

# Proceedings

## ***Protecting Children Where They Live, Learn, and Play***

*A summary of the first EPA children's environmental health border symposium held in cooperation with the Southwest Center for Pediatric Health at the Texas Tech University Health Science Center in El Paso, Texas on September 24-25, 2015.*

# Children’s Environmental Health on the Border Proceedings

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### INTRODUCTION

**Children's Environmental Health on the Border: Protecting Children Where They Live, Learn, and Play** was held at the Texas Tech University Health Sciences Center in El Paso, Texas, September 24-25, 2015. This was the first of two symposia to be held on the border, the first in Texas, and the second in California.

The symposium is part of the U.S. Environmental Protection Agency's continuous work with its partners to address binational environmental challenges and disproportionate health impacts that burden border communities, especially as they impact children. Health impacts may include mismanagement of pesticides, poor indoor and outdoor air quality, misuse of chemicals and other waste, poor water quality, and binational chemical emergencies. Informing healthcare professionals, public health practitioners, community health promoters or *promotoras*, and others in the community about the crucial links between the environment and health is an essential step towards improving health outcomes in communities along the Border.

In the fall of 2015, several groups came together to address the link between health and the environment, specifically focusing on areas where children live, learn, and play. Contributors included the Southwest Center for Pediatric Environmental Health at Texas Tech, US/Mexico Border Health Commission, the US/Mexico Border 2020 Program, the U.S. Environmental Protection Agency's US/Mexico Border and Children's Environmental Health Programs, and the Border Environment Cooperation Commission.

#### Symposium as Part of a Larger Children's Health Border Initiative

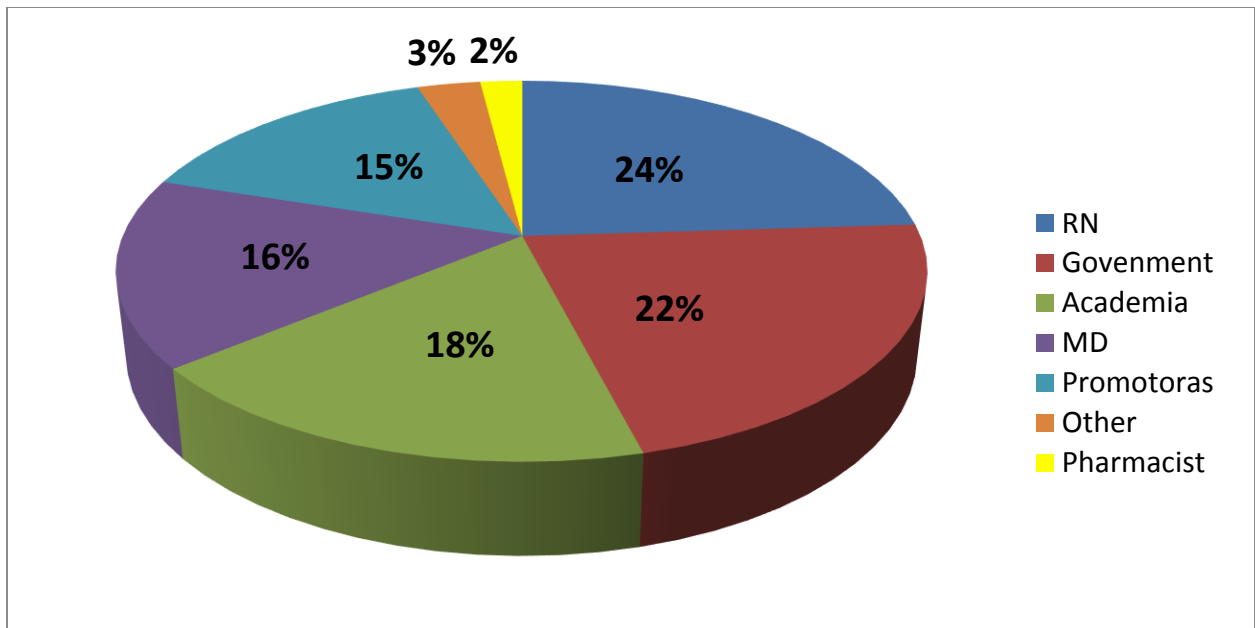
The two main goals of the symposium were: 1) to increase knowledge of how early childhood exposure can affect children's health; and 2) to facilitate networking among the healthcare community, *promotoras*, and the public. The first Symposium was held in El Paso, Texas on September 24-25, 2015, and a second, in San Diego, California on January 27-28, 2016. Proceedings from the California will be available in the spring of 2016.

In addition to symposium training which provided continuing education credits for health care providers and public health professionals, EPA Regions 6 and 9, and the Border Health Commission, in partnership with other local/state agencies, provided training for *promotoras* in several communities along the border. These trainings began in June 2015 through October 2015 with a total of 7 training events taking place in Texas, 1 in Arizona, and 2 in California. The curriculum for the trainings in Texas included: a) *Essentials for Healthy Homes Practitioners*, course developed by the National Center for Healthy Housing; 2) Healthy Homes and Asthma, 3) Household chemicals, 4) Carbon Monoxide and 5) "Bites and Stings", a course focused on understanding the dangers of insects and other animals found in rural and colonia areas. Training in Region 9 was held in Arizona and California. In Nogales, AZ and Chula Vista, CA trainings focused on air quality and asthma, lead, pesticides, and climate change. Training in El Centro, CA focused on air quality and asthma, pesticides, and water issues

**AUDIENCE**

The audience for the Symposium was healthcare professionals (i.e., physicians, nurses, mid-level practitioners, and respiratory therapists), public health practitioners, and *promotoras*. There were 119 people attending the first day, and 94 people the second day.

The audience’s professional sector was distributed as follows: The largest group in attendance was made up of *promotoras* with 24 percent, followed by government employees with 22 percent and academia with 18 percent. Physicians and Nurses represented 16 and 15 percent respectively, of all attendees.



**SYMPOSIUM FORMAT AND AGENDA TOPICS**

Day 1

The morning featured two plenary sessions--climate change impacts on children's health, and prenatal exposures. The afternoon focused on childhood breathing--healthy lungs and good indoor air quality. Sessions included presentations and panel discussions on e-cigarettes, unconventional petroleum exploration concerns, carbon monoxide, asthma, and lead. There was also a special session from *promotoras* working the border area who were recently trained as part of the 2015 Border Health Initiative.

Day 2

The morning featured three plenary sessions that examined the environments where children learn and grow and how environmental disruptions such as toxic substances and homelessness can impact children. There was also a session on the top children's environmental health concerns and an open forum to ask specific questions about environmental health impacts. The afternoon sessions built upon this issue and looked at specific illnesses as well as social and environmental situations that can impact children's health (for the symposium agenda see Attachment B, for pictures see Attachment C).

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### PRESENTATION SUMMARIES

A brief summary of key points for each forum is provided below. For the complete presentations, please see Attachment D.

#### Day 1 Plenary Session 1

Climate Change Impacts on Children's Health, Ruth Etzel, MD, PhD

Objectives:

- How much disease could be prevented by modifying the environment?
- Impacts on Children's Health
- Climate Change Health Risks
- Find the Win-Win Choices

Conclusions:

- In Healthcare Services--Climate change risks are already causing families to seek medical care. Parents of children with asthma or chronic lung disease will need advice about how to protect their health when air quality deteriorates and ozone levels increase because of heat and traffic congestion.
- In the Workplace--In the context of a typical medical practice, it can be approached from two sides—from the point of view of purchasing and from the point of view of disposal.
- In Communities--As community leaders, you can get involved in the public policy arena as potential influencers. Check the Air Quality Index (AQI) for a reporting of daily local air quality.

#### Day 1 Concurrent Session 1; Track A

E-Cigarettes Toxicity: The Risk to Children, Susan Smolinske, PharmD, DABAT

Objectives:

- Evaluate the potential risk of exposure to vapor constituents on short and long term health of children who are exposed to electronic cigarettes.
- Understand the risks of trauma or injury to children from accidental exposure to batteries or devices related to electronic cigarettes.
- Discuss potential for child-resistant packaging to affect pediatric access to liquids.

Conclusions:

- More research needed to assess risk of second and third hand exposure to excipients in e-cigarettes.
- Dripping delivery methods should be discouraged.
- Use only the charging device provided by the product.
- Wipe surfaces of gas appliances frequently.
- Avoid use in presence of children.
- Encourage adoption of child-resistant packaging for tank refills.

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- Cartridge types are safer around small children.
- Risk is very high of accidental ingestion for tank types.

### Day 1 Concurrent Session 1; Track B

Carbon Monoxide: Odorless, Colorless, Borderless, Carl Baum, MD, FAAP, FACMT

#### Objectives:

- Understand sources of carbon monoxide.
- Describe existing treatment of carbon monoxide exposure.
- Understand strategies for prevention of carbon monoxide exposure.

### Day 1 Concurrent Session 2; Track A

Health Impacts of Unconventional Petroleum Exploration on Children, Stephen Borron, MD, MS, FAACT, FACMT

#### Objectives:

- Define unconventional petroleum exploration.
- Discuss the actual and potential physical and chemical risks to children from increased drilling activity.
- Discuss the risks of negative impact on drinking water.
- Describe the possible prenatal health concerns.
- Identify issues related to environmental justice.
- Discuss the need for application of the precautionary principle.

#### Conclusions:

- The enormous increase in unconventional drilling activity has augmented the risk of physical injury, toxic exposure, and water scarcity/quality issues for children, though reported injuries to date are few.
- Diesel emissions, hydrogen sulfide, and volatile organic compounds are only a few of the many potential toxic effluents contributing to air pollution.
- Exposures in children have been insufficiently studied, conclusions about causality remaining elusive.
- Efforts should be made to minimize risks through expansion of alternative fuel sources, engineering controls to minimize exposures, and enhanced environmental regulations and compliance efforts.

### Day 1 Concurrent Session 2; Track B

E-Cigarettes: Talking Tech with the New Generation, Stormy Monks, MPH, PhD, CHES and Scott Crawford, MD. (invited). Presented by Salvador Baeza, PharmD, DABAT

#### Objectives:

- Describe the e-cigarette device.

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- Discuss its appeal to users.
- Recognize usage patterns of e-cigarettes.
- Identify current e-cigarette prevention strategies.

### Day 1 Concurrent Session 3; Track A

Lead: Update on an old poison, Jennifer Lowry, MD, FAAP, FACMT

#### Objectives:

- Discuss the history of lead and understand how we ended up where we are.
- Describe the sources of lead (common and new) for children, adolescents and pregnant women.
- Provide education to patients regarding management of elevated blood lead.

#### Conclusions:

- Lead exposure is still a major concern for children.
- No known threshold for lead exposure and no safe lead level.
- Current reference value is >5 mcg/dL (mean 1.3 mcg/dL).
- Neurocognitive effects cannot be reversed even with chelation.
- Primary prevention is key.
- Most children are asymptomatic.
- Screening and parental education are important.
- Chelation should be considered for blood lead level >44 mcg/dL in coordination with a toxicologist.
- Health effects of lead exposure can persist into adulthood.

### Day 1 Concurrent Session 3; Track B

Asthma and Lead Home Interventions, Marc Hanfling, MD, FAAP

#### Objectives:

- Identify who would benefit from environmental home visits.
- Describe basic elements of an environmental home visit for different clients.
- Explain how learners can participate and learn from an environmental investigation.

### Day 1 Concurrent Session 4; Track A

Lead and Asthma - Panel Discussion, facilitated by Marc Hanfling, MD, FAAP

Addressing Childhood Asthma, Karin Hopkins, MPH, Cristina M. Baker, MPH, Jennifer Karnik, MPH,  
(invited)

#### Objectives:

- Understanding Asthma
- Asthma along the Border
- Childhood Asthma in Texas
- Home Interventions



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- Treatment & Control

### Conclusions:

- Physical & emotional pain for the child—trauma of not being able to breathe, & missing out on normal peer activities.
- Permanent lung damage can occur, blocking air passages & reducing lung capacity as an adult.
- Leading cause of school absenteeism, lowering academic performance & affecting future wage earning potential.
- Economic burden for families resulting from lost work days for parents caring for children with asthma symptoms & paying for ER visits.
- Adults with asthma are at higher risk for other chronic health conditions such as obesity; COPD, emphysema, or chronic bronchitis; depression, diabetes, and hypertension. May be moderated by learning to control the disease as a child & improving health behaviors.

### Day 1 Concurrent Session 4; Track B

Promotoras on Asthma and other CEH issues - Panel Discussion, facilitated by Patricia Juarez, MPH, PHD  
Healthy eating and active living in the Paso del Norte Region, Leah Whigham, PhD, FTOS,

### Objectives:

- Paso del Norte Region
- Healthy Eating/Active Living Initiative Goals
- Collective Impact Model
- Development of Strategic Plan

### Conclusions:

- Healthy Eating/Active Living Initiative Goals
  - GOAL 1: Increase fruit & vegetable consumption and improve portion control
  - GOAL 2: Increase physical activity and decrease sedentary behavior
  - GOAL 3: Create an environment that promotes healthy eating and active living without bias against obesity
  - GOAL 4: Achieve long term sustainability of PdNIHL & HEAL initiative

Factors affecting participation in community intervention projects, Celina Alvarado Gamiño.

### Objectives:

- Need of participation in community intervention projects
- Identify the factors that influence the decision to participate
- Actual levels of participation
- Elements not considered in implementations
- Enable greater participation and better performance of projects

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### Conclusions:

- The reaction of the recipient when learning of the mechanisms of the support programs (appearance of homes, testimony of mothers, and proximity to leaders) is to sell donated products; avoid the arrangement of buildings, hide appliances, lie or omit information.
- Welfare projects, unclear information on criteria for selection of beneficiaries, causes uncertainty, conflict and division between people.
- Participants of religious groups are also identified: support to their relatives, not promoting incorporation of new members, they do not share knowledge.
- Implementing institutions dynamics have not been the most suitable. Passivity, speculation, deception, political control with its clientele and paternalistic practice has developed a permanent co-dependent relationship.
- There is not only available, but deep desire to participate, be taken into account, considered in their way of thinking and feeling.

### Day 2 Plenary Session 3

Mercury: Common – Caustic – Costly... and Scary..., Kurt Kleinschmidt, MD, FACEP, FACMT

#### Objectives:

- Describe the typical presentation of mercury toxicity
- List the potential participants in a mercury event
- State the most important contributing factor that can help an event "to go well"
- Discuss factor that can make mercury costly to manage

### Conclusions:

- Inhalational mercury often presents like a viral syndrome with fever and rash
- The Risk Communication piece can be vast and there is a need to ensure that all the players are at the table
- Everybody talking, sharing their expertise, and all agreeing on the plan.
- Mercury clean ups can be very expensive.

### Day 2 Plenary Session 5

Pediatric Environmental Health Specialty Units, Panel on Top Ten Environmental Health Concerns, Facilitated by Stephen Borron, MD, MS, FAACT, FACMT, Marc Hanfling, MD, FAAP, Jennifer Lowry, MD, FAAP, Larry Lowry, PhD, Mark Miller, MD, MPH

#### Objectives:

- Describe the roles and activities of the Pediatric Environmental Health Specialty Units
- List 10 environmental exposures of significant concern to children
- Present a few illustrative examples

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### Conclusions:

- Heavy metals – lead, mercury, and arsenic
- Air pollution and its effects on asthma
- Threats to clean, safe, inexpensive drinking water
- Endocrine disruptors
- Environmental carcinogens
- Pesticides
- Global climate change
- Mold
- Carbon monoxide
- Social determinants of health / healthy homes

Day 2 Open Forum: "Promotoras working in the Community" with Ruth Etzel, MD, PhD

Panelists: Sue Forster-Cox, PhD, MPH, MCHES, Angie Sanchez Corral, Olivia Figueroa

Environmental Health / Home Safety Education Project: A recipe for success, Sue Forster-Cox, PhD, MPH, MCHES,

### Objectives:

- Ingredients for a successful environmental health program:
  - Key players
  - Promotoras preparation
  - Spreading community awareness
  - Home Safety Assessment
  - Incentives

### Conclusions:

- Clients had increased knowledge and awareness of:
  - Fire safety
  - Food safety
  - Pesticide safety
- Environmental Health / Home Safety Education Project
  - Replicable
  - Flexible
  - Attractive to funders

Day 2 Concurrent Session 5; Track A

Social and Environmental Factors in Pediatric Obesity, Jesus Peinado, MD, FAAP

### Objectives:

- Identify the social and environmental influences as a causative factor for obesity
- Discuss the epidemiological evidence for obesogens actions
- Discuss the effects of obesity in the pediatric population

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### Conclusions:

- Air pollution is now recognized as a novel risk factor for the development of obesity
- Several xenobiotic chemicals can disrupt the normal development and homeostatic controls over adipogenesis and energy balance
- Exposure to obesogens has been identified to induce obesity.
- Obese individuals are also more vulnerable to the harmful effects of air pollutants
- Despite the emerging evidence for the role of air pollutants in obesity, this topic is still in its infancy More knowledge needs to be generated by means of dose-response studies on air pollutants and obesity to conclusively establish the link

### 5 to Go!!! Message

- 5: Eat FIVE fruits and veggies a day
- 4: Give and get FOUR compliments a day
- 3: Consume THREE dairy a day
- 2: No more than TWO media hours a day
- 1: At least ONE hour of exercise a day
- 0: No sugar-sweetened drinks, ever

### Day 2 Concurrent Session 5; Track B

#### Childhood Leukemia: a preventable Disease? Mark Miller, MD, MPH

### Objectives:

- Why did this patient get this disease at this time?
- Or, why does this population have a higher incidence?

### Conclusions:

- Underlying issue and difficulties have some parallel with leukemia in children
- Rare / difficult to study prospectively
- Serious outcome
- There is no consensus about mechanisms of causation
- Individual studies showing association
- There are a number of meta-analyses mostly identifying consistent patterns of risk
- Intervention impact can only really be studied with widespread population adoption of prevention activity and then evaluate incidence rates.

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Day 2 Concurrent Session 5; Track C

Changing community culture to decrease obesity and diabetes, Joseph McCormick, MD

Objectives:

- The Story of Brownsville, TX: Model for an Emerging Healthy Community

Conclusions:

- Diabetes and Obesity in our population are higher than most other areas of the US.
- Half of those with diabetes are undiagnosed primarily because of lack of health insurance therefore no access to health services.
- Only half of those who report having diabetes are under treatment
- Underlying heart disease and liver disease, and other manifestations of diabetes are extremely prevalent but undiagnosed.
- Diabetes underlies over 60% of hospital admissions for congestive heart failure, over 90% for renal disease, and nearly 100% for amputations.
- High costs of diabetes found in our population because of high prevalence, advanced disease because of lack of access.
- The Approach Can be Replicated!

Day 2 Concurrent Session 6; Track A

Outdoor Air Pollution, How does it affect our Children's health, Carla Campbell, MD, MS

Objectives:

- Overview of children's environmental health (CEH) & how air pollution affects our children
- Determinants and Characteristics of Air Pollution
- Symptoms/Problems Caused by Air Pollution
- Why do we worry about children's susceptibility to air pollution?
- Outdoor air pollution at the US-Mexico border

Conclusions:

- Measures to reduce or prevent exposures to outdoor chemical air pollutants (reduce GHGs).
  - Advocate for public policies that promote sustainable (less-polluting) energy sources, less reliance on fossil fuel burning, and reduced energy use in general.
  - Decrease pollution by walking, biking, taking mass transit for transportation choices.
  - Monitor the daily Air Quality Index (ozone and particle pollution; 0-300 scale) if family members have asthma or other conditions made worse by poor quality outdoor air.
  - Parents, teachers, coaches can limit outdoor exercise/practice on days with high AIQ index and avoid student exposure to idling buses.
  - Close windows; use air conditioning on high AQI Index days

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Day 2 Concurrent Session 6; Track B

Coccidioidomycosis (“Valley Fever”): An Environmental Health Risk Endemic to the U.S.-Mexico Binational Border Region, Paul Dulin, MA

Objectives:

- Coccidioidomycosis Epidemiology
- Transmission
- Risk Factors for Valley Fever
- Diagnosis
- Guidelines for Treating Cocci
- What about Cocci in Mexico?

Conclusions:

- Expand knowledge in the clinical and public health community concerning the burden of cocci disease, with emphasis on New Mexico, Texas, and Mexican Border states, and how to diagnose and treat it.
- Continue implementing pilot surveillance for Coccidioidomycosis in Mexico Border States of Sonora and Chihuahua, to serve as model for all of Mexico.
- Establish/maintain state laboratory capacity and epi surveillance in all Mexican Border States.
- Provide sustained financing in the U.S. and Mexico to support the efforts listed above and—eventually—to develop a cocci vaccine to be administered to those at risk in endemic areas in the binational border region.

Day 2 Concurrent Session 6; Track C

Mosquito Borne Illness Dengue, Beatriz Tapia, MD, MPH

Objectives:

- Dengue Virus
- Transmission of Dengue Virus
- 2009 New Dengue Classification
- Top Ten Dengue Points Texas Promotoras Should Know

Conclusions:

- Dengue is spread through the bite of a mosquito.
- South Texas has had dengue outbreaks and is at high risk for more outbreaks given its proximity to Mexico (which has lots of dengue), the presence of the right mosquito and large cross border movement.
- Communities need to be educated how to reduce mosquitos in their yards and homes –  
REMEMBER:
  - Clean
  - Cover
  - Empty and clean every week

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- Avoid mosquito bites to avoid dengue
  - Use mosquito repellent
  - Wear long pants and sleeves
  - Keep windows closed and use screens if open
- Dengue is an acute febrile illness which passes through 3 phases (febrile, critical and recovery)
- People with dengue infection should rest, drink plenty of water and avoid aspirin and non-steroidal anti-inflammatory agents (NSAIDs)
- Persons with dengue should take care not to be bitten by a mosquito and potentially infect others in the home
- Most persons with dengue make a complete recovery but some will get very sick AFTER their fever goes away
- There are warning signs for severe dengue:
  - Abdominal pain
  - Persistent vomiting
  - Bleeding from gums or elsewhere
  - Excessive sleepiness
- People with warning signs should be seen by a doctor.

Day 2 Concurrent Session 7; Track A

Children and Waterborne Disease: What Are the Risks? Kristina Mena, MSPH, PhD and  
Objectives:

- Risk Assessment
- Hazard vs. Risk
- Hazard Identification

Conclusions:

- Risk factors for waterborne disease among children
  - Immature immune defense mechanisms
  - Higher water ingestion rate
  - Potentially greater exposure to waterborne hazards
- Future approaches addressing children and waterborne disease
  - Database development
  - Epidemiological studies
  - Clinical studies
  - Informed risk assessments

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Water Matters: Drinking Water-Borne Illness in Children Living in Colonias on the Border, William Hargrove, MS, PhD

Objectives:

- We conducted a Health Impact Assessment (HIA) focused on water and sanitation in Vinton, TX
  - Assess quality of water sources in the community and health of residents
  - Identify potential health impacts of improved water and sanitation infrastructure
  - Inform decisions by community, local government, and donors regarding proposed infrastructure improvements

Conclusions:

- Existing Conditions and their Impacts

Existing Condition	Impacts
Poor water quality: As, TDS, Coliform Bacteria	High As blood levels in children Gastrointestinal ailments Skin problems
Reliance on bottled water for drinking	High cost of drinking water
Poor septic tank management	Risk of overflows leading to: Exposure/gastrointestinal ailments Odors Contamination of groundwater
Inadequate fire hydrants	High cost of fire insurance Inability to fight fires
Lack of local health clinics	Lack of local access to health care, especially preventative care
Lack of water availability at local parks	Lack of drinking water fountains and shade lead to less use
Prolonged drought	Unreliability of water supply; periods of no service
Lack of retail businesses	Lack of economic vitality Poor job opportunities locally

Day 2 Concurrent Session 7; Track B

Pesticides in children, Janett Santos, MD

Objectives:

- Show data related to pesticide exposures in Mexico
- Point out common pesticides involved in children’s exposure and poisoning at our Poison Center
- Focus on preventive measures that can be easily spread among public and patients

Conclusions:

- Preventive measures should be reinforced
- Less exposure everywhere
- Fight the cause instead of the problem



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- Reduce pests at home
- Reduce exposure
- Reduce potential accidents
- Product label for identification
- SINTOX antidote kit content: Toxogonin (Obidoxime), Atropine, Vitamin K1, Loratadine, Sodium Sulfate. Activated charcoal, Bentonite, Nitrile gloves, guidelines.

### Day 2 Concurrent Session 7; Track C

Designing Multi-cultural Health Posters for Children and their Parents, Margaret Short, DMin, MA, MDiv, PDiv, BCC and Dr. Cynthia Kratzke, PhD, CHES

#### Objectives:

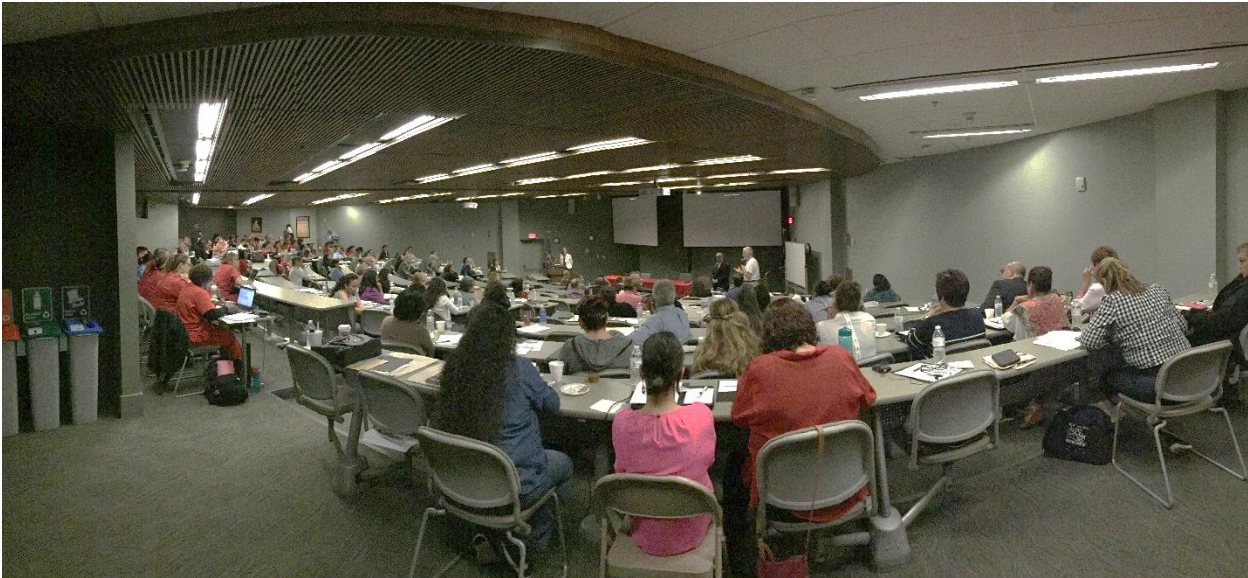
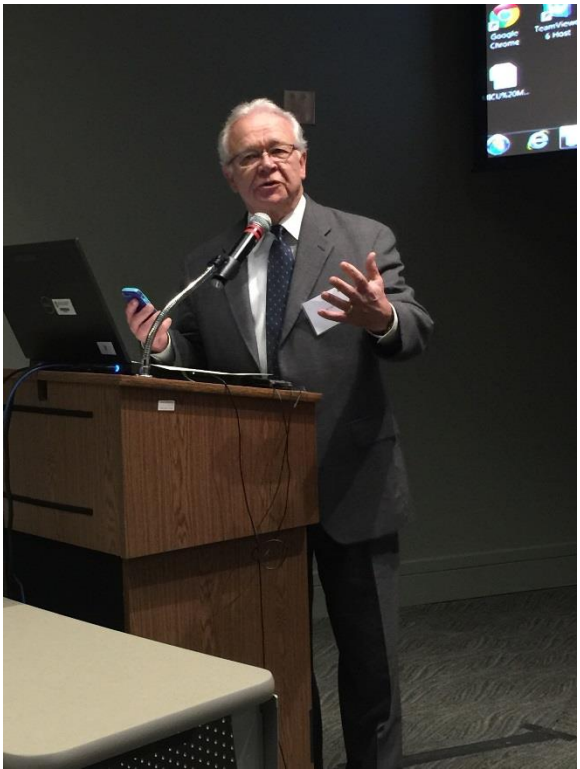
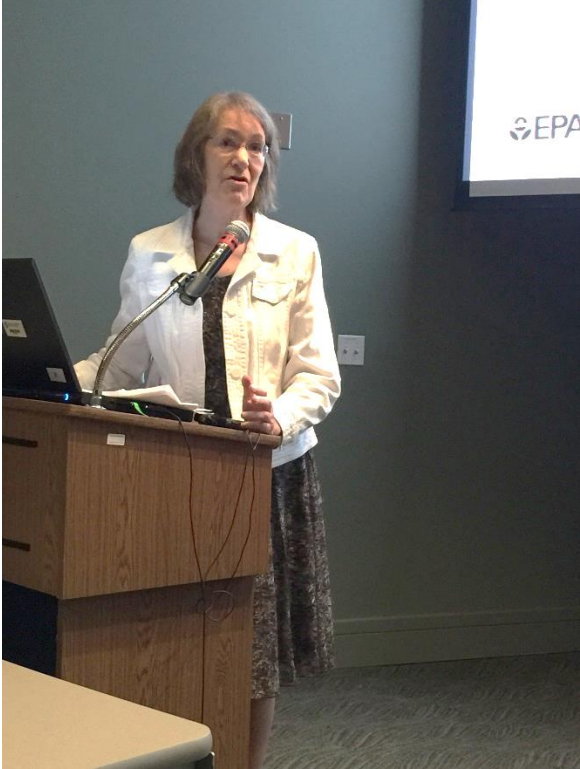
- Identify methods to develop health posters reaching children and adults.
- Discuss pre-testing multi-cultural health promotion posters.

#### Conclusions:

- Our changing roles to teach and reach pediatric patients and parents: 1) Developers: posters, brochure; 2) Reviewers: new apps, sites; 3) Evaluators: accuracy.
- Poster health information also used with mobile technology
- Health educators and clinical staff may collaborate for using or developing health posters.
- Cost is incurred to use print materials or mobile technology – which works and can we use both?

Attachment "C"  
Symposium Photos

Children's Environmental Health on the Border Proceedings



# Children's Environmental Health on the Border Proceedings



Children's Environmental Health on the Border Proceedings



Attachment 1  
Symposium Agenda



## **Children's Environmental Health on the Border: Protecting Children Where They Live, Learn, and Play**

**September 24-25, 2015**

**Texas Tech University Health Sciences Center – El Paso  
El Paso, Texas**

### **Background**

The U.S. Environmental Protection Agency continues to work with its partners to address binational environmental challenges and disproportionate health impacts that burden Border communities, especially as they impact children. Health impacts include mismanagement of pesticides, poor indoor and outdoor air quality, misuse of chemicals and other waste, poor water quality, and binational chemical emergencies. Informing healthcare professionals, public health practitioners, promotoras, and others in the community about the crucial links between the environment and health is an essential step towards improving health outcomes in communities along the Border.

This fall, several groups have come together to address the link between health and the environment, especially where children live, learn, and play. Contributors to this effort include the Southwest Center for Pediatric Environmental Health at Texas Tech, US/Mexico Border Health Commission, the US/Mexico Border 2020 Program, the U.S. Environmental Protection Agency's US/Mexico Border and Children's Environmental Health Programs, and the Border Environmental Cooperation Commission.

### **Symposium as Part of a Larger Border CEH Initiative**

The two main purposes of the symposium are: 1) to increase knowledge of how early childhood exposures can affect children's health; and 2) to facilitate networking among the healthcare community, promotoras, and the public. Two symposia are being planned. The first Symposium will be held in El Paso, Texas in September, and a second one will be held in San Diego, California on January 27-28, 2016. In addition, the Border Health Commission will train promotoras in several communities along the border, and they will be featured during the symposium in El Paso. Housing officials, promotoras, and others will also be trained in the *Essentials of Healthy Homes* training in Hidalgo and Cameron Counties in Texas to further support healthy environments for children.

### **Audience**

Healthcare professionals (i.e., physicians, nurses, mid-level practitioners, and respiratory therapists), public health practitioners, promotoras, and the public are encouraged to attend.

### **Continuing Education Credits**

Medical and nursing school education programs provide little curriculum time dedicated to environmental health. This symposium will provide education regarding some of the major concerns and environmental health impacts upon children.

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of Texas Tech University Health Sciences Center El Paso, Paul L. Foster School of Medicine, US-MX Border 2020 Program, West Texas Regional Poison Center, University Medical Center of El Paso and Border Environment Cooperation Commission. Funding provided by the U.S. Environmental Protection Agency.

Texas Tech University Health Sciences Center El Paso, Paul L. Foster School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

Texas Tech University Health Sciences Center El Paso, Paul L. Foster School of Medicine designates this live activity for a maximum of 11.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

University Medical Center of El Paso is an approved provider of continuing nursing education by the Texas Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

This course has been approved for up to 11.75 continuing nursing education contact hours.

Sponsored by Texas Tech University Health Sciences Center El Paso – Southwest Center for Pediatric Environmental Health, a designated provider of continuing education contact hours (CECH) in health education by the National Commission for Health Education Credentialing, Inc. This program is designated for Certified Health Education Specialists (CHES) and/or Master Certified Health Education Specialists (MCHES) to receive up to 11 total Category 1 continuing education contact hours. Maximum advanced-level CECH hours available are 2.



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### Symposium Format and Agenda Topics:

#### Day 1

The morning will feature two plenary sessions—climate change impacts on children’s health, and prenatal exposures. The afternoon will focus on *childhood breathing—healthy lungs and good indoor air quality*. Sessions will include presentations and panel discussions on e-cigarettes, hydraulic fracturing concerns, carbon monoxide, asthma, and lead. There will also be a special session from promotoras working the border area who were recently trained as part of the 2015 Border Health Initiative.

#### Day 2

The morning will feature three plenary sessions that examine the environments *where children learn and grow* and how environmental disruptions such as toxic substances and homelessness can impact children. There will also be sessions on the top children’s environmental health concerns and an open forum to ask specific questions about environmental health impacts. The afternoon sessions will build upon this theme and look at specific illnesses and social and environmental situations that can impact children’s health.

**PLEASE NOTE:** The two concurrent tracks will focus on **medical** and **public health** issues. Asterisks [\*\*\*] after a session title indicates a public health track.

Day 1 Thursday, September 24, 2015		
8:00 - 9:00	<b>Registration</b>	
9:00 - 9:30	<b>Opening Remarks</b> Samuel Coleman, P.E., Deputy Regional Administrator, U.S. EPA, Region 6 Ron Curry, Regional Administrator, U.S. EPA, Region 6 Jane Nishida, JD Director, U.S. EPA, Office of International and Tribal Affairs J.M. de la Rosa, MD, FAAP, U.S.-MX Border Health Commission Member - Texas	AEC Auditorium
9:30 - 10:30	<b>Plenary Session 1</b> Climate Change Impacts on Children’s Health, Ruth Etzel, MD, PhD	AEC Auditorium
10:30 - 10:45	Break	
10:45 - 11:30	<b>Plenary Session 2</b> Environmental Contaminants and Reproductive Health: What Should We Tell Our Patients? Marya Zlatnik, MD, FACOG	AEC Auditorium
11:30 - 1:00	<b>Lunch and Video:</b> <i>The Last Ride</i> , Larry Lowry, PhD	AEC Auditorium
1:00 - 1:45	<b>Concurrent Session 1</b> Track A - E-Cigarettes Toxicity: The Risk to Children, Susan Smolinske, PharmD, DABAT Track B - *** Carbon Monoxide: Odorless, Colorless, Borderless, Carl Baum, MD, FAAP, FACMT	MEB 1100 MEB 1200
2:00 - 2:45	<b>Concurrent Session 2</b> Track A - Health Impacts of Unconventional Petroleum Exploration on Children Stephen Borron, MD, MS, FAACT, FACMT Track B - *** E-Cigarettes: Talking Tech with the New Generation, Stormy Monks, MPH, PhD, CHES and Scott Crawford, MD	MEB 1100 MEB 1200
3:00 - 3:45	<b>Concurrent Session 3</b> Track A - Lead poisoning, Jennifer Lowry, MD, FAAP, FACMT Track B - *** Asthma and Lead Home Interventions, Marcus Hanfling, MD, FAAP	MEB 1100 MEB 1200
4:00 - 5:00	<b>Concurrent Session 4</b> Track A - Lead and Asthma Panel Discussion, Karin Hopkins, MPH, Cristina M. Baker, MPH, Jennifer Kamik, MPH, facilitated by Marc Hanfling, MD, FAAP Track B - *** Promotoras on Asthma and other CEH issues Panel Discussion, Leah Whigham, PhD, FTOS, Celina Alvarado Gamiño and Emilio Saenz, B.S. facilitated by Patricia M. Juárez-Carrillo, MPH, PHD	MEB 1100 MEB 1200

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Day 2 Friday, September 25, 2015		
8:00 – 8:30	<b>Registration</b>	
8:30 – 9:00	<b>Opening Remarks</b> Susan Forster-Cox, Ph.D., U.S.-Mexico Border Health Commission Member - New Mexico José L. Velasco, Executive Director, U.S.-Mexico Border Health Commission – U.S. Section Bradley P. Fuhrman, MD – Dept. Chair of TTUHSC Dept. of Pediatrics, Physician-in-chief El Paso Children's Hospital	AEC Auditorium
9:00 – 9:45	<b>Plenary Session 3</b> Mercury Exposure in the School Environment, Kurt Kleinschmidt, MD, FACEP, FACMT	AEC Auditorium
9:45 - 10:45	<b>Plenary Session 4</b> Childhood Homelessness and Insecurity and Their Effects on Health Dr. Gilbert Handal, MD, FAAP	AEC Auditorium
10:45 - 11:00	Break	
11:00 – 12:00	<b>Plenary Session 5</b> Pediatric Environmental Health Specialty Units, Panel on Top Ten Environmental Health Concerns Facilitated by Stephen Borron, MD, MS, FAACT, FACMT – Marcus Hanfling, MD, FAAP, Jennifer Lowry, MD, FAAP, Larry Lowry, PhD, Mark Miller, MD, MPH	AEC Auditorium
12:00 - 1:00	Lunch	AEC Auditorium
12:15 – 1:00	<b>Open Forum – "Promotoras working in the Community" with Ruth Etzel, MD, PhD</b> Panelists: Sue Forster-Cox, PhD, MPH, MCHES, Angie Sanchez Corral, Olivia Figueroa	AEC Auditorium
1:00 – 1:45.	<b>Concurrent Session 5</b> Track A - Social and Environmental Factors in Pediatric Obesity, Jesus Peinado, MD, FAAP Track B – Childhood Leukemia and the Environment, Mark Miller, MD, MPH Track C – *** Changing Community Culture to Decrease Diabetes, Joseph McCormick, MD	MEB 1120 MEB 1140 MEB 1150
2:00 – 2:45	<b>Concurrent Session 6</b> Track A – Outdoor Air Pollution, Carla Campbell, MD, MS Track B – Valley Fever, Paul Dulin, MA Track C – *** Mosquito Borne Illness, Beatriz Tapia, MD, MPH	MEB 1120 MEB 1140 MEB 1150
3:00 – 4:00	<b>Concurrent Session 7</b> Track A - Drinking Water-Borne Illness in Children, Kristina Mena, MSPH, PhD and William Hargrove, MS, PhD Track B – Pesticide Exposure, Janett Santos, MD Track C – *** Designing Multi-cultural Health Posters for Children and their Parents, Margaret Short, DMin, MA, MDiv, PDiv, BCC and Dr. Cynthia Kratzke, PhD, CHES	MEB 1120 MEB 1140 MEB 1150

Attachment 2

Symposium Presentations

Can be found on [www2.epa.gov/border2020](http://www2.epa.gov/border2020)