

► **DirectTalk** MUSINGS FROM THE 10TH FLOOR

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**A**s I write this column it's August, it's unseasonably hot, I'm ensconced in Bethesda, and my head is about to explode! The general chemistry class I labored through at Saint Mary's College seems a lifetime ago. What was *that* definition? A reducing agent ... a compound that loses an electron during a chemical reaction, thus becoming something else in the process. Strong reducing agents easily lose control of their valence electrons, leaving a simpler, more stable atom in its place.

For the last eight hours I've participated in an energetic discussion with a handful of the country's preeminent public health talent. They represent state and local health departments, national membership organizations, academia, and key players in the training and education of the governmental workforce. Who brought us together? The de Beaumont Foundation ([www.debeaumont.org](http://www.debeaumont.org)). Why? To explore opportunities to advance the use of data, informatics, and other surveillance systems in support of informed decision making.

Interest in population health data has grown exponentially of late, in large measure to the 2010 Patient Protection and Affordable Care Act, more commonly referred to as the Affordable Care Act or Obamacare. Among other things, healthcare providers are increasingly motivated to keep people healthy with less financial remuneration for treating illness. I reluctantly accept that healthcare is the 800-pound gorilla in the health world, which drives my cortisol levels skyward. On the other hand, there is very good news—common interests in prevention. Data are a universal language that

## Data: The Grand Simplifier

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creates fertile conditions for collaboration and shared understanding with the clinical side of the house.

The de Beaumont Foundation workshop began its efforts through exploration of the challenges to the public health workforce's efficient and effective use of data, of which the environmental health profession is awash. Participants identified many common workforce development challenges in the current public health informatics environment. A few key challenges that bubbled to the top were:

- lack of agreement on standards of practice,
- lack of tools and guidance documents related to defining requirements and selecting health information systems, and
- balancing innovation with the need to replicate best practices.

Over the last five years I have listened to the frustrations voiced in the environmental health field around issues such as software systems being expensive to customize or amend, uncertainty regarding what to purchase, and a lack of common social space for us to exchange health information systems experiences and recommendations. I grieve over these conditions. Ironically, while many of the de Beaumont Foundation workshop participants suggested that resources to purchase an informatics system were a major limiting factor, I pointed out that our constituents often have these resources, but lack a road map to follow to make informed purchasing decisions.

The state of environmental informatics is puzzling. So, earlier this year I charged our Program and Partnerships Development team to assist me in conceptualizing what NEHA's role in informatics should be. Two of our staff, Christl Tate and Solly Poprish, hosted an excellent day-long forum in Denver that brought together experts representing the fields of private information technology (IT), state and local environmental health departments, and federal agencies. We struggled to answer three basic questions, which I outline below, along with some preliminary conclusions.

### 1. What environmental health informatics problem is NEHA trying to solve?

- Local data are not routinely utilized by the majority of federal databases, which affects the timeliness of data availability.

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- Local health departments (LHDs) don't have resources to analyze data and create meaningful information that can be marketed to the end user and be used for performance improvement and public health promotion.
  - Vocabulary differs across agencies for the same data elements.
  - Cooperative or unified standards for data collection and reporting are lacking.
  - It is difficult for LHDs to report up to federal and state agencies.
  - LHDs often aren't looped back in by federal agencies once their data have been uploaded regarding how or if they are being used.
  - LHDs lack centralized IT systems and similar software among other LHDs and state and federal agencies.
2. What are the knowledge, skills, and abilities environmental health departments need to solve the problem?
- Knowledge of existing models to utilize as a guide for their own adoption of informatics.
  - Better understanding of how the public receives and uses environmental public health data.
  - Knowledge of software capabilities and analysis tools.
  - Understanding of what local environmental health professionals need in order to develop tools for informatics.
- Understanding of how to turn data into information—not just how to collect data, but how to quickly analyze that data.
  - Securing resources (i.e., time and money) to complete data analysis and publish scientific literature as data collection is usually funded, but analysis and sharing are not.
  - Ability to work with federal agencies around data use, collection, analysis, etc.
3. What is NEHA's role in solving the problem?
- Make environmental health data meaningful to local agencies to promote and protect public health.
  - Facilitate value and ease of informatics adoption by LHDs through the provision of models and toolkits.
  - Conduct a needs assessment and gap analysis around collection and use of environmental public health data.
  - Facilitate and act as a steward of the development of data standards for the environmental health community.
  - Market to LHDs to make them aware of opportunities and to promote data sharing and analysis.
  - Advocate for LHD funding to upgrade technology and data analysis abilities.
  - Facilitate conversations at the federal level around environmental public health data to encourage the incorporation of local data into federal level data in a meaningful way.
- I suggest we create a NEHA Community of Solutions to tackle the issues identified above.

The de Beaumont Foundation workshop participants recommended that as we move forward, NEHA should continue the conversation around environmental health and informatics, as well as position itself as a resource for environmental health departments as they transition from data collection systems to informatics systems. What do you think?

Our profession should be the grand public health reducing agent. Let's consider collecting, packaging, and giving away our environmental health data in a manner that creates value for philosophically aligned agencies, sectors, and data users. Healthcare systems, health officials, and citizens at large would love to have access to our retail food inspection data, recreational water data, septic system data, vector data, prison inspection data, body art data, air quality data, and all the other data we collect. In the process, our value and contributions to population health becomes easier to understand and our workforce is more likely to achieve long-term stability and growth. That's a balanced redox equation I can live with. 🐼

*Dave*

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