

Perinatal outcomes - *a roadmap to good health* Can we get there from here?

American College of Epidemiology

2014 Annual Meeting

Silver Spring, MD

September 8, 2014

- Maternal chronic conditions – short and long-term consequences
 - **Pauline Mendola**, Investigator, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development
- Fetal programming – how much is “over” before it begins?
 - **Edwina Yeung**, Investigator, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development
- Using research to drive improvements in perinatal health at the state and national level
 - **Reem Ghandour**, Director of the Division of Epidemiology, Maternal and Child Health Bureau, Health Resources and Services Administration

Maternal chronic conditions - short and long-term consequences

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Pauline Mendola, PhD

Investigator, Division of Intramural Population Health Research



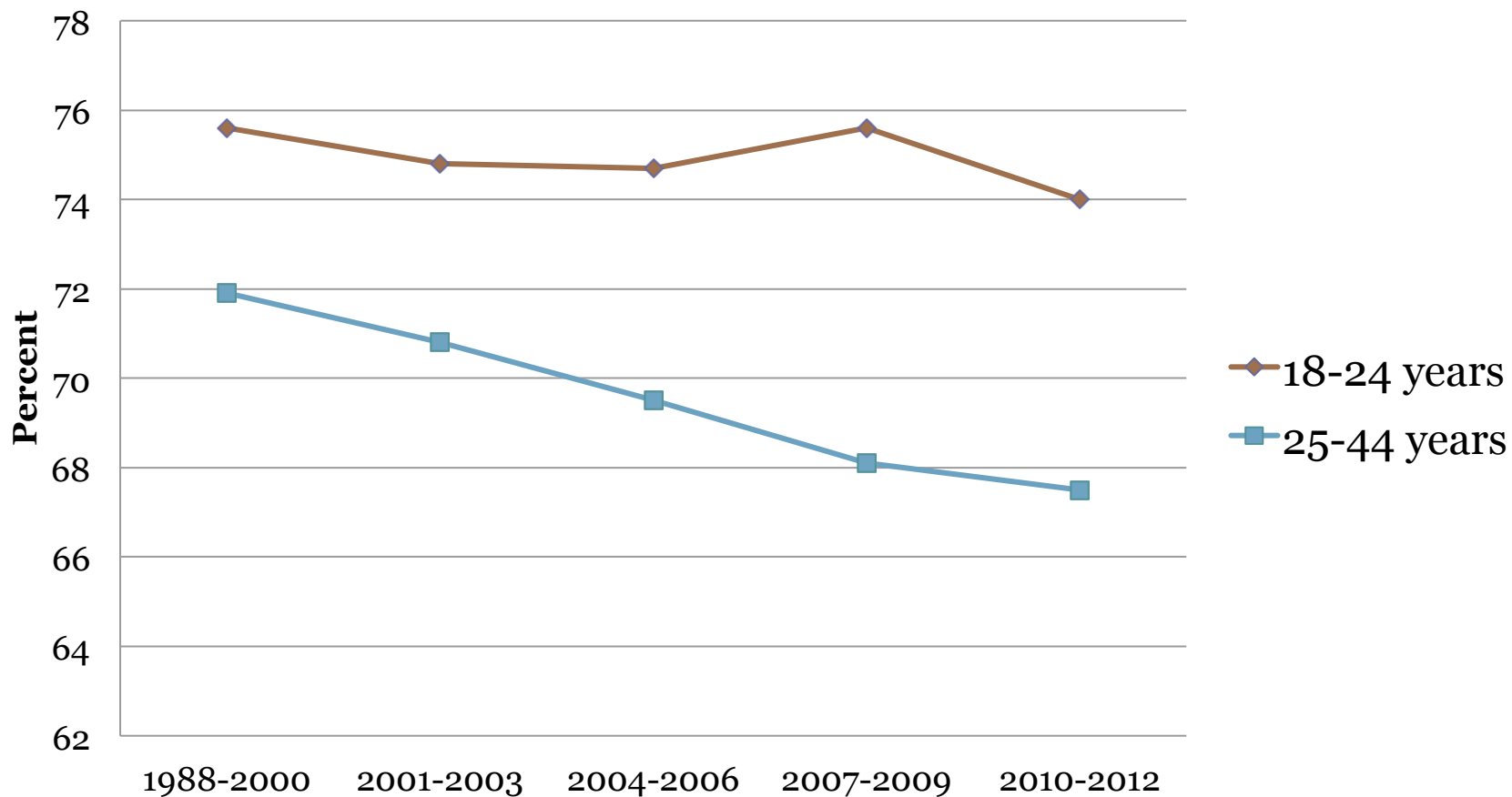
Eunice Kennedy Shriver National Institute
of Child Health and Human Development

Overview

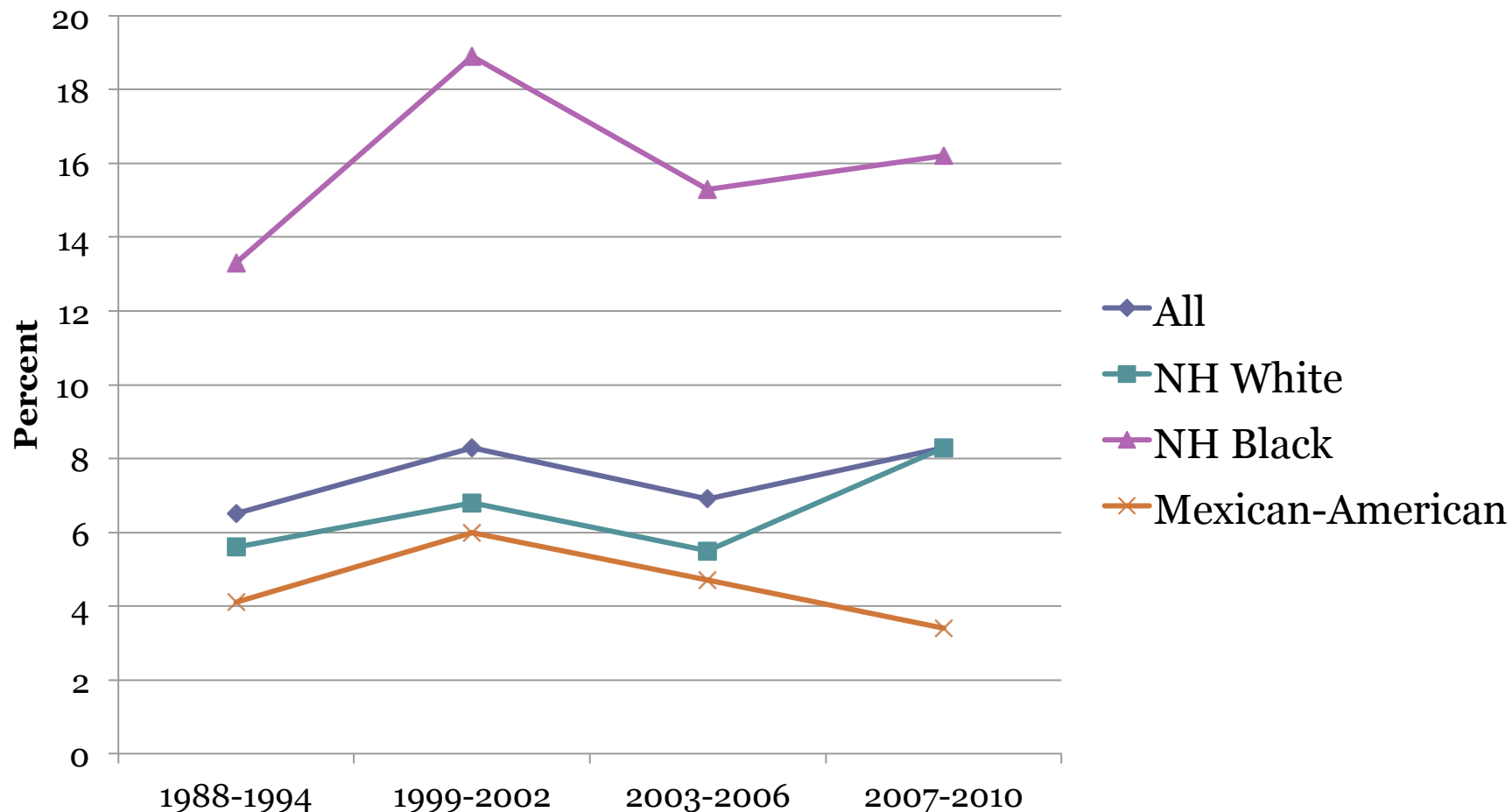
- American women of reproductive age
 - Increasing rates of chronic disease
 - Changes in the obstetric population
- Chronic diseases increase risk for adverse neonatal and obstetric outcomes
 - Preterm delivery
 - Hypertension
- Long-term consequences for mothers and children



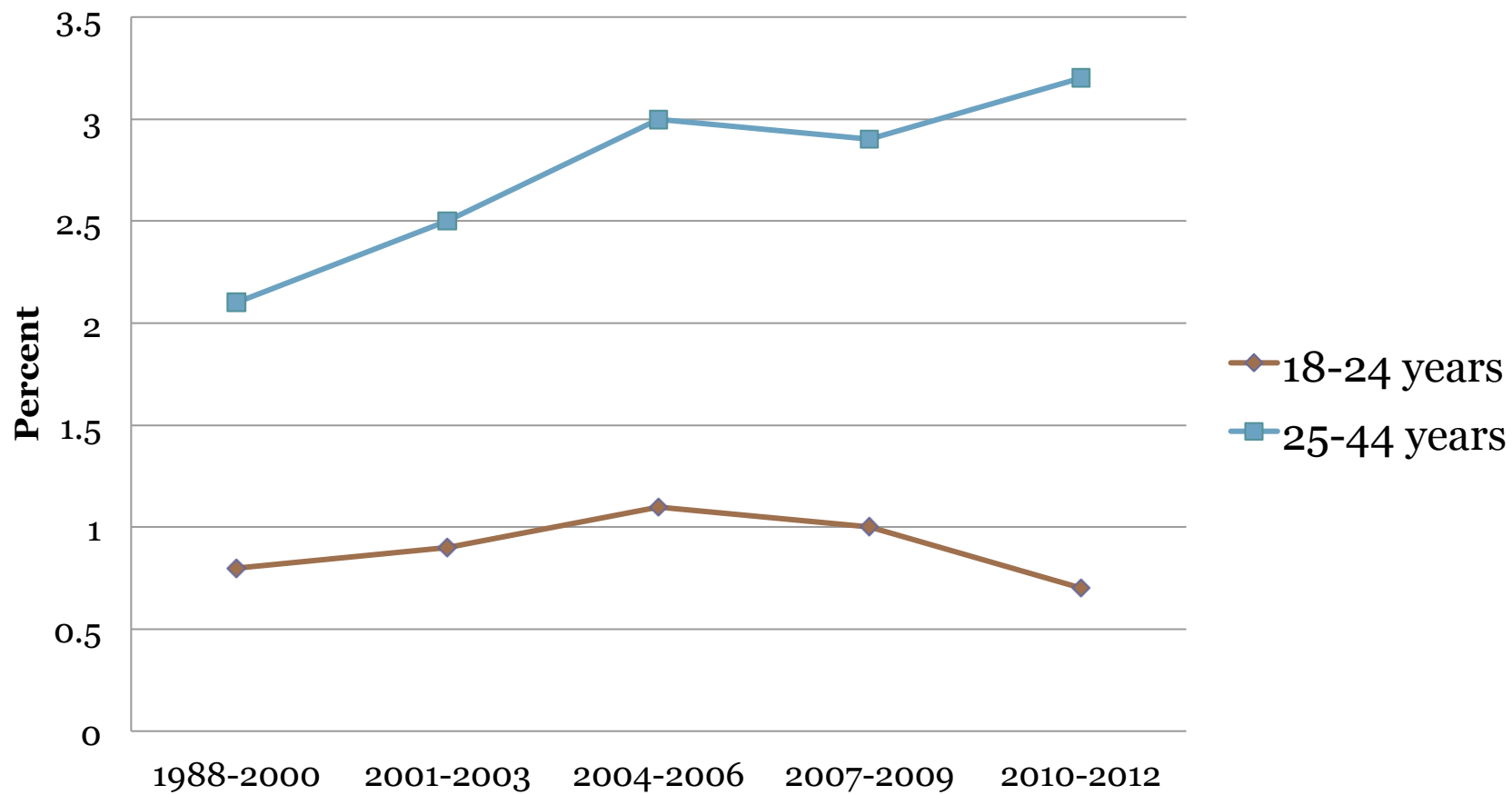
US women who rate their health as excellent or very good



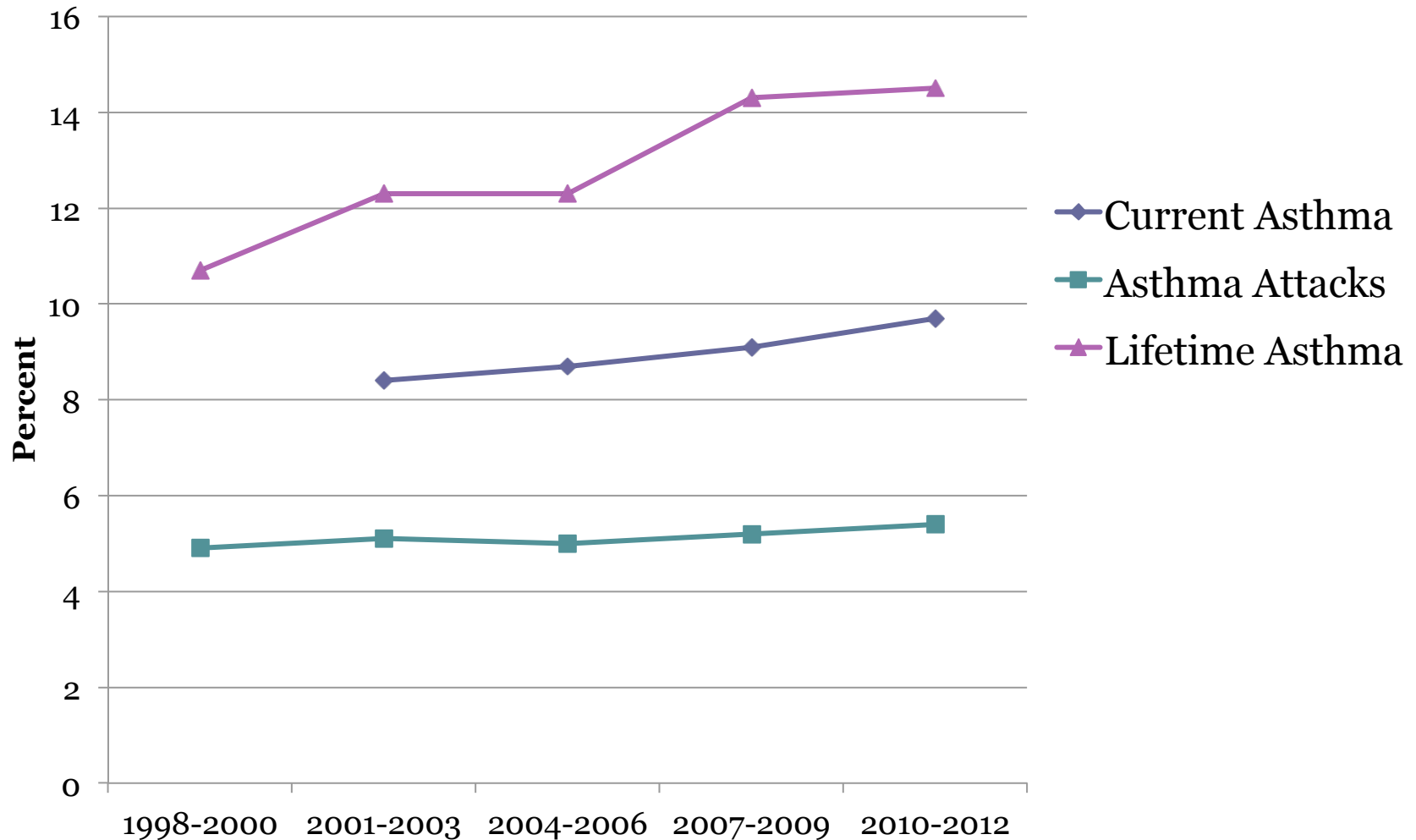
Diagnosed hypertension among US women aged 20-45



Diagnosed diabetes among US women



Increases in asthma, US women 18-44

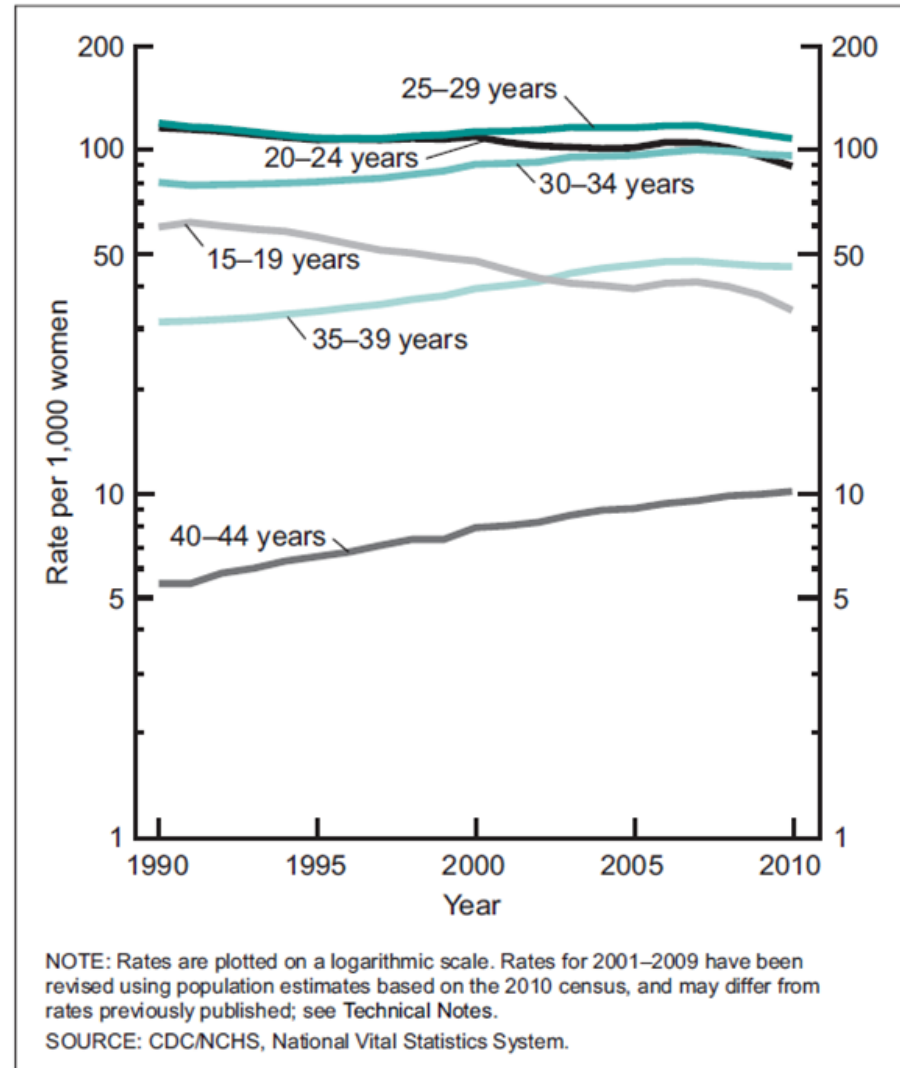


Changes in the obstetric population associated with increased risks

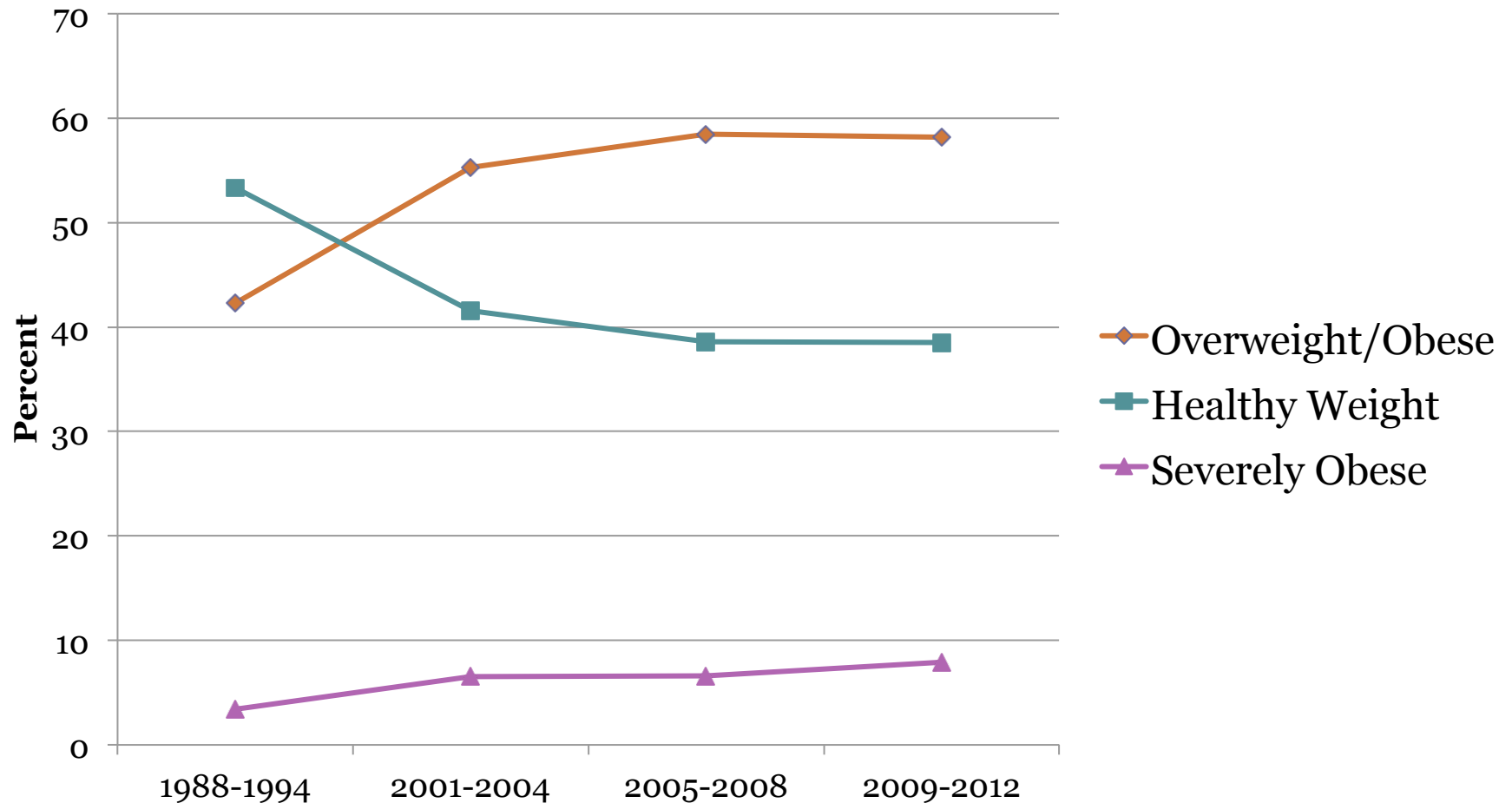
- Age
- Obesity



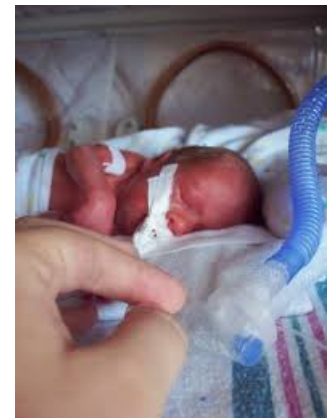
Birth rates
continue to
rise for older
mothers



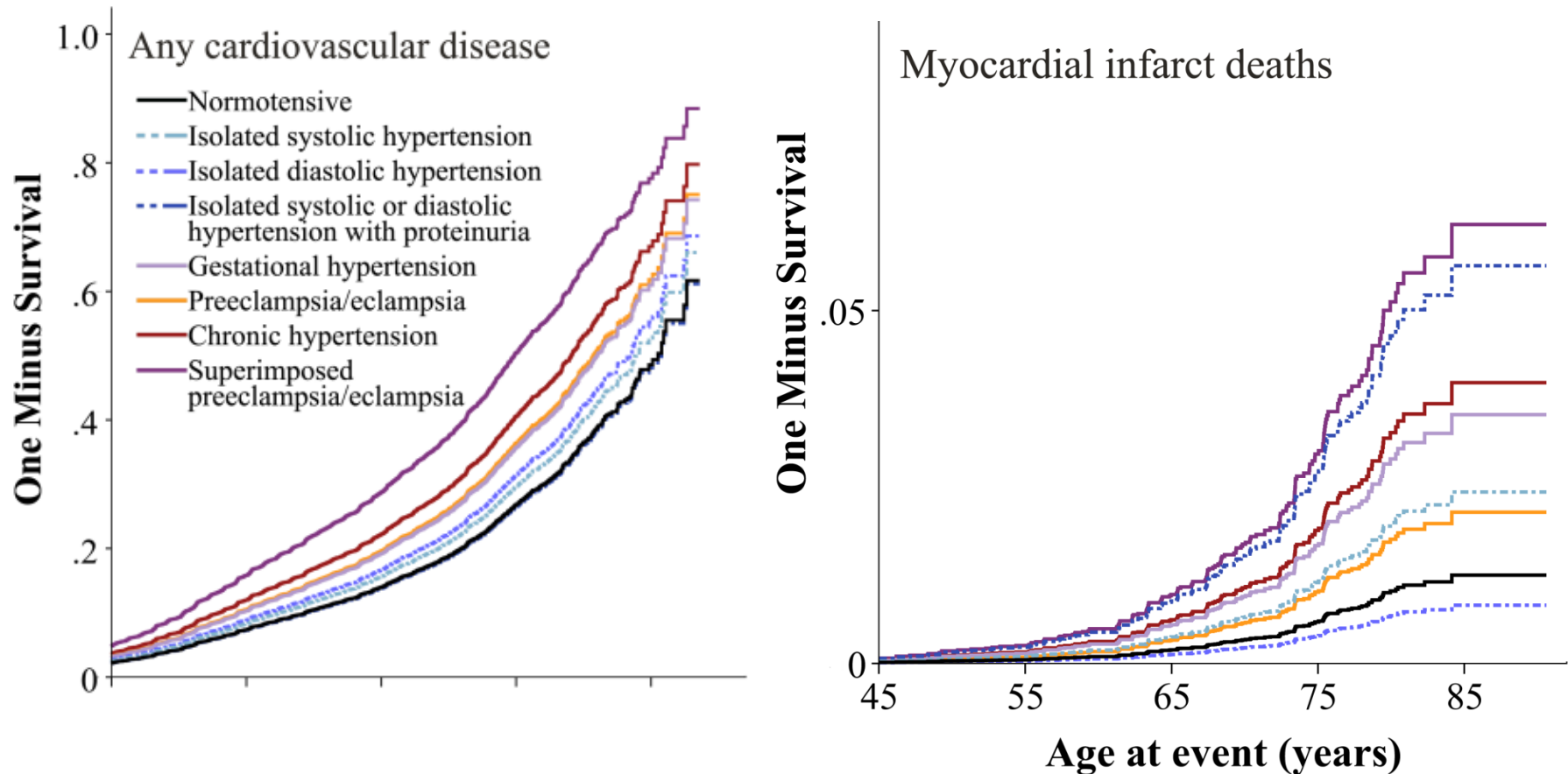
Weight among US women 20-44

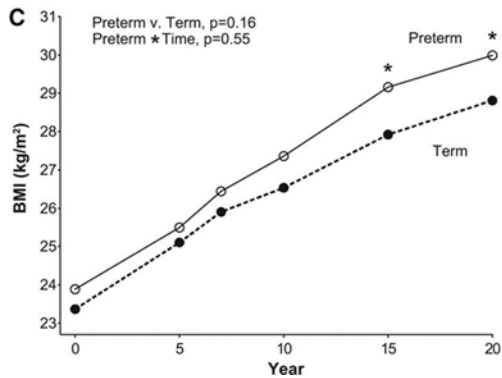
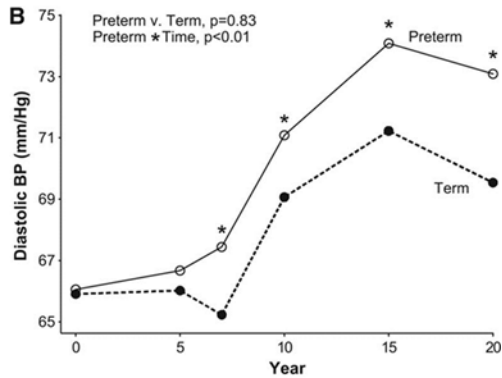
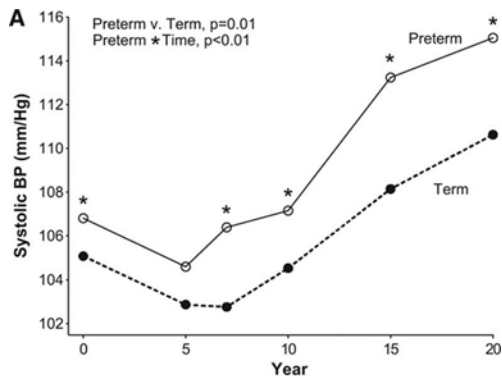


Increased prevalence of chronic disease, older and overweight mothers can lead to complications
hypertensive disorders in pregnancy and preterm birth

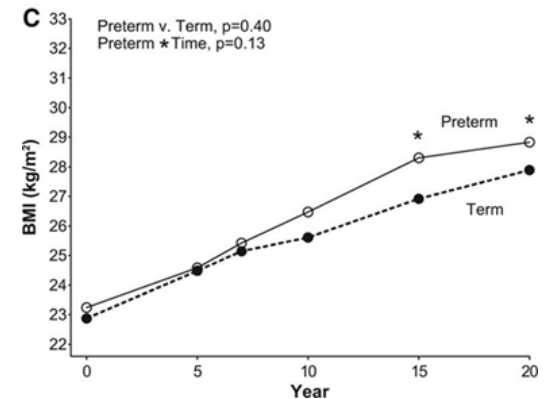
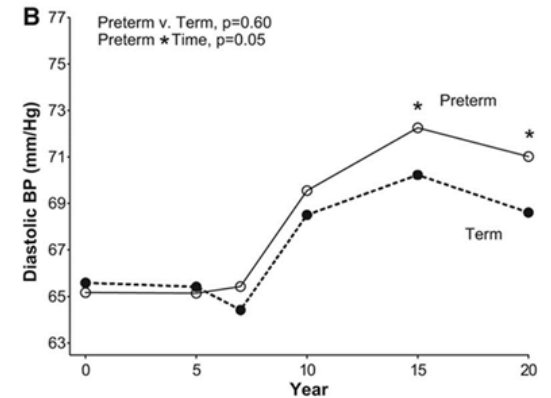
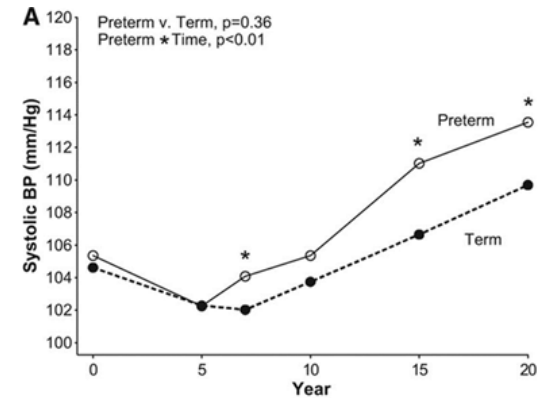


Long-term effects for mom

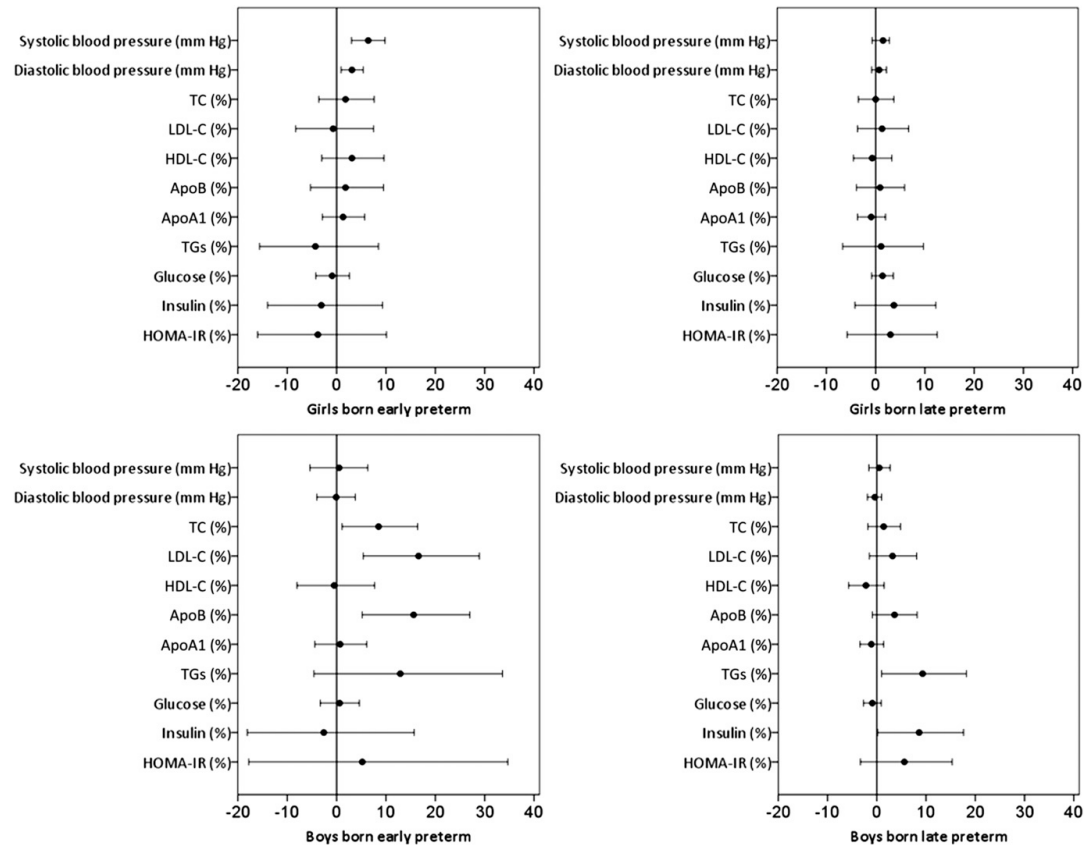




Mothers who have preterm deliveries have higher blood pressure and BMI in later life



Shorter gestation also has long-term effects on children



Perinatal health - a *family* health issue with population level consequences

- Social and medical factors interrelate
- Maternal chronic disease in pregnancy is on the rise
 - 25% of twin pregnancies
 - More than 15% of singleton pregnancies
- Better primary care and good health behavior may be the best foundation for healthy pregnancy with long term consequences for population health

