Introduction

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Public health questions I address in my research

1) Effects of common environmental exposures on perinatal and pediatric health?
2) Given the same level of exposure, are certain subgroups more affected?
3) Design effective interventions to improve perinatal and pediatric health
Strategies I implement to in my research

1) Large population-based studies (state and national level)

2) Clinical studies

3) Interventional studies

Participants

Filter

Sham filter

Outcomes

Outcomes
The Environment and Maternal and Child Health in CA

- Environment
- Hospitalization
- ED visits
- Vital Statistics

B-Well-Mom Study
- 500 pregnant women
- Personal air monitors
- Measures health outcomes for mothers and baby

Preterm birth and extreme temperature in SJV
- Retrospective chart reviews of babies born at Community Regional Medical Center (CRMC, Fresno, 2014-2018)
Previous findings/contributions

Mother
- Gestational diabetes
- Gestational hypertension
- Cardiovascular events

Fetus
- Pregnancy loss
  - Stillbirth
  - Birth defects
  - Restricted growth (SGA, LBW)
  - Preterm birth

Child
- Delayed development

In healthy volunteers, air filter use is significantly associated with reduction in:

1) PM$_{2.5}$
2) Systemic inflammatory
3) Blood coagulation
4) Vasoconstriction
5) Respiratory inflammation
Establish an obstetric/pediatric cohort to study personally monitored environmental exposures in relation to long-term health outcomes


For a more complete list, please visit: https://scholar.google.com/citations?user=D7nqsrsAAAAJ&hl=en