



Medical school joins National Children's Study

SIU School of Medicine has joined institutions nationwide participating in the National Children's Study, the largest study of child and human health ever conducted in the United States.

The extensive, population-based study looks at the health and development of children by following them from before birth to adulthood. An estimated 100,000 newborns from varied families and backgrounds will be enrolled nationally in the study and evaluated to age 21.

Last September, the National Institutes of Health, which is sponsoring the study, added the city of St. Louis and Macoupin County, Ill., (just south of Sangamon County) to the 105 sites that are being selected nationwide. Carlinville is the county seat of Macoupin County.

SIU School of Medicine is one of the partners with Saint Louis University School of Public Health. Other partners are Saint Louis University School of Medicine, Southern Illinois University Edwardsville School of Nursing, Washington University School of Medicine in St. Louis and St. Louis Battelle Memorial Institute.

"A lot of things happen prior to birth that set the thermostat on how vulnerable you are to risk factors for diseases," says Louise Flick, DrPH, co-principal investigator and professor of nursing from Southern Illinois University Edwardsville School of Nursing. "We are studying children to age 21 because some of the exposures we suspect are important have consequences that take a lot of time to develop."

SIU School of Medicine will provide expertise and liaison to various health-care providers. "SIU physicians provide both obstetrical and primary care services in the area. More than 100 SIU graduates are in practice in the study's region.

According to the Web site of the National Children's Study, the study's goal is "to better understand how children's genes and environments interact to affect

their health. . . . What is learned from their health and environments will impact the well being of children for years to come." The findings could help prevent and treat some of the most significant health problems in the United States, including autism, birth defects, diabetes, heart disease and obesity.

Victoria Nichols-Johnson, M.D., associate professor and chief of general obstetrics and gynecology and Janet Albers, M.D., associate chair of the SIU Department of Family and Community Medicine, are working on the project as physician liaisons.

"This study will cover every aspect of pediatric care," says Dr. Nichols-Johnson. "We will learn about things in children's environments that could affect their health. There may be things we can change, or we may learn that children are healthier than we thought."

SIU School of Medicine is building on patient and professional relationships built over the last 30 years. "We have connections in the community with graduates we've trained, medical professionals we work with, and patients we've cared for," Dr. Albers says. The SIU Center for Family Medicine has had a rural prenatal outreach clinic for many years in Girard, Ill., located in Macoupin County.

SIU School of Medicine "is known for working with rural populations such as Macoupin County and wanting to better the health of a rural population," adds Dr. Nichols-Johnson.

Saint Louis University expects to enroll 250 participants from the city of St. Louis and 250 participants from Macoupin County each year, from 2009 to 2012. The study participants will be enrolled either prior to conception or in the first trimester of pregnancy. "We will be building enthusiasm and making communities aware of the magnitude of the study — this is a huge thing," Dr. Albers notes.

Researchers will gather data on a child's genetic makeup and a number of

biological, chemical, environmental, physical and psychosocial factors. Researchers also will collect environmental samples from the air and water where children spend more than 30 hours a week to learn about potential exposures. They will analyze blood, urine, hair, and fingernail samples from children. In addition, children will be screened for asthma, birth defects, diabetes, injury susceptibility, obesity, and physical and mental development disorders. The outcomes of pregnancies, such as preterm delivery, also will be evaluated.

"This will give us data in a prospective way," Dr. Albers explains. "If there are certain findings we can link with disease in adulthood, we may be able to make a difference in the future."

With such data, scientists can look at how certain factors alone or in combination with others affect pregnancy outcomes, child development, overall health status and an adult's likelihood of developing certain diseases.

"Being involved in this study puts SIU on the cutting edge," Dr. Albers notes. "It's an extraordinary opportunity to be a part of this research and an exciting opportunity to work in partnership with other universities in the region."

To fund the landmark study, Saint Louis University School of Public Health has received a \$26 million, five-year contract from the National Institute of Child Health and Human Development and a consortium of federal agencies including the National Institute of Environmental Health Sciences, the Centers for Disease Control and Prevention, and the U.S. Environmental Protection Agency.

The cost of the research is estimated at \$3 billion over the next 25 years. Congress appropriated \$69 million in fiscal year 2007 for the study. ●●●