

Combating a crisis: Global burden of preterm birth can be reduced if critical actions are taken

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New surveys of researchers and funders reveal a lack of consensus regarding researching and developing interventions to prevent prematurity and stillbirth, according to an article published in the *American Journal of Obstetrics and Gynecology* ahead of World Prematurity Day on November 17.

Authored by Michael G. Gravett, MD, scientific director of the Global Alliance to Prevent Prematurity and Stillbirth (GAPPS), an initiative of Seattle Children's, and Craig E. Rubens, MD, PhD, executive director of GAPPS, the article outlines significant opportunities to enhance research into [pregnancy complications](#) and develop solutions to prevent prematurity and stillbirth, which combined take the lives of 4 million babies every year.

"One of the main observations from the technical team was that current research funding is fragmented and uncoordinated, lacking central leadership," the authors write in A framework for strategic investments in research to reduce the global burden of preterm birth. "Fundors do not understand where the field is going."

Gravett and Rubens surveyed researchers and funders and found that both parties are equally uncertain about research and development projects that need to be undertaken, and many funders are hard-pressed to support research on the complex problems of [pregnancy](#) and

childbirth given competing priorities. This lack of consensus provides an opportunity to engage with funders and researchers to recognize the importance of understanding healthy pregnancies and the consequences of adverse [pregnancy outcomes](#).

The article proposes that a strategic alliance of funders, researchers, nongovernmental organizations, the private sector, and others could organize a set of grand challenges centered on pregnancy and childbirth that could yield a substantial improvement in the development and delivery of new and much more effective interventions, even in low-resource settings.

The authors note: "Pregnancy remains one of the least explored aspects of human biology, creating a tremendous opportunity. Long-term funding commitments for research could advance discovery science and the development of interventions targeted at pregnancy and early life and impact maternal and newborn health around the world."

Preterm birth and stillbirth are among the greatest health burdens associated with pregnancy and childbirth. Fifteen million babies are born preterm each year, causing about 1 million deaths annually and lifelong problems for many survivors; 3 million stillbirths also occur annually. Worldwide, the number of women and children who die during pregnancy and childbirth exceeds the total number of births in the United States. Even if all current interventions were universally applied, the authors estimate that the preterm birthrate would drop by less than 20 percent.

Based on their interviews, the authors compiled a set of recommendations that could greatly improve the visibility of research on pregnancy, childbirth, and early life, and mobilize funders to increase investments leading to the discovery, development, and delivery of low-cost and high-impact interventions to prevent preterm birth and stillbirth.

Toward making every pregnancy a healthy pregnancy:

- Emphasize that healthy outcomes in pregnancy benefit everyone, directly and indirectly
- Raise awareness of personal and public burden of prematurity, stillbirth, and other pregnancy and early life problems
- Establish strategic alliance of funders, researchers, and other stakeholders in areas of pregnancy, childbirth, and early life
- Identify commonalities among funding organizations to develop a coordinated research and intervention agenda
- Identify and promote research opportunities in areas of pregnancy, childbirth, and early life that can attract investigators
- Engage new investigators from multiple disciplines
- Utilize descriptive sciences and economic modeling to establish true costs and burdens of disease and assess impact of costs of current or future interventions
- Establish collaborations and promote research within high-burden, low-resource countries

Key considerations in developing a framework for a global approach to reduce preterm birth and stillbirth:

- Develop and adopt clear and consistent definitions and classification criteria
- Longitudinally characterize determinants of healthy continuum pregnancy and pathologic perturbations
- Recognize preterm birth and stillbirth as multifactorial, complex endpoints
- Develop predictive biomarkers and interventions that are pathway-specific for varied causes of [preterm birth](#) and stillbirth
- Develop infrastructure to support population-specific research and intervention in high-burden, low-resource settings

- Link discovery science to intervention development and implementation science

Provided by Seattle Children's Research Institute

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