Introduction

It is a pleasure to have this opportunity to speak before the Tohoku Public Health Association. My presentation today will address the topic of “A Public Health Perspective on Reconstructing Post-Disaster Tohoku.”

Sometimes, as a result of disasters, it is possible to view things happening underneath the surface in society. This was a finding of my research on pollution problems when I lived in Japan in the early 1970s. At that time, I coauthored a book on Japan’s environmental crisis, with the title of Island of Dreams (‘Yume no shima’) – as a metaphor for what was happening then. A similar phenomenon is now happening now in Japan. Processes that are normally hidden from the public and kept out of public debate are low being exposed to light. As a result, disasters can create an opportunity for change.

The recent 3/11 disasters thus create an opportunity for reconstruction and reinventing Japan. Of course, this is easy to say and difficult to do, and represents a major challenge for Japan today. In this sense, the disasters may represent a major turning historical point for Japan, an end to the post-war era, and the beginning of a new historical period. What that period will be and how it will evolve, however, are still being determined. We do not yet know.

Japan is now in the midst of major reflection on the disaster. It is a time for reflection both on how things could have been done better in addressing the multiple catastrophes that occurred, and also how Japan should evolve into the future. In this period of reflection, public health people have a special responsibility and role. This is the topic of my presentation today.

The question of how Japan has performed in responding to the recent disasters is now being debated both inside and outside Japan, and many questions are being raised. Teams of international experts have visited Japan, and are reviewing the public and the private records.
New facts are being discovered, and the stories of what happened are being revised and rewritten, as a result of comprehensive investigations. This process will continue for a long time.

It is worth noting that any government in any country would be challenged by the complexity of the problems that occurred after the triple-disasters of 3/11. In addition, it is a complex question of how to assess performance in responding to a disaster. What are the right criteria? How do you measure performance in disaster response? Who does the measurement? But these questions are not the main focus of my talk, since they are looking more to the past. I would like to focus on the other question, looking more to the future.

If a new Japan is to arise out of the ruins of the triple-disasters, what could that new Japan look like? What are the principles of that new path into the future? What can a public health perspective contribute to that effort? In examining that question, I would to suggest six “public health principles.”

This is important for the Tohoku Public Health Association because of its location here in the areas affected by the disasters. Public health people have a special responsibility with these triple-disasters, and public health people of Tohoku have an even more important responsibility. This is your home.

In thinking about “public health principles for reconstructing a new Tohoku and a new Japan,” we must begin by thinking about what we mean by public health. This, too, is a complex question. Indeed, I have worked for about 30 years at one of the world’s leading schools of public health. We have about 200 faculty members at our school, from many different disciplines. But I doubt that the faculty members at my School could agree on what we mean by public health.

So the ideas that I will suggest today are my personal views on basic principles of public health, even if they are not accepted by all public health experts, or even all faculty members at my school. Nonetheless, I hope that you find these principles and my views persuasive, provocative, and practical. I also hope that the ideas will be somewhat useful to you as you seek to provide public health order in the chaos that has followed the triple-disasters of 3/11.

As background, I should note that the Harvard School of Public Health, as an organization, is somewhat different from what exists in Japan. In Japan academic public health is typically a department in a medical school, with a single professor, an associate professor, several lecturers, and various students. My school includes nine different departments, about 180 full time primary faculty members, over 1000 students, with over 400 doctoral students, and over 600 masters students, with annual operating expenses in 2010 of 338 million dollars, with about 60 percent raised by faculty members through research grants. The School has three main
divisions, statistical sciences, laboratory sciences, and social and policy sciences. Today, I will be speaking from the perspective of social and policy sciences, as someone trained in political science.

Each person in the audience today may be wondering, What can someone in public health do to address these great disasters? I will not provide specific answers to this question, but I hope that the general principles I propose will have some relevance to your choice of specific actions.

Principle #1: Provide comprehensive redress to the victims

The first principle is that people who have suffered from loss should receive comprehensive redress and their lives should be made whole again. In addition, those who caused the loss should be held responsible. Of course, this is not a simple or easy objective to achieve; in fact, it is very difficult for a complex disaster like the Great Eastern Japan Disaster. Unfortunately, the lives of the victims cannot be returned to the pre-disaster condition. In this circumstance, what does “comprehensive redress” mean?

Forty years ago, when I studied the victims of Japan’s pollution disasters, I learned that their struggle to obtain redress lasted for decades. They experienced a double victimization – they were victimized first by the pollution, and they were then victimized by the social process of seeking redress. In the end, they could not return to their original pre-disaster circumstances, and it was impossible to achieve “comprehensive redress.”

Let’s hope the same does not happen for the victims of 3/11. Assistance for them is not just an economic problem. There are also health losses, and community losses, and emotional and spiritual losses. In that sense, “comprehensive redress” is impossible to achieve.

How can the politicians and bureaucrats of Tokyo be made to feel the suffering of the victims of 3/11? How can the promises of compensation be turned into reality? And in considering “responsibility,” attention will certainly be focused on TEPCO, but what about central government officials as well? In seeking to realize responsibility for what has happened, it is important to stress transparency and ethics.

Principle #2: Protect the health of the workers

The second principle that I would like to propose is to protect the occupational health and safety of the workers doing the cleanup work at the nuclear power plants. They are exposed to the highest levels of radiation, and to the most mental and physical stress. Many of the workers
at the Dai-ichi and Dai-ni Fukushima power plans are local residents who lost family, friends, homes, and neighborhoods, while working around the clock in the early phase of the disaster to try to bring the nuclear disaster under control.

One worker wrote in an email that became public in a *Wall Street Journal* blog as follows:¹

I myself have had to stay in the disaster measurement headquarters the entire time ever since the earthquake occurred, and have been fighting alongside my colleagues without any sleep or rest. Personally, my entire hometown, Namie-machi, which is located along the coast, was washed away by the tsunami. My parents were washed away by the tsunami and I still don’t know where they are. Normally I would rush to their house as soon as I could. But I can’t even enter the area because it is under an evacuation order. The Self-Defense Forces are not conducting a search there. I’m engaged in extremely tough work under this kind of mental condition…I can’t take this any more!”

We are also shocked by the stories that we read about contract workers at the Fukushima nuclear plant. We have read stories that day laborers were hired in other parts of Japan and brought to Fukushima at high hourly wages and without adequate preparation for the work they were instructed to do.² The nuclear power industry in Japan has a history of employing non-regular contract workers for more dangerous jobs.

According a report of data published by the Nuclear and Industrial Safety Agency in 2009, Fukushima Dai-ichi had 1108 regular employees and 9195 contract laborers.³ The agency also reported radiation exposure for these two groups as follows:

- 5-10 millisieverts (mSv): 671 contract laborers versus 36 regular employees;
- 10-15 mSv: 220 contract laborers versus 2 regular workers;
- 15-20 mSv: 35 contract workers and no regular workers.

On March 14, Japan’s Ministry of Health, Labor and Welfare raised the maximum dose allowable for workers to 250 mSv a year, raised from the previous standard of 100 mSv over 5 years (either 20 mSv a year for five years or 50 mSv for 2 years), justified on the grounds of a state of emergency.⁴

Who is doing the clean up at Fukushima Dai-ichi Power Plant? What kind of health protection are they receiving? What will be the future costs in terms of illness and perhaps death? Unfortunately, some of the labor unions are caught in a conflict of interest, between the desire to protect their jobs and the desire to protect their health. Some labor unions even asked to increase the allowable limit of radiation exposure, so that they could continue to work.
**Principle #3: Build up social capital as the basis of community reconstruction**

In 1995, Professor Robert Putnam wrote a classic article called, “Bowling Alone: America’s Declining Social Capital.” That article started a social science boom on the social capital research. Recently, a number of research studies have been published on the relationship between social capital and disasters, not just in America, but all around the world, including India, Africa, and Japan. The researcher Daniel Aldrich, for example, has examined the role of social capital in the aftermath of Katrina in New Orleans. His research has shown the role of “social capital” in explaining how well different communities perform in recovery from disasters. In other words, protecting social capital is important to rebuilding communities.

Dr. Aldrich conducted a comparative study of post-disaster recovery processes in New Orleans (after Katrina), in Tamil Nadu, India (after the tsunami), and in Kobe (after the earthquake), and came to this conclusion: “Communities with more trust, civic engagement, and stronger networks can better bounce back after a crisis than fragmented, isolated ones...”

Aldrich showed that social capital can be measured through three proxies:

- the level of trust (in fellow citizens and in government officials),
- the propensity to expend time and energy on civic duties (such as voting in local, regional, and national elections), and
- the ability of citizens to mobilize cooperatively (through demonstrations, neighborhood cleanup days, and other collective action).

According to the cross-national research by Aldrich, social capital helps the recovery process in three ways:

- First, social ties can serve as “informal insurance” that provides people with information, financial help, and physical assistance – especially when formal institutions (both public and private) are not functioning
- Second, groups with greater levels of social capital can overcome the barriers to collective action and mobilize more effectively as a group to raise and distribute resources and advance the processes of recovery.
- Third, social capital increases the likelihood that people will decide to stay in the community and participate in rebuilding, and not exercise their option of “exit” when confronted with the difficult challenges of recovery (in part because of the availability of “voice” and collective action).
What are the implications of this research for Great Eastern Japan Disaster? The conclusion of Aldrich’s research is that the Japanese government needs to actively promote the creation and protection of social capital as a way of helping recovery in the communities affected by all three disasters, earthquake, tsunami, and nuclear.

In other words, the Japanese government needs to give emphasis to social relationships, collective action, and community spirit in its recovery policies. For example, temporary housing may not work for the elderly if it breaks up their informal interactions and cuts them off from one another. Another example, splitting up a community into different evacuation centers harms the existing social bonds and creates obstacles to recovery. All levels of government (national, prefectural, and local) need to find creative ways to strengthen the bonds of social capital that remain after the disasters. Japan has learned from the Hanshin disaster, from a lack of attention to social capital in disaster responses; but there still are problems that need to be addressed.

**Principle #4: Create real preparedness for real disasters**

Public health generally believes it is better to prevent problems rather than to treat problems. What does this mean for the victims of disasters?

In thinking about prevention policies, it is useful to consider two different categories: disaster prevention (*bosai*) and crisis management (*kiki kanri*). In the case of the Great Eastern Japan Disaster, disaster prevention policies were well implemented for the earthquake. Similarly, in the Tohoku region, where there is strong awareness about the dangers of tsunami, good efforts were made at disaster prevention for tsunami. But the situation was different for nuclear disasters, where disaster prevention policies were not effectively conducted.

For the future, Japan needs real preparedness rather than illusory preparedness. This is especially important for nuclear disasters. In short, inadequate protection can create a false sense of security and a myth of nuclear safety. And when a disaster occurs, the prior myth of safety can create among citizens a profound sense of distrust about the government.

Of course it is not easy to assure a true sense of safety in disaster prevention. There are some difficult questions that must be addressed. For instance, for tsunami, do you prepare for the 100 year tsunami or the 1000 year tsunami? Who decides, and how?

Part of the process of evaluating and debating these risks and preparing appropriate plans interventions needs to consider issues of transparency. My colleague and philosopher Norman Daniels calls this an issue of “fair process”. One of the problems in Japan has been the walls of silence that exist in the nuclear industry, so that it is hard for problems to be discussed publicly.
Japan has a special sensitivity about nuclear disasters, because of its experience as the only country that has been attacked by atomic bombs at Hiroshima and Nagasaki. This experience may have contributed to the “myth of safety” that was believed necessary by Japan’s political and economic establishment, during the period of rapid economic growth, to support policies to develop nuclear power plants. As a result, Japan’s nuclear power administration was not based on objective scientific evidence and became instead an organizational mechanism for hiding safety problems when they occurred. Unfortunately, the myth of safety became an obstacle in Japan’s nuclear energy administration to building effective safety mechanisms for nuclear power in Japan.

What sort of public health approach could contribute to more effective safety management of nuclear power in Japan? How can the public be assured about preparedness for disasters and be convinced that the plans will really help protect people? In the post-disaster period, how can government manage the many crises that arise and how can government do this in ways that make people feel safe?

Here I would like to make two recommendations. First, Japan should consider establishing something like the US Centers for Disease Control and Prevention, especially its Epidemic Intelligence Service – which can send out teams that can conduct epidemiological investigations for both natural and man-made disasters. 9 Second, Japan should consider an overall framework for comprehensive preparedness for emergencies, similar to the “all-hazards all-threats emergency plans” approach used by the US Federal Emergency Management Agency.10

In short, Japan should improve its disaster management preparation, for all kinds of crises, before those events occur. These preparations should occur at the national level all the way down to prefectures, towns and villages, on a comprehensive basis, including a system for administrative decisions when confronted with complex multiple disasters at a single time.

Principle #5: Make regulation more effective

In all countries around the world, public health depends on effective regulation by government of private business in many settings, including food, medicines, highways, construction, and nuclear power. But in order to create an effective regulatory system that can protect people’s health and people’s lives, there needs to be effective separation of the people who regulate from people who are regulated. In many countries around the world, however, this separation is inadequate, so that the regulated side ends up controlling the regulators. This phenomenon is known as “regulatory capture” in the social science literature.
In Japan, one of the causes of regulatory capture is the problem of “amakudari”. Other countries have a similar social phenomenon, even though they do not have a similar word. In the United States, the phenomenon is called the “revolving door” where government officials are hired by related private companies and then may even return to government at some time in the future.

For example, in Japan in 2000 a whistleblower reported a cracked steam dryer at Fukushima Dai-ichi; this whistleblower was not Japanese but was a Japanese-American. Despite a law protecting the identity of whistleblowers, the Japanese regulatory agency disclosed his identify to the company and did not send its own investigators to the company.

The lack of effective regulation no doubt contributed to the spread of damage from the Fukushima nuclear power plant during the Great Eastern Japan Disaster. As the New York Times reported, “Many Japanese and Western experts argue that inconsistent, nonexistent, or unenforced regulations played a role in the accident -- especially the low seawalls that failed to protect the plant against the tsunami and the decision to place backup diesel generators that power the reactors’ cooling system at ground level, which made them highly susceptible to flooding.” The lack of effective regulation has had many real public health consequences as well as social consequences. It has contributed to undermining public trust in both government and corporations.

This perspective helps to clarify many events from the recent past. For example, under many LDP governments, regulators repeatedly ignored warning signs about risks of disaster at the Fukushima power plant. Today, who is believes what TEPCO says? How do you correct the regulatory capture that continues to persist in Japan? Part of this will require structural change in the Japanese bureaucracy, as occurred in the US many years ago – so that the agency responsible for promoting nuclear power is separated from the agency responsible for regulating nuclear power. This could contribute to controlling the practice of amakudari, even though it may not be a complete solution to the regulatory problem.

What can public health professionals in Tohoku do in confronting this situation? First of all there is a need for more research on the effectiveness of regulation. How is effective regulation defined and measured? Under what kind of organizational structures is it likely to occur? And finally, how can public health professionals use that research to promote more effective regulation in Tohoku?

Public health departments in Japanese universities have not yet developed courses on “regulatory science” as it is known in the United States. As a result, there is limited awareness of these regulatory issues among health and medical professionals in Japan. Most regulatory
specialists are located in the public sector bureaucracy, which creates an obstacle to public deliberation about these issues.

**Principle #6: Create a government that can be trusted**

My final public health principle is perhaps both the most important and the most difficult to implement. Japan’s old Liberal Democratic Party was not able to adequately protect public safety. The current Japan Democratic Party is confronting similar problems. This may be a problem of politicians, or a problem of political parties, or a problem of the political system. In many areas, there is a need for new leadership, new technology, new vision, and new reforms.

Japan may be entering a new historical period, the “*shin-sai-go*” or the “post-disaster period”. Where will the political energy come from to address the challenges of this new period? There may be a re-alignment of political parties, and perhaps a new political party may emerge. In that case, what should people concerned with public health hope for? Personally, I would hope for politicians who deeply understand public health.

Radiation creates an invisible, silent, tasteless poison. As a result, radiation creates deep fears among people. People in Japan would like a government that publishes safety information that they can believe and trust. They would like a government they can trust; and public health people have an obligation to help create this kind of system.

**Summary**

Based on the above six principles, Japan is now confronting three basic challenges, at the levels of the individual, the community, and society.

**Challenge of Redress**: First at the level of the individual, how will Japan provide comprehensive redress for the victims of the Great Eastern Japan Disaster whole again? What kind of fair process can be created to provide assistance to the different victims of the disaster. The government has a major responsibility in this area, but the decisions of individuals are also necessary.

**Challenge of Rebuilding**: Next, at the level of communities, Japan is confronting the challenges of how to reconstruct communities in Tohoku in ways that are alive and supportive and that can create new social capital. This involves the relationship between communities.

**Challenge of Renewal**: Finally, Japan needs a new spirit, vision, and capacity. After two decades of stagnation, there are serious questions about where the creative and innovative leadership will come from. I hope that the participants in this conference, based on the sixty
years of achievements of the Tohoku Public Health Association will help create that leadership that will contribute to solving the problems of this region, from the disaster, and help resolve the broader public health problems of Japan in the twenty-first century.

Thank you for your attention.
References


7 Aldrich 2010.


