

Avian Flu and Crumbling Infrastructure

When I first heard about this new avian flu that's heading our way, I was so worried that I immediately gave up drinking mineral water.

As it turns out, avian flu is actually that bird flu you keep hearing about and has nothing to do with bottled water at all. Evian turned out to be something else entirely - somebody should have made that clearer.

Until recently I have avoided reading much about the bird flu, figuring I didn't need to really worry until the people around me started falling down and not getting up.

I guess I became somewhat jaded in 1976 after an unsatisfactory experience with the Swine Flu. As you older folks will recall, the United States set a precedent in immunology by attempting to vaccinate the entire population of this country against the possibility of a swine-type influenza A epidemic.

A large percentage of Americans were immunized in a very short period of time. It was an awesome achievement that was only slightly diminished by the fact that the feared epidemic never occurred. Ah, well.

I have never understood why virology is such an imprecise science. It seems that nobody involved ever seems to know for sure what is going to happen. But then a couple of weeks ago I heard a talk given by Dr. Mary Gilchrist, head of the State Hygienic Lab, at the lab's Oakdale Campus location.

It seems that whenever two different viruses find themselves within shouting distance of each other, they promiscuously swap genes (let me know if I'm getting too technical here) and create a bouncing new baby germ to which nobody may be immune yet. Dr. Gilchrist makes a compelling case that another pandemic is on the way, we just don't know when.

New viruses are constantly evolving - we can only sit around and hope that the new strains aren't too much different from the ones we're already used to. If a new germ appears in Iowa, the University Hygienic Laboratory (UHL - Iowa's public health lab) will be involved in identifying and combating it.

That's all well and good, but the building that houses UHL was built in 1917 - one year before the Spanish flu pandemic that killed tens of millions worldwide. We have the dubious distinction of having the oldest state public health facility in the nation.

Originally designed as a treatment center for tuberculosis victims (a purpose for which it was eventually deemed unsuitable), the building is being held together with duct tape and baling wire. UHL administrators are more than happy to provide the "Crumbling Infrastructure Tour" for anyone who is interested - it's a shockingly poor facility.

Laboratory equipment is jammed into tiny rooms originally designed for TB patients and examinations. Aging pipes corrode within asbestos-lined walls. Ceilings are so low that exhaust hoods for chemical work require some lab tables to literally be at knee height. One supervisor's office is located in a hallway, bordered on one side by a bricked-up fireplace originally used for heat.

UHL administrators are quick to assure us that they crank out reliable tests despite their current working conditions, but after touring the building I am amazed that it's possible.

Why should you care? The UHL serves the entire state, and among other things:

- Tests every baby in Iowa for disorders that could lead to mental retardation or death if not detected early and treated
- Tests for rabies, West Nile virus and other infections carried by animals and transmitted by bites
- Identifies the source of food borne outbreaks such as hepatitis Salmonella and E.coli
- Tests for agents of terrorism, including smallpox and anthrax

- Minimizes outbreaks of diseases like influenza, whooping cough and TB

In 2004 the SARS commission wrote: "Laboratory capacity is much like the rest of public health; its importance is not appreciated, nor the impact of its inadequacies felt, until there is an outbreak and then it is too late."

A new building for UHL has already been designed and a site secured - the only detail remaining is about \$30 million to build it. Interestingly, the new building will be smaller than the old one, due to more efficient use of space.

I can hear you saying (my hearing is pretty good), "We need a new building right now, so what can I do to help?" The answer is: pretty much nothing, unless you are a state legislator or a member of the U.S. Senate or House of Representatives - they need to allocate the funds.

Even though you can't help, I thought you'd like to know that a) Your antiviral health net has a hole in it, b) You shouldn't kiss any chickens on the lips, and c) You probably don't need to worry about your bottled water.