

Comments to Special Report on Toxic Chemicals and Children's Health in North America (DRAFT)

As a pediatrician, epidemiologist and environmental health advocate I very much welcome the report because it would be impossible for me to gather and organize these publicly available data from the National Pollutant Release Inventory (NPRI) in Canada and the Toxics Release Inventory (TRI) in the US.

Since North America has the highest per capita ecological footprint of any region on earth, this report sheds light on a big problem. It is a sober, matter of fact report and I appreciate that it is not glossed up.

In general, the report gathers strength in chapter 3. Chapter 1 and 2 are less well written.

Chapter 1 Children in North America

Chapter one has the opportunity to make an impression with important points at the very beginning of the report. I find Table 1 with its focus on mortality misleading because it does not give critical contextual information:

First, mortality due to birth defects is the tip of an iceberg barely explored.

Second, *mortality* due to birth defects more likely reflects the strength of the respective healthcare system as it is heavily influenced by preterm birth rate. It says very little about the *frequency of birth defects*, which is unknown because good birth defect registries are few and far between, at least in the US. It says even less about the frequency or actual environmental exposures leading up to the birth defects. Lastly, definitions of *what constitutes* birth defects vary across nations and states.

This contextual information should be included, as it has been from Chapter 3 onward.

Chapter 2 Toxic Chemicals and Children's Health in North America

The statement "Reported asthma prevalence is higher in the US and Canada" Page 31, is misleading. One might say "*appears to be higher*". First it is completely unknown how high the *actual* asthma prevalence in Mexico is because there is no epidemiological tracking. Second, it is unknown how high it would be, given the same access to healthcare and as in Canada or the US.

Unless the basic epidemiologic measurement tools are the same the authors should refrain from making any inference on triggering factors, such as air pollution or immunomodulatory effects, that Mexican children are exposed to. Maybe a clarifying sentence, inserting "*appears*" and putting "*reported*" in italics would call attention to this problem.

Chapter 3: Releases of Chemicals: Data from Industrial Pollutant Release and Transfer Registers (PRTR, p 32)

I praise the idea to start with a disclaimer for PRTR's. This should have been done for the data in Chapter 1 and 2 as well.

Towards the end of the chapter tables appear to get repetitive.

The idea to consider combined carcinogens, developmental toxicants and neurotoxicants releases is a good one (figure 11 page 49, 50). However the conclusion of an overall release decrease by 12%, from aggregating the data is a well known epidemiological paradox: On further inspection it appears that offsite releases increased at least in US. This is not good, as it suggests more difficult tracking and possibly detection (esp. with underground injection) in the future.

The chapter presents excellent information on lead starting page 62.

It is a brilliant idea to make protecting arctic children a topic (page 74). I suggest to choose a similar example in Mexico and the US (Native American children?).

Chapter 4: What's Being Done to Protect Children's Health from Toxic Chemicals?

I know how proud ATSDR of their Pediatric Environmental Health Specialty Units is and how faithfully they are mentioned by its followers. However, from my perspective in Minnesota they are too few and far between to have a real impact on education and medical services in pediatric environmental health at this time. If no coalition with existing clinics and hospitals in *every* state is forged, they are at risk of being just "special centers". The hospitals for a healthy environment coalition (H2E) seeks to reduce waste, phase out persistent bioaccumulative pollutants and promotes green purchasing (such as PVC free infusion bags, esp. for premies). This network is far greater and bigger in influence, as it includes clinics in every state. Churches have mobilized: United States Conference of Catholic Bishops <http://www.nccbuscc.org/sdwp/national/children.htm> Interfaith coalitions re ped env health have been launched like the National Religious Partnership for the Environment.

Chapter 5: What Needs to be done to Protect Children's Health from Toxic Chemicals

I like the listing of the 5 activities. An illustration that prioritizes and interrelates them would be helpful to better describe the anatomy of the needed shift in consciousness. What needs to be done is that we make fundamental ecologically responsible changes in education, national and international institutions, trade agreements, resource use practices, development models, and in our personal lives.

The paragraph on "Actions to reduce releases of toxic chemicals" however is unduly cryptic ("programs in place") and overly cautious. The paragraph on page 73 repeats what has been carved out in previous chapters (handful of facilities, few states...). It mentions "targeting facilities", but does not complete the action (targeting for what?).

I does not clearly spell out the decentralized postmodern multiprong-approach of legislative, economic, R&D and grassroot measures: eg regulations, policies, fines, taxation for lifecycle cost on the one hand and the need to breakdown industrialism, an *end* to anthropocentrism and authoritarianism, subsidizing clean efficient industries and services and the need for green energy on the other hand. It barely spells out direct public pressure, although it mentioned local action/community input at schools. Precautionary principles should be advised. Consider inserting ecophilosophy links. A little bit of interdisciplinary work as for example environmental accounting would be helpful. As long as my power supplier can advertise coal as "cheapest fuel type" [and wind most

expensive and least reliable without mentioning photovoltaic at all] work to show the hidden environmental and health expenses needs to be done. The distinction to shallow quick, technical fixes and pursuit of business as usual without any deep value questioning or long-range changes needs to be made.

Also, please correct the “In Press “ part for Wigle, D.T. Child Health and the Environment. It was published by Oxford University Press in 2003!

References:

Correct the “In Press “ part of the reference for Wigle, D.T. Child Health and the Environment. Oxford University Press published 2003.

Appendix B: To increase accuracy one could print “suspected” chemicals in a lighter shade than known carcinogens/ neurotoxicants.

I would add “*known*” to the column of “suspected neurotoxicants” because you list numerous examples of established neurotoxicants (first and foremost lead), not merely “suspected neurotoxicants”.

What is missing?

- It would help to clarify what environmental releases are contained in the report and which ones are not (transportation emissions, radioactive chemicals etc) .
- The interconnectedness of the three countries and their global context could be alluded to briefly (fraction of global releases).
- Toxic releases are a part of the ecological footprint, which analyzes numerous environmental impacts. North America has the highest per capita ecological footprint *of any region* on earth.
<http://www.redefiningprogress.org/programs/sustainabilityindicators/ef/>
At 9.57 hectares per person, the United States has the largest Ecological Footprint of all *countries* on the planet, not too different compared to Canada with 8.56 hectares, but almost 4 times as much as Mexico with 2.56 hectares.
<http://www.unfpa.org/swp/2001/english/figures/index.html>
- The US military is a major polluter in North America. This undisputed fact is not part of the TRI, nor to my knowledge the NPRI. Past burial, dumping practices and leaking underground storage tanks have caused large solvent (TCE) and radioactive plumes contaminating aquifers. Perchlorate groundwater contamination (endocrine disruptor) affects large parts of California and Nevada. Open burn permits for waste or decommissioned ammunition plants contaminate the air with large regional effects.