

## **ATTACHMENT #1**

May 1, 2006

PANDEMIC PLANNING  
Alaska's Readiness Summit  
Anchorage  
April 13, 06

### A Report from the Committee-of-One for the Airport Board of Juneau Alaska.

The summit was a well prepared meeting and I feel privileged to have been there. Speakers included US Senator Stevens, US Senator Lisa Murkowski, Mayor of Anchorage Begich and others. I arrived in the late morning and did not hear the political lead-ins, but Stevens was late also, so I did hear his remarks.

The audience at the summit was not a general audience, but an 'invitation only' audience tilted toward health care and civil defense professionals. The remainder were civic leaders to include representatives from villages across the state including Gamble Island. In the afternoon the crowd was split into two groups separated by urban and rural concerns. The question of which way to go was a poser. The Juneau Airport is an urban facility, but it serves the entire rural area in Southeast. I think many residents here including myself view themselves as rural people, accidentally defined as urban by the size of the town. The urban-rural split and definitions was a major piece of the unresolved subsistence controversy. Every time Juneau residents get a few hours to spare, many go straight out into the country for recreation, adventure, and even business. So in Anchorage I went with the rural crowd in part because that's where the worst trouble is likely to be and because I figured I could catch up with the urban crowd fairly easily later on.

Three questions from the rural session stood out. One was a Prince-of-Wales school superintendent who asked "What are the five things I can do on Monday morning at eight o'clock when I get home from this meeting to start preparing my school and town for a pandemic?" The second was a village council president who asked "Ok, if half my town is sick and a quarter of my town is dead, will there be anybody from the state who can come to my village and help us?" And the third was a combination question/statement from a little old lady, probably another village council member, who made a declaration that the federal government owed it to the native population to keep them safe. She had absorbed the statistics about death and economic collapse and sounded a little panicked. But it was a classic moment that occurs with fair regularity in meetings in Alaska when the embarrassment level is high, but the question contains a deep nugget of the structures by which we all live. It was the 'how much of this is rhetoric and how much is the real goods, don't blow me off because I'm a little old native lady' question. You could hold a whole summit meeting on the legal relationship between Federal law and the American Native population, and it turns out that the little old lady is right to some degree. Depending on how the subject is approached however, it can be quite divisive which could become a major factor under the stress of a working pandemic.

It turned out that most of the presenters and speakers had staff members in the audience. So on getting a question, many of the presenters would call out a name and somebody in the audience would pop up with the answer. These staffers were in health and science fields and very much knew their business. So because of the hand-picked nature of the audience and because there was so much expertise hidden in the crowd, the questions and the answers were relaxed and competent and the atmosphere was excellent.

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Basically the situation is that the medical/scientific community can see the possibility and the eventual 100% probability of an influenza pandemic sweeping the world. Pandemics which were probably influenza have occurred in 1510, 1580, 1688, 1699, 1847, 1889, 1900, 1918, 1957, and 1968,<sup>1</sup> a list that is not all inclusive. With current world population levels, political failures and tensions, incidents of environmental collapse, and a tightly coupled economic system from the local to the world level, a pandemic resulting in many millions of deaths would echo down the years and decades. To take one scenario, if some millions of heads-of-households in the US were dead, too sick to work, or out of work because their employers or businesses closed, what would happen to their mortgages, their ability to provide their families with shelter and food, and the entire structure of the American economic path? If banks held millions of foreclosed mortgages while armies of homeless walked the streets, society would be shaken to its foundations and might never again achieve the same structure or standards of living that form the current standard, or are at least a possibility for families in the context of the 'American Dream'.

Medical science, having reached the conclusion of the inevitability of a pandemic, the leadership at the interface between science and public policy have also concluded that preparedness and public education is the only responsible course, and in fact the only action available to them. The Anchorage summit meeting is a consequence of this conclusion and a major effort to get the process of public education and preparedness started.

There are quite a number of subjects to be found under the general heading of avian flu pandemic. These include

1. scientific understanding about the behavior of viruses
2. medical advances and limitations in treating viruses and the consequent complications
3. world history of pandemics and what can be learned about public behavior under the influence of high stress
4. the effects of a pandemic on the economy and the ability of the surviving population to function and rebuild
5. the politics and practical possibilities and limitations of the interaction between federal, state, and local authorities
6. the current state of preparedness in the US
7. the situations and conditions peculiar to the state of Alaska
8. the roll of institutions in working on preparedness, to include the roll of airports

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<sup>1</sup> The Great Influenza, Barry 2004; pg 113

9. individual responsibility and preparedness on the family level.

1: Scientific understanding about the behavior of viruses has increased at an exponential rate in recent years. During the 1918 pandemic, doctors frantically searching for a cause of the disease did not yet know of the existence of viruses and did not have the techniques to deal with an organism as small as a virus. Consequently investigators spent immense time and effort basically in the dark. They also recommended all kinds of prevention techniques that had no effect. Out of their efforts however came the underlying structure of major American medical institutions that still exist today<sup>2</sup>, notably Johns Hopkins University Medical Center.

One of the recent pieces of medical detective work in virology is the recreation of the 1918 flu virus, in part from tissue samples acquired from mass graves in Brevig Mission, Alaska. The question was asked if modern individuals could get the 1918 disease from these mass grave sites, especially in as much as climatic warming in the arctic is causing some mass graves to thaw and cave into rivers or otherwise no longer be encased in a sealed crypt of permafrost. The answer to the question is no. It took state-of-the-art twenty-first century technology to do the virology, and attempts to do the same work in the 50s, 80' and even 90s failed because the technology was not yet up to the job. The virus that was recreated was only parts of RNA strings and was not capable of replicating itself. It was enough however to determine that the 1918 flu was an avian virus.

An excellent synopsis of virus structure and behavior is contained in *The Great Influenza*.<sup>3</sup> A pertinent point of this information is that the influenza virus can mutate so fast that it is considered to be a 'quasi-species, or mutant swarm'. It shares this characteristic with HIV and coronavirus. The consequence is that drug resistance can emerge within days, and may change too fast for the human immune system to respond.

There is a great deal to the science of why an avian flu pandemic may be brewing, but a pertinent piece is that there are several steps that a virus must take in the process of becoming a dangerous human pathogen, and H5N1 has made all but the last step, which is easy human-to-human transmissibility. This is why the current level of concern in the scientific community is high.<sup>4</sup>

2: Medical advances and limitations in treating viruses and the consequent complications are relatively simple to understand and massively complex and difficult to manage on a practical level. We know that viruses exist and we know their structure. We know that the virus reservoirs are wild birds, domestic poultry, swine, and possibly cats or members of cat species. We have old technology and are developing new technologies to manufacture vaccines. We know that something on the order of 50% of the deaths that occurred in 1918-1919 were caused by opportunistic pneumococcal phenomena which today could be controlled by antibiotics, except where antibiotic resistance has emerged. However there are a couple of problems in applying what we know to the world, and they are politics and scale.

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<sup>2</sup> *The Great Influenza*; 2004 Barry; pg 47

<sup>3</sup> pages 103, 104, 105

<sup>4</sup> *Nature's Bioterrorist*, M Specter; New Yorker Feb 28. 05

On the political side the discussion goes all the way back to the arguments made and the methods developed for the support of science and research in the US. What emerged at the end of the second world war was a three fold system, in which a great deal of R&D is supported by grants from the Department of Defense to universities and scientists based on what the military is interested in and what kinds of proposals come in from the scientific community. On the civilian side various government agencies like the National Science Foundation support science by means of grants to applicants across the whole range of scientific investigation. On the private-sector side considerable effort and funds are put into specific projects which are typically expected to produce marketable products. The support for science has never been what the scientific community has considered sufficient, but in recent times the ascendancy of conservative and fundamentalist thinking in political leadership has been accompanied by a crash in support for science in both dollars and rhetoric. For our purposes here, there have been some consequences, one of which is that there is no vaccine production facility in the US and all our vaccine is acquired by contract from offshore. Another is that a significant level of research has also moved offshore in search of a more benign regulatory environment and research institutions that have more supportive financial and political underpinning. The result is that US science is on a descending curve of productivity from which it cannot recover by a stroke of the pen.<sup>5</sup> This goes to the concept of ‘depth’ in institutions which is a big part of the US health picture.

3: We can start the world history of pandemics and what can be learned about public behavior under the influence of high stress by considering ‘depth’ in public health. ‘Depth’ was illustrated at the Anchorage Influenza Summit by the contrast between the uniformed and credentialed leadership of health and defense departments on one side, and on the other side the testimony about the low and decreasing funding for the ‘boots on the ground’ in public health nursing, field labs, research labs, and long-term baseline support for public health, especially in rural Alaska. This is only a small piece of the national picture where public health has been on a descending line for many years.<sup>6</sup> This includes the closure of the Rockefeller Foundation Clinics, the closure of public health clinics and data gathering labs, and the lack of collection and maintenance of baseline data. Consequently if a public health event occurs, health scientists can’t tell what the level of the anomaly is because they don’t have the data that tells them what the usual state of affairs is for comparison. What this all translates into is vulnerability, weakness, and lack of depth in public health,<sup>7</sup> which is now confronting the probability of a pandemic that has a world-wide field of 6.5 billion individuals with which to engage.

This number is the beginning of the problem of scale. In 1918 world population stood at something under 2 billion. Estimates of the death toll in that pandemic range from about 30 million on up. There was poor or nonexistent record keeping in most of the world at the time, and 100 million individuals could have died in China and India alone, with no records of their passing. Investigation into these numbers has settled on the estimate that between 5 and 10 percent of the world population died. Application of these estimates to today’s population gives a range from 73 to 350 million fatalities world wide. That these deaths could occur in a

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<sup>5</sup>We Are Not Immune, RJ Glasser, M.D.; Harper’s July 2004

<sup>6</sup>We Are Not Immune

<sup>7</sup>The Coming Plague, 1994; Laurie Garrett

compressed time period of a year or two compares to the current death toll from AIDS which is roughly 25 million, but has occurred over 25 years.

“Forget bird flu. The world is already gripped by a health crisis of catastrophic proportions. Twenty five years since the discovery of AIDS, HIV is the most serious threat to humankind since the black death and we’re not even close to controlling it.” This quote from the publication of the Royal Geographical Society shows that comparisons are being made. If a flu pandemic occurs it may strike the weak and weakened with increased consequences and tip struggling third world economies over the edge with negative consequences for the politics and stability of the entire world.<sup>8</sup>

For Alaska a pandemic could immediately overwhelm all health facilities at every level. Who has access to high tech medical care and who does not could become divisive. In villages, food and fuel supplies dependent on modern transportation could be jeopardized by the failure of transportation companies or by the imposition of travel bans. Medical supplies may be inadequate and resupply in jeopardy or impossible. In any case a working vaccine will not be available even in theory for as much as nine months because the pandemic strain has to strike (i.e. it has to evolve into existence) before the vaccine can be developed. Vaccine availability and usefulness will be affected by the ability of the virus to develop immunities and by the historic tendency of pandemics to strike around the world in two, three, or more waves.

Because the health facilities will be overwhelmed and the health professionals will be too few and under the same threat as the general population, much will depend on volunteers as was the case in 1918. This can work fairly well in an educated population, but as the death toll rises and the economic conditions worsen, volunteers become harder to acquire and to hold against the stress level. The translation of public and health policy into actions on the ground can quickly exceed the political will of the normal structures like city assemblies or airport boards. Political will sort of teeters on the brink of usefulness at the easiest of times, and under the stress of a pandemic would probably fail. Thus the level of public control may quickly jump to higher authority like military control, executive orders, marshal law and the like. In limited special cases local control can work. In 1918 the New York State Training School for girls quarantined itself, requiring deliveries of supplies to be left outside. It had no cases. A naval facility in San Francisco on an island enforced rigid quarantine and had no cases.<sup>9</sup> Australia tried to enforce quarantine on the entire continent, but lost the game when a troop ship with influenza aboard landed and flu swept the nation.

One of the first statements made in Anchorage was that responsibility, control, and effective response rests with the local Alaska towns and the state. Because of the lessons of Katrina and critical lack of depth in federal- level institutions the citizens of Alaska basically have to plan on saving their own bacon, both literally and figuratively. One of the most interesting presentations was by the CEO of the Alaska Commercial Co which has grocery and supply stores all over the bush. They are actively planning a company response and capability to respond to civil emergency with staff training, planned changes in stock piling supplies at their stores,

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<sup>8</sup> Geographical, January 2006

<sup>9</sup> The Great Influenza, pg 405

communications with local officials etc. It was fairly dramatic evidence that the private sector can and should be a part of Alaska's response to a health crisis.

4 & 5: The effects of a pandemic on the economy and the ability of the surviving population to function and rebuild are an open question dependent on the severity of the event. Grim scenarios can be imagined, most of which can be modified or reduced with increased public education and preparedness, which was the point of the summit. If you stand in your church or with a civic group of any kind and imagine ten to twenty percent of the individuals dead or economically disabled you can get a bit of a feel for the ultimate problem. Businesses must be ready to have a high percentage of workers not showing up; government must get more flexible and function without the usual red tape restrictions on rational behavior; financial intuitions, especially those involved in loans, must figure out a way to react to default without destroying the fabric of the community. Also leadership must not lie. Nothing will destroy leadership credibility faster than lying to the public and inevitably having the lies exposed.<sup>10</sup>

The ramifications and consequences of a pandemic with millions of deaths are really too complex to be subject to speculation. As far as the Juneau Airport is concerned we should engage in planning for a worst case scenario to include quarantine areas, direct medical intervention at the airport, staff training, and immediate appropriate response to the news of the spread of flu anywhere on the North American Continent. Simply allowing the influenza to be brought into Juneau by air carrier is not something we should simply take as inevitable. All the air carriers serving Juneau should be included in this planning. If this involves closing the airport temporarily or for an extended period, it goes immediately to the problem of political will, and having guide lines for such action in advance will help.

6, 7, 8, & 9: The state of preparedness in the US generally and the situation in Alaska are a moving target. In Senator Stevens' remarks at the summit, his main substantial point, and a point of frustration for him, was that when he gets millions of federal dollars sent to numerous institutions in Alaska, they should and must cooperate with each other and use the funds efficiently. It was noted by the major participants that six months ago they didn't really know of each others' existence and now they are on a first name basis. Lower down on the totem pole there is still competition for the dollars as they get allocated to different programs.

In the US generally it must be assumed that the situation will not improve markedly as far as available support from the Feds is concerned. Difficulties in the Washington administration include divisive politics, immense deficit spending leaving few funds and no will to correct the 'depth' issues; lying to the public with consequent loss of trust; and a war atmosphere all of which make rapid corrective action unlikely. The most the Alaska public can expect is that health officials at the highest levels will work rapidly to achieve the production of a vaccine when it becomes possible. Other support will probably be forthcoming but it will depend on the demands being made by populations in the south and on all kinds of practical and political factors. The entire population of Alaska is less than the population of most large cities in the continental US, and under stress we could fall off the radar.

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<sup>10</sup> The Great Influenza, pg 395

A point made repeatedly in Anchorage was that in 1918 much of the simple basic infrastructure that we take for granted did not exist. As individuals we need to use the infrastructure to our advantage. Maintain a level of stockpiled food; wash your hands with soap and water; pay attention to your own basic health and be your own advocate. To the extent possible understand the behavior of the flu pathogen and use behavioral tactics to outwit it.

Maintaining the existing harvest of wild birds was encouraged. The current state of information is that no case of flu has been transmitted from wild birds to humans. All cases in Asia are related to close proximity to domestic birds which is why you hear of huge culls of domestic poultry everywhere from China to Europe. If you are a hunter, clean wild birds carefully using rubber gloves, cook them well, and enjoy. The probability of the transmission of a flu pathogen is that it will come out of China or India and be transmitted by the modern transportation network. The work with wild birds is of research interest but at present is not where the highest probability of danger lies. Interestingly there is a probability that the 1918 flu, called Spanish flu, actually originated in a rural area of Haskell County, Kansas.<sup>11</sup>

At the summit a great deal was made about communicating information to the general public, not all of whom have access to computers. It is my recommendation to the Board that the airport install an information board of some sort with relevant phone numbers, public health information, and changes in the status of the avian flu world wide. The last position we ever want to be in is to have the public accurately accuse us of not providing available information in a timely manner. Every passenger who goes through the airport should be confronted by flu information. In this it should be possible to get support from the public health service. A large and informative package of handouts was provided to participants at the summit, and an abbreviated version could be made available at the information board site.

The Committee-of-One would like to thank the Board Chair for the opportunity to pursue this subject. It is a troubling development, but one that needs our attention.

Eric Forrer

For reading on the subject:

Chills and Fever, Health and Disease in the Early History of Alaska  
Robert Fortune, 1989 University of Alaska Press

The Demon in the Freezer, R. Preston 2002, Random House

The Great Influenza, J.M. Barry 2004, Penguin Books

The Coming Plague, Laurie Garrett 1994

We are Not Immune, RJ Glasser; Harper's

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<sup>11</sup> The Great Influenza