Impacts of E-waste Exposure on Maternal and Fetal Health

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**BACKGROUND**

Electronic waste import and recycling sites are prevalent in China, and exposure to harmful waste compounds may have detrimental effects on maternal and fetal health.

Taizhou, China is one of the largest e-waste processing sites worldwide.

China has recently established e-waste recycling policies, but their enforcement has yet to be evaluated.

**PROJECT GOALS**

**HEALTH TEAM**

- Assess Taizhou community exposures with silicon wristband methodology
- Measure chemical profile in cord blood samples
- Design laboratory tests to investigate e-waste exposure on pregnancy

**POLICY TEAM**

- Analyze Chinese policies relating to e-waste regulation and disposal
- Survey community attitudes towards e-waste recycling in Taizhou
- Communicate findings in written policy brief

**CONCLUSIONS**

- Gaps in national policy implementation affect local community interactions with e-waste
- Low exposure levels of damaging chemicals suggest that the removal of an e-waste site in 2018 decreased risks for the Taizhou community

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**A MULTITIERED APPROACH: FINDINGS**

**Institutional Level**

China’s Circular Economy Promotion Law (2008) was a national effort to manage e-waste.

Despite a ban, individual actors continue to import foreign waste.

National policies have failed to impact change in local settings, which jeopardizes community health.

**Community Level**

Residents who lived in an abandoned e-waste site were highly aware of its remaining issues.

Residents benefited economically from the industry yet also potentially faced health consequences of e-waste exposure.

**Individual Level**

Low current-day exposure levels of heavy metals and flame retardants follow decreasing levels of lead in cord blood over time.

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