

# Community Health Workers As An Implementation Strategy for Exposure Science

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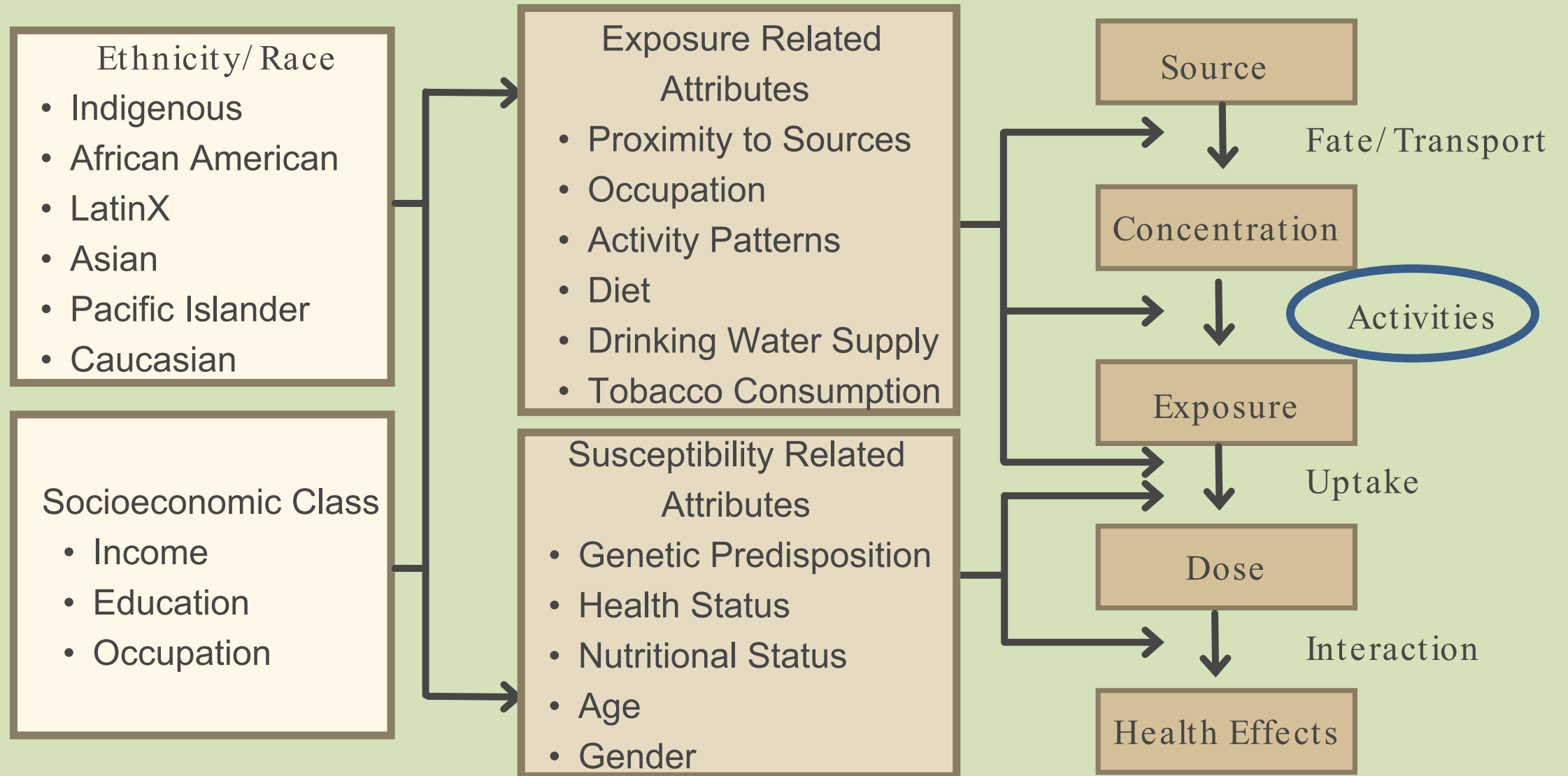


THE UNIVERSITY OF ARIZONA

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# Human Health Risk Paradigm



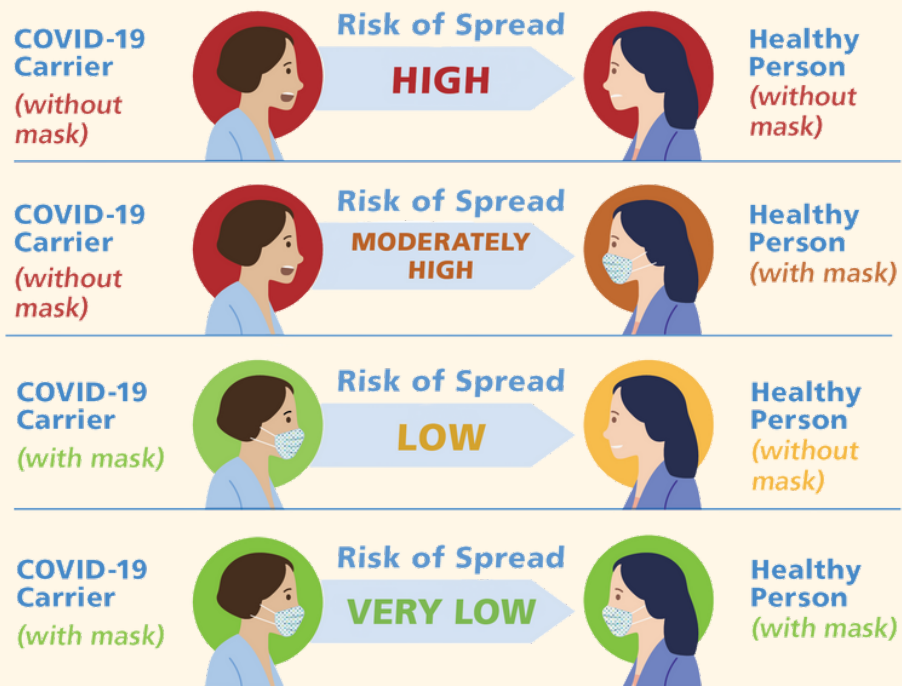
# Implementation Science

- Implementation research looks at how best to help people/places DO THE THING
- Implementation strategies are the stuff we do to try to help people/places DO THE THING
- Main implementation outcomes are HOW MUCH and HOW WELL they DO THE THING

# Implementation of Exposure Science during the COVID-19 Pandemic

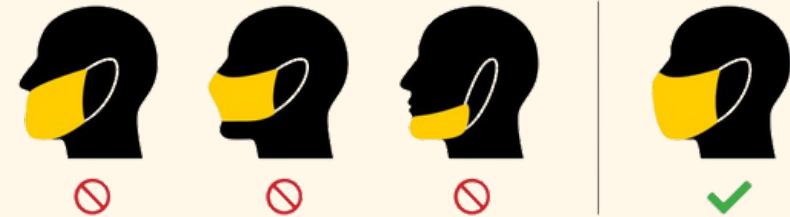
## WEAR A FACE COVERING TO PROTECT YOURSELF AND OTHERS

Help prevent the spread of COVID-19!



## KEEPING YOU SAFER

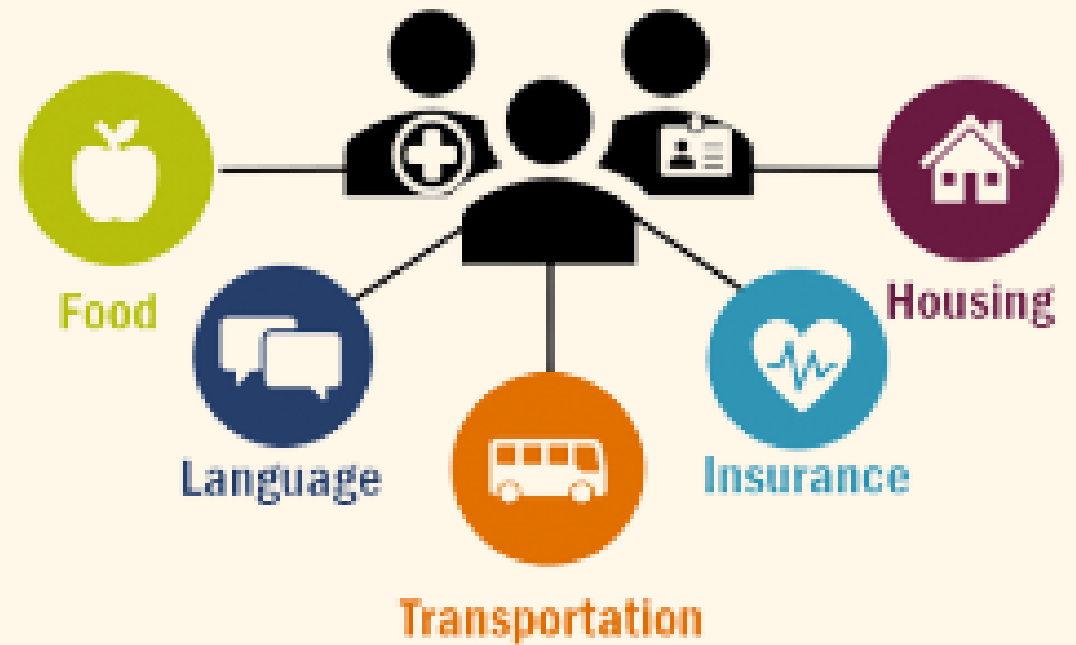
Protect yourself and others by wearing a face covering correctly.



# Community Health Worker

“A community health worker is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.”

- APHA CHW Section



# CHWs and Environmental Research Projects



Breastmilk  
and TCE  
Nogales, AZ



Metal  
Exposures  
Study in  
Homes

Farmworkers  
& Pesticides  
Yuma, AZ



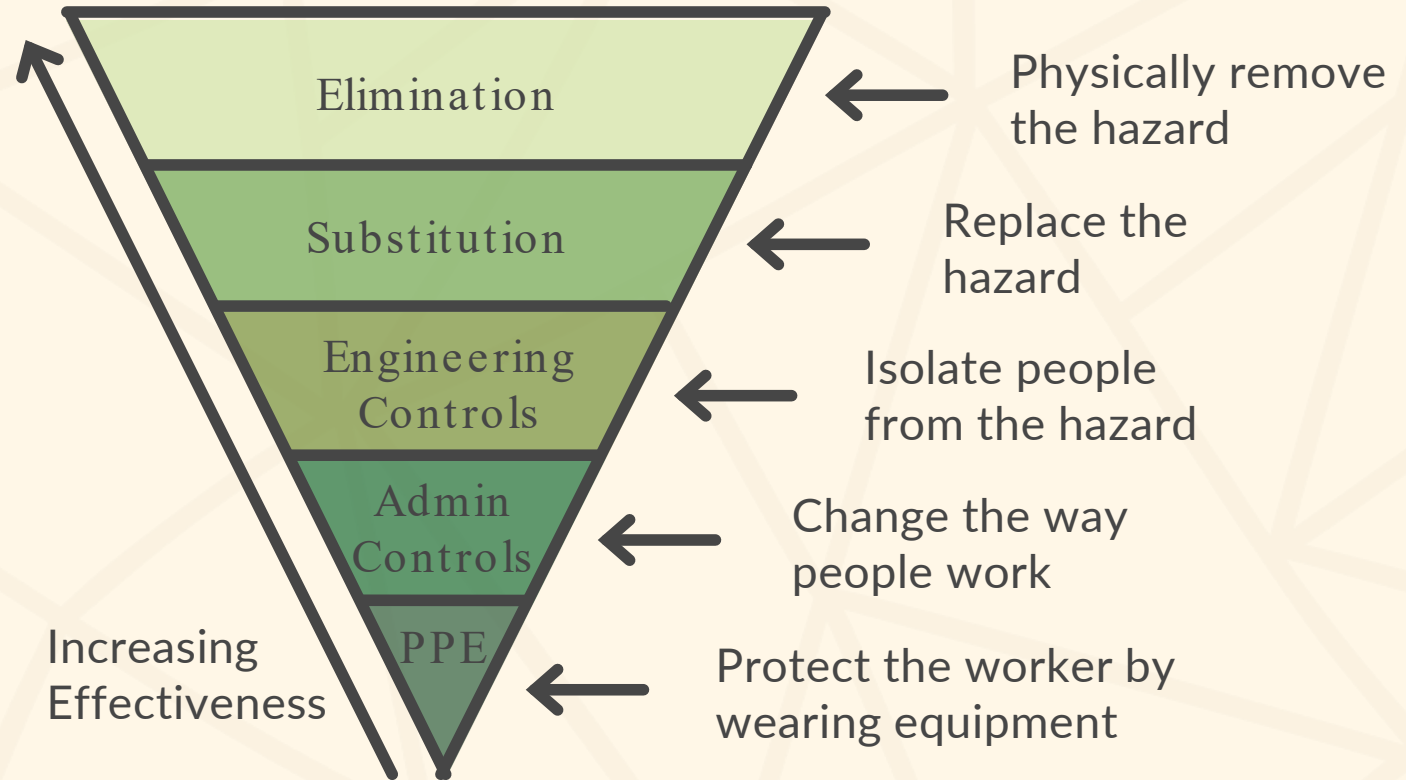
Gold King  
Mine Spill  
Navajo  
Nation



# Small Businesses' Access to Resources



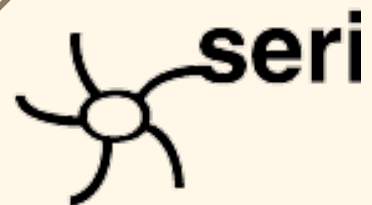
- Occupational disease is 8<sup>th</sup> leading cause of death in the US
- Small businesses particular risk
  - Use hazardous solvents
  - Less likely to provide health insurance, medical screening tests, employ safety personnel
- What about OSHA?
- Documented improper implementation of controls
- Additional Barriers
  - Language/Literacy
  - Marginalized Status
  - Gender
  - Access to health care



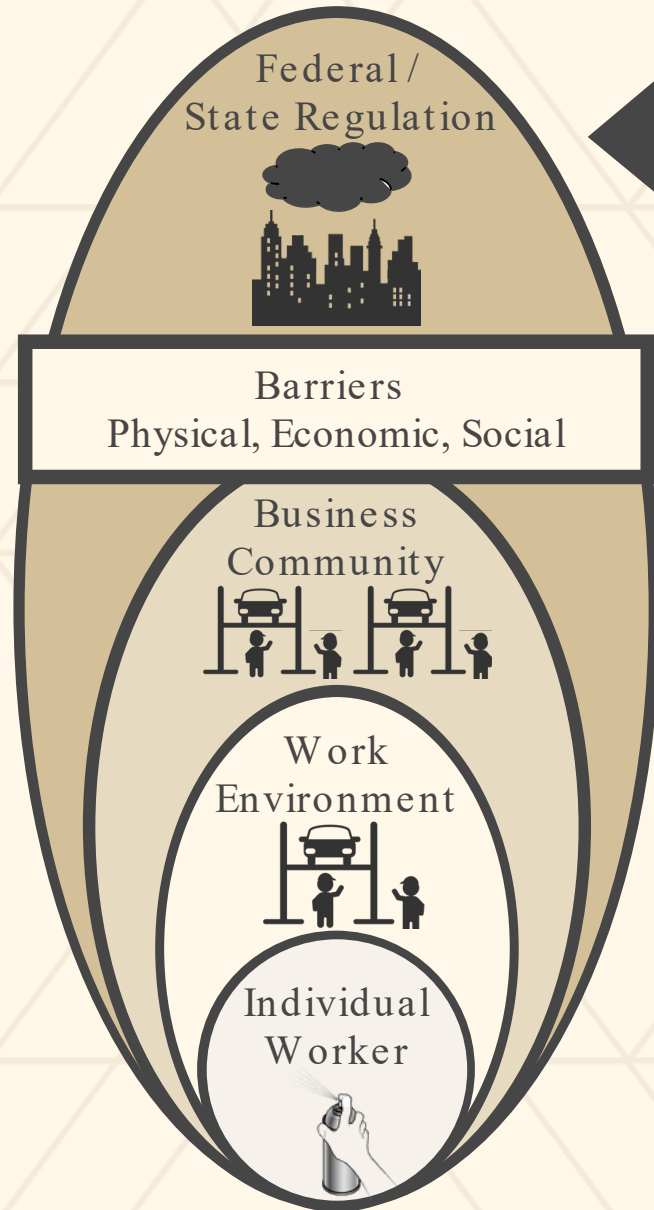
# PREVENTABLE

# Community Assist of Southern Arizona (CASA)

- Comprehensive multi-media pollution prevention program
  - Source reduction, recycling, treatment and disposal
- Promotoras conduct outreach and trainings
- Developed 8 industry specific packets
- Distributed 662 packets
- Over 2 years conducted 535 business visits and 597 follow up visits
- Conducted 11 workshops
- Example: 84 nail salons - use nail polish removers without acetone giving a reduction in acetone emissions of 35,952 lb/year

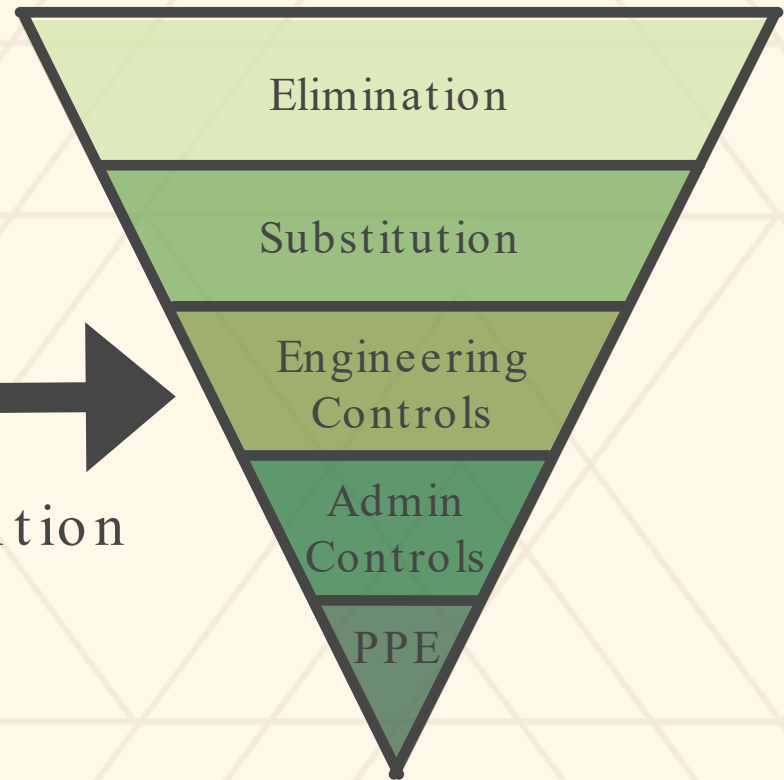




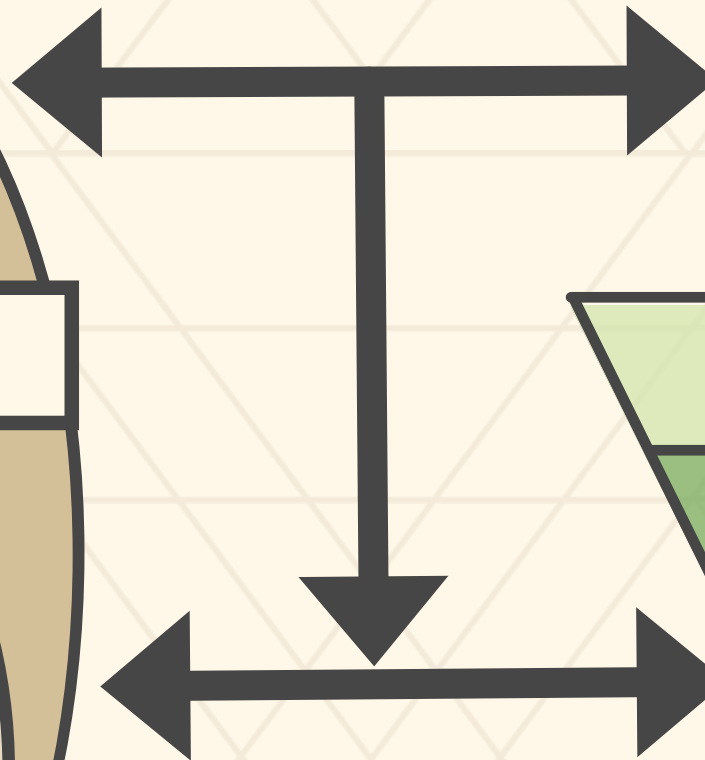


Socio -ecological model  
Occupational and Environmental  
Health Disparities

Community  
Partnerships  
UA, SERI, El Rio, &  
Trade Orgs.



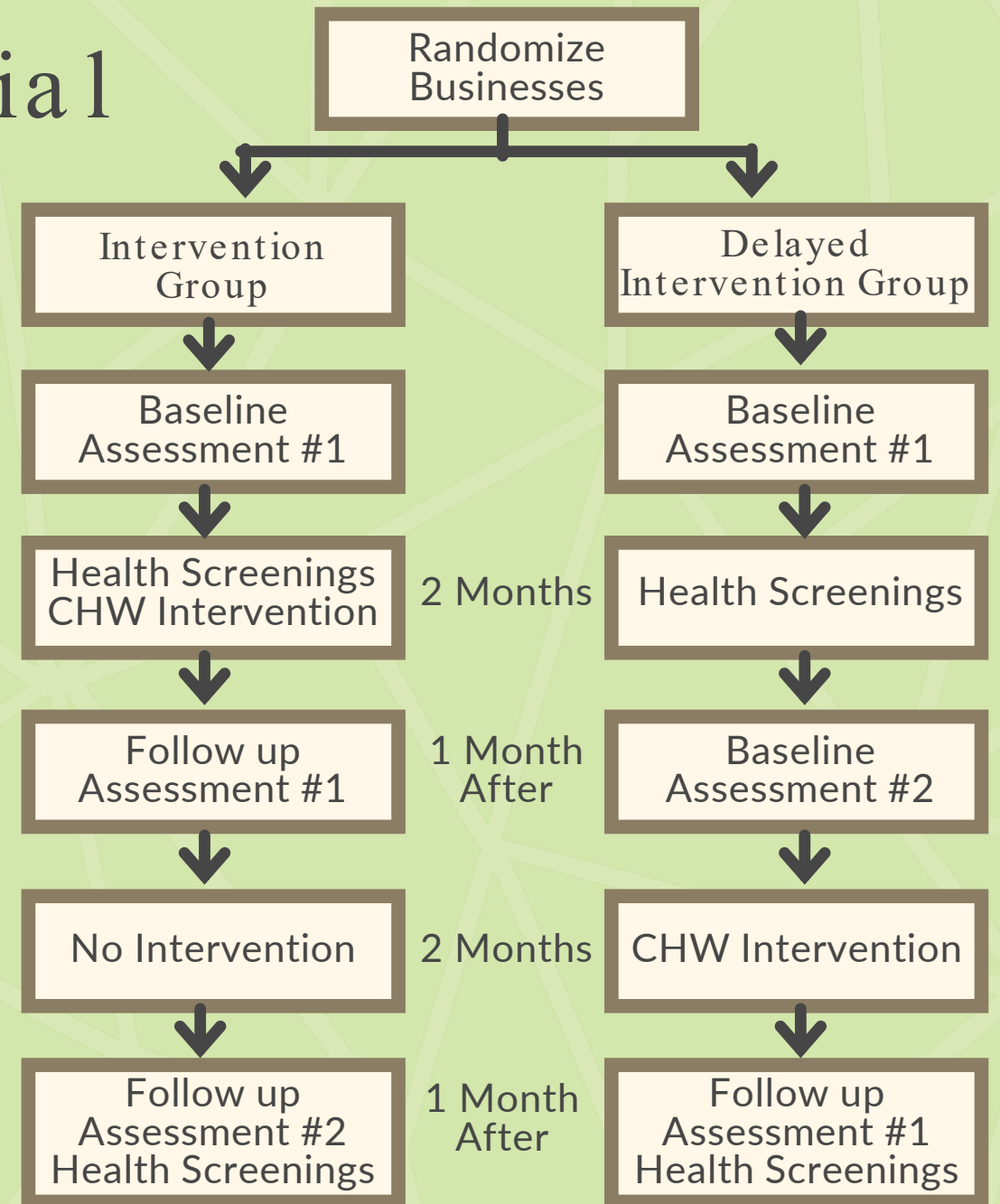
Hierarchy of controls



CHW Intervention

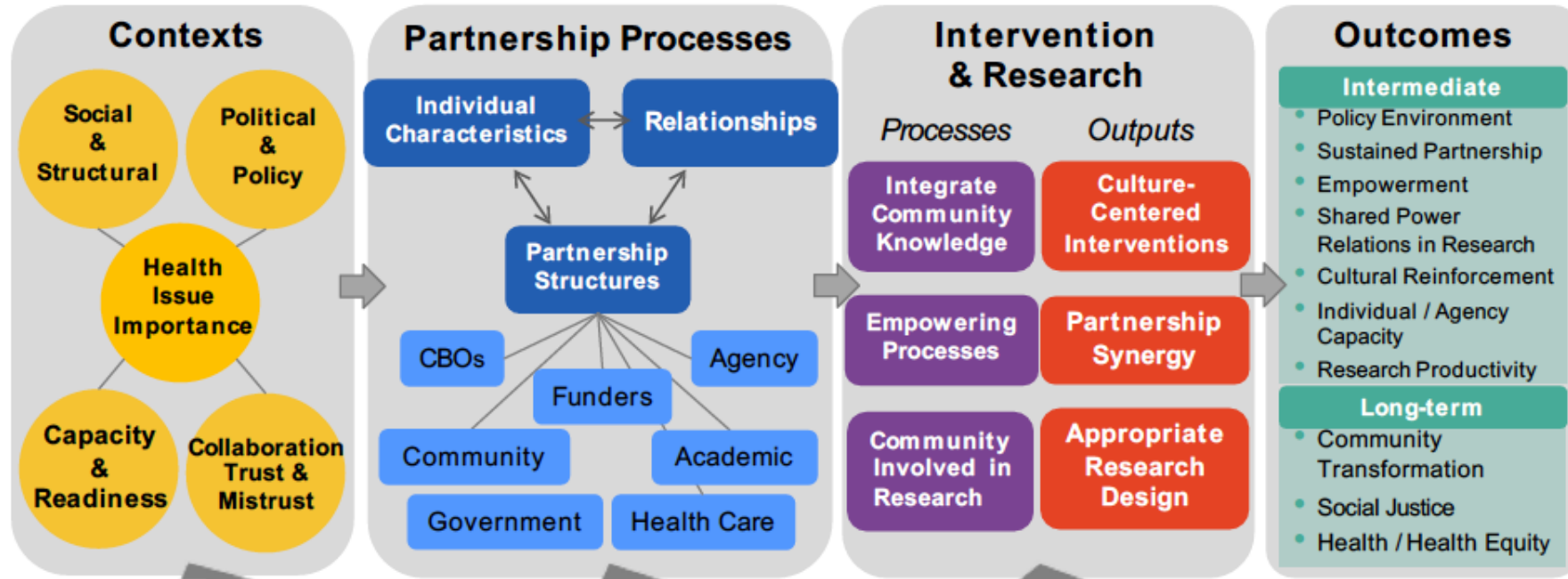
# Cluster Randomized Trial

- Rationale: formerly determine efficacy of CHW intervention for reducing exposures in the workplace
- Approach:
  - Trial Design
  - Business recruitment and health screenings
  - Implement CHW intervention
    - Visit coordination and assurance
    - Evaluation
      - Exposure assessment (Total VOCs)
      - Site surveys
      - Questionnaires / Focus groups



# CBPR Conceptual Model

Adapted from Wallerstein et al, 2008 & Wallerstein and Duran, 2018, <https://cpr.unm.edu/research-projects/cbpr-project/cbpr-model.html>



Visual from amoshealth.org 2017

Contexts	Partnership Processes	Intervention & Research	Outcomes
<ul style="list-style-type: none"> <li>• Social-Structural: Social-Economic Status, Place, History, Environment, Community Safety, Institutional Racism, Culture, Role of Education and Research Institutions</li> <li>• Political &amp; Policy: National / Local Governance/ Stewardship Approvals of Research; Policy &amp; Funding Trends</li> <li>• Health Issue: Perceived Severity by Partners</li> <li>• Collaboration: Historic Trust/Mistrust between Partners</li> <li>• Capacity: Community History of Organizing / Academic Capacity/ Partnership Capacity</li> </ul>	<p><b>Partnership Structures:</b></p> <ul style="list-style-type: none"> <li>• Diversity: Who is involved</li> <li>• Complexity</li> <li>• Formal Agreements</li> <li>• Control of Resources</li> <li>• % Dollars to Community</li> <li>• CBPR Principles</li> <li>• Partnership Values</li> <li>• Bridging Social Capital</li> <li>• Time in Partnership</li> </ul> <p><b>Individual Characteristics:</b></p> <ul style="list-style-type: none"> <li>• Motivation to Participate</li> <li>• Cultural Identities/Humility</li> <li>• Personal Beliefs/Values</li> <li>• Spirituality</li> <li>• Reputation of P.I.</li> </ul> <p><b>Relationships:</b></p> <ul style="list-style-type: none"> <li>• Safety / Respect / Trust</li> <li>• Influence / Voice</li> <li>• Flexibility</li> <li>• Dialogue and Listening / Mutual Learning</li> <li>• Conflict Management</li> <li>• Leadership</li> <li>• Self &amp; Collective Reflection/ Reflexivity</li> <li>• Resource Management</li> <li>• Participatory Decision-Making</li> <li>• Task Roles Recognized</li> </ul> <p><b>Commitment to Collective Empowerment</b></p>	<ul style="list-style-type: none"> <li>• Processes that honor community and cultural knowledge &amp; voice, fit local settings, and use both academic &amp; community language lead to Culture-Centered Interventions</li> <li>• Empowering Co-Learning Processes lead to Partnership Synergy</li> <li>• Community Members Involved in Research/Evaluation Design that Reflects Community Priorities</li> <li>• Bidirectional Translation, Implementation, Dissemination</li> </ul>	<p><b>Intermediate System &amp; Capacity Outcomes</b></p> <ul style="list-style-type: none"> <li>• Policy Environment: University &amp; Community Changes</li> <li>• Sustainable Partnerships and Projects</li> <li>• Empowerment –Multi-Level</li> <li>• Shared Power Relations in Research/. Knowledge Democracy</li> <li>• Cultural Reinforcement / Revitalization</li> <li>• Growth in Individual Partner &amp; Agency Capacities</li> <li>• Research Productivity: Research Outcomes, Papers, Grant Applications &amp; Awards</li> </ul> <p><b>Long-Term Outcomes: Social Justice</b></p> <ul style="list-style-type: none"> <li>• Community / Social Transformation: Policies &amp; Conditions</li> <li>• Improved Health / Health Equity</li> </ul>

# Lessons Learned

- Every community is unique – CHWs have the trust and knowledge of the community
- Be adaptable – the partner is always right
- Get CHWs involved as early as possible in the design of the intervention and/or research
- Sustainability – the Navajo CHR model



# Acknowledgements

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