

Proposal to Adapt Earthquake
Preparedness for Flu in Albany
California (An opinionated
personal crusade)

Raymond Richard Neutra MD Dr.PH

Earthquake Block Captains in Albany California

- After Loma Prieta grass roots effort pushed Albany officials into supporting block preparedness
- By 1990 80% of city blocks in Albany CA had designated block captains
- Block groups:
 - Assured foundations bolted
 - Water heaters strapped
 - Family plans and food and water stashes
 - Neighborhood plans and equipment, search and rescue
 - Designated roles include liaison to Albany City

Goals of Neighborhood Family Flu Preparedness and Mutual Aid

- Peer pressure for vaccination (if available)
- Good nutrition, exercise and social networks known to boost natural immunity and lower morbidity and mortality from all causes
- Prepare family supplies, acquire home nursing and nutrition skills
- Mutual Aid for logistics and nursing
- Grass roots surveillance of death and illness
- Social cohesion “we survived the Flu together!”

What Happened in 1918

- Medical and nursing capabilities overwhelmed
- Entire families ill in their homes for weeks with no help in food or nursing
- Parents dead, children left to starve
- Uncollected dead bodies on sidewalk
- Terrified neighbors huddling in houses
- Chaos and post traumatic stress syndrome

Preventive Actions on your Block

- **A. Getting your neighborhood immunized**
- **B. Quarantine agreements**
- **C. Staying home from school and work**
- **D. Hygiene**
- **E. Cohesion, exercise, nutrition**
- **F. Assure each family stockpiled supplies**

Block Captains and Surveillance

- In Flu, County health department would man a phone bank to which calls about dead bodies and prevalent and incident cases of flu could be called in.(Note: majority of cases will not reach MDs to be counted in conventional surveillance)
- Block organization would assure that someone was calling in the day's report
- A lack of report from a previously reporting block might trigger a call from the zone supervisor

Home Nursing Skills (1)

- **Hand washing**
- **Preventing droplet spread**
- **Air flow in the home**
- **Making and changing a bed**
- **Bed baths**
-

Home Nursing Skills (2)

- **Use of Bed pans**
- **Preventing bed sores**
- **Tracking temperature, respirations and pulse**
- **Tracking fluid intake and output**
- **Controlling fever**

Neighborhood Mutual Aid

- Who needs help?
 - Ascertain by Placard systems
 - Ascertain by Neighborhood Patrol
- How can we help?
 - Run errands and get groceries
 - Those who have recovered can provide housekeeping, cooking and home nursing care to other families who need it.

Why we might need to fall back on family and neighborhood preparedness.

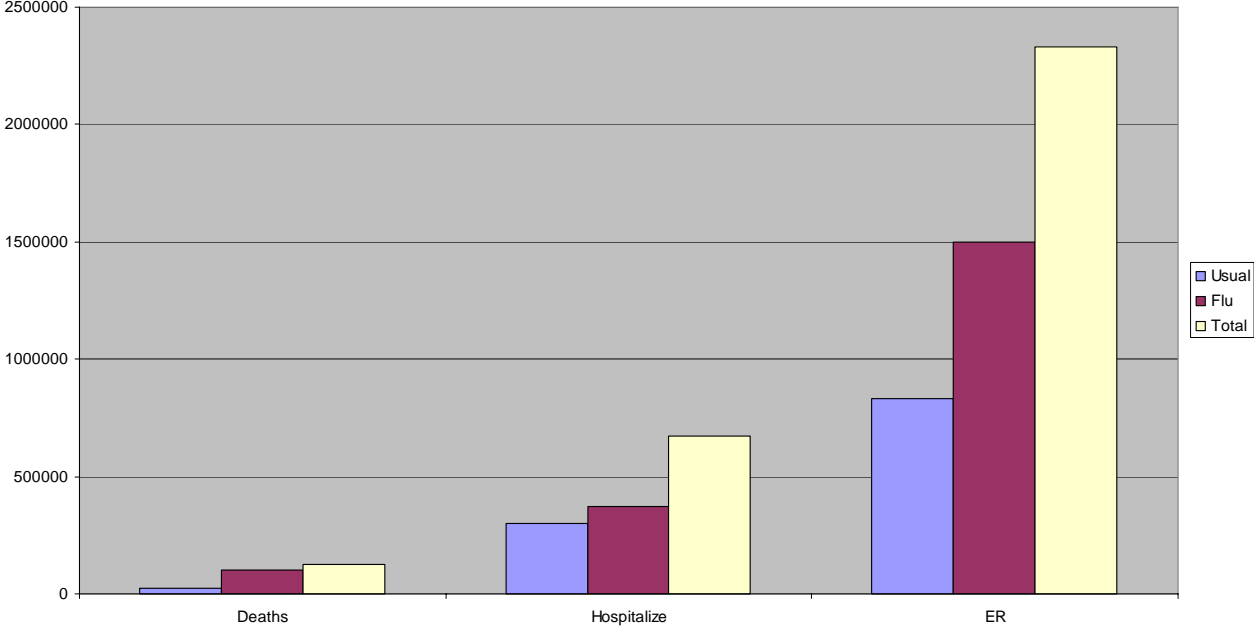
- The flu might arrive before we have vaccine
- The flu might mutate away from the vaccine
- We might not vaccinate everyone in time (particularly poor and ethnic communities)
- We might not have enough anti-virals
- Anti-virals might not work on this strain

How bad could it get?

- In 1918 one third of the US population fell ill and 2% of those died. Most of this occurred in just a few months.
- 33% of 37 million = 12.3 million people
- Two percent of these or 246,000 die in a three month period (66,000 baseline).
- This would overwhelm our:
 - 500 hospitals and 63,000 hospital beds
 - 70,000 MDs
 - 235,000 Registered Nurses.

Compare Monthly Baseline Rates to Flu Projections

Monthly "Usual", Flu and Total: Deaths, Hospitalizations and ER Visits



Is Home Nursing So Much Worse than Hospital Care?

- Not enough respirators in hospitals to cover more than a small percentage of admissions
- Anti-virals can be dispensed at home
- IV's available in hospitals but not at home (plan for visiting IV teams for small percentage requiring it?)
- Otherwise care could be fairly equivalent.
- Lack of home nursing training and neighborhood mutual aid could result in avoidable morbidity and mortality.

Three Models for Neighborhood Family Preparedness

- Current US Model: Government Provides information and hopes that nuclear families will adopt recommendations. No evaluation
- Albany Model: Government provides some support and linkage to blocks and families who want to prepare and link to city. Some evaluation
- USA WWII, Cuban and Swiss Models: Blocks and families *required* to prepare for neighborhood mutual aid and linkage to block, zone, city hierarchy. Careful evaluation and feed back.

Political Assumptions Behind Current US Preparedness Strategies

- American's are individualists who cannot be required to help others or coordinate with their government.
- Therefore “preparedness” is a voluntary activity of nuclear families.
- We cannot bring back the WWII air raid warden system that linked neighborhoods to government.
- Care in Gymnasiums is better than home care:
<http://www.hhs.gov/pandemicflu/plan/sup3.html#altcare>

Elements of the Albany Approach

- Voluntary neighborhood preparedness and organization.
- Voluntary nuclear family preparedness
- Voluntary linkage to city and county government.
- County and state governments with the help of the Red Cross could foster more of this.

How Much Should Government Spend in Fostering Family and Neighborhood Preparedness?

- OMB values a human life at \$6 million dollars.
- If the Flu hits it could cause hundreds of thousands of deaths in California.
- If preparedness avoided, say, ten of those deaths, a ten year \$6 million/yr government investment would be judged cost beneficial
- Its hard to put a dollar cost on the intangible benefits of preparedness.

Controversial Ways to Enforce Flu and Earthquake

Preparedness

- Pass a state law allowing local jurisdictions to opt in to requiring each block to have a preparedness organization linked to successive zones (manned by National Guard) linked to City Government
- Require cities to increase property tax by \$500 per parcel on blocks that do not comply and use money to pay someone on block to serve that function (\$25,000/block)
- Make it a crime to abandon neighbors.

Overall Lesson

- Katrina and Rita taught us that a quantitatively larger event can require a qualitatively different kind of response.
- We have 235,000 nurses but we may need tens of millions of people with simple nursing skills. We have 60,000 hospital beds we need tens of millions of beds.
- We can cope with this if we are willing to take a qualitatively different approach with new partners and new systems. This approach would help us when (not if) the next big earthquake comes.