**President’s Message**

The Curation* of Environmental Health Data

_Every two days now we create as much information as we did from the dawn of civilization up until 2003._

— _Eric Schmidt, Google CEO_

The volume and range of environmental health activities in the U.S. is awe-inspiring. Three to five thousand governmental agencies annually perform an estimated 3.5 million food safety inspections, close more than 20,000 retail food facilities, investigate as many as 40,000 reports of foodborne illness, inspect more than 500,000 pools and spas, and review the hazardous materials practices of more than 25 million businesses. These numbers are all estimates drawn from different sources as there is currently no national database or data repository to accurately track these actions. These environmental health data exist, but they reside in multiple forms and formats, file cabinets and file servers, cardboard boxes, and maybe even some car trunks. It is impractical to think we can easily gather and utilize these data, but we would be negligent if we did not make an honest effort to capture and analyze the available fraction of this useful information.

Virtually every federal, state, and local agency has some means to record their activities and findings. Federal agencies typically will store their information in isolated silos, with little if any coordination among and between the Food and Drug Administration (FDA), U.S. Environmental Protection Agency, Centers for Disease Control and Prevention, Department of Homeland Security, U.S. Department of Agriculture, and others with a national database. State agencies offer a somewhat higher degree of standardized data practices, especially when they have responsibility for monitoring the activities of local agencies. Individual local agencies frequently do a good job of integrating multiple program data, but their sheer numbers ensure widely differing practices.

While environmental health data management is challenging, modern technology may now offer some solutions that may make this task less formidable. The vast majority of all agencies now utilize some form of digital data storage, and many if not most are migrating to web-based application software. The task of sorting the more important components of these data can be initiated now and it will continually ease over time.

The return on investment for collecting, mining, and utilizing these data can be significant. We now have limited-scale studies that correlate levels of regulatory activity to compliance status and the incidence of illness. Agencies that are providing ease in Internet access to inspection records are finding a high level of interest by the general public. National restaurant chains are requesting access to regulatory data that they can use for quality control purposes. All of these activities would be enhanced with a more standardized national data repository.

With so many activities and interested parties, it is easy to be stopped by planning paralysis. We might also be deterred by seeking universal participation or the perfect system. There will be issues with access, security, and quality control that we have previously experienced with nearly all systems. As we have found with the initiation of other significant endeavors, success will likely come with a tenacious approach to successfully completing incremental components.

One promising starting point for establishing a national environmental health data system might be found in the recently passed FDA Food Safety Modernization Act (FSMA). For the past several months I have been a participant in an FDA-sponsored FSMA implementation team that is charged with carrying out the provision in the law that mandates “sharing information on a timely basis among public health and food regulatory agencies, with the food industry, with health care...
providers, and with the public.” The activity to date has been aimed at initially integrating federal and state regulatory information, with plans to subsequently incorporate local agency data and the interests of industry, health care providers, and the public.

As there are fewer than a dozen involved federal agencies, approximately 100 state entities, and thousands of local agencies, it is logical to begin with federal and state information sharing. Local environmental health jurisdictions do not have to necessarily be far behind, especially as many large local agencies may already be prepared to participate in information exchanges. For example, the retail food safety program in Los Angeles County serves a population of nearly 10 million residents and several other local agencies in metropolitan areas also provide service to populations larger than many states. Local agencies may also offer an opportunity in that a large number of cities and counties utilize a limited number of commercial data vendors. This small number of environmental health software specialists provide similar if not standardized data systems for 100 or more client jurisdictions each.

The FSMA-initiated integration of food safety information can be the first of many steps toward establishing a more comprehensive environmental health data system. Most local environmental health agencies have already found ways to integrate information systems for many different program areas including food safety, water protection, waste management, recreational health, and more.

Until we have more comprehensive data available, we will continue to have difficulty establishing evidence of the efficacy of our activities and programs. Do our inspections result in safer industry practices? Do enforcement actions deter further noncompliance? Does mandatory training improve the practices of industry workers? What is the relationship of regulatory activity to industry practices to morbidity and mortality? The answers to these questions and many more can be found in existing environmental health data sources. This is a tremendous resource that should not be squandered. We owe it to the profession, industry, and the general public to initiate a good faith effort to make this information available. As with other significant activities that span the spectrum of environmental health practice, I see NEHA in the forefront of this timely initiative that will certainly influence our perspectives and practices.

*Digital curation is generally referred to as the process of establishing and developing long-term repositories of digital assets for current and future reference by researchers, scientists, historians, and scholars. Enterprises are starting to utilize digital curation to improve the quality of information and data within their operational and strategic processes.


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