



Inside this Issue

# Its Flood Time Again

The welfare of staff was a prime consideration for Bay of Plenty District Health Board during last months Whakatane - Edgcumbe floods and their concurrent earthquake swarms. "Just simple measures like providing laundry facilities for staff members coping with floods through their homes was a big help", said Quality and Risk Manager, Brent MacDonald. Bay of Plenty staff have also set up and donated to a fund to help those affected as they recover from the loss of their waterlogged homes and belongings.



With most roads in the area, including the Whakatane—Tauranga highway, blocked for days, some key managers were unable to leave their homes. Continued telephone access was critical to a successful response and recovery from the event. Daily teleconferences allowed staff to be regularly briefed and tasked. Telephone access also made easier the task of locating all community based patients. All patients were visited, checked and medication supplies delivered. Two patients were helicoptered to Whakatane Hospital for further care.

As the Whakatane—Rotorua road remained open to essential traffic, supplies to Whakatane Hospital were maintained. With earthquake swarms centred in the Rotorua lakes area near the road, the area was at risk of being cut off to all but rotary wing aircraft.

Perhaps surprisingly there were no major public health issues. Other than in some rural communities, potable water supply remained in place and sewerage spills were not a major hazard.

Injury is not a major consequence of flooding. The only deaths in this incident were from a mud slide and an earthquake toppled tree falling on a car. However, with the loss of houses, possessions and livelihoods there are significant psycho-social needs to be met. Counselling and Mental Health support was provided at Civil Defence Welfare Centres.

The earthquake swarms that happened to coincide with the flooding were for some an unpleasant reminder of the 1987 Edgcumbe earthquake which caused so much damage in the area. The indications are that this event will also have a heavy footprint on the emotional resilience of the affected communities.

The Bay of Plenty region is just in the early stages of developing a CDEM Group Plan. In this event the co-ordination, communication and understanding across agencies was far from fluent. The gaps have been identified. Now is the time to seize the opportunity to close them. ●



Scenes like these are too frequently repeated all over the world



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## New Zealand Media gets tick for SARS Coverage

"The media never get it right" is the common refrain from professionals in all sectors of the economy. Is that common perception justified? Nick Wilson, George Thomson and Osman Mansoor set out to examine the media response to severe acute respiratory syndrome. Their report, **Print media response to SARS in New Zealand** is published in *Emerging Infectious Diseases* August 2004 edition, available at [www.cdc.gov/ncidod/EID/vol10no8/03-1096.htm](http://www.cdc.gov/ncidod/EID/vol10no8/03-1096.htm).

Effective risk communication is critical for providing the public with information to allow them to behave appropriately in the face of the threat of pandemic influenza or diseases associated with bio-weapons. This study highlights the potential value of the media for communication about public health issues and pandemic threats. It found that official health spokespersons were accurately quoted and that no technically incorrect information on the clinical or epidemiologic features of SARS was published. Such a response is reassuring and highlights the potential value of the health sector's use of the media to inform the public.

An important part of an unprecedented public health response to SARS was probably the intense global media coverage given to this disease. To derive lessons for addressing future threats to public health Wilson et al reviewed New Zealand's major newspaper, the *New Zealand Herald* for three months, noting 261 articles (3.3 per issue). No incorrect information was identified, and health spokespersons were accurately quoted. While important accurate health messages were frequently included, some were missed (e.g., hand washing in only 2% of articles).

Their analysis is limited by its focus on only one New Zealand newspaper. It also lacks the broader context that could have been obtained from interviews with key personnel. Nevertheless, it provides an insight into the media response to an emerging public health threat.

They chose the *Herald* because it has the largest circulation of a daily paper in the country and its reporting was considered likely to represent that of other mainstream media. They searched the Internet-based electronic archive of the *New Zealand Herald* using the advanced search capacity at the newspaper's Web site. The search was confined to the news section of the archive because stories on SARS in the business and sports sections rarely provided information on health aspects.

They compared information in the articles on SARS with that in the Medline-indexed literature (to July 2003). Information attributable to health officials in New Zealand was compared to the information on the Ministry of Health's Web site and its media releases. For comparison purposes, they obtained from WHO the weekly numbers of new cases of SARS from four areas that had ongoing SARS transmission in the Western Pacific Region.

SARS clearly dominated the health news during the study period despite having to compete with the Coalition invasion of Iraq. SARS "enjoyed" a number of newsworthy features, such as its new disease status, exotic aspects (e.g., possibly arising from wild animals), relative infectiousness, uncertain transmission modes, high case-fatality rate, and limited treatment options.

The number of articles mentioning SARS rose and fell, more or less in line with disease activity. The views or comments attributed to Ministry of Health spokespersons were consistent with messages promoted by the ministry in its media releases and on its SARS Web site. The impression conveyed was that the spokespersons were credible, and their reported statements imparted information and reassurance, and sometimes put the risk for SARS into a broader risk perspective. Some statements by officials promoted the theme of civic responsibility by stating that persons who ignored official travel advisories were placing others at risk.

Wilson et al consider that, in retrospect, some comments reported were overly pessimistic. For example, an economist was reported as saying that the disease "was on its way to New Zealand, and once here it was unlikely to go away quickly." International health officials were also quoted as saying that SARS "is probably here to stay" and "is now probably entrenched in the population [in China]." The *Herald* was doing no more than trying to fill an information vacuum created by uncertainty about the disease. Similar comments can be found in overseas papers. For a less rigorous review, check the headlines from the *San Jose Mercury News* at [basecampearth.org/exp3/sars/sars.htm](http://basecampearth.org/exp3/sars/sars.htm)



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Particular terms were used that could be considered alarming (e.g., "outbreak" in 38% of articles, "deadly" in 32%). Similarly, at least one of the following terms was used in 15% of headlines: kill, killer, deadly, panic, and death. Some examples of headline phrasing included the following: "doctor dies of killer virus"; "nature's terrorism strangles Hong Kong"; "SARS deaths leap"; "panicking crowds flee"; "creeping panic over epidemic"; and "SARS virus... mutating rapidly."

Information on disease symptoms was frequently provided but often with little accompanying detail. This finding highlights the importance of health authorities' keeping key messages short and using well-published Web sites for providing more detail. The media appear to be much more likely to use some words than others (e.g., "flu" versus "influenza" and "outbreak" versus "pandemic"). The clear message for health authorities is to use simple language and to use it consistently.

Although some prominence was given to describing disease control interventions (e.g., quarantine and isolation), relatively few articles provided information on basic personal preventive measures such as hand washing. Little coverage was given to how to access Web sites or telephone helplines, perhaps because newspapers only partly see themselves as a "public good information service" and may expect health authorities to pay to advertise such details. This finding suggests that in a crisis, if critical health messages are not picked up by the media, then paid advertising becomes a necessary backup option to supplement the attention gaining editorial supplied by the media. Health budgets need to take into account such contingencies. ●

## Estimating the additional capacity required by the mental health sector to meet extended service demands when coping with disasters

Estimates of current capacity, potential additional capacity to deliver services and of potential shortfall within the mental health sector are needed pieces of information for planning the responses to future disasters. The September 11th disaster in New York City resulted in an increase in mental health service delivery as a vast network of providers responded to the urgent needs of those impacted by the tragedy. In the first six months post September 11th, 250,000 persons received crisis counselling in New York State. Approximately the same number of patients that were in mental health clinic programs during the whole of 1999 year.

In an article published in the *Journal of Mental Health Policy* 2004; 7(1): 29-35. Siegel C, Wanderling J, Laska E., report on a study which set out to:

- determine the distribution of clinical service delivery rates among programs and to examine an explanatory model of observed variation;
- estimate potential additional capacity in the mental health sector;
- and estimate shortfall based on this capacity and data from studies on the need and use of services post September 11<sup>th</sup>. ●

Empirical distributions of weekly clinical service delivery rates in programs likely to be used by persons with post disaster mental health problems were obtained from available data. The authors found there was substantial variation in clinical service delivery rates within impact regions and among programs serving different age populations. The estimates of this study suggest that additional funding and personnel are needed to provide mental health services in the event of a major disaster.

They argue that a "disaster plan" is needed to coordinate the use of current and additional personnel including mental health resources from other sources and sectors. ●

### TEN THINGS YOU SHOULD HAVE LEARNED BY NOW

- Don't worry about what people think, they don't do it very often.
- If you look like your passport picture, you probably need the trip.
- Bills travel through the mail at twice the speed of cheques.
- Eat well, stay fit, die anyway.
- No man has ever been shot while doing the dishes.
- A conscience is what hurts when all of your other parts feel so good.
- Middle age is when broadness of the mind and narrowness of the Waist change places
- There is always one more imbecile than you counted on.
- Thou shalt not weigh more than thy refrigerator.
- By the time you can make ends meet, they move the ends.

 HM Government


## PREPARING FOR EMERGENCIES WHAT YOU NEED TO KNOW

The British government is about to dump an emergency preparedness booklet into every letterbox in the land. The document, “**Preparing for emergencies: What you need to know**”, follows on the heels of documents produced in 2003 by Australia and the United States. The British document is also available at [www.preparingforemergencies.gov.uk](http://www.preparingforemergencies.gov.uk). Being PC correct, English, Scottish, Welsh and Northern Ireland versions are available and the document is offered in sixteen languages, including.

The American document “**Be Ready**”, which prompted a run on duct tape and plastic sheeting; and the Australian version, “**Lets Look Out for Australia**”, which included a “handy fridge magnet”; were both widely ridiculed in their home countries. Judging by media commentary the British document is already heading for a similar fate.

The main message is faith in government: - in short, get inside a building and await instructions from a regime that presumably has not been blown to bits. As such, it betrays its cold war origins. This advice has been a staple of British civil defence publications since the end of the second world war and suggests an enduring belief in the powers of officialdom. An earlier 1958 document “Home Defence and the Farmer” promised that bureaucrats would visit farms as soon as radioactive dust stopped falling – in a few days, it was assumed. A 1980 pamphlet advised householders to whitewash their windows against radiation burns and explained how to build a bomb shelter.

This is another Civil Defence message being lambasted by the Media

This approach contrasts sharply with American advice imbued with a more pioneering spirit. The Department of Homeland Security explains that officials may or may not be capable of communicating after a catastrophe. Families are left to decide for themselves whether or not to get out and are encouraged to keep at least half a tank of petrol in their cars. With hurricanes, tornadoes, earthquakes, floods and other natural calamities so much part of American life, they are probably better prepared for disasters.

Americans dislike officials who try to tell them what they can and can not do. New Zealanders are even more prone to cocking a snook at authority. Our current approach of having civil defence information in the back of the yellow pages seems a better approach than producing a pamphlet that, at best, will be read and discarded or filed in a soon forgotten place. Surveys indicate that most New Zealanders are not able to recite the instructions and advice offered in the Yellow Pages, but they do know where to look. Those instructions give people the appropriate tools to survive for a minimum of the three days they must expect to be on their own. Has any provider a 1 page advice sheet in the back of their internal phone book? ●

Can we use the back page of our internal phone books for promoting emergency management advice to staff?

## ARCHI Toolkit Seminar: Improving Safety and Security in the Health Workplace. — Call for Papers

The Australian Resource Centre for Healthcare Innovation is promoting a safety and security seminar to be held in Auckland on December 9<sup>th</sup> and 10<sup>th</sup>.

### Aims of Seminar

To showcase systems, structures, strategies and processes that have resulted in:

- Improved patient and staff safety;
- Improved productivity, culture change, improved workforce morale, efficiency gains; and
- To showcase innovation projects with demonstrated outcomes for workplace safety and security

### Call for Papers

Submissions for abstracts that relate to innovative approaches to dealing with issues of workplace safety and security.

Key themes include absconding patients, absenteeism, aggression management, security alert systems, benchmarking, bullying, clinical practice, improvement, cultural diversity, incident reporting, monitoring, patient identification, patient and staff safety, patient safety systems, professional development, productivity improvement, safe staffing, staffing levels and rostering, staff management, security, secure information transfer, verbal aggression, visitor control, violence, workplace morale etc.

Abstracts should be submitted by August 31<sup>st</sup>.

For more information visit [www.archi.net.au/content/index.phtml/itemId/158635](http://www.archi.net.au/content/index.phtml/itemId/158635) ●

# Estimating Time and Size of a Bio-terrorist Attack

In the event of a bio-terrorist attack, rapidly estimating the size and time of attack enables short-run forecasts of the number of persons who will be symptomatic and require medical care. Johan Walden and Edward H. Kaplan present a Bayesian approach to this problem for use in real time and illustrate it with data from a simulated anthrax attack. They say the method is simple enough to be implemented in a spreadsheet. Their report is published in **Emerging Infectious Diseases**

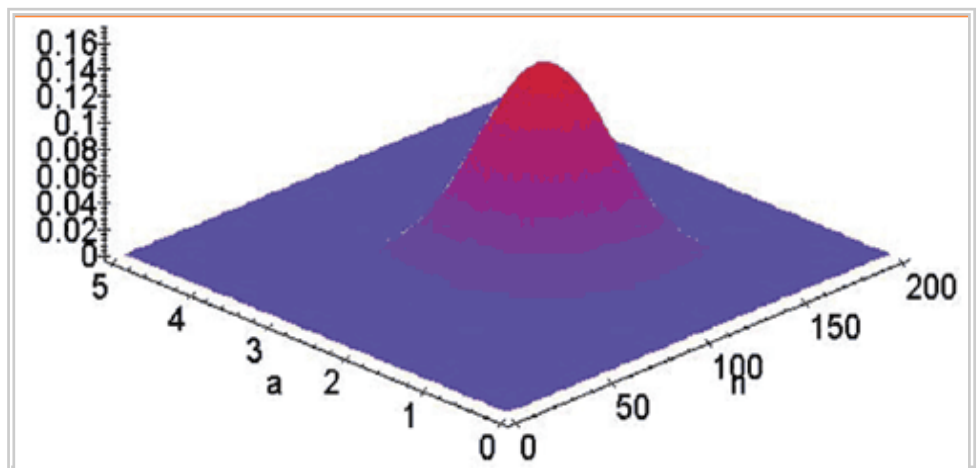
For those readers lacking a statistical bent, read on - this report is for lay readers. You can refer your in house statistician to the source document.

In the event of a bio-terrorist attack, once the biologic agent has been determined, rapidly estimating the size and time of attack enables a forecast of the number of persons who will be symptomatic and will require medical attention over the days (and perhaps weeks) after the attack. Such a forecast could play a key role in determining the response effort required. For example, surge capacity planning at hospitals and distributing vaccines or antimicrobial agents to the population, as appropriate. They refer to early knowledge of the size and time of an attack as situational awareness.

Walden and Kaplan's model assumes a single-source outbreak caused by a bio-terrorist attack at a particular point in time. Although the model assumes that the infectious agent is not contagious, the analysis still holds for contagious agents until secondary infections have progressed to symptomatic cases. Therefore, their model should prove valuable within the first incubation period after a contagious agent attack has been detected for and for longer time periods in the event of a non-contagious agent. However, in the event of multiple attacks at different points in time or an attack with a rapidly progressing contagious agent, the problem becomes more difficult.

The incubation time distribution for anthrax and smallpox are understood through empirical studies. Although smallpox is a contagious infection, historically the incubation time from infection through onset of symptoms is 7-17 days, which makes the Walden-Kaplan model applicable to smallpox for roughly 2 weeks after an outbreak or 1 week after the first observed cases (which is the shortest time until one would expect to see cases resulting from second-generation infections).

Likely ranges for the incubation times of other plausible bio-terrorist agents are available at the Centers for Disease Control and Prevention's bio-terror Web site. The authors assume that the attack is detected through the appearance of infected persons with symptoms, and that as cases are identified, patient interview yields the approximate time at which symptoms appeared, a process which avoids the need for explicit estimates of reporting delay. Corrected as such, case reports provide two types of information. The number of cases observed provides a lower bound on the size of the attack. The specific timing of case reports also conveys information that can be better understood when filtered through the agent-specific incubation time distribution.



The joint posterior distribution of the attack size and time of attack. Based on a total of 23 cases at the end of 5 days since the initial case was observed.

The mathematical details of their approach are described in the Appendix to the article and they have developed an Excel spreadsheet for implementing the procedure. Given estimates of the initial size and time of an attack, one can forecast the occurrence of future cases over time. Such a short-range forecast could be helpful in determining the resources required to treat those infected in the attack, although once a widespread response to the attack is mounted (e.g., distribution of antimicrobial agents, in the case of anthrax), the forecasts lose their validity. The model might also prove helpful for education and training exercises, in addition to use during an actual bio-terrorist attack •

# Emergency Evacuation Plans

We all have plans for the evacuation of our premises—Fire Regulations demand it. An evacuation for fire reasons is an easy scenario. Evacuation in response to a terrorist threat or other event where the evacuation points are potentially hazards in themselves are a different matter. Jim Burtles, addresses the issue of evacuation in the August issue of Contingency Planning—available at [www.contingencyplanning.com/PastIssues/aug2004/2.asp](http://www.contingencyplanning.com/PastIssues/aug2004/2.asp)

He notes that over the years, business continuity planners have developed emergency and contingency plans for such diverse threats as fires, floods, earthquakes, terrorist activity, riots and demonstrations. In all of these situations there is a basic question of how best to ensure the safety of employees and people in an organization's facility. Often there is a choice of whether or not to evacuate the building. Sometimes it is safer to remain indoors than to attempt to run into the face of danger.

From a military view one solution is to harden the building so as to provide a permanently safe shelter for the workforce. Hospitals do this in part by dividing their facility into zones separated by fire doors. However, evacuation is often still a preferred choice. One reason for its popularity is the assumption that it is a cost effective option. All the other choices seem to require capital investment or invite high running costs when they are invoked. He suggests that all BC professionals should be considering what is involved in evacuation and how they might adopt or adapt a common approach.



Charlotte Regional Medical Centre buildings damaged by Hurricane Charley earlier this month. The whole hospital campus needed evacuation

## A Structured Approach

Emergency evacuation planning focuses on the protection and safety of people; it takes no account of the protection of resources or property, which are considered expendable in these circumstances. The subject can be addressed using the following planning structure:

1. Site review process; highlighting risks and identifying opportunities;
2. Evacuation and remaining on site; evaluating options and making choices;
3. Emergency assembly areas; selection of safe sites and safe routes;
4. Emergency response timing; what is realistic, desirable or needed; and
5. A test and rehearsal regime; making sure it works and that people know what to do.

## Site Review

Site reviews for emergency evacuation plans address the entire neighborhood and the neighbors. We must identify risks to personal safety from work locations to probable points of safety. Note that many of the potential threats would apply to most of, if not all of, the buildings in the immediate vicinity.

Pay particular attention to building exits. Ensure there are at least two emergency exits each offering different aspects or escape routes. Ideally, people should be able to exit in any direction, e.g., through a front, rear or side exit. Equip escape points with a rugged canopies or covered walkways to protect people from falling debris.

Prepare a checklist when carrying out such a survey. Unless you have a great deal of experience you can easily overlook the "clues", which may demonstrate a good evacuation path while others may suggest areas for improvement or even places to avoid.

## Safe Spaces

The second objective of the site review is to identify safe locations for potential emergency assembly areas. Look for two types of assembly areas: internal refuges and safe open spaces. An internal refuge must be within the core of the building and not exposed to any external windows, as flying glass is a key danger. Internal refuges must also handle internal building damage. Check with a structural engineer on this.

A safe open space will be at some distance from the main location and will not be in the target's line of sight, a precaution against flying debris. The assembly area should also be a safe distance from nearby buildings, again to avoid falling debris. Finally, the area should be at least 500 yards away or within about five minutes walking distance—not so easy for hospitals with non ambulatory patients.

Once safe spaces are identified, plot safe escape routes from the various exit points to the selected assembly areas.

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Plan at least two alternative routes to each of the assembly areas. This will help avoid unexpected crowds, obstacles or additional dangers. Ideal escape routes avoid straight lines because corners provide protection.

### Will We Be Safer Indoors Or Outdoors?

Determine if your building can function as a safe refuge in an emergency. If enough really safe space can be located, an internal evacuation can be an option. One advantage is that nobody should be exposed to external dangers while escaping. This must be balanced against the potential of getting trapped inside the building. Clearly if there is sufficient notice of the impending danger then complete evacuation to a remote assembly area is the preferred strategy.

If the warning period is uncertain or very brief there are risks associated with an evacuation. The event may occur while some or all of the staff is still en route. Making the best decision at the earliest moment is key to developing the decision process.

### Emergency Evacuation Process and Timing

To develop a rational process for emergency evaluation and evacuation we have to make some assumptions or set certain parameters. The process involves a series of steps that must be taken quickly, with no hesitation. Possible criteria include the following:

- ⊖ Evacuation window of up to 20 minutes; time from first alarm to incident occurrence;
- ⊖ Emergency assembly areas are five minutes walk from the target building; and
- ⊖ Exit time four minutes; length of time needed to clear the target building.

While we cannot verify or influence the duration of the evacuation window we can take steps to address the other two parameters. If we were unable to meet either of them, then it may not make sense to occupy that particular building.

In addition to evacuation planning, consider post-event debriefing and counseling, as these are integral parts of any comprehensive approach to contingency planning. Post-event debriefing helps us understand what happened and learn for the future. Counseling provides another level of personal support for individuals who may need to deal with their feelings and reactions under the guidance of a properly trained person.

### Testing and Rehearsal

No action plan has any value until it has been exercised and validated. Challenge the assumptions about evacuation timings, for example. A dress rehearsal ensures that everyone knows what to do and how to do it. Since over time people can forget the plan response and their duties (they may even be replaced), it is desirable to practice evacuations on a fairly regular basis. The last thing you want in an emergency is chaos instead of a controlled response. ●

## C Diff hits the popular press

The Canadian Clostridium difficile outbreak, reported in HEMNZ Bulletin 84 has made its way into the mainstream media. Both the BBC News and CBC News have run stories this month. The outbreak is also getting regular commentary in ProMed mail postings.

The BBC reports a plea for more hygiene with Quebec's health minister, Philippe Couillard, urging against panicking and questioning whether all the deaths attributed to C. difficile can be directly blamed on the disease. Health officials are to set up a system to track C. difficile more efficiently and are urging all staff in Canadian hospitals to increase hygiene measures such as cleaning toilet seats and doorknobs and systematically washing their hands.

The experts investigating the Canadian outbreak say the bacterium appears to have mutated into a highly contagious and lethal strain, but they do not know why. It mostly seems to affect patients in hospitals and it usually strikes them after they have been given antibiotics for another condition.

It has been blamed for 100 deaths in one Quebec hospital alone in the past 18 months.

The risk of contracting the disease seems to increase for patients being treated with chemotherapy or abdominal surgery. It can also be spread by spores mostly commonly found in toilets. So far the disease has been confined to a handful of hospitals in the province of Quebec and the western city of Calgary.

At the University of Sherbrooke medical centre, Dr. Maurice Roy said the university hospital has been working to control the infection for some time, and, that there has been a decrease in the number of cases since February 2004. "The measures put in place have enabled us to continue the decline" in the number of cases, said Roy, the hospital's director of professional services. The measures included the distribution of more information about the problem, the presence of more nurses, and the use of stronger disinfectants for cleaning.



The HEMNZ Bulletin is published monthly by the Risk Management Unit of St John Northern Region for all those interested in emergency management in health care settings

Articles and comment on emergency management issues are welcomed

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Check out our Web site at  
[www.hemnz.org.nz](http://www.hemnz.org.nz)

## Up coming Conferences

21-22 September 2004

### HAZDENT 2004

Christchurch Conference Centre

Fee \$360 incl GST

More information from

[http://hazdent.fire.org.nz/programme\\_page.htm](http://hazdent.fire.org.nz/programme_page.htm)

29 September -1 October 2004

### New Zealand Institute of Health Management Conference:

#### Showcasing New Zealand—innovation from isolation

Rotorua Conference Centre

More information from [www.nzihm.org.nz](http://www.nzihm.org.nz)

### The Natural Hazards Centre Course Programme 2004

Managing Extreme Weather and Flooding,

Christchurch 26-27 August;

Planning for a Volcano Crisis, Wairakei 14-15 October

More information from

[www.naturalhazards.net.nz](http://www.naturalhazards.net.nz)

4 – 6 November 2004

### New Zealand Risk Management Society Conference

Te Papa, Wellington

More information from [www.risksociety.org.nz](http://www.risksociety.org.nz)

17 - 18 November 2004

### North Island CDEM Conference

Sky City Conference Centre, Auckland

Cost: \$440 + GST

More information from

[www.aucklandcity.govt.nz/council/documents/defence/conference.asp](http://www.aucklandcity.govt.nz/council/documents/defence/conference.asp)

## Editor's soapbox



Putting human conflict to one side for a moment, a quick scan of major natural disasters gaining media attention this week puts the events in this country in perspective. Yet the Bay of Plenty floods, Southern snow storms and Waitara tornado are significant events for those involved and the personal loss is as acute as that of those involved in large scale disasters.

Current natural events include Typhoon Ranim cutting a swathe through south eastern China, flooding in Nicaragua, flooding in India and Bangladesh, a locust swarm in Burkina Faso and the south eastern United States recovering from Hurricane Charley.

The scars of these events will remain for ever for those involved, as it will for victims of our 'disasters'. Some individuals and communities will bounce back and get on with their lives – others never will. What makes the difference? What makes some communities resilient against nature's adversities?

Our National CDEM Strategy Vision is "Resilient New Zealand: Communities understanding and managing their hazards". How do we emergency managers measure before the event which communities and organisations are resilient and which are not?

Economic wealth helps. President Bush is able to offer an afflicted Florida community economic assistance beyond the dreams of third world countries. Yet the likes of Bangladesh carry on against impossible odds. Is it because they are regularly confronted with adversity and have learned to adapt and adjust their lives to the environment that nature, with human help, has imposed upon them?

Health services are constantly having to adjust to cope with an ever increasing demand for service. Is that building up our resilience against an unexpected or overwhelming event?

Resilience is a before, during and after the event criteria. Next month the Waikato DHB, assisted by St John, plan a Health Recovery workshop in Hamilton. Give the identification of resilience measures some thought. It will be good to talk about them at the workshop.

*Bruce Parkes*

## A Modern Morality Tale

Once upon a time, in a land far away, a beautiful, independent, self-assured princess happened upon a frog as she sat contemplating ecological issues on the shores of an unpolluted pond in a verdant meadow near her castle.

The frog hopped into the Princess' lap and said: "Elegant Lady, I was once a handsome Prince, until an evil witch cast a spell upon me."

"One kiss from you, however, and I will turn back into the dapper, young Prince that I am and then, my sweet, we can marry and setup housekeeping in my castle with my mother. There you can prepare my meals, clean my clothes, bear my children, and forever feel grateful and happy doing so."

That night, on a feast of lightly sautéed frogs legs seasoned in a white wine and onion cream sauce, the beautiful princess chuckled to herself and thought: "I don't think so buddy"