

Suggested Projects: Presidential Innovation Fellows
25 - Release of FDA's National, Heavy Metals, Market Basket Data

I suggest developing a project to give immediate public access to vital data collected by the Food and Drug Administration showing the extent and variation (across states and local areas) of the heavy metals and arsenic in food that are produced or sold locally. [The FDA collects these data (concerning chromium, lead, selenium, mercury, etc.) at specific locations in each state by purchasing and analyzing market baskets assumed to reflect the diet of typical Americans.]

The distribution of different diseases in America is not uniform. The explanation of these extraordinary variations is at the forefront of potential discoveries that can be of enormous benefit to public health. Variations in these elements in local food chains may prove to be an important, cumulative cause: [FDA's regulation of arsenic and heavy metals in human created additives occurs on top of substantial variations in local soil chemistry that already affect the food chain.]

- Selenium deficiency, for example, is known to cause illness in specific areas for different kinds of livestock. Veterinarians also recognize that high natural concentrations of selenium in the soils of North Dakota, California, and regions of at least seven other states produce illness in some kinds of susceptible livestock.

For consumers (because of soil variations), the best step is to release federal data from the actual supermarket sites sampled in each State. [The new Kaiser/NIH biobank has individual patient data by GPS coordinates and zip code that (for example, in California) can allow researchers and activists to correlate these data with electronic health records.] The details of the products in the consumer market baskets also should be released so that the App can calculate the potential variations in exposure of various groups (e.g., infants, ethnic groups) following different diets.

[Primary credit for this suggestion belongs to Dr. Walter Schmidt, a former FDA research scientist.]

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