

Collaborative on Health and the Environment



eNewsletter - September 2011

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From Puzzle to Mystery: More Data Isn't Enough to Address Public Health Problems

Malcolm Gladwell describes the difference between a puzzle and a mystery in one of his essays entitled "Open Secrets" from his recent book *What the Dog Saw*. He suggests that when you're trying to work out a puzzle, you simply need to collect more information in order to uncover what is hidden or obscured -- and thus solve the puzzle. Figuring out a mystery, however, is more complex. Often more information is not useful, and even counterproductive, because it muddies the waters, according to Gladwell. Instead, what is often needed is a better, smarter analysis of information already available and the ability to take effective action based on that analysis. Gladwell uses examples such as Enron, World War II, Watergate and Al Qaeda to demonstrate how puzzles and mysteries are distinct and therefore need different responses.

I think this distinction is useful to apply to the environmental health field as well. Over the years, many of us (including yours truly) have viewed environmental health related concerns as puzzles to figure out. By this, I mean we have sought more information -- more facts, graphs, methodologies, and so forth, believing that if we could just bring more data to light, we would solve the puzzle and improve public health. This method has worked to a certain point. For example, with increasingly sophisticated scientific tools over the last century, what were considered "safe" thresholds of exposures to lead and mercury have dropped and dropped to the point where many researchers think that any exposure to these heavy metals can have some negative impact on neurodevelopment.

But with the recent revolution in science regarding endocrine disrupting chemicals and how even minute exposures in utero at certain developmental windows can have lifelong impacts, we have come to realize that simply collecting more and more data is not adequate. In other words, what seemed like a puzzle -- using Gladwell's framing-has transformed into a mystery.

In fact, the magnitude of information we have is so vast, and growing daily, that our greater challenge is not uncovering more, but making sense of what we have -- and in turn, acting on it effectively. Public health policies and legal structures are still based on old toxicological and risk assessment methods that do not incorporate systems thinking and cumulative impacts. This means that we are not addressing the realities of the human experience across the lifespan -- including the myriad and interacting factors from socioeconomic status to toxic exposures that impact our health. In short, the real problem is that we, collectively, aren't making very good use of what we know.

More skilled and wise discernment is clearly needed. As partners of CHE, you are already working to solve this increasingly complex mystery using a variety of strategies. As collaborators in this process and given your own expertise, your ideas about how CHE might be more effective in our collective efforts would be greatly welcomed. To that end, please take a few moments to respond to our survey if you haven't already (complete the CHE Partner survey -- open until September 19th). As CHE moves towards its 10th anniversary, your insights and ideas will help inform and enrich our deliberations at the upcoming retreat of the core leadership of CHE in October.

Many thanks for your ongoing contributions, dedication and partnership, Flise

Elise Miller, MEd

Director, Collaborative on Health and the Environment (CHE)

This essay is available on CHE's blog for comment and further discussion.

CHE Partnership Calls

CHE Partnership call: Air Pollution and Neurodevelopment: How Prenatal Exposures May Impact I.Q.

Tuesday September 27, 2011 at 10:00 am Pacific / 1:00 pm Eastern

RSVP for this call

Air pollution is most often seen as a contributor to children's asthma and other respiratory problems. Emerging research, however, suggests that air pollution is linked to neurodevelopment concerns as well. Studies recently published in Pediatrics and Environmental Health Perspectives, in fact, found lower I.Q. levels in the children of mothers who were exposed during pregnancy to an array of pollutants, including polycyclic aromatic hydrocarbons (PAHs) and organophosphate pesticides. Given school is back in session, how a child performs on I.Q. tests and other exams is a heightened concern for parents and school administrators. This research suggests that some kids may have a more challenging time reaching their full potential because of these early life exposures to air pollutantants. On this call on Tuesday September 27, 2011 at 10:00 am Pacific / 1:00 pm Eastern, leading researchers will discuss their recent findings as well as the potential implications for children's neurodevelopment.

Featured speakers include:

- Frederica Perera, DrPH, Director, Columbia Center for Children's Environmental Health and professor of Environmental Health Sciences at Columbia University Mailman School of Public Health
- Heather Volk, PhD, MPH, Assistant Professor of Research, Departments of Preventative Medicine and Pediatrics, Zilkha Neurogenetic Institute, Keck School of Medicine of University of Southern California

The call will be moderated by Elise Miller MEd, Director, CHE. The call will last one hour and will be recorded for archival purposes.

Special Events and Announcements

CHE Partner survey: CHE is nearing its 10-year anniversary. As a part of our process of looking forward to the next ten years we are asking CHE Partners to complete a brief survey. Responses will help CHE to strategically plan for the future. We appreciate your input.

Take the survey

CHE-LDDI and ASA co-sponsor state-based workshops on environmental influences on neurodevelopment: CHE-LDDI and the Autism Society of America (ASA) are co-sponsoring 3 state-based workshops in North Carolina, Texas and California. The workshop is titled: *Environmental Influences on Neurodevelopment: Translating the Emerging Science into Public Health Policy*.

Read more

Save the Date! Promoting Intergenerational and Environmental Health Across the Lifespan conference announced for 2012: CHE and the Healthy Aging and the Environment Initiative are partnering with AARP, the US EPA Aging Initiative, The Intergenerational School, The Whole Child Center, The Center for Children's Environmental Health Center at Mt. Sinai Medical Center, Gray is Green, and WEACT for Environmental Justice to organize a conference, entitled Promoting Intergenerational and Environmental Health Across the Lifespan, to be held in New York City in June 7-8. 2012. This day and a half, interactive event will focus on diverse factors that influence both human and ecological health across the lifespan. These include the many levels of the built, food, chemical, psychosocial, and socioeconomic environments, and the practices and policies that promote or impede health at all ages. The conference venue is the newly renovated New York Academy of Medicine, that offers us not only programmatic partnership, but will help us fulfill our goals to conduct an ecologicallysustainable and multicultural conference serving the needs of all ages and all communities. More detailed information and registration information will be posted as it becomes available.

Download and print the Save the Date card

Community-Based Research Infrastructure to Better Science (CRIBS):

Applications are now open for an innovative training program in community-based participatory research (CBPR) hosted by the California Breast Cancer Research Program and Commonweal. This online and face-to-face program is designed to help community and academic partners build stronger teams and grant proposals to receive funding for CBPR that addresses the environmental causes of and/or social disparities in breast cancer. The face-to-face 2-day sessions (Fri/Sat; for a total of 10 days) and online portion of the training will run from January through May 2012. A mock proposal review session will take place in the Fall of 2012.

The deadline for applications is 5:00 pm Pacific September 30, 2011.

The Intensive Training Program will help partnerships learn to:

- Build and maintain healthy collaborative partnerships
- Understand the environmental causes of and disparities in breast cancer
- Understand scientific/CBPR methods for researching these topics
- Write competitive grant applications
- Identify potential funders

Who is Eligible to Apply?

• Partnership of 2-3 individuals (at least one academically-trained scientist and at

least one community member)

- Applicants much be California residents
- Interested in the environmental causes of breast cancer and/or disparities in breast cancer
- Able to participate in all five 2-day face-to-face trainings
- Able to access a computer throughout the six month training program
- Willing to participate in the evaluation of the training program

Applicants do not have to have a history of working together to be eligible to apply, though we do welcome applications from existing partners. Transportation, housing, and food for the face-to-face trainings are free to participants. Each individual participant will receive a stipend (up to \$2,000.00) for full participation in the program. For more information or to request an application for the intensive training program please contact community@cabreastcancer.org or visit: http://www.cbcrp.org/community/cribs itp program.php

Potential applicants are also invited to listen to a recording of a past "How to Apply" webinar that provides information on the application process. It will be posted on the California Breast Cancer Research Program website. Please contact community@cabreastcancer.org for details.

CHE Environmental Health Primary Prevention Training: CHE is hosting a series of trainings on breast cancer and environmental health science. These trainings will focus on teaching evidence-based science in lay language to be used in a range of settings, including advocacy, determining research priorities and public education. The goal is to provide basic scientific knowledge so trainees can become more effective as champions for a healthier world.

The next trainings will take place September 27-29 and November 7-9. All trainings will be held at Commonweal in Bolinas, CA.

Training topics include:

- · Overview of healthy breast development.
- Origins of breast cancer.
- Exposures to toxic chemicals throughout the human life cycle, and how they can increase risk for disease.
- The use of biomonitoring (measuring environmental chemicals in the body) as an education and advocacy tool.
- The "web of causality" that makes breast cancer etiology so complex to fully understand.
- How to respond effectively when there is not scientific certainty also referred to as the precautionary principle.
- Practical exercises using your scientific understanding to strengthen your advocacy efforts.
- Suggestions for steps in your daily life that can reduce risk.

For more information, please contact Heather Sarantis of Commonweal at heather@healthandenvironment.org. An application form is available on the CHE website. Please visit: http://www.healthandenvironment.org/ehtraining

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Resources from recent CHE calls:

If you missed any of the following CHE calls, you may listen to MP3 recordings and find supporting materials at the following links:

- July 21, 2001 Breast Health and Early Life Exposures
- July 12, 2011 The World Gets Hot(ter) with Mark Hertsgaard
- June 30, 2011 Navigating the Science: Evaluating Research Quality

And of course, you can always explore our archived resources

CHE Working and Regional Group Updates

Stay in touch with CHE via Facebook and the CHE blog:

Visit CHE's blog at http://ourhealthandenvironment.wordpress.com/ CHE's Facebook page

New working groups reminder:

CHE recently established to new working groups. To learn more or join any of CHE's working groups, please see the links below.

CHE Climate Change

Visit the CHE Climate Change working wroup webpage

CHE Pet

Visit the CHE Pet working group webpage

Cumulative Impacts Working Group hosted by CHE and SEHN

- ~ coordinated by Elise Miller and Carolyn Raffensperger, for more information visit the <u>Cumulative Impacts website</u>
- ~ Upcoming working group calls:

Emerging Trends in the Field of Cumulative Impacts Tuesday September 20, 2011 at 11:00 am Pacific / 2:00 pm Eastern

This call is a general meeting of the Cumulative Impacts Working Group. The group will discuss upcoming activities and Nancy Myers, Science and Environmental Health Network (SEHN), will update the group on current trends in the field of cumulative impacts.

To participate, please use the following dial in information:

1-270-400-2000

Access code: 198686#

No Borders: Communities Living and Working with ASARCO, a discussion with Lin Nelson and Anne Fischel

Monday October 3, 2011 at 11:00 am Pacific / 2:00 pm Eastern

Join the Cumulative Impacts Working Group for a discussion featuring Anne Fischel and Lin Nelson faculty members at The Evergreen State College in Washington State, who coordinate and lead the project "No Borders: Communities Living and Working with Asarco." In May 2010 they were part of a delegation visiting Cananea, Mexico, site of a major strike and public health and environmental crisis tied to the operation and impacts of Grupo Mexico (now the owner of Asarco). In collaboration with delegation colleagues from the University of Missouri-Kansas City, Indiana University and University of Minnesota, along with Evergreen student Alex Becker, they did filming, photography, interviews and investigative research on the situation in Mexico and its links to Asarco in the US. They presented their report, "Crossing the Border to Cananea: High Stakes & Teachable Moments for North American Workers," on March 23 in New Orleans at the annual meeting of the United Association for Labor Education. The Cananea delegation report is part of the larger "No Borders" project which explores the impacts of one major corporation on public health in communities in AZ, TX and WA. The project is now online at www.theirminesourstories.org. Anne & Lin will discuss the evolving project and their collaborations with concerned citizens in these different communities.

To participate, please use the following dial in information:

1-270-400-2000

Access code: 198686#

The call will be moderated by Elise Miller, Director, CHE and Carolyn Raffensperger, Executive Director, SEHN. The call will last one hour and will be recorded for archival purposes.

CHE Diabetes-Obesity Spectrum

- ~ coordinated by Sarah Howard, for more information contact info@healthandenvironment.org
- ~ **New Practice Prevention column**: CHE has published a new practice prevention column on obesogens.

Download and read the column

- ~ Working group call: The working group hosted a strategic planning call on September 14, 2011 at 10:00 am Pacific / 1:00 pm Eastern. Notes from the call and announcements about future calls will be distributed to the listserv.

 Read more about the call
- ~ **New Zotero group**: We have created a new group called "diabetes and environment" on www.zotero.org. Anyone can join the group, which is free and only requires installing the software on your computer. Here you can access a searchable database of thousands of studies on diabetes (of any type), obesity, chemicals, and other environmental factors. Members can add new studies to the database, or add them as citations to Word documents and other publications. Zotero is a useful tool for sharing research studies online.
- ~ Conference on diabetes and obesity: The Environmental Health Strategy Center and the Goldfarb Center at Colby College are sponsoring a conference on "Chemicals, Obesity, and Diabetes: How Science Leads Us to Action" on Friday, October 14, 2011 in Waterville, Maine.

Read more

~ New research published in academic and scientific journals:

A four part series about obesity in the Lancet: http://www.thelancet.com/series/obesity

Airaksinen R, Rantakokko P, Eriksson JG, et al. 2011. Association Between Type 2 Diabetes and Exposure to Persistent Organic Pollutants. Diabetes Care PM [pubmed ID number]:21816981.

Del Razo LM, Garcia-Vagras GG, Valenzuela OL, et al. 2011. Exposure to arsenic in drinking water is associated with increased prevalence of diabetes: a cross-sectional study in the Zimapan and Lagunera Regions in Mexico. Environ. Health 10(1):73.PM: 21864395.

Dijkema MB, Mallant SF, Gehring U, et al. 2011. Long-term Exposure to Traffic-related Air Pollution and Type 2 Diabetes Prevalence in a Cross-sectional Screening-study in the Netherlands. Environ. Health 10(1):76. PM: 21888674.

Lee DH, Lind L, Jacobs DR, Jr., et al. 2011. Associations of persistent organic pollutants with abdominal obesity in the elderly: The Prospective Investigation of the Vasculature in Uppsala Seniors (PIVUS) study. Environ.Int. PM: 21835469.

Lee HK. 2011. Mitochondrial dysfunction and insulin resistance: the contribution of dioxin-like substances. Diabetes Metab J. 35(3):207-215. PM:21785739.

Mo J, Xia Y, Wade TJ, Demarini DM, Davidson M, Mumford J. 2011. Altered gene expression by low-dose arsenic exposure in humans and cultured cardiomyocytes: assessment by real-time PCR arrays. Int.J.Environ.Res.Public Health 8(6):2090-2108. PM:21776218.

Simpson M, Brady H, Yin X, et al. 2011. No association of vitamin D intake or 25-

hydroxyvitamin D levels in childhood with risk of islet autoimmunity and type 1 diabetes: the Diabetes Autoimmunity Study in the Young (DAISY). Diabetologia PM: 21858504.

Wang C, Xu CX, Krager SL, et al. 2011. Aryl Hydrocarbon Receptor Deficiency Enhances Insulin Sensitivity and Reduces PPAR-alpha Pathway Activity in Mice. Environ. Health Perspect. PM: 21849270

Xu X, Liu C, Xu Z, et al. 2011. Long-Term Exposure to Ambient Fine Particulate Pollution Induces Insulin Resistance and Mitochondrial Alteration in Adipose Tissue. Toxicol.Sci. PM: 21873646.

Xu Z, Xu X, Zhong M, et al. 2011. Ambient Particulate Air Pollution Induces Oxidative Stress and Alterations of Mitochondria and Gene Expression in Brown and White Adipose Tissues. Part Fibre. Toxicol. 8(1):20. PM: 21745393.

Yan YH, Chou CC, Lee CT, et al. 2011. Enhanced insulin resistance in diet-induced obese rats exposed to fine particles by instillation. Inhal.Toxicol. PM: 21736501.

Zuo Z, Chen S, Wu T, et al. 2011. Tributyltin causes obesity and hepatic steatosis in male mice. Environ. Toxicol. 26(1):79-85. PM: 19760618.

CHE Fertility

- ~ coordinated by Karin Russ, karin@healthandenvironment.org
- ~ NIH Road Map: NIH is requesting input on ideas for the Common Fund. Ideas will be used to create an NIH Road Map. One proposed area of study is "Developmental Origins of Health and Disease: Disease Prevention Across Generations". To comment, go to http://commonfund.nih.gov/strategicplanning/ and select Developmental Origins of Health and Disease in the column on the right. Here you may add your name and state why this topic is critical for funding.
- ~ Speaker recommendations requested: The 2012 Society for the Study of Reproduction (SSR) Program Committee would like your suggestions for minisymposia speakers at the 2012 annual meeting on the Penn State campus. SSR was founded in 1967 to promote the study of reproduction by fostering interdisciplinary communication among scientists, holding conferences, and publishing meritorious studies. Please submit your suggestions using the online form: http://www.ssr.org/12ProgSug.shtml no later than Sept. 26th.
- ~ CDC National Action Plan for Prevention, Detection, and Management of Infertility: The Centers for Disease Control and Prevention is developing a report that will identify public health priorities regarding prevention, detection, and management of infertility. The goal of the NAP is to promote, preserve, and restore the ability of U.S. women to conceive, carry a pregnancy to term, and deliver a healthy child. The CDC welcomes questions, comments, and input on the National Action Plan for infertility through its website. To provide input, go to: http://www.cdc.gov/reproductivehealth/Infertility/PublicHealth.htm
- ~ Study: UV blocker curtails male hormone: Researchers have discovered that an ultraviolet (UV) radiation blocker designated BP2 that is found in a variety of cosmetics and personal care products, decreases testosterone hormone production in both cultured human testes cells and in male mice. This is the first study to report that BP2 exposure can impact reproductive processes in mammals, including human cells. Read more
- ~ Study: Prenatal phthalate exposure and infant neuro and motordevelopment: Increasing exposure to phthalates in pregnant women was associated with poorer development in their baby boys, finds a study that examined mental and motor skills in 6-month-old infants. Researchers with the Prospective Mothers and Children's

Environmental Health (MOCEH) Study examined data from 460 mother/infant pairs in Korea. Results show that the higher the exposure to phthalates in the moms, the lower the scores of infant development, including both cognitive and motor behavior. However, the association was only identified in sons, not in daughters. *Environmental Health Perspectives*.

Read more

CHE-LDDI

- ~ coordinated by Elise Miller, for more information contact info@healthandenvironment.org
- ~ **State-based workshops announced**: CHE-LDDI and the Autism Society of America (ASA) are co-sponsoring 3 state-based workshops in North Carolina, Texas and California. The workshop is titled: *Environmental Influences on Neurodevelopment: Translating the Emerging Science into Public Health Policy*.

During these workshops, national experts from diverse sectors will highlight the latest research on associations between environmental exposures and neurodevelopment as well as the implications for prevention-based public health policy. This meeting is intended to catalyze cross-discipline discussions among leaders in environmental, experimental and epidemiologic fields as well as those involved in public policy and environmental health advocacy.

Workshops are open to the public. Faculty, students, policy makers, and others concerned with environmental influences on neurodevelopment and public health are particularly encouraged to attend.

Workshop dates and locations:

- November 2, 2011 Research Triangle Park, North Carolina
- November 15, 2011 Dell Children's Medical Center, Austin, Texas
- January 12, 2011 UCLA, California

More information, including registration information

~ Autism and the environment webinar: Please join the Autism Society from your home computer on Saturday, September 24, at noon Eastern as we welcome Dr. Suruchi Chandra and Dr. Anju Ussman to discuss *Autism and the Environment II: What We Know for the Clinic and Home*. These two clinicians will discuss integrative medicine treatments for autism, summarize recent research of environmental exposures and the developing brain, and present steps that can be taken at home and in school to optimize a person with autism's environment. This webinar is free and all are welcome. It is the second in our two-part series, and will be recorded and archived on the Autism Society website for future reference.

Details and registration information

CHE Regional Working Groups Updates

- ~ CHE Washington
- ~ coordinated by Steve Gilbert, sgilbert@innd.org and Aimee Boulanger, aboulanger@whidbey.com
- ~ CHE-WA Children's Environmental Health working group hosted meeting: The Children's Environmental Health sub-working group held a meeting on September 8, 2011. Roxanne Green, Health and Beauty Coordinator at PCC Natural Markets and President of the Natural Products Association Northwest, discussed the history, process and successes of this groundbreaking effort. She was joined by Wendy McLain, Health and Beauty Aids Merchandiser for PCC.
- ~ WSEHA children's environmental health trainings: The CHE-WA Children's

Environmental Health sub-working group partnered with the Washington State Environmental Health Association to develop and present their first Children's Environmental Health trainings. In August 2011 three trainings were held in Shoreline, Tumwater, and Spokane. Forty-three people attended. At least one attendee will be sharing the information with her staff, further extending the training's reach. The working group members who developed and presented this training were Lauren Jenks (WA DOH), Nicole Thomsen (PH-S&KC/LHWMP), Aileen Gagney (ALA), Holly Davies (DOE), and Margo Young (EPA) with Gail Gensler (LHWMP) organizing the events.

Download the presentations and handouts

Presentations cover:

- An introduction to children's environmental health
- How to identify and remediate common home environmental health hazards
- Possible sources of lead exposure, including ethnic remedies, among children in Washington
- Recommendations for future public health activities at the state and local levels to improve children's environmental health
- ~ **Lessons Learned**: Steve Gilbert publishes a monthly column in the CHE-WA bulletin titled *Lessons Learned*: *Look back to go forward*. In these columns Gilbert explores lessons and important events in environmental science from history and how those events have shaped or continue to influence our future. You can read past columns at: http://toxipedia.org/x/06Jb.

Announcements and News Highlights

Passport Foundation welcomes request for proposals:

The Passport Foundation's Science Innovation Fund is now accepting requests for proposals. The proposal submission deadline is October 20, 2011. The Fund, described in greater detail in the RFP, was established in 2009 by Passport to increase understanding of the impacts of hazardous chemicals on human health. Project results must have strong potential to inform and build support for significant changes in public policies or clinical practices.

For more information or to request a RFP contact info@passportfoundation.org

American Medical Association calls for Chemical Policy Reform

In a strongly-worded editorial titled Time for new policy on environmental risk, the AMA in August noted "more needs to be done to assess the risk of chemicals in the environment".

This statement focuses on BPA as "the poster child illustrating the need for a better, more efficient way to research and take action" and results in large part due to policy resolutions submitted by CHE partners and others working within the AMA policymaking process. A decade ago, during our early discussions about CHE goals, one was to involve the medical profession as much as possible, as physicians are still viewed with respect in public policy circles. It is gratifying to see the AMA statement and we will continue to work with medical leadership on CHE topics. - Steve Heilig, for CHE Read the editorial

September 2011 issue of *Environmental Health Perspectives* available online Read more

September 2011 issue of *Environmental Factor* available online Read more

CHE maintains a <u>news feed</u> of environmental health related news announcements and events collected from a multitude of sources on CHE's website.

Reports, Resources and Other Update

New study: Phthalates affect child development: Researchers from Columbia University have found a significant link between pregnant women's exposure to phthalates, used in all kinds of consumer products including flooring, cars and cosmetics, and negative impacts on their children's development. Three phthalates were significantly associated with behavioral disorders, or behavioral problems: anxious, depressed behaviors, emotionally reactive behaviors, withdrawn behavior. *Environmental Health Perspectives*.

Read more

New report: Making the case for Health Impact Assessments: A report released this month by the National Academies' National Research Council provides a ringing endorsement of Health Impact Assessments. The report not only provides guidelines for conducting these analyses, but also argues for their value on both public and private construction projects.

Read more

CHE lists hundred of reports, books, videos, databases and other resources in a searchable Portal to Science on CHE's website.

Thank you for taking the time to read the latest about CHE. As always, we welcome your questions and suggestions. Please direct comments to Elise Miller, Director of CHE, at elise@healthandenvironment.org.

Best wishes,

Elise Miller, MEd, Director

Steve Heilig, Director of Public Health and Education at San Francisco Medical Society and CHE

Erika Sanders, Administrative Coordinator

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