



gapps

an initiative of Seattle Children's

GLOBAL ALLIANCE TO PREVENT  
PREMATURITY AND STILLBIRTH

Every year around the world, more than 1 million babies die because they were born too early.

More than 3 million stillbirths occur each year.



Save the Children/Michael Bisceglie

## Preterm Birth and Stillbirth: Neglected Local and Global Health Issues

Globally, preterm birth is the leading cause of death within the first 28 days after birth. Unpublished data from the World Health Organization estimate about 13 million babies are born preterm, or before 37 weeks gestation, each year. Babies born sooner than 37 weeks are not fully developed and those who survive have increased risks for infections, cerebral palsy, brain injury, and respiratory, vision, hearing, learning and development problems.

In addition, an estimated 3.2 million stillbirths occur each year. This staggering number is often not considered when developing health policies or goals, although many are preventable. Most stillbirths occur in South Asia, sub-Saharan Africa and East Asia. Many are linked to maternal death.

We cannot achieve the United Nation's Millennium Development Goals to reduce maternal and child mortality without improving pregnancy outcomes. The one million annual deaths from preterm birth contribute to more under-five child deaths than AIDS, malaria or tuberculosis. While there is no question preterm births and stillbirths contribute to the global burden of disease, these issues receive relatively little funding, research or attention.

## About GAPPS

In 2007, Seattle Children's launched the Global Alliance to Prevent Prematurity and Stillbirth (GAPPS) to address these neglected issues. GAPPS' mission is to lead a collaborative, global effort to increase awareness and accelerate innovative research and interventions that will improve maternal, newborn and child health outcomes.

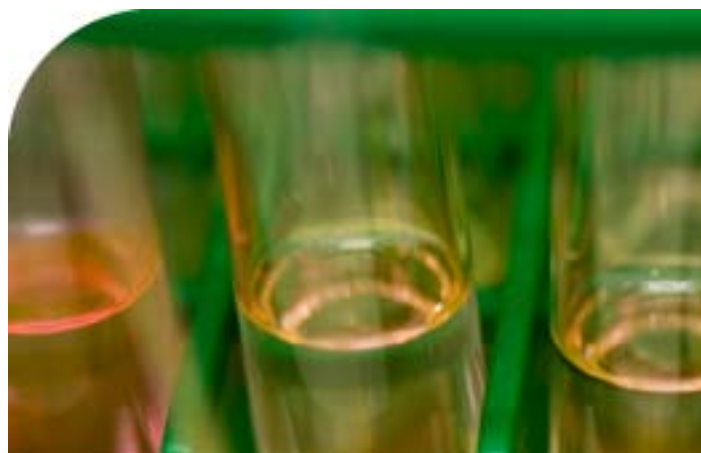
# GAPPS' Efforts to Improve Pregnancy Outcomes

## The GAPPS Repository

GAPPS is building a standardized, prospective collection of maternal data and specimens that will serve as a significant global resource for researchers aiming to understand and prevent preterm birth and stillbirth. Currently, GAPPS is collaborating with five Washington hospitals that serve as collection sites. This will enable researchers to study a large, diverse population.

These pilot sites will utilize GAPPS' standard operating procedures. Once collection processes are refined, GAPPS will help train and build in-country research capacity.

These high quality data and prenatal specimens will be linked to phenotypic data, so multiple factors can be studied at different points throughout pregnancy. Such information is critical for predicting adverse maternal, fetal and newborn outcomes. Although there are currently many collections of prenatal samples globally, they are not standardized, making it impossible to compare across studies. The GAPPS Repository also provides a resource for studies aimed at understanding the fetal origins of adult disease.



## Preterm Birth and Stillbirth: A Global Landscape Review

GAPPS' investigators are writing a comprehensive assessment of what is known, what needs to be known, and what can be done to manage and prevent these outcomes in low-resource settings. The report is organized into five chapters:

1. Discovery—causes, estimates, trends and risks
2. Development—assessing evidence for interventions
3. Delivery—scaling up cost-effective interventions
4. Advocacy—attitudes, knowledge and commitments
5. Ethics and Social Justice—cross-cutting ethical issues

## International Conference on Prematurity and Stillbirth Seattle, WA, USA

GAPPS co-convoked this conference in May 2009 with the Bill & Melinda Gates Foundation, March of Dimes, PATH, Save the Children, UNICEF and WHO. Participants included 200 leading international researchers in maternal, newborn and child health, policymakers, health care practitioners and philanthropists. Interdisciplinary teams worked over four days to create a collaborative global action agenda that includes short- and long-term milestones as well as success metrics.

## Intergrowth 21<sup>st</sup>: Fetal and Newborn Growth Research

GAPPS recently became part of the University of Oxford's study to establish new international standards for describing healthy fetal growth and newborn nutritional status. Information from ultrasounds and height measurements of the mother's womb will be used to understand risks and improve newborn health. GAPPS is partnering with the Maternal & Infant Care Clinic at the University of Washington Medical Center to help conduct this research. About 5,000 pregnancies will be monitored at 10 sites around the world.

## GAPPS' International Team of Investigators

Craig E. Rubens, MD, PhD – Executive Director, GAPPS, an initiative of Seattle Children's

Fernando C. Barros, MD, PhD – Universidade Catolica de Pelotas; Pelotas, Brazil

Maneesh Batra, MD, MPH – University of Washington School of Medicine; Seattle

Zulfiqar Bhutta, MBBS, FRCP, FRCPC, FCPS, PhD – Aga Khan University; Karachi, Pakistan

Michael G. Gravett, MD – University of Washington School of Medicine, Seattle

Thomas N. Hansen, MD – CEO, Seattle Children's

Maureen Kelley, PhD – University of Washington School of Medicine, Seattle

Joy Lawn, BMedSci, MB BS, MRCP (paeds), MPH – Saving Newborn Lives/Save the Children US; Cape Town, South Africa

Cynthia Stanton, PhD, MPH – Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Cesar Victora, MD, PhD – Universidade Federal de Pelotas; Pelotas, Brazil