMARY CARE HMO APPROACH

Robert Harmon, M.D.

The Arizona Health Care Cost Containment System (AHCCCS) program is Arizona's experimental Medicaid program. It was developed under the assumption that maternal and child health by health maintenance organizations (HMOs) might be able to reduce infant mortality rates. Some studies have been done about the effects of care by HMOs on reducing infant mortality among privately insured individuals, but little research has been done on it for prepaid Medicaid patients. More research is needed.

My basic message is that prepaid Medicaid is incredibly complex but that it also provides great flexibility allocating funds and resources. Instead of being tied to a rigid fee-for-service system, the pool of money can be invested in prenatal care, primary care, and health education if the operators of that prepaid system see fit to do so.

Maricopa County is located in central Arizona. It is a large county that extends more than 100 miles in each direction. Its land mass is greater than the state of Vermont. The population of the county is 1.6 million people, of whom 13% are Hispanic, 3 percent are black, and 1% are other minorities. The total population of Arizona is 2.9 million; approximately 55 percent of the state's population are Maricopa County residents. Our indigent population before Medicaid was approximately 100,000 users, of whom 43% were Hispanic and 13% were black. We operate our system from an umbrella agency, the Department of Health Services, which recently developed a new HMO--the Maricopa Health Plan--in response to AHCCCS. We also have a large teaching hospital, a Division of Public Health, and a Division of Long-term Care.

The AHCCCS program was initiated in October 1982. It is a statewide prepaid Medicaid experiment under the auspices of the Office of Research and Demonstrations of the DHHS Health Care Financing Administration (HCFA). The legislature finally started Medicaid in Arizona because the money to pay for indigent care, which was fully provided by the counties, was

running short as a result of taxation and spending limits passed by Arizona voters in 1980.

Initially, a private contractor administered AHCCCS statewide, which was terminated in March 1984, and the program is now run by the state. Enrollment of employed groups to balance the indigents was planned but never implemented. Cost sharing by indigent enrollees was planned, but has been negligible. Prepaid capitated financing for about 180,000 enrollees statewide has continued, however. Competition among prepaid plans is strong. Approximately 20 plans throughout the state now provide care under this program. Gatekeeping and case management by primary care physicians is still intact. Finally, the program includes no coverage of nursing home or home care services.

The AHCCCS program elements that most affect maternal and child health care are gatekeeping, case management and competition among plans. The latter has brought many private providers into the program. In the first year, our own plan, which had had complete responsibility for indigent care in Maricopa County, lost 38% of that market. Four new competing plans, all private prepaid providers, entered the market and claimed nearly 40% of the market.

Effects on Infant Mortality

We wondered what would happen to morbidity and mortality during this process. Family planning was an optional service in the Arizona Medicaid experiment. If a plan wanted to use its revenues to provide family planning services it could. Although many health care professionals believe these services are cost-effective services and would expect most plans to provide them, it was not the case. Our plan provided family planning services, but many private plans did not.

The infant mortality rate in Maricopa County was 13.4 in 1980 and 12.0 in 1981. Pheonix's infant mortality rate (14.4) ranked tenth among 26 cities with populations greater than 500,000 people between 1978 to 1980. Phoenix now has a population of about 800,000. Arizona ranked thirty-second among all states for infant mortality rates during the period between 1980 and 1982, with a rate of 12.0.

Statistics for the last part of 1982 and all of 1983 show the new program's effect on infant mortality rates. We expected the transition from a completely county-run system to one in which patients were distributed among county and private

providers to result in some change. We found that the rate of adequate prenatal care seemed to deteriorate. The rate of births with no or inadequate prenatal care certainly increased in 1983. In Maricopa County, the rate of births with no prenatal care per 1,000 live births increased 70% from 5.0 to 8.5 from 1982 to 1983. For Arizona, this rate increased from 18.9 to 21.2. The rate of births with between one and four prenatal visits per 1,000 live births increased from 39.3 to 44.1. These events occurred after years of steady improvements.

During the same period, federal, state, and local funding for maternal and child health and community outreach programs decreased, including our IPO program. It is also important to note that in our Title V project, only 24% of our clients were coming in for care during the first trimester, 50% during the second trimester, and 26% during the third trimester.

The infant mortality rate for both 1982 and 1983 was 9.3; thus, with a decrease in the amount of prenatal care, infant mortality stayed constant. It represented a plateau after years of steady decline. Statistics detailing race and census tract differences are not yet available. We will pursue this analysis to answer the many questions that remain. We also want to analyze whether the infant mortality rates are different between the public HMO and the private HMOs, which were primarily independent practice networks.

Comments on Prepaid Medicaid Programs

I'd like to issue a warning for those who are considering develcping a prepaid Medicaid system. Incredible confusionan result related to eligibility (who is eligible and when) and enrollment (who is enrolled in which plan and when). Many patients have changed providers repeatedly. Many women and children have been dislocated from their usual sources of ancillary services, such as the WIC nutrition programs, counseling, health education, immunization, and other health services. This dislocation became even more profound during the second year of the program, because enrollment in our own plan dropped from 62% of market share to 23%. We lost one of the biggest groups in our contract, the medically indigent and needy, because our bid was said to be too high.

The other change to anticipate with prepaid Medicaid is that the competition will be fierce for "up-front" money. This money can serve as startup capital for doctors who want to start their own HMOs. California had this experience in the early 1970s. Eventually about two-thirds of these plans lost

contracts and disappeared. Some of the private plans in Maricopa County are currently having financial troubles. Two are near insolvency and may be purchased by outside chains. Being accused of providing poor quality care, they are under strict supervision by the state. We expect, however, that the AHCCCS will continue and these problems eventually to be resolved.

We cannot yet say what the long-term effects of prepaid Medicaid will be on infant mortality. Our plan is trying to direct resources toward prevention and health education. We believe it is also important to bring the uninsured "notch group" into these programs. In this way, a public HMO providing Title V services can deliver the same program to both Medicaid and Title V eligibles. Because Medicaid eligibility is often transient, continuity of care is a challenge.

Conclusion

The 1990 Objectives for the Nation and the Model Standards that are currently being revised have not yet been discussed during this conference. I propose that we use these standards as a blue-print for our future efforts. In addition, I believe that interaction with public hospitals is extremely important. A public hospital in our agency allows us to collaborate on perinatal care and other programs. We also need to continue emphasis on antismoking and antidrinking programs and the promotion of breastfeeding. The National Association of County Health Officials, the U.S. Conference of Local Health Officials, and the Association of State and Territorial Health Officials are collaborating with federal and private agencies to achieve the goals of this conference as well as the Model Standards and the 1990 Objectives.

MEDICAID'S ROLE in ADDRESSING INFANT MORTALITY

Paul Allen

Thank you for the opportunity to speak on this vital issue. Inasmuch as Medicaid is perhaps the major funding source to finance health care for those at risk on this subject, I think a state perspective on Medicaid is appropriate. Earlier this week I attended a meeting of Medicaid directors in Washington, where we discussed issues of long-term care. A conference studying the problems of care at the end of life and this conference concentrating on health care problems at the beginning of life share great similarities. The problems are the same when we are talking about needed health care of a human being and the opportunity to have quality care at the beginning or end of a long and fruitful life.

Michigan's Medicaid Program

The Michigan Medicaid program is one of the largest in the country. My budget this year is $1.4 billion for Medicaid. I spend $25 million a week for health care, for the one million citizens of Michigan who are eligible for Medicaid--about one out of nine people in the state. About 600,000 of those eligibles are children, and therefore a major orientation is health care analysts, claims processors, health care policy people, and others in the spectrum of people needed to run a health insurance system for the poor.

We are very proud of our agency's ability to carry out its mission--that is, to facilitate quality care for people who happen to be poor. My major reason for being here is to share some ideas, concepts, and activities related to Medicaid that are often ignored when examining a topic like infant mortality.

In the last 10 years, the number of Medicaid eligibles in Michigan has increased from 700,000 to 1 million people, but

the number of children has actually decreased. This change is the result of a complete change in family life styles in this country and their effect on our children per case because we are having fewer children. With 1 million eligibles, we have roughly 200,000 Aid to Families with Dependent Children (AFDC) cases and another 35,000 in Aid to Families with Dependent Children of the Unemployed.

Maternal and Child Health Services

Michigan Medicaid is a very expansive program and covers nearly all services, except experimental transplants. To be eligible, a pregnant female has only to have a lack of resources to obtain adequate health care. Once we know that woman is eligible, nearly every situation is covered and has been covered for several years. Over the past 12 years, I have participated in a number of health care initiatives financed by the Medicaid program in Michigan.

For example, 19% of our AFDC population is enrolled in a health maintenance organization (HMO); 25% of the AFDC women and children in Detroit are members of an HMO. We have been innovators in providing access to high-quality, main stream health care to the poor. Besides being cost-effective, it allows poor people and their children to develop a relationship with a doctor.

We have an extensive Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program ever since the program began. We screen approximately 11,000 children every month through EPSDT. We also have several preventive and other programs for the populations at risk, including extensive family planning services throughout the state, in both rural and urban areas.

With our health department, we established a series of neonatal intensive care license units in the mid-1970s. Medicaid recognizes these units, and they are reimbursed fairly well, given the availability of monies in our program.

Availability and Accessibility of Services

In the last 12 years, we have noticed a complete shift in

emphasis in health services for poor people, particularly children of AFDC families. When I came to Michigan in 1971, we had a shortage of doctors. One of my biggest problems was constant telephone calls from people who could not get in to see a doctor. Now we have too many doctors, clinics, and hospital beds. We have surrounded the poor with health care. Even in previously underserved areas, adequate health care is now available. Accessible service for the poor is not now the main problem.

It is my opinion that we have also surrounded the infant mortality problem with health care. We have done the same thing with care for senior citizens. Now we have to address the heart of the problem--and it's a social one. Michigan's profile of infant mortality parallels the national statistics for infant white mortality, about half of that for the black population. The major problem we have left is in southeast Michigan and a few isolated out-state counties. As a support mechanism, we have over 100 social service offices scattered throughout the state that act on behalf of Medicaid in concert with local health departments. The problem is not that we are not seeking the target population and providing services where possible: it's that we are not reaching those who are most at risk.

The system has to be transformed from a health model to a social model to reach people early in the prenatal cycle. Our biggest problems are identification, education, outreach, consultation, and treatment of those at risk. Simply throwing money at the problem will not solve it. This year we will spend $100 million in neonatology, normal deliveries, and pre- and post-neonatal care; $20 million alone goes to neonatal care. We are going to spend a few million more next year, but it will not make a great difference in infant mortality because we are attacking the symptoms, not the cause. We have begun to experiment with outreach counseling and have already let some grants to groups to identify, educate, counsel, and consult with the people at risk. This effort may make a dent in future program costs and performance in serving those in jeopardy. We hope so.

Physician Primary Sponsor Plan

We are also trying a case management program called the Physician Primary Sponsor Plan. We have received a freedom of choice waiver under Title XIX so clients can be assigned to primary care physicians. The program will eventually cover all 1 million of our Medicaid eligibles, and it is the most extensive case management program in the country. It has begun

in Wayne County, which includes Detroit, by giving patients the option of enrolling with a primary care doctor or a health maintenance organization. So far, we have enrolled 155,000 individuals statewide, and we hope to increase our enrollments to 8,000 per month. At this rate, we expect to have all county eligibles enrolled by the end of 1985. It will be the first time for many of these people that they will have had a personal physician. The primary care physicians are available round-the-clock; the doctor's name and telephone number are printed on the client's identification card.

Michigan has a high Medicaid physician participation rate; 63% of all doctors statewide serve Medicaid patients. When we began the new primary care case management program, we expected a comparable level of participation. Currently, 2,200 primary care physicians practice in Wayne County. I have individual contracts with 1,300 of them to serve clients at risk. To date, about 56,000 clients in Wayne County have enrolled with private physicians, and about 80,000 have signed up with HMOs. With both options available, the percentage of enrollment seems to be shifting toward primary care physicians, although HMOs have been marketing heavily since the program began.

Our intent is to use and expand on this technique to enroll all high-risk mothers who come to our attention as early as possible in the pregnancy cycle. We already know this case management system works in establishing a meaningful patient/physician relationship. We are eliminating our clients' use of hospital outpatient departments as a regular source of care; we are providing them access and a person who cares. If we identify women at risk early enough, I think this program can greatly help to minimize the infant mortality problem.

Part III

PRESENTATION of GROUP FINDINGS

SUMMARY OF WORKSHOP DISCUSSION: INTERVENTIONS BEFORE BIRTH

Donald Lyman, M.D.

Participants in the workshop on interventions before birth generally believe that many of the resources we need to lower infant mortality rates currently exist but that for some reason they are not being used to maximum advantage. We also reached a consensus on several of the following recommendations.

First, coordination among programs needs to be increased. That includes coordination with the Department of Health and Human Services (DHHS), particularly integrating family planning activities into other programs aimed at curbing infant mortality rates, and among programs outside the Department. External coordination must be improved between federal agencies, for example, between DHHS and the Department of Agriculture, which operates the WIC program--and among federal, state and local agencies. Regulatory and other problems historically have hindered this kind of coordination.

Second, the health care community is not as aware as it should be of the problem of low birth weight. Health professionals must be better educated about this and related problems.

Third, the Department of Health and Human Services should convene a consensus conference of those groups most concerned with developing a standardized protocol for prenatal care. Procedures, timing, frequency of visits, and the content of prenatal care currently vary so that it might not be as effective as it could be.

Fourth, access in the broad sense is still a problem for women requiring prenatal care. Although remarkable progress has been made in these areas over the last 15 to 20 years, access has not kept pace with availablity. Eligibility standards and benefits among programs, including WIC and Medicaid, need to be conformed and administrative and financing problems addressed. Existing regulations and standards need to be enforced and new ones developed if necessary to ensure access to prenatal care for all women.

In addition to making recommendations related to existing programs, our group made several concerning new activities.

First, we need more research on new prenatal care programs and an evaluation of ongoing efforts. The question of eliminating the problem of very low birth weight babies through interventions such as the arrest of preterm labor needs particular attention. Ordinary public health efforts are not going to be very effective in this area. This kind of problem needs much investigation, especially that related to costs and ethical considerations.

Second, some form of clearinghouse should be established to provide us all with information on the number and range of activities that are being tried across the country.

Third, reducing the incidence of low birth weight should be incorporated into existing and future federal initiatives. We should make sure, for example, that in addition to discussing the cancer and heart disease associated with smoking, we also stress the risks to unborn babies. Similarly, alcohol, drug abuse, and mental health programs should address the effects of stress on low birth weight.

Fourth, much more public information and education about low birth weight prevention is generally needed.

Finally, efforts like this conference should be institutionalized. A standing advisory committee on low birth weight and infant mortality should be established in DHHS. It might be modeled on the Advisory Committee on Immunization Practices that advises the Centers for Disease Control on immunization.

SUMMARY of WORKSHOP DISCUSSION: INTERVENTIONS AFTER BIRTH

Barbara Shipnuck

The 3 topics we discussed most in this morning's workshop were: flexibility, especially in regulations; integration of specific services at the delivery level; and coordination, both between and within levels of government.

Regulatory Flexibility

We first focused on regulations that have the most significant or potentially significant effects on perinatal and postnatal care. One is the expansion of Title XIX freedom of choice waivers, which is an issue in South Carolina and several other states desiring to try innovative Medicaid programs to improve care. Second, if reimbursement for DRGs is adopted for maternal and child health services, we need to study the effects on the perinatal care system. Third, federal and state family planning regulations often limit the organizations that can receive family planning funds based on the range of services provided. As a result, organizations that may be most appropriate to provide contraceptive services may not be eligible to receive these funds.

Service Integration

Our group thought that follow-up beyond the neonatal stage of infancy is the most important area for activity. In particular, high-risk babies should be monitored through early childhood until age 5.

This is not necessarily a public responsibility. There are private-pay patients who have the same types of high-risk infants as those in public programs. They can and should be followed through private networks; however, such systems are not yet in place. Although we were unable to agree on which specific agencies should assume follow-up responsibility for infants discharged from neonatal centers, we did concur that

community-based integrated services are needed to perform this kind of follow-up. Ultimately, a variety of models should be operating nationwide, including ones based on centralized county health departments, health departments that include social services, as well as those that do not.

We supported the recommendation for a clearinghouse and an institutionalized conference structure to share information about these programs and their evaluations. We should examine a variety of models and let communities decide which are best for their infants and mothers.

Too often programs focus only on the mother and baby. We need to concentrate more on fatherhood, which often has been overlooked in programs related to contraceptives and in government and private sector services. We cannot change behavior and affect neonatal mortality rates without greater involvement of the fathers.

Community-level integrated services also need to be culturally based, and the workers need to be appropriate for the target populations, especially for programs in the black community.

In addition to access to perinatal and postnatal care, we discussed access to other services, including education and social services, for socially deprived populations.

Intergovernmental Coordination

The third topic we discussed was the need for a federally run data collection and dissemination system. Data from state and local jurisdictions need to be placed in a meaningful retrieval system. The data about subcultures has tremendous gaps. Although the conference has addressed differences between white and black infant mortality rates, it has not explored why, for example, Hispanic rates are lower than those of other white groups. We cannot determine the best approaches for these subgroups without this information.

Data on prevention programs is also needed. Communities may sacrifice six prevention programs to save one neonatal intensive care unit (NICU), but they may actually be able to save more infants through an appropriate prevention and prenatal care system. We have no way to substantiate this if there is no data. We are also frustrated about our inability to share existing data because there is no central retrieval

system.

Government efforts must be coordinated with the private medical and insurance communities. Private insurance companies need to cover prevention and prenatal programs to effect behavior and attitudinal changes about the importance of this care. The public sector cannot do it alone.

One surprising outcome of our discussion was the group's belief that additional resources are not needed for neonatal intensive care units. This piece of the puzzle seems to be resolving itself through competition within communities to provide this level of care. Regional planning programs may work, but we could not agree on uniform standards for appropriate regionalization.

SUMMARY of WORKSHOP DISCUSSION: INTERGOVERNMENTAL COOPERATION

Stephen King, M.D.

The intergovernmental cooperation workshop focused on two basic issues: funding responsibilities and the appropriate roles of different levels of government. We also discussed future activities to lower infant mortality rates and the possibility of reexamining the 1990 national health objectives in 1985, paying particular attention to the responsibilities of various levels of government.

Funding Responsibilities

First we discussed funding issues, including the positive and negative aspects of block grants. We generally agreed that conceptually block grants are a good idea and that the block grant mechanism has begun to work better since recent funding increases. Some of the problems discussed concerned the evolving roles of state legislatures in setting priorities and distributing block grant dollars. We also considered ways to integrate local governments into this decision-making process.

Different levels of government can effectively manage a number of funding sources for infant mortality programs. For example, all levels of government need to effectively integrate infant mortality-related services with Title X and family planning programs. The same is true for migrant and community health centers and Section 333-29 of the Public Health Service Act. WIC funding is another example; for many localities, it is the largest source of out-of-state revenue for services for mothers and babies. Although all of these programs may have similar goals, their specific agendas and administration may preclude input from government officials who actually administer the services.

Local and state funding sources for maternal and child health programs are still evolving. Instead of viewing federal dollars alone as the driving force behind health policy decisions, we need to consider integrating other sources of funds in developing our objectives for maternal and child health. Many states and counties have a significant investment

in this area; people contributing the funds should play a more significant role in shaping these programs. Intergovernmental interface is critical in this process.

Federal, State and Local Government Roles

We believe strongly that federal leadership is necessary to solve the national problem of infant mortality. Federal authorities can exert this leadership in a variety of ways:

- identifying problems, as this conference is doing;
- developing and reporting data from across geographic and political boundaries;
- identifying national goals and funding needs.

The roles of Washington and the regional offices of the Public Health Service should be strengthened to better support state and local agencies with competent professional advice and support.

Often overlooked is the fact that policy decisions made in Washington always affect state and local policy and funding decisions. During the last 10 to 15 years, local authorities have become increasingly more sophisticated and concerned about these decisions. We cannot ignore them any longer. Their role, as that of state officials, is an important one and should be carefully acknowledged by the other two levels of government.

We discussed issues related to uniform eligibility. If we were to use the WIC elegibility standards for all other maternal and child health programs, costs for local governments would increase tremendously. Eligibility needs to be addressed in the context of what local governments can afford. We also discussed the related issue of changing Medicaid eligibility for mothers and children. We strongly suggest that the Health Care Financing Administration (HCFA) begin to actively study the effects of eligibility changes on maternal and child program funding and health outcomes.

The need for data are another very complex problem. Currently data is collected at all levels of government for a variety of purposes. We need to develop a definition of minimal useful data sets. All levels of government should participate to help ensure their support.

Finally, in addition to disseminating the information we have learned at this conference, we need the leadership of the Public Health Service to continue the effort to inform and involve state and local governments in this process. We believe that 1985 is a good year to spend time reviewing and assessing the 1990 national health goals and to involve state and local health officials in this process. Staff time from all levels of government should be dedicated to this effort.

Part IV

CLOSING REMARKS

Douglas S. Lloyd, M.D.

There are very few topics we could discuss that are more closely woven into the fabric of society than pregnancy, sexuality, and bad pregnancy outcomes. This conference was very interesting; I learned a lot to take back to my community. However, we still need to set agendas for the future.

We don't have enough information to target our resources appropriately. Public policy decisions that require extra resources are made at the margin--they are decisions about how we are going to spend that next dollar. We need more information to effectively debate allocating more state, local or national resources to prenatal services. For example, we need more definitive information about risk factors and how they should be weighted. We also need to know much more about the effects of stress on pregnancy outcomes and the positive effects support systems and a stable home environment might have. I have strong reservations about the positive effects of simply channeling high-risk women into earlier traditional prenatal care. I was pleased to see this raised in the Institute of Medicine's study. Prenatal care may not be that helpful if the mother and her baby are returning to a stressful and unhealthy environment.

One of the most interesting areas for research in the future is behavioral epidemiology. What do we really know about behavior related to cigarette smoking? What causes people to smoke and what makes it easy or difficult for some people to quit? The behavior of young teenagers who get pregnant or become fathers also needs to be studied. Scientific research methods should be applied to these questions.

Targeting will also be very important for the future. We must focus programs on the populations that are likely to benefit most from the resources spent. This will require more emphasis on outreach. We also need to identify more people in the community for special services. In Hartford, we have the Hispanic Maternal and Child Preventive Health Network, or Comadrona Model. In the last 10 years, we have had a large influx of Hispanic people. The Comadrona (birth attendant) Model educates community women about smoking, drinking,

nutrition, and cleanliness, and sends them to work with pregnant teenagers early in their pregnancies, even before they begin prenatal care. These women serve as liaisons between the community and the health care system.

Government officials should assume many roles. One is a convener role. We have a president who is known as the "Great Communicator." I hope eventually he will assume a leadership position and serve as the "Great Convener" on infant mortality issues. There are many institutions that should become involved in this effort. Several are promoting smoking cessation campaigns; they include the National Cancer Institute, the Surgeon General, voluntary organizations, and health departments. Smoking-related infant mortality risks should be addressed by these organizations. We should also study the ethics of advertising. Advertising should be more responsible about messages it gives, especially to young people.

To conclude, this problem is pluralistic and it needs pluralistic solutions. We should not leave this conference thinking that increased federal funding is the answer; much work must be done locally. Our national colleagues need to focus on both the immediate problem and the factors that have created it. The federal government and key coalitions can call attention to this issue and convince people to probe its causes and possible solutions. Convening groups is an extremely important function for the federal government to fund. It is particularly important to join educators, advertising and business executives, judges, and other non-health community leaders to discuss these issues. Let's not simply try to put more people into existing prenatal services; let's look at a spectrum of activities that can change the root causes of this problem.

Part V

APPENDICES

Appendix A: Exemplary and Innovative State Health Department Programs Aimed at Reducing Infant Mortality

ASTHO FOUNDATION
ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS FOUNDATION
10400 Connecticut Ave., Suite 207, Kensington, MD 20895 (301) 933-7950

Exemplary and Innovative State Health Department Programs Aimed at Reducing Infant Mortality

Prepared for the

Intergovernmental Health Policy Project

Conference on

Intergovernmental Options for Reducing Infant Mortality

September 13-15, 1984

Denver, Colorado

This paper describes a number of exemplary or innovative programs developed by State Health Agencies to reduce infant mortality. In August, 1983, The Association of State and Territorial Health Officials (ASTHO Foundation) asked state and territorial directors of Maternal and Child Health programs to send descriptions of innovative state projects designed to reduce infant mortality. SHAs responded by sending descriptions of a variety of programs addressing a wide range of problems related to the causes of infant mortality.

The paper is divided into two parts. Part I summarizes programs by state. Part II is a chart of programs by category. In Part II, programs are grouped into the following four categories.

1) Low Birth Weight, Preterm Birth, and Prenatal Care Programs

2) Perinatal, Infant and Child Care Programs

3) Adolescent Pregnancy Programs

4) Special Programs

The fourth category (Special Programs) consists of several projects which do not fit easily into any of the three principal categories.

Part I

Summary of Infant Mortality Programs, by State

State programs are summarized in alphabetical order by state. The numbers in parenthesis following the program title indicate the page number where that project may be found in the categorical listing.

Alabama

The Prematurity Prevention Project (page 15) is targeted to Jefferson County and the Central Alabama Public Health Region. The goal is to reduce the number of low birth weight and premature infants. Infant mortality rates are extremely high in Alabama; and more than 80% of deaths occur in infants weighing less than 2500 grams. The program provides special attention to patients at high risk for preterm delivery, including weekly visits from 20 to 36 weeks. In-service education is an important component and is given to every provider in the system, including clerical workers. From previous data, the spontaneous preterm delivery rate has been reduced by more than 50%.

Person to contact: Beverly W. Boyd, M.D.; Director, Family Health Administration; Alabama Department of Public Health; 434 Monroe Street; Montgomery, AL 36130; (205) 832-6525

Arkansas

Healthy Beginnings (page 15) is a demonstration project targeted to indigent pregnant women and children in East Arkansas. It is designed to reduce the high rate of infant mortality and low weight births caused by severe poverty and lack of affordable health resources. As many women as possible are enrolled in the program during the first trimester. High-risk patients who are income-eligible receive special treatment at the regional medical center in Memphis. This project adds intensive outreach, community education, and home visits to existing services and is complemented by a contractual arrangement for high risk deliveries at a tertiary center. Three nurse-midwife centers are also provided for early discharge of low-risk patients. An extensive evaluation component has been developed; however, it is too soon to have documented impact.

Person to contact: Charles McGrew; Director, Bureau of Public Health Programs; Arkansas Department of Health; 4815 W. Markham; Little Rock, AR 72201; (501) 661-2242

California

The Obstetrical Access Project (page 15) was implemented as a pilot project in 1979. The target population was made up of low-income and Medi-Cal-eligible pregnant women. The program addressed problems of access to prenatal and maternity care, and the high percentage of low birth weight infants in this population. The SHA contracted with 11 community providers for clearly-defined prenatal services, which included nutritional services, psychosocial assessments, and education. Mothers were to have a minimum of 11 prenatal visits, and prenatal care was coordinated with other programs such as WIC. Evaluation of the program demonstrated that 84% of project registrants completed care and delivered live infants. The percentage of low birth weight infants was 4.7% compared to 7.1% for a matched group.

Person to contact: Thelma Frazier, M.D.; Chief, Community Health Services Division; California State Department of Health; 714 P Street - Room 300; Sacramento, CA 95814; (916) 322-2950

Donald O. Lyman, M.D.; Deputy Director, Public & Environmental Health Division; Department of Health Services; 714 P Street, Room 450; Sacramento, CA 95814; (916) 445-1102

Colorado

Colorado's low birth weight rate for its white population is one of the highest in the United States. The Low Birth Weight Prevention Project (page 17) began as a pilot program in urban clinics in 1983. It provides education, counseling, and group support for clients who are pregnant, or intend to become pregnant; smoke, use alcohol, are underweight; or who have a hematocrit less than 30%. The project has developed a prenatal risk scale and low birth weight risk reduction strategies to reduce smoking, alcohol use, and nutritional risk. The goal is to reduce the low birth weight rate among clients in four prenatal clinics and in family planning clinics, and to duplicate the use of risk and reduction protocols statewide by 1986. Outcome data is still insufficient to measure impact; however, anecdotal information suggests success at reducing risk-taking behaviors.

Person to contact: Robert McCurdy, M.D.; Director, Division of Medical Affairs and Special Programs; Colorado Department of Health; 4210 East 11th Avenue; Denver, CO 80220; (303) 320-6137

Daniel Gossert, ACSW, MPH; Director, Family Health Services Division; Colorado Department of Health; 4210 East 11th Avenue; Denver, CO 80220; (303) 320-6137

Connecticut

The Hispanic Maternal and Child Preventive Health Network: Comadrona Model(page 21) is a program that attempts to enhance pregnancy outcomes and prevent perinatal and child health problems in low-income Puerto Rican families by using the traditional birth attendant (comadrona) as a liaison between the community and the health care system. The goal is to bring the Hispanic population into the health care system and to provide understanding of Hispanic cultural issues affecting health care to the provider. The comadrona is trained to go into the community and develop support networks, provide education, and identify families in need of service. To date, 14 volunteer comadronas have been trained, linkages have been established with local health care providers, community-based support groups have been formed, and 47 health education workshops have been held.

Person to contact: Vijaya Bapat, M.D.; Chief, Maternal & Child Health Services; Connecticut Dept. of Health Services; 150 Washington Street; Hartford, CT 06106; (203) 566-5425

District of Columbia

The Perinatal Education Exchange Program (page 20) and the Mayor's Advisory Board on Maternal and Infant Health (page 20) are city-wide programs providing education for professionals. The Perinatal Education Exchange Program is an educational outreach program which emphasizes the exchange of current information on optimal standards of care. The Mayor's Advisory Board provides for site evaluation of hospitals and the upgrading of neonatal transport, as well as professional education and outreach. This program was awarded the Wyeth Award by ACOG for the hospital site review project.

The Community of Caring (page 26) is an adolescent pregnancy program in which nurse-midwives form health care teams to provide prenatal care in public health clinics. Teens are seen every two or three weeks allowing for frequent, positive reinforcement. Nurse-midwifery services are also available for labor and delivery at D.C. General Hospital. The Baby Hotline (page 27) operates 24 hours a day and provides information on questions related to all areas of maternal and child health, including referrals. Training for operators is provided by the Office of Maternal and Child Health.

Person to contact: Harry C. Lynch, M.D.; Acting Chief, Maternal & Child Health and Crippled Children's Services; D.C. Department of Human Services; 1875 Connecticut Avenue, N.W.; Washington, DC 20001; (202) 673-6665

Florida

Both the Improved Pregnancy Outcome Indigent Maternity Program (page 17) and the Preterm Birth Prevention Program (page 17) target low-income women and address the problem of low birth weight infants. Since 1975, the number of low birth weight infants in Florida has increased primarily due to the lack of adequate prenatal care. The Improved Pregnancy Outcome Indigent Maternity Program is a statewide program implemented in 1983 to provide more indigent women with access to prenatal care and to ensure that women at risk for delivering low birth weight infants receive quality care. Services, including home visits, are provided through county public health units.

The Preterm Birth Prevention Program, implemented in January, 1984, through the IPO Program, assesses each pregnant woman at the first prenatal visit. High-risk patients are seen weekly. Patients also receive counseling on preterm labor signs, nutrition, and stress management. If a patient goes into preterm labor, early admission and use of tocolytic drugs takes place. The number of low birth weight infants born to IPO project patients was reduced by 11.5% in FY 1983-84.

Person to contact: Paul T. Boisvert; Personal Health Program Administrator; Health Program Office; 1323 Winewood Blvd., Bldg. 1, Rm. 214; Tallahassee, FL 32301; (904) 487-1321

Hawaii

The purpose of Maternity and Infant Care Projects (page 18) is to reduce the percentage of low birth weight infants, and improve and maintain the health of women and newborns in three economically-deprived rural communities. The MIC project is an example of a comprehensive inter-disciplinary health care system. The program's Community Services component links high-risk patients to existing community resources, raising utilization rates rather than duplicating services. The Regional Perinatal Planning Program (page 19) is a statewide project addressing the problem of access to effective perinatal care. A regional perinatal program has been developed which sets standards, assesses needs and develops networks of public and private providers. The Sudden Infant Death Syndrome Educational Program (page 22) is a response to the need for education, counseling and referral for families of SIDs victims. The project is targeted toward families with infants up to one year of age and health professionals, and is statewide in scope.

Two adolescent pregnancy programs are targeted to different geographic areas. The Adolescent Family Life Project (page 26) addresses teen pregnancy in three rural communities where the teenage birth rate is the highest. The incidence of late perinatal care and low birth weight is also high in these areas. This project has developed models for community-based programs through community volunteers and community agencies with the support of the Department of Health. The Teen Intervention Program (page 25), targeted to adolescents 18 years or less on the Island of Oahu, provides counseling in the areas of pregnancy, adoption, and parenting skills, as well as outreach to schools. It utilizes teen advocates who provide support to pregnant teens and assist with counseling by providing real-life examples of issues relevant to teen age parenting.

The Medical Genetic Services Project (page 28) is a statewide program providing genetic counseling and evaluation. In a given year, the program screens as many as 180 children and families, and provides a range of community and professional educational services related to genetic screening and prevention.

Person to contact: Henry Ichiho, M.D.; Chief, Maternal & Child Health Branch; Hawaii Department of Health; 741-A Sunset Avenue; Honolulu, HI 96816; (808) 548-6554

Illinois

Parents Too Soon (PTS) (page 26) is a coordinated effort of 10 state agencies targeted to adolescents 10 to 20 years of age who are at-risk of becoming parents, are pregnant, or are already parents. Through this program, designed to reduce teen pregnancy, Illinois hopes to mitigate adverse social and health consequences of teen childbearing, including reduction of infant mortality. PTS provides medical care for pregnant teens, adolescent mothers, and their children. Other services include food and nutrition counseling through the WIC program, help with drug or alcohol-dependency problems, vocational counseling and training, day care for infants, and family planning. PTS is a statewide program; however, emphasis is placed on areas where teenage pregnancy, infant mortality, and unemployment are widespread.

Person to contact: Elsie Baukol, M.D., M.P.H.; Chief, Division of Family Health; Illinois Department of Public Health; 535 W. Jefferson Street; Springfield, IL 62761; (217) 782-2736

Iowa

The Prenatal Care Program (page 16), the Iowa Perinatal Program (page 20), and the Sudden Infant Death Program (page 22) are statewide projects. The Prenatal Care Program is targeted toward high-risk, indigent mothers who are not entering early into prenatal care. The program provides multi-disciplinary prenatal care with identification of the appropriate level of care for delivery. This program has increased the percentage of high-risk women entering care in the first trimester. The Iowa Perinatal Program (1973) was instituted because the state had many small hospitals incapable of providing high-risk perinatal care. A perinatal system was developed, which set criteria and established standards. A hospital review system was designed to assess the ability to provide care, and perinatal deaths are now analyzed to identify problems. The program also provides education for professionals. Neonatal mortality has been reduced from 13.7/1000 in 1972 to 5.9/1000 in 1981.

The Sudden Infant Death Program addresses the need for organized care for infants prone to sleep apnea. It is a statewide program targeted to all potential infant apnea patients, which has led to the coordination and development of 10 regional centers.

Person to contact: John Goodrich, D.D.S.; Director, Maternal & Child Health Section; Iowa Department of Health; Lucas State Office Building, 3rd Fl.; Des Moines, IA 50319; (515) 281-4922

Michigan

Michigan's programs developed from a need to address the problem of high infant mortality rates caused by widespread poverty and unemployment. Both the Low Income Prenatal/Postpartum Care Program (page 15) and the Maternal Infant Care Project (page 15) directly address problems related to inadequate prenatal care and early identification of high risk pregnancies. The Low-Income Prenatal/Postpartum Care Program, which will be implemented in 1985, designates prenatal care as a "basic service," which means that any woman seeking care will find appropriate care available. The Maternal Infant Care Project, which has been in place for five years, provides team-oriented prenatal and postnatal maternity and infant care services to reduce the incidence of low birth weight. These services include health education and family planning. This project has resulted in a 12% increase in the number of women seeking care in the first trimester. Since 1979, there has been a 24% increase in mothers with 11 to 15 prenatal visits. Fetal deaths have been reduced from 28 (1.6%) in 1979 to 22 (1.2%) in 1983.

The Infant Health Initiative Program (page 26) is targeted mainly to adolescents. In Michigan approximately two-thirds of infant deaths are associated with low birth weight; and this program includes outreach to encourage early entry into prenatal care as well as nutrition, parenting skills, and family planning.

Person to contact: Jeffrey R. Taylor, Ph.D.; Chief, Division of Maternal & Child Health; 3500 North Logan Street; P.O. Box 30035; Lansing, MI 48909; (517) 373-1255

Mississippi

The state of Mississippi sent descriptions of programs in every category. The Delta Maternity and Infant Care Project (page 28) and the Limited Medically Needy Task Force Projects (page 29), which addressed funding problems and the need to increase access to care, were included under Special Programs. The High Risk Maternity Funded Program (page 16) is targeted toward high-risk pregnant women below the poverty level who are not eligible for Medicaid. Patients are risk-scored and those at high risk may apply for the program. Last year 1,750 maternity patients received hospitalization under this program.

High infant mortality rates, poverty, and insufficient access to primary and perinatal care provide impetus for a wide range of perinatal programs in Mississippi. Most programs target low-income women and infants. The High Risk Infant Funding Program (page 21) targets infants less than 18 months of age and provides hospitalization and physician care for acute conditions. The Primary Care Infant Mortality Reduction Program (page 21) provides improved access to Level III care as well as maternal postpartum, and infant tracking. It also includes professional education, as does the Outreach Perinatal Education Project (page 21), which targets providers in the public and private sectors and provides in-service education through the University of Mississippi Medical Center. The Perinatal Data Project (page 21) collects and analyzes data to determine high-risk groups and geographic areas so that programs can be instituted where the need is greatest. The Child Health Program (page 22), in addition to assuring access to care, attempts to coordinate services such as Immunization, WIC and Crippled Children's Services with well baby care to develop a focused effort to reduce infant mortality.

The Holmes County Maternity Project (page 22) makes Level I perinatal care available through utilization of midwives in a community hospital. It targets low-income women and infants in a county with extreme medical and economic problems, and demonstrates effective use of midwives as providers of low-risk maternity care. To provide access to appropriate care for mothers and children at all income levels the Perinatal Awareness Project (page 21) emphasizes cooperation among public and private health service providers, professional associations and consumer advocacy organizations. The project focuses on the elimination of existing barriers to risk-related maternity and infant health care services. It also provides information to state policy makers regarding the need for appropriate access.

Mississippi's adolescent pregnancy programs are directed toward specific geographic areas. The Jackson-Hinds Adolescent Pregnancy Prevention Program (page 25), targeted to students in five urban junior high and high schools, provides counseling for teens, as well as child care and health services for infants of teen mothers. The Teen Learning Center (page 25) attempts to keep pregnant adolescents in school by providing schooling in an alternative setting and education for pregnancy, delivery and child care. Mississippi reports that 80% of participants return to school after delivery and 85% practice family planning. The Teen Pregnancy Reduction Project (page 25) targets adolescents in the Mississippi Delta, which has one of the highest infant mortality rates and teen pregnancy rates in the nation. The project employs health education and a case management approach to reduce the incidence of repeat pregnancies and encourage postponement of sexual involvement. The Adolescent Counseling Program (page 25), due to be implemented in 1985, will address all Medicaid-eligible adolescents and risk factors, such as the use of drugs, alcohol, and tobacco, through counseling in reproductive health.

Person to contact: C. Earl Fox, M.D.; Chief, Bureau of Family Health Services; Mississippi Board of Health; 2423 North State Street; P.O. Box 1700; Jackson, MS 39205; (601) 354-6680

Montana

The Montana Perinatal Program (page 20) is a statewide program targeted to all perinatal patients. The project addresses causes of infant mortality--preterm labor, fetal alcohol syndrome (FAS), and high-risk pregnancy--through professional and consumer education, and an anti-FAS campaign. The program involves 1,000 health care providers, 56 hospitals, public health nurses, and lay people.

Person to contact: Sidney Pratt, M.D.; Chief, Clinical Programs Bureau; Dept. of Health & Environmental Sciences; Cogswell Building; Helena, MT 59620; (406) 449-4740

Kansas

In 1980, 17.3% of Kansas women did not receive adequate prenatal care. The objective of the Promotion of Prenatal Care Project (page 16) is to assure that 100% of pregnant women receive prenatal care. Each year since 1980 the Kansas Index of Adequacy of Prenatal Care has been used to review prenatal care at the county level. In 1983, 15.3% of women received less than adequate care based on the Index, an improvement of 2%. Hospital Perinatal Casualty Studies (page 20) was implemented in the early 1960s and targeted hospitals, where over 99% of Kansas births occur. Perinatal mortality rates were reduced from 25.6/1000 in 1965 to 12.2/1000 in 1983. Neonatal rates dropped from 15.3/1000 in 1965 to 5.9/1000 in 1983. Adolescent Maternity and Infant Care Project (page 27) targets adolescents in counties with 20 or more births per year to mothers less than 18 years of age. There are 11 projects which reach 750 adolescents and their children each year. The program is a modification of the Title V Maternity and Infant Care Projects adapted especially for adolescents. In addition, it provides for networking with private practitioners, hospitals, schools, and social agencies.

The Black Infant Mortality Reduction Project (page 28) was instituted as a pilot program in Kansas City in 1981 due to a black infant mortality rate which was twice the rate for white infants. In 1983 it was expanded to include three additional cities. The program includes pregnancy outreach, and enrollment in comprehensive prenatal care programs. Two programs use lay visitors for pregnancy outreach and newborn home visits. In Kansas City the black infant mortality rate was reduced from 17.9/1000 in 1980 to 14.3/1000 in 1983. The state mortality rate for black infants decreased from 19.9/1000 in 1982 to 16.8/1000 in 1983.

Person to contact: Patricia T. Schloesser, M.D.; Medical Director, MCH Programs; Dept. of Health & Environment; Forbes Field, Bldg. #740; Topeka, KS 66620; (913) 862-9360

Kentucky

Under the Improved Pregnancy Outcome Project, Kentucky has undertaken several projects related to perinatal care and one prenatal project, the MCH Prenatal Risk Assessment Tool (page 16). The Risk Assessment Tool was developed to determine the level of care needed by the individual patient. The form is completed for every prenatal patient and used as a guideline for obstetrical consultation. The other three IPO projects are health education programs, two of which are targeted to providers. The Continuing Education Program for Professionals (page 19) provides in-service education for nurses on prenatal and post-partum care, and education on the regionalization concept for both nurses and physicians. The Audio Visual System (page 19) places audio-visual educational materials in all district health departments. Coordination is provided by the University of Kentucky and the University of Louisville. The Parenting Effort (page 19) provides health education in the areas of prenatal care, childbirth and parenting. It utilizes available resources and attempts to expand services without additional funding or staff.

A regional perinatal system was developed under the Regionalization of Perinatal Care Program (page 19). This program was instituted in 1978 and directed toward the 11% of newborns requiring other than normal newborn care. A statewide system of perinatal centers was developed. The program currently provides partial reimbursement of uncollectable costs associated with in-patient services for sick and critically ill newborns, as well as air and ground transport.

The Young Parents Program (page 27) is an adolescent pregnancy program for patients attending the University of Kentucky Medical Center. Emphasis is placed on medical care for mother and child, parenting education, educational counseling and family planning.

Person to contact: Patricia K. Nicol, M.D.; Director, Division of Maternal & Child Health; Bureau for Health Services; 275 East Main Street; Frankfort, KY 40601; (502) 564-4830

Louisiana

The Improved Pregnancy Outcome Project - Media Campaign (page 26) was designed for the special needs of the New Orleans area. Even though medical facilities and trained personnel are abundant, Orleans Parish has a higher infant mortality rate than the rest of the state. The project gathered baseline data on the potential audience and developed radio commercials focusing on the importance of early and regular prenatal care, nutrition, and the use of alcohol, tobacco, drugs and medication during pregnancy. There is also a phone line for referrals. The program is targeted to males and females below the age of 20 and tries to focus on behaviors that are changeable. The target population was involved in the campaign from the beginning, and the last commercial in the series was developed by two classes of eighth graders. The project is currently being evaluated.

Person to contact: Louis Tractman, M.D.; Director, Division of Personal Health Services; Dept. of Health & Human Services; P.O. Box 60630, Room 605; New Orleans, LA 70160; (504) 568-5071

Maryland

The state of Maryland has several programs designed to reduce infant mortality, teenage pregnancy, and the incidence of low birth weight infants in Maryland. These are the Improved Pregnancy Outcome Maryland State Expanded Maternity Plan; Infant Mortality Committee, Baltimore City: Prenatal Package Plan; and the JHH Adolescent Program (page 16). These programs target low-income pregnant women, including adolescents and women with a history of low birth weight infants. The projects are located in Baltimore City and the seven counties with the highest rate of infant mortality, low birth weight infants, and adolescent pregnancies. Under these programs high risk pregnancies are identified and referred to high risk centers. Maternal and infant transport is also provided. Professional education has been upgraded, and MCH services evaluated. Infant mortality has decreased from 14.7% to 12%, the lowest in Maryland's history.

Person to contact: Eric M. Fine, M.D., M.P.H.; Director, Preventive Medicine Administration; Dept. of Health &. Mental Hygiene; 201 West Preston St., 4th Floor; Baltimore, MD 21201; (301) 383-4797

Annelies Zachary, M.D., M.P.H.; Chief, Office of Maternal Health, Family Planning, and Hereditary Disorders; Dept. of Health & Mental Hygiene; 201 West Preston St., 3rd Floor; Baltimore, MD 21201; (301) 383-6464

North Carolina

North Carolina's programs are directed at reduction of its high infant mortality rate (46th in 1982), and its high rate of low weight births (45th in 1981). The Premature Birth Prevention and Infant Mortality Reduction Program (page 18) targets all pregnant women and involves both the public and the private sector. The project screens women at risk for delivering premature infants and provides special education for high risk women. It also provides financial support for health departments, physicians, and hospitals to cover indigent care.

The High Priority Infant Program (page 23) is a statewide program which targets high-risk infants. Under this program, at-risk infants are identified in the hospital. Follow-up consists of home visits, regular clinic visits, and developmental assessments. This project is also a cooperative effort involving both the public and private sectors. The Maternal Health/Perinatal Program (page 23) was first implemented in the 1960s and established a statewide network of prenatal and high-risk maternity clinics. A network of Level III Centers involving nine communities was also established. Since 1974, the fetal mortality rates have declined by 31%, neonatal mortality rates by 38%, perinatal mortality rates by 35%, and infant mortality rates by 32%. These declines in mortality rates were almost all due to increased birthweight specific survivals, especially at low weights for neonatal deaths, and at moderate and mature weights for fetal deaths.

Person to contact: Verna Barefoot, M.D.; Chief, Maternal & Child Care; Division of Human Services; Dept. of Human Resources; P.O. Box 2091; Raleigh, NC 27602; (919) 733-3816

Jimmie L. Rhyne, M.D.; Head, Maternal & Child Health Branch; Division of Health Services; Dept. of Human Resources; P.O. Box 2091; Raleigh, NC 27602; (919) 733-7791

North Dakota

The Native American Maternal/Child Health Program, Fort Totten, Indian Reservation (page 28) targets Native American women of childbearing age and their children up to five years. It is a comprehensive health care program designed to meet the special needs of the target population. In 1979, only 49% of pregnant women at Fort Totten enrolled in prenatal care. Participation in well-baby care was also low, and immunization levels for children were only 32%. The major focus of the project has been enrollment of women in prenatal care in the first trimester. Information is also provided on fetal alcohol syndrome and the effect of smoking. Since diabetes is a problem among Native Americans, blood sugar screening is conducted for all pregnant women at 26 weeks. Participation in well-baby clinics is encouraged, and in 1983 immunization levels had reached 90%. Enrollment in first trimester prenatal care was 72% in 1983; however, the average number of prenatal visits was still only five. The infant mortality rate has decreased from 35.7/1000 in 1976 to 17.3/1000 in 1983.

Person to contact: Robert N. Wentz, M.D.; Director, Division of Maternal & Child Health; North Dakota Department of Health; State Capitol; Bismarck, ND 58505; (701) 224-2493

Ohio

The "Thanks Mom" Improved Pregnancy Outcome Program (page 18) is a statewide program targeting adolescent and minority women. The goals are to increase the number of women initiating prenatal care in the first trimester, to increase coordination among agencies working to improve maternal and child health, and to increase awareness of problems associated with maternal PKU. A media campaign (radio, TV, and printed materials) was launched in March 1984. Geographic areas not well-served by the media are being given special attention and educational materials are also sent to providers.

Fetal Alcohol Syndrome: A Health Promotion to Improve Perinatal Outcome (page 22) is a campaign to increase awareness among pregnant women of the hazards of alcohol consumption during pregnancy. The Bureau of Maternal and Child Health in conjunction with the Bureau of Alcohol Abuse and Alcohol Recovery will 1) develop an educational program which will distribute educational materials relevant to Fetal Alcohol Syndrome and 2) train providers to deal with alcohol consumption among pregnant women.

The Family and Community Network Project (page 26) targets adolescents in a rural community. The project will provide education and counseling to pregnant adolescents to encourage them to finish school and to link them and "significant others" with community resources. Program objectives include decreasing the number of repeat pregnancies and increasing the number of financially-stable adolescent parents.

Person to contact: James F. Quilty, Jr., M.D.; Chief, Division of Maternal and Child Health; Ohio Department of Health; 246 N. High St., P.O. Box 118; Columbus, OH 43216; (614) 446-3263

Oregon

The Maternity Services Program (page 16) targets low-income women, especially those in two-parent families, not eligible for Medicaid. The goal of the project is to make early prenatal care more accessible and to identify individuals with high-risk pregnancies. The program increases the availability of maternity services; uses the WIC program as a case finder and a referral source; and expands the capability of family planning clinics and health departments in the area of pregnancy testing and counseling. It also incorporates a public education component to encourage early prenatal care and inform consumers of local resources.

Person to contact: Marianne Remy, P.N.P., M..P.H.; Coordinator, Maternal & Child Health Program; Oregon Health Division; P.O. Box 231; Portland, OR 97207; (503) 229-5593

South Carolina

The High Risk Perinatal Program addresses the problem of access to appropriate care for pregnant women at highest risk of a poor pregnancy outcome and access to appropriate care of the highest risk newborns. The goal of the program is to reduce fetal and neonatal mortality through a regionalized approach. The Program uses a two pronged approach to reach the goal—high risk obstetric care and high risk newborn care. The obstetric goal is to ensure infants are born healthy or, if not healthy, at least assure high risk births occur in the appropriate level hospital to ensure optimal neonatal care. The neonatal portion of the Program is also preventive and strives to prevent death and disability of high risk newborns. The statewide Program purchases appropriate prenatal, intrapartum and post-partum care for pregnant women identified to be at highest risk for a bad outcome. If the patient is found to be at high risk, has income less than 150% of HHS poverty schedule, and not a Medicaid recipient, the Program pays for special care to assure the best pregnancy outcome. This special care consists of medical evaluation and management, follow-up, social work evaluation, nutrition evaluation and health education. The patient is followed for one post-partum year by family planning staff.

Person to contact: Rita S. Hammack; Deputy Director, Division of Maternal Health; South Carolina Department of Health and Environmental Control; 2600 Bull Street; Columbia, SC 29201; (803) 758-8553

Texas

The Maternal and Child Health Jobs Bill Program for High Risk Maternity and Neonatal Care (page 17) targets high-risk, indigent women in 38 rural counties and 11 cities with unemployment rates greater than 12%. The purpose of this project is to assure continuity of care for high-risk pregnant women and to increase enrollment in early prenatal care. It consists of a comprehensive program of consultation and hospital care for high-risk patients. Arrangements have been made with local hospitals, physicians, health departments, and community health centers for delivery of care.

Person to contact: Walter Peter, M.D.; Chief, Bureau of Maternal & Child Health; Texas Dept. of Health; 1100 West 49th Street; Austin, TX 78756; (512) 458-7700

Virginia

The Preterm Birth Prevention Program (page 15) is a pilot program designed to reduce the number of preterm births. It is targeted to women who attend prenatal clinics at Virginia's three medical schools and to local health departments in those same areas. The program provides for identification of mothers at risk, weekly prenatal visits, patient education, and treatment with tocolytic agents for women in early labor. If the program demonstrates success in reducing preterm births, it will be expanded.

Person to contact: Alice Linyear, M.D.; Director, Bureau of Maternal & Child Health; Virginia Department of Health; 109 Governor Street; Richmond, VA 23219; (804) 786-7367

Washington

The Rural County Early Detection and Intervention Program (page 23) was implemented in 1980 and targeted to three rural counties. The program addresses problems of medically-isolated areas at a distance from secondary and tertiary care centers. The target population includes children from 0-3 years of age with questionable, ill-defined, or fully-documented developmental delay. It provides for developmental assessments, on-going monitoring, referral, and follow-up. It also provides training for local professionals and home visits when needed. The High Priority Infant Tracking System (page 23) addresses the problem of appropriate follow-up for high-risk infants. This is a pilot program located in one rural and one urban county and targets newborns who are at high risk. There is an initial evaluation of the infant in the hospital and referral to a local health department, which contacts the primary provider at stated intervals to be sure the child is receiving on-going care. If not, the family is contacted. After one year, 100% of children are still under the on-going care of a physician. Before tracking, only 50% of children were receiving on-going care after one year.

Assistance for People with Problems Large Enough to Share (APPLES, page 23) is a pilot project targeted to high-risk families in a two-county health

district which includes both urban and rural populations. The project is an addition to the traditional maternal and child health program and uses trained volunteers to provide support to high-risk families through home visits. This program was implemented in 1984 and has not yet been evaluated.

The Core Services Project (page 24) is proposed for implementation in 1985. This is a pilot program which will target children with disabling impairments resulting from a variety of conditions and diseases, served by the state's major tertiary pediatric care facility. The program will coordinate community and institutional care of these children by assigning case managers in both the hospital and the local health departments to oversee continuity and evaluate outcomes.

Person to contact: Fran Moellman; Manager, Maternal & Child Health Program; Office of Maternal & Child Health Services; Airport Building 3, MS-LC-12A; Olympia, WA 98504; (206) 753-2482

Wisconsin

The objectives of the Healthy Birth Program (page 17) are to reduce the incidence of low birth weight and birth defects, and to ensure comprehensive health care for infants during the first year of life. The target population consists of all pregnant women, infants, and parents, with special attention given to adolescents and low-income families. The project, implemented in July 1984, will develop uniform standards of care and risk assessment tools for professionals and consumers. Consumer education will also be included to help achieve program objectives. This program will be a combined effort of the Department of Health and Social Services, private agencies, and professional organizations in order to develop a coordinated system of maternal and child health services.

Person to contact: Bill Reiser; Unit Supervisor, Maternal & Child Health Section; Division of Health; P.O. Box 309; 1 West Wilson Street; Madison, WI 53701; (608) 266-2661

Wyoming

The Improved Pregnancy Outcome Program (page 20) is targeted to families in the childbearing years, and perinatal health care providers. It is a statewide program, implemented in 1978, that provides educational and prevention programs for providers and consumers, transport assistance to regional centers, and cooperative efforts for education and consultation with the regional centers. Wyoming's infant mortality rates have improved, and it now has the second lowest rate in the nation.

Person to contact: Lawrence J. Cohen, M.D.; Administrator, Division of Health & Medical Services; Hathaway Building; Cheyenne, WY 82002; (307) 777-7121

PART II

STATE HEALTH AGENCY INFANT MORTALITY PROGRAMS, BY CATEGORY

Low Birth Weight, Preterm Births, and Prenatal Care Programs

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Healthy Beginnings	Arkansas	LBW & IM caused by poverty & lack of affordable health resources	Indigent pregnant women	9 rural counties	10/83	1) Education 2) Home visits 3) Nurse-midwife centers 4) High-risk tertiary care	Being monitored
Preterm Birth Prevention Programs	Virginia	> 60% of infants who die in first year are LBW infants	Women at risk for preterm births who attend selected clinics	Pilot Program Urban & Rural	11/83-2/84	1) Weekly prenatal visits 2) Education 3) Treatment with tocolytic agents	Not documented
Prematurity Prevention Project	Alabama	Alabama has one of highest IM rates. 80% occur in births < 2500 grams		Jefferson City & Central Alabama Public Health Region		1) Weekly visits from 20-36 wks 2) Education for providers	Based on previous data, preterm delivery rate reduced by > 50%
Maternal Infant Care Project	Michigan	High level of infant mortality due to lack of adequate prenatal care, especially in cities	Low-income pregnant women	8 urban projects	Ongoing for 5 yrs	1) Increased enrollment of first trimester patients 2) Team oriented pre and post-natal care 3) Family planning 4) Education	1) 12% increase in women seeking care in first trimester 2) 24% increase in mothers with 11-15 prenatal visits 3) Fetal deaths reduced in 1979-1983 from 1.6% to 1.2%
Low Income Prenatal/ Postpartum Care	Michigan	Same as above. In addition, lack of early identification of high-risk pregnancies	1) 5000 pregnant women below 185% of USDA poverty level 2) All high-risk groups	Selected urban & rural settings	1/85	1) Provision of basic services to all women 2) Medical, nutritional, psychological, laboratory, & prescription services 3) Education	Not yet available
Obstetrical Access Project	California	High % of LBW. Lack of access to prenatal and maternity care	Low-income, Medi-Cal-eligible pregnant women	Pilot project in 13 counties	7/79	State contracted with 11 community providers for prenatal care: 1) Nutritional & psychosocial assessment, prenatal vitamins, birth ed. 2) A minimum of 11 prenatal visits 3) Coordination with other programs, such as WIC, FP, Genetic Diseases	1) 84% registrants completed care & delivered live infants 2) LBW for population was 4.7% compared to 7.1% for matched grp. 3) Cost Benefit= $2.60 savings in neonatal care for every $1.00 of additional prenatal care

LBW Preterm Births, Prenatal Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Maternity Services Program	Oregon	Diminishing access to maternity services	Low-income families, especially 2-parent families not eligible for Medicaid	32 of 34 counties	7/83	1) Development of maternity services: direct or contract with MD's. 2) Traveling consulting teams from Oregon Health Sciences University	
Prenatal Care Program	Iowa	High risk mothers not entering early into prenatal care	Indigent, high-risk pregnant women	Statewide	1979	1) Multi-disciplinary approach to prenatal care 2) Identification of appropriate level of delivery care	Increased % of high-risk mothers entering care in first trimester
Promotion of Prenatal Care	Kansas	Inadequacy of prenatal care	All women of childbearing age	Statewide	1980	To assure 100% women receive prenatal care: 1) annual review of care at county level through Kansas Index of Adequacy of Care 2) Outreach at county level	Based on Index: 1980-17.3% received inadequate care 1983-15.3% received inadequate care
High Risk Maternity Funded Program	Mississippi	High percentage of poor & high risk mothers, many not eligible for Medicaid	High risk pregnant women below poverty level who are not eligible for Medicaid	Statewide	1975	1) Patients risk scored on Hollister Maternity Record 2) Provide funds for high-risk patients to receive prenatal & delivery care at Level II/III hospital	In 1983, 1,750 patients received hospitalization
Improved Pregnancy Outcome Project: MCH Prenatal Risk Assessment Tool	Kentucky	Need to determine level of care commensurate with patient needs	All MCH prenatal program patients	Statewide	7/83	Prenatal risk assessment tool applied to each patient & used as guideline for obstetrical consultation	Currently being evaluated
Improved Pregnancy Outcome Md. State Expanded Maternity Plan; IM Committee, Baltimore City; JHH Adolescent Prograc	Maryland	In 1978, Md. ranked 26th in IM in U.S.	1) Low-income pregnant women & adolescents 2) Women with history of LBW infants	7 counties, Baltimore City	1/80	1) Identify high-risk pregnancies 2) Referral to high-risk care & coordination of maternal and infant transport 3) Social Services & nutritional supplement services 4) Upgrade of MCH education 5) Improve access to care	IM decreased from 14.7% to 12%. LBW decreased from 7.8% to 7.4%

LBW, Preterm Births, Prenatal Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Healthy Birth Program	Wisconsin	Need to reduce incidence of LBW and birth defects	1) pregnant women, fathers, infants 2) adolescents 3) low-income families	Statewide & Pilot Projects	7/84	1) Development of uniform standards of care and risk assessment tools for preconception, pregnancy, and infancy 2) Education for professionals & consumers	Evaluation measures being developed
LBW Prevention Project	Colorado	High rate of LBW infants: 8% in 1981	Clients of 6 publicly funded clinics who: 1) are pregnant or intend to become pregnant 2) smoke, use alcohol, are underweight or gaining inadequate weight during pregnancy 3) have a hematocrit < 30%	Pilot project in urban clinics; statewide 1986-87	9/83	1) Develop prenatal risk scale 2) Strategies incl. education & support groups to address smoking, alcohol use & nutrition	Data insufficient to measure at this time
Improved Pregnancy Outcome Indigent Maternity Program	Florida	Lack of adequate prenatal care resulting in increase of LBW infants	Low-income women	Statewide	7/83	1) Prenatal services including laboratory & some arrangement for delivery & postpartum care 2) Home visits to high risk patients 3) Sterilization	LBW infants born to project patients reduced by 11.5% in 1983-84
Preterm Birth Prevention Program	Florida	Increase in number of LBW infants since 1975	Low-income pregnant women	Statewide	1/84	1) Patient assessment using scoring system 2) Weekly visits by high-risk patients 3) Education & counseling 4) Tocolytic drugs 5) Education for professionals	Same as above
MCH Jobs Bill Program for High Risk Maternity and Neonatal Care	Texas	Lack of health care at delivery and in neonatal period for high-risk, indigent patients	High-risk indigent pregnant women and infants	38 rural counties & 11 cities with unemployment > 12%	6/83-9/84	1) Local hospitals & physicians contracted with to provide needed care 2) Reimbursement: A. $750-$1,000 for vaginal delivery B. $900-$1,300 for Caesarean Section C. Predelivery care also covered	Currently being evaluated

LBW, Preterm Births, Prenatal Care (continuod)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Premature Birth Prevention and IM Reduction	North Carolina	High rate of IM (46th in 1982) and LBW (45th in 1981)	All pregnant women	Statewide	7/84	1) Screening for women at-risk for premature delivery 2) Special education for high-risk women 3) Financial support to cover cost of indigent care	Not yet documented
Maternity & Infant Care Projects	Hawaii	High infant mortality, morbidity & LBW in economically deprived communities	Low-income, high-risk women in 3 rural areas	3 rural communities on 2 islands	1960s	1) Links high-risk patients to existing community resources 2) Interdisciplinary approach providing preventive, diagnostic & treatment services; outreach & education	Steady reduction in IM & LBW. Population has shown more interest in their health care management
"Thanks Mom" IPO Program	Ohio	Late entry or lack of prenatal care	Adolescent & minority women	Statewide	3/84	1) Media campaign (radio, TV, ed. materials) to promote awareness of importance of early prenatal care 2) Make available ed. materials for providers 3) Coordinate program with other agencies to improve MCH services	Not determined
High Risk Perinatal Program	South Carolina	Access to appropriate care for women @ highest risk of poor pregnancy outcome	Low income, non-medicaid women referred to or identified by the Public Health Dept.	Statewide	1976	1) Purchases appropriate prenatal, intrapartum and post partum care for pregnant women identified @ highest risk for bad outcome 2) Provides medical evaluation management and follow-up, social work evaluation, nutrition evaluation, and health education 3) Assesses risk at birth and covers care at appropriate facilities, i.e. Level I or II.	Fetal mortality 15.2/1000 versus 23.3/1000 for matched group; neonatal mortalit 15.5/1000 versus 27.5/1000 for matched group;pe natal mortality 30.5/1000 versus 53.2/1000 for matched group.

Perinatal, Infant and Child Care Programs

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Regional Perinatal Planning Program	Hawaii	1) Variable infant mortality rate dependent on ethnicity & residence 2) Access to effective perinatal care	High risk pregnant women & newborns	Statewide	1980	Develop a regional perinatal system: 1) Assess needs & resources 2) Set standards & guidelines 3) Develop networks of public & private providers 4) Convene meetings for professionals	Developed a model perinatal health system
Regional-ization of Perinatal Care Program	Kentucky	High mortality & morbidity and high cost of neonatal care	11% of newborns requiring other than normal services	Statewide	7/78	Phase 1: Provided funds for statewide system of perinatal care centers Currently: Reimbursement of cost for inpatient services for critically ill newborns; air & ground transport	Decrease in maternal, perinatal, & neonatal death rates
Improved Pregnancy Outcome Project	Kentucky						
A. Continuing Ed. for Profess-ionals		Need to increase perinatal training	Health professionals providing high-risk obstetrical & new-born care	Statewide	1978-current	1) Five 6-day sessions for nurses on prenatal & postpartum care 2) Education on regionalization concept for nurses & physicians	
B. Audio-Visual System		Need to increase perinatal training	Level II hospital & district health dept. staff	Statewide	1981/82	1) Audio-visual materials placed in all district health depts 2) Use of materials & provision of additional resources facilitated by University project coord-inators (UL & UK)	Improved utilization of educational materials
C. Parenting Effort		Need for parent ed. related to perinatal care	21 selected communities	Statewide	1984	Coordinated effort to provide Health Ed. related to childbirth, prenatal period, parenting and sex ed. through available resources	

Perinatal, Infant and Chidl Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Hospital Perinatal Casualty Studies	Kansas	Reduction of perinatal mortality & morbidity	Hospital births	Statewide	1962	1) Annual comparison of hospital data 2) Local reviews of deaths through local perinatal review committees	IM Rates: Perinatal 1965 25.6/1000 Perinatal 1983 12.2/1000 Neonatal 1965 15.3/1000 Neonatal 1983 5.9/1000
Montana Perinatal Program	Montana	Causes of IM	All perinatal patients	Statewide	6/83	1) Continuing ed. for professionals 2) Anti-FAS campaign & education	
Iowa Perinatal Program	Iowa	Many small hospitals not capable of providing high-risk perinatal care	All pregnant women	Statewide	1973	1) Assess each hospital's ability to provide care 2) Analyze perinatal deaths to identify problems 3) Provide ed. to suit needs of providers	Neonatal mortality reduced from 13.7/1000 in 1972 to 5.9/1000 in 1981
Improved Pregnancy Outcome	Wyoming	To reduce IM rate which was above the natl. average	Families in child-bearing yrs. & perinatal providers	Statewide	12/78	1) Education and prevention for providers & consumers 2) Transport for mothers & infants to regional centers 3) Cooperative efforts for education & consultation with regional centers	IM rate went from 48th to 2nd lowest in nation
Mayor's Advisory Board on Maternal & Infant Health	District of Columbia	High rate of IM	At-risk women & infants	City-wide but concentrated in areas with high IM	on-going	1) Education for professionals 2) Site evaluation of hospitals 3) Upgraded neonatal transport 4) Outreach	Decrease in infant mortality over 4 yrs
Perinatal Education Exchange Program	District of Columbia	Keeping knowledge of health professionals up to date	Health Care Professionals	Citywide		1) Comprehensive perinatal education through seminars, lectures. 2) Exchange of information on optimal standards of care emphasized	

Perinatal, Infant and Child Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Hispanic Maternal & Preventive Health Network	Connecticut	Perinatal & Child health problems	Hispanic women & children	Selected urban Hispanic neighborhoods	1/82	To build trusting relationship with health care system and enhance outcomes, traditional birth attendants trained to: 1) develop neighborhood support networks 2) identify families needing services 3) provide health education	Being monitored: 49 pregnant women currently enrolled; 14 birth attendants trained; 47 workshops given; 7 support groups developed
Perinatal Awareness Project	Mississippi	Access to appropriate care for mothers & children at all income levels	Pregnant women & infants < 1 yr. below 125% of poverty level	State Health Dept; Hosp. Assn.; Academy of Pediatrics; Coalition for Mothers & Babies	10/83	1) Coalition to form linkages among public & private providers, professional assn's. & consumer grps. to eliminate barriers to services 2) Conduct surveys on barriers to perinatal care & publish results 3) Provide information to policy makers 4) Hold workshops & publish newsletter	Has carried out stated activities and received endorsement of 61 organizations for efforts in behalf of improved access to care
High Risk Infant Funding Program	Mississippi	State has 2nd highest IM rate in U.S.	Infants < 18 mos. needing hospitalization or immediate care for acute conditions	Statewide	10/83	Provides hospital/physician care for high-risk infants: 1) Up to 5 days in hospital + physician services 2) Office visits for acute care	In first 9 mos. 77 infants approved for care: 37 hospitalized, 40 physician acute care visits
Outreach Perinatal Education Project	Mississippi	To decrease IM during perinatal period	Perinatal care providers in public & private sectors	Statewide	10/84	Univ. of Mississippi Medical Center to conduct series of five 2-day sessions in obstetrics & neonatal care for providers	Hospital records will be reviewed before & after intervention to measure impact
Perinatal Data Project-Mothers & Babies Book	Mississippi	High IM rates		Statewide	10/84	Analyze perinatal data to determine high risk grps. & geographic areas & then target program where needed	
Primary Care-Infant Mortality Reduction Program	Mississippi	Lack of sufficient access to primary & perinatal health services	Low-income women & children	11 counties in N.E. Mississippi	7/83	1) Access improved to Level III perinatal care 2) Maternal post-partum & infant tracking 3) Team approach to care based on risk criteria 4) Provider education	Not yet known

Perinatal, Infant and Child Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Holmes County Maternity Project	Mississippi	Extremely high IM & poverty	Low-income women & infants	1 rural county with extreme health & social problems	1975	1) Prenatal & intrapartum care for low-risk women 2) Risk scoring & referral 3) Infant care & follow-up	1) Demonstrates effective use of nurse-midwives for low-risk care 2) IM reduced
Child Health Program	Mississippi	Appropriate health services not available through private practice for a substantial segment of the population	Children at or below 125% of poverty level & others in need of care	Statewide	1982	Assures access & availability of health care: 1) Health assessments 2) Appropriate intervention and follow-up 3) Combines services such as Immunization, WIC, EPSDT & Crippled Children's Services with well child care	
Sudden Infant Death Program	Iowa	Lack of organized care for infant apnea patients	All potential infant apnea patients	Statewide	1982	1) Development of regional infant apnea centers 2) Establish criteria for centers	Developed 10 centers
Sudden Infant Death Syndrome Educational Program	Hawaii	Need to develop an educational program and a system of referral & counseling for SIDS victims, a problem affecting the total community	1) Families with infants 0-1 yr. 2) Health professionals	Statewide	10/82-9/84	1) Identification of all SIDS cases 2) Autopsy examinations 3) Counseling for families 4) Education	1) Conducted study of SIDS incidence 2) Provided identification & follow-up for 70 families 3) Conducted 80 educational sessions for professionals
Fetal Alcohol Syndrome; a Health Promotion To Improve Perinatal Outcome	Ohio	Percentage of women of childbearing age who consume alcohol regularly	Women of childbearing age	Statewide	1/85	1) Development & dissemination of ed. materials related to FAS 2) Train consultants and providers to deal with alcohol consumption by pregnant women 3) Program developed in conjunction with Bureau of Alcohol Abuse & Alcohol Recovery	Not determined

Perinatal, Infant and Child Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
High Priority Infant Program	North Carolina	High rate of IM (46th in 1982)	High-risk infants	Statewide	7/84	1) ID of at-risk infants in hospital 2) Follow-up with home visits 3) Regular clinic visits 4) Developmental assessments	Not yet documented
Maternal Health/Perinatal Program	North Carolina	High IMR	All pregnant women and newborns	Statewide	Late 1960s	Statewide network of: 1) Prenatal clinics, involving 90 county HDs 2) High-risk maternity clinics, involving 19 clinics 3) Level III centers, involving 9 communities	Since 1974: IMR declined by 31% NNMR declined by 38% Perinatal MR declined by 35% Infant MR declined by 32%
Rural County Early Detection & Intervention Program	Washington	Medically isolated counties with few specialty resources at a distance from tertiary centers	Developmentally delayed children 0-3 years	3 rural counties	1980	1) Training for local professionals 2) Public ed. 3) Developmental assessments, monitoring referral & follow-up 4) Home-based intervention	1) Increase in number of referrals 2) Phase II will evaluate effectiveness of early intervention
High Priority Infant Tracking System	Washington	High-risk infants lost to follow-up, which prevents early intervention	Newborns at risk for developmental delay or other health hazard	1 rural & 1 urban county	1/83	1) Evaluation by hospital and referral to health dept. for follow-up 2) Follow-up by health dept. at intervals to assure child receives on-going care 3) If not, initiation of contact with family	After 1 year, 100% of children still under care; prior to tracking only 50% still under care
Assistance for People with Problems Large Enough To Share (APPLES)	Washington	IMR in high-risk families	High-risk families	2 counties (rural & urban)	1984	1) District staff identify & refer families 2) Recruitment & training of volunteers 3) Home visits by volunteers to provide support, foster independence & relieve stress	Not yet documented

Perinatal, Infant and Child Care (continued)

Title	State	Problem	Target Population	Scope	Date	Activities	Impact
Core Services Project (proposed)	Washington	Lack of coordination in care of children with disabling impairments, resulting in less than optimum outcome	Children with disabling impairments due to injuries, disease, developmental disabilities, & birth defects being, served by the states major tertiary pediatric facility	Pilot project	proposed for 7/85	1) Assignment of case management coordinator at hospital 2) Assignment of case manager at LHDs 3) These to oversee jointly continuity of care & to evaluate outcomes	NA