

**TITLE:** Building a study: Bringing together communities, researchers, clinicians, public health, and local health officials to discuss wildfire smoke exposure during pregnancy

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**STUDENT SUBMISSION:** Yes

**TOPIC/TARGET AUDIENCE:** Topic: Focus on collaborative decision-making, balancing community requests and research capabilities. Target audience: Community-engaged researchers

**ABSTRACT:** Background: Klamath County is severely impacted by wildfire smoke and has increased rates of adverse infant health. Studies have linked prenatal exposure to wildfire smoke with increased risk of preterm birth and low birth weight. Purpose: To address these concerns, we built an interdisciplinary team to co-create a research plan looking at the impacts of wildfire smoke on maternal and infant health in Klamath County. Our research questions included: How can this study best address the needs of the stakeholder, i.e. what data and health endpoints are needed? Methods: Through existing partnerships and outreach conducted by a community liaison, we built an interdisciplinary team of 26 individuals, representing 12 academic, public health, and community organizations. We used the Delphi method to develop a research plan, wherein short online surveys were disseminated to identify data sources, collection tools, and methodologies. Results were discussed at 5 team meetings and used to reach consensus on a study design. Outcomes: We designed a quasi-experimental study design that included: i) analysis of multiple pollutants; ii) environmental, residential and personal air monitors; iii) in vivo toxicity model and; iv) infant birth outcomes. Conclusions: We leveraged interdisciplinary expertise and consensus-building to develop a community-engaged funded study.

**OBJECTIVE(S):** Learners will be able to describe how to use the Delphi method for co-designing community-engaged environmental health research

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