



National Institute of Nursing Research Working Group on “Optimizing Pregnancy Outcomes in Minority Populations”

Patricia A. Grady, PhD, RN, FAAN*

National Institute of Nursing Research, National Institutes of Health, Bethesda, Md

KEY WORDS

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The growing complexity of biomedical research requires new methods of discovery; scientists must use an interdisciplinary approach and explore new models of team science, as underscored in the Roadmap of the National Institutes of Health. In March 2003, the National Institute of Nursing Research convened a working group of scientists and clinicians with a wide range of backgrounds to address “Optimizing Pregnancy Outcomes in Minority Populations.” The 2-day meeting included a variety of presentations on the current state of research on pregnancy in minority populations. Many participants provided specific insights regarding biobehavioral issues in human-environment interaction, stress and health status relationships to risk, maternal-fetal interactions, and the complications of pregnancy. This supplement presents articles from several participants at this interdisciplinary meeting. The National Institute of Nursing Research looks forward to further collaborations across the National Institutes of Health and other agencies to achieve the vital aims of this working group.

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The recently announced National Institutes of Health Roadmap underscores that the growing complexity of modern biomedical research will require new methods of discovery. Today’s scientists must “move beyond the confines of their own discipline and explore new organizational models for team science,”¹ using an interdisciplinary approach that can yield fresh and possibly unexpected insights. Consistent with this vision, in March 2003, the National Institute of Nursing Research (NINR) convened a diverse working group of scientists and clinicians to address “Optimizing

Pregnancy Outcomes in Minority Populations.” Premature and low birth weight (LBW) births remain a major public health problem and a significant contributor to health disparities. Incidence data reveal that the rate of prematurity and LBW among black infants is roughly twice that of white infants, with wide variance among minority groups and subgroups. Premature and LBW infants often require prolonged hospitalization and intense intervention. Findings from NINR-supported research have added evidence that, later in life, these children may experience a higher incidence of developmental delays, chronic health problems, and poor school performance.²⁻⁴

The Optimizing Pregnancy Outcomes Working Group brought together experts in public health, psychology, epidemiology, basic science, clinical medicine,

* Reprint requests: Patricia A. Grady, PhD, RN, National Institute of Nursing Research, National Institutes of Health, 31 Center Dr, Room 5B-10, Bethesda, MD 20892-2178.

E-mail: info@ninr.nih.gov

and nursing with an established track record in the study of high-risk pregnancy and birth outcomes or in the design of related disease pathways and biomarkers. The 2-day meeting included presentations on the current state of research on pregnancy in minority populations, psychosocial and behavioral influences, stress and neuroendocrine mechanisms, maternal health, environmental factors, and physiologic pathways. Lively discussions followed each presentation, as the working group members explored the state of the science and added their own expert perspectives on the problems. Important themes included conceptual dimensions of epidemiologic factors and risk in relation to minority populations, along with methods, measurement, and design issues that are associated with biobehavioral research. Many participants provided specific insights regarding biobehavioral issues in human-environment interaction, stress and health status relationships to risk, maternal-fetal interactions, and the complications of pregnancy. Out of these discussions, the participants formed recommendations about future directions and possible models that can help to develop, test, and refine new knowledge.

This supplement presents papers from several of the participants of the interdisciplinary working group on major topics of concern in this area:

Susan Gennaro provides an overview of the problem and a review of the effects of education, socioeconomic status, race and ethnicity, health care delivery, and health behaviors.

Ellen Silbergeld and Thelma Patrick review the effect of environmental exposure, which is a tangible measure of health disparity.

Jennifer Culhane and Irma Elo describe social and health problems by using the neighborhood as a specific environment.

Janet Rich-Edwards and Tarayn Grizzard explore the cumulative effects of stress and the concept of weathering.

Robert Goldenberg, Alice Goepfert, and Patrick Ramsey discuss the issues that are related to the use of biomarkers as a means of describing the mechanisms of pregnancy complications.

Carol Hogue and Douglas Bremner delineate racism as a specific stressor.

Patricia O'Campo and Ashley Schempf address the problems of measuring psychosocial constructs.

To conclude this supplement, the working group co-chairs Thelma Patrick and Yvonne Bryan provide a synthesis of the discussions and recommendations for future biobehavioral approaches to this growing and perplexing public health concern and stress the importance of working collaboratively toward solutions.

NINR is confident that these papers will contribute to the current understanding and the future research strategies needed to move science forward in the areas of high-risk pregnancy, prematurity, and LBW in minority populations. The results from this working group are the latest, but not the only, recent efforts directed toward the resolution of issues in these areas. The unique quality of this group came from the mix of diverse experts who previously may not have been in dialogue with one another but who left this meeting intent on developing collaborative strategies for future research.

NINR looks forward to further collaborations across the National Institutes of Health and other agencies to achieve the vital aims of this working group in improving the care of pregnant women from minority populations toward the goals of reducing health disparities, improving birth outcomes, and decreasing the rate and the complications of prematurity and LBW.

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