Health Emergency Management New Zealand
Bulletin

Issue 89

16 November 2004

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Responding to Terrorist Bombings in Indonesia

Robert Patton

Terrorist bomb activity in the region to our north east stepped up this week with three incidents in the mainly Muslim southern provinces of Thailand. The latest bomb, believed to have been triggered by a mobile phone, exploded at a market killing a Buddhist man and wounding at least seven other people. It follows an earlier blast which injured at least 14 people. A police spokesman said someone pretending to be a customer left a bomb in a bag at the restaurant and detonated it after leaving.

At least 500 people have been killed in clashes between security forces and militants in Thailand this year, including at least 85 Muslims at a protest last month. The army said they died in the aftermath of a demonstration in Narathiwat, 78 of them after they were overcrowded into army trucks following their arrest. More than 20 people, including Buddhist civilians, have been killed in apparent revenge attacks by suspected Muslim militants.

These attacks have received less publicity in our media than similar events in Indonesia. The latest was on September 9 when a huge explosion rocked the business district in the fashionable suburb of Kuningan in south Jakarta, leaving a crater three metres deep outside the Australian Embassy and blowing out every window in the Embassy building. This blast, the fifth in Indonesia since 2000, killed 9 and injured 160 people going about their business in the area.

What Emergency Medical Services are available in Jakarta, the bustling capital city of Indonesia and home to more than 10 million people and how do they respond? Robert Patton, who lived and worked in Jakarta for two years, returned to Jakarta in October and took the opportunity to meet Professor Aryono Pusponegoro, Chairman, Department of Surgery, University of Indonesia and Director of the 118 Emergency Ambulance Service. He was keen to discover what the emergency services, especially the health sector, had learnt from their recent experience of the Australian Embassy bombing. He reports:

The detonation

And the result

"Our meeting place was Professor Aryono's office at the 118 Emergency Ambulance Service Headquarters. The first thing Professor Aryono shared with me was the context within which the response to the bomb blast took place. In the early to mid nineties many developing Southeast Asian countries realised the need to improve the health emergency response to disasters and looked to see what was being done elsewhere. While they found some excellent initiatives being taken in developed countries, much of this could not be transferred.

About five years ago the U.S. Agency for International Development (USAID) and the Office of U.S. Foreign Disaster Assistance (OFDA) funded the development of guidelines and a training programme in emergency management for the health sector appropriate to the culture and environment of four Asian countries; Nepal, India, Philippines and Indonesia. The outcome was the HOPE Program: **HO**spital **P**reparedness for **E**mergencies & Disasters - a medical response and emergency management training programme for health sector staff, based on the HEICS (Hospital Emergency Incident Command System), MIMMS (Major Incident Medical Management and Support) and business continuity and risk management principles, adapted and made appropriate for the Asian context. This comprehensive course includes topics as diverse as epidemiology, seismic hazards, structural and non-structural components of hospitals, pre-hospital response to disasters, medical management of casualties, hospital disaster plans and how to deal with the media.

"Functional collapse of hospitals" was one topic that caught my eye, required some explanation. This refers to a situation where a hospital is fully intact structurally and all utilities are functioning, but the hospital cannot provide a service because of casualty overload, lack of medical supplies, or low numbers of available staff. The HOPE course was first held in Indonesia in 2003 with further courses being held this year and planned to be ongoing. The result of this training is a raised awareness, leading to better planning and preparation with a flow

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on to improved responses to disaster events.

Ground Zero

The 118 Emergency Ambulance Service Foundation is an initiative driven primarily by the Indonesian Surgeons Association to ensure there is an accessible and affordable ambulance service for the people. Currently, the service is limited to major cities in Indonesia, with the level of service restricted by the available resources. Jakarta, a city of 10 million people, has 50 ambulances, with only four having paramedic capability.

Removing a casualty
* Note the crowd in the background. Bystanders are endemic to all events

Integrated Emergency Medical System (IEMS) is a charitable foundation set up to improve health sector response to disasters. The underlying concept is one of tapping into the huge existing health resource across Indonesia where there are more than 7,000 public health centres and 1,500 hospitals. The key objective is to develop a cooperative network between these resources and, through training, establish a common approach to emergency response to ensure effective coordination.

Past experiences have been crucial in the evolvement of health sector responses to emergencies in Jakarta. In August 2003 a bomb exploded in the J.W. Marriott Hotel in Jakarta. A major finding from an analysis of the response to this event was the lack of coordination between the emergency services; Police, Ambulance and Fire. Since then these services have had regular meetings and developed a plan on how to better coordinate their services. One key component of this plan is to establish an incident command point (ICP) near to the scene with representatives from each service. The objective is to ensure there is good coordination between each of the services and overcome the problem of each service having radio communication on different frequencies.

As I sat listening to Professor Aryono, all this sounded familiar. It was so encouraging to hear strategies and planning similar to what is happening elsewhere in the world, especially at home.

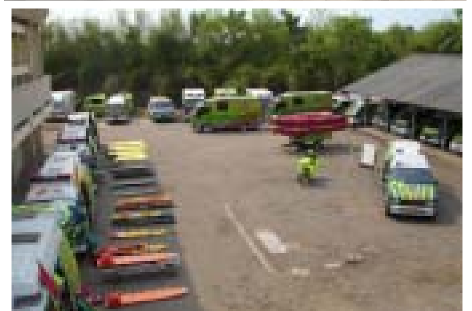
Now to the recent bomb blast outside the Australian Embassy. How did coordination and communication happen? Although coordination and communication was improved over previous events, an initial debriefing of the event identified that communication and coordination between the emergency services is still not good. Immediately following the bomb blast the Police did a great job of sealing off the area, but in doing so blocked off access by fire and ambulance services. An ICP was setup and some coordination did happen, however in the immediate aftermath there was much chaos and confusion.

Many of the casualties walked to the nearest hospital, by chance only two buildings away and still operational. The ambulance service provided triage at the scene and provided medical evacuation to spread the load to other hospitals.

Professor Aryono outlined the ambulance service plan for managing a mass casualty event. Many of the hospitals in Jakarta are likely to be under-equipped for a mass casualty event so ten of the better-equipped ambulances would be stripped of their equipment and with this equipment 10 resuscitation beds setup in the nearest hospital's emergency department . The stripped ambulances would then be used just to ferry patients to the now well-equipped emergency department for treatment.

Although Jakarta seems far from New Zealand, many of the challenges and the solutions are similar. However, while basic principles may have a generic application, specific emergency response plans cannot necessarily be copied from one place to another. Some of the plans developed to facilitate an effective emergency response in Jakarta are designed specifically to address known weak spots in their system and would not necessarily be appropriate or work in another place. Emergency response planning requires assessment, analysis and the creation of solutions that are going to be fit the environment in which they arise.

Incident Control Point (ICP) set up


118 Emergency Ambulance Service on Parade

Toronto Emergency Medical Services and SARS

Between March and July 2003 224 people in Toronto were officially diagnosed with SARS, and 38 died. In a letter to the Editor of Emerging Infectious Diseases, Alexis Silverman, Andrew Simor, and Mona R. Loutfy report that the SARS outbreak in Toronto severely strained Toronto Emergency Medical Services (EMS).

Annually, Toronto EMS transports >140,000 patients to 17 acute-care hospitals, which makes it the largest and busiest municipal EMS in Canada. During the outbreak, Toronto EMS's 850 paramedics had 1,166 potential SARS exposures; 436 were placed in a 10-day home quarantine, which meant being isolated from those persons within the home, continuously wearing an N95 respirator, and taking their temperature twice a day. SARS-like illnesses developed in 62 paramedics, and suspected or probable SARS requiring hospitalization developed in 4 others. On March 26, almost all of the frontline staff of the city's northeast quadrant were sent home because of possible SARS exposure at a Toronto hospital. On May 22, when the outbreak's second phase began, >200 paramedics had contact with patients with SARS and were quarantined. These events seriously affected EMS and their staff.

Even before the SARS emergency was declared in Ontario, Toronto EMS was aware of a serious respiratory disease in the community. Because of an increase in "atypical pneumonia" cases, an advisory had been sent to all paramedics warning them to wear respirators, gowns, gloves, and goggles with all respiratory patients. The advisory was recalled in favor of the Provincial Directive; the Provincial Directive was also changed when SARS reemerged in May. While properly fitting and supplying 850 paramedics with respirators took several months, no paramedics became ill with SARS after these requirements were initiated, even without fit-testing all the respirators.

Although cleaning the emergency vehicles was a potential concern, the only important change was substituting the usual disinfectant of 3% hydrogen peroxide with virucidal effect in 10 minutes to a disinfectant of 7% activated hydrogen peroxide with virucidal effect in 5 minutes. Otherwise, normal procedures were followed and emergency vehicles were cleaned on their regular rotational basis.

During the outbreak, the EMS Healthcare Divisional Operations Centre became the emergency operations center for Toronto EMS. It had been designed to coordinate Toronto's operational response with other municipal and provincial health services. During this time, the province also created its own emergency operations center, to which representatives from both health services reported.

Within days of the provincial emergency, Toronto EMS, in conjunction with Toronto police and fire services, created the medical support unit that operated as an internal public health department for all paramedics and was responsible for their direction, education, support, and screening. If needed, paramedics were placed under work or home quarantine or precautionary symptom surveillance on the basis of their exposure history, symptoms, and treatment in an emergency department or SARS clinic if needed. The medical support unit used protocols developed by a base hospital medical director who, together with EMS staff, reviewed each paramedic's chart daily to make appropriate follow-up decisions. The medical support unit was a vital component in protecting the paramedics' health and welfare.

To sustain the optimal functioning of Toronto EMS, its headquarters was closed to frontline staff for the duration of the outbreak. All personnel had to be screened for SARS-like symptoms before entering, and all paramedics had to check themselves for signs and symptoms of a SARS-like illness before reporting for duty. Anyone with SARS-like symptoms had to report to the medical support unit and stop working in an EMS capacity.

To control the spread of SARS, the provincial government placed all inter facility transfers under the control of Toronto EMS through the creation of the Provincial Transfer Authorization Centre on March 29. Since then, the Provincial Transfer Authorization Centre has been responsible for ensuring that all non-emergency transfers are medically cleared to prevent patients with contagious diseases from being taken to a facility that is unprepared to receive them. The Provincial Transfer Authorization Centre now processes >1,200 requests daily and was an important factor in containing SARS.

Several lessons were learned from the SARS outbreak. First, an emergency plan must be in place before an outbreak occurs. Second, the ability to communicate quickly and easily with provincial and municipal health authorities was needed to ensure that the most up-to-date information concerning the outbreak was available. The intergovernmental relationships necessary for such rapid communication should be established in advance. Third, accurate and timely communication with frontline staff members is the best way to minimize their fears. Finally, personal protective equipment procedures should be maintained until assurance that the exposure risk is negligible. The SARS outbreak is unlikely an isolated occurrence; therefore, sound advance planning on the basis of experience will increase the ability to protect both EMS staff and the public in the future.

China fails to hide Foot and Mouth Disease

China does not seem to have learnt from its SARS lesson that hiding infectious disease outbreaks just exacerbates the problem. We in foot and mouth free New Zealand should be very worried.

An outbreak of foot and mouth disease hit a major livestock-producing prefecture in northwest China's Xinjiang region in October

China does not report outbreaks, and central government and provincial officials refused to comment, but local government offices and companies confirmed many cows and sheep were infected in the Yili prefecture.. Local non government sources claim the outbreak has been contained.

"In 3 counties in Yili, animals were discovered to have foot and mouth disease," said an official from the livestock bureau of Yining county, the worst-affected area. "They are giving vaccination shots to animals in the area. The animals seriously ill will be dealt with and buried."

Officials refused to say how many animals had been killed to prevent the spread of the highly contagious disease which affects all species of cloven-hoofed animals. But sources said the situation in Yili, which exports meat around China, was "serious."

"Now in Yili, there's a very serious outbreak of foot and mouth disease," said an executive surnamed Wang at veterinary medicine supplier Xinjiang Huatian Shouyao Co. "Many cows and sheep have to be burned or slaughtered."

An employee surnamed Hu at a feed company, the Yili Tiankang Livestock Science and Technology Co. Ltd., said: "I heard many animals were slaughtered. They're not purchasing as much feed. It's had a great impact on us."

The spokesman for the Munich-based World Uighur Congress, an overseas rights group for Uighur Muslims, who populate the Yili area, said he heard more than 1000 cows and sheep died suddenly this month from the disease.

Vehicles coming in and out of Yining were disinfected and neighboring counties also had to vaccinate their animals and disinfect vehicles. "We set up checkpoints on all roads leading to our county and shut down all livestock trading markets,"

Chinese shepherd with his goats

said Zhang Aidong, an official of Nileke County.

A Yining county government official would only say: "It's been controlled."

China is a member of the World Organisation for Animal Health, whose 167 member countries are supposed to report animal diseases they detect on their territory so other countries can take preventative measures.

Yining county is the biggest livestock-producing county in Xinjiang, according to its website. The Yining livestock bureau official admitted: "It happens frequently, but this year the symptoms are different." Wang of the veterinary medicine company said: "The virus has mutated."

China's last OIE-reported outbreak of FMD occurred in May 1999. It was caused by FMD serotype O (most probably of the pan-Asian group). In all, 8 outbreaks were officially reported: 5 outbreaks from Tibet, 2 from Hainan, and one from Fujian. The disease was reported as absent during 2000-2002. In the 2003 annual report, FMD is not mentioned at all.

During 2003, China's monthly reports covered only the period September - December, and stated that the disease was absent. In 2004, monthly reports cover the period January - June, also stating absence of the disease. No later reports are available

Broken Autoclaves kill surgery

Non-urgent surgery at Wairau Hospital was put on hold, after both autoclaves at the hospital broke down reports the Marlborough Express. Fourteen surgery patients were cancelled on November 12 and more were to be deferred on the 13th.

Nelson Marlborough District Health Board surgical services manager David Brydon said the hospital had been able to continue with three acute operations yesterday using instrument packs.

Instruments were sent to Nelson Hospital to be sterilised for urgent surgery today and the board would continue to traffic instruments between the two hospitals and there should be enough instruments for acute surgery. In the case of a mass casualty, people would be evacuated to Nelson or Wellington, he said.

Mr Brydon said the hospital had problems with one of the machines before and it was "Murphy's Law" that both would break down together. The autoclaves were being worked on but Mr Brydon did not know when they would be back in gear. Surgery would be "compromised" until they were fixed, he said.

The story illustrates the interdependence between so many departments in the successful functioning of a hospital and shows good contingency plans can keep critical functions operating.

Plagues, Public Health, and Politics

On July 1, 1665, the lord mayor and aldermen of the city of London put into place a set of orders "concerning the infection of the plague," which was then sweeping through the population. They intended that these actions would be "very expedient for preventing and avoiding of infection of sickness".

At that time, London faced a public health crisis, without an adequate scientific base in that the role of rats and their fleas in disease transmission was unknown. Nonetheless, this crisis was faced with good intentions by the top medical and political figures of the community.

Daniel Defoe made an observation that could apply to many public health interventions then and today, "This shutting up of houses was at first counted a very cruel and unchristian method… but it was a public good that justified a private mischief". Then, just as today, a complex relationship existed between the science of public health and the practice of public health and politics. Jeffrey Koplan and Melissa McPheeters, writing in **Emerging Infectious Diseases** November issue address the relationship between science, public health, and politics, with a particular emphasis on infectious diseases.

Science, public health, and politics are not only compatible, but all three are necessary to improve the public's health. The progress of each area of public health is related to the strength of the other areas. The effect of politics in public health becomes dangerous when policy is dictated by ideology. Policy is also threatened when it is solely determined by science, devoid of considerations of social condition, culture, economics, and public will.

When using the word "politics," we refer not simply to partisan politics but to the broader set of policies and systems. Although ideology is used in many different ways, in this case, it refers to individual systems of belief that may color a person's attitudes and actions and that are not necessarily based on scientific evidence.

Public Health Achievements

Science influences public health decisions and conclusions, and politics delivers its programs and messages. This pattern is obvious in many of public health's greatest triumphs of the 20th century, 10 of which were chronicled in 1999 by the Centers for Disease Control and Prevention (CDC) as great public health achievements, and several of which are presented below as examples of policy affecting successes. These achievements remind us of what can be accomplished when innovation, persistence, and luck converge, along with political will and public policy.

Vaccination

Childhood vaccinations have largely eliminated once-common, terrible diseases, such as polio, diphtheria, measles, mumps, and pertussis. Polio is being eradicated worldwide. The current collaboration between the World Health Organization, the United Nations Children's Fund, CDC, and Rotary International is a political as well as biological "tour de force," yet eradication of polio in Nigeria has been threatened by local political struggles and decisions. In the United States, politics has contributed to successful public health policies by requiring vaccination at school entry, which has

Dr. Jeffrey P Koplan, a former Director of the CDC, is vice president for academic health affairs at Emory University.

Dr. Melissa McPheeters is a healthcare epidemiologist whose work focuses on translation and use of research in policy and practice. She is also a respected yoga teacher.

been vital to achieving high vaccine coverage in young children.

Debate about vaccines offers an example of the effect of ideology on public health progress in the form of persons who oppose vaccination. These persons put communities at risk by refusing vaccination for themselves and their children and enlist political support to undermine our greatest medical advance.

Family Planning

Safe contraception and family planning have not only improved the health of women by preventing unintended pregnancies, but they have also contributed to one of the century's most dramatic social revolutions by helping redefine roles and opportunities for women. However, ideologic views on contraceptive practices and sexually transmitted disease (STD) prevention continue to contradict scientific observations, leading to compromised public health policies.

Control of Infectious Diseases

Clean water, treated to protect us from outbreaks of infections like cryptosporidiosis, is an obvious example of the interaction between public policy and infectious disease control. Public policy has sought to control infectious disease throughout history, including attempts to ban spitting in the streets around the turn of the century (an issue that resurfaced 100 years later in the context of severe acute respiratory syndrome [SARS]) and imposing restaurant inspections to ensure sanitary conditions in food preparation. Many important infectious disease issues have political and economic overtones: Legionnaires' disease and hotel closures, Nipah virus outbreaks and the swine industry, and drug resistance and inappropriate and widespread antimicrobial drug use in the food industry and medicine are just a few examples.

Recognizing Tobacco Use as a Health Hazard

Knowing that tobacco is addictive and dangerous alone did not ensure that tobacco companies were held responsible for their role in impairing many people's health. Rather, that accomplishment required a combination of political will and social insistence. Nonetheless, regulations on secondhand smoke continue to be acrimoniously debated, as science and

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individual ideology clash.

New Challenges

In just the past 2 years, new health challenges have occurred that illustrate the tension between the economic health of a community or business and the personal health of citizens or employees; or the role of the individual versus the government in taking responsibility for health and health-related actions. In emerging infectious diseases, these new health challenges include avian flu and bovine spongiform encephalopathy, as well as SARS.

What makes infectious diseases particularly compelling to the public, to public health and political involvement, is that microbial agents are frightening. They come from exotic places, jump from person to person, often have no treatments or preventive measures available, and can paralyze industries and communities. Infectious agents represent our lack of control over our health, regardless of whether they are used deliberately by terrorists or are delivered by nature. Many infectious diseases have become a security issue, bringing a new set of "partners" to the microbiologic and public health table. While this arrangement is appropriate and necessary in many instances, it also has potential for abuse, by promoting anxiety and insecurity for political means, distorting public health priorities, and possibly militarizing public health institutions.

Smallpox

The decision to implement widespread vaccination against smallpox generated substantial interest in the general public. After believing that smallpox was not a threat for many years, we were informed by the government that cause for serious alarm existed.

Production of large quantities of vaccine was accelerated, which was a prudent and decisive action. This action was followed by a policy that called for vaccinations for hundreds of thousands of healthcare workers and millions of first responders. The science on which this decision was based seemed shaky at best, and many chose to forego vaccination, including two distinguished academic infectious disease units. The Washington Post criticized these units, saying, "There are reasons, moral and medical, to deplore the decision of those doctors who refuse in this manner…. Their job is not to assess intelligence risks or to second-guess state public health officials but to be prepared to care for sick people and to vaccinate healthy people".

The Post's statement may be correct, but academic infectious disease specialists have every right and responsibility to question decision-making that affects their patients and colleagues, especially when the scientific-political interface regarding that decision is unclear. Careful review of the literature and expert experience predicted substantial risks from adverse vaccination reactions.

The Washington Post editors seem to have missed the concept of "do no harm." Analytic and compassionate physicians realized that, in the face of little or no threat of an attack, widespread use of a potentially toxic vaccine was not in the best interest of their patients. The decision by various academic medical centers not to widely vaccinate hospital and medical personnel seems prudent, given the revised estimates of risk and the reporting of substantial adverse reactions.

Bioterrorism is not the only infectious disease challenge with political implications. Existing pathogens and newly emerging diseases remind us that infectious agents can destabilize our social structure and commerce, and they may require political or policy intervention. Therefore, the danger is that ideologic stances may intrude on the process and push us away from science and even away from good public health practice.

SARS

The SARS outbreak in Asia in 2003 provided examples of how ideology and politics can interfere with public health practices and bring criticism by ideologues. Moreover, SARS demonstrated the challenge of protecting the public's health across national and ideologic lines. The SARS outbreak was not reported by the Chinese government for the first several months of its transmission. An ideologic perspective that required not sharing weaknesses or inadequacies with the rest of the world probably played a role in this delay. The political pressure of the rest of the world was required to convince China to acknowledge the problem and accept help.

Hong Kong, on the other hand, was more open. Early cases of atypical pneumonia were identified and reported. Further cases were ascertained, and contact tracing was put in place. The system responded with infection control efforts, including isolation and quarantine. Nonetheless, Hong Kong faced a daunting task, with a high population density and a poorly understood disease. In the end, Hong Kong's department of health faced substantial criticism from political opposition and the press, and a committee was formed to evaluate their response. The committee developed a number of recommendations but recognized overall the impressive response of the hardworking public health and healthcare communities. Nonetheless, persons initially critical of the response itself took the opportunity to criticize the report by an international panel. Certainly, being critical and trying to improve performance are valuable, but are they best done in the middle of the challenge and with blatant political intent?

2003–2004 Flu Season

For influenza, the scientific and political processes need to be improved. For many years in public health, we have recognized the threat of pandemic flu and called for the need to act. In this case, politics is more than helpful, it is essential. Preventing a flu pandemic necessitates using the resources of science, politics, and the private sector. Last year, vaccine development became a matter of public concern when several children died from influenza early in the season, and the press reported that the vaccine may have lacked protection against the circulating Fujian strain.

Public discussions highlighted the imperfections of science, particularly related to vaccine production and distribution. Then the finding of cases of H5N1 influenza in Asian chicken flocks and other birds and several human infections and deaths rekindled apprehension about a flu pandemic with a new, lethal strain, should mutations permit person-to-person transmission. With avian flu, some government officials were slow to disclose infected flocks to protect economic interests, and these decisions could have had tremendous potential health effects around the world. Thus politics continues to influence infectious disease control on micro and macro levels.

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Ideology and Science

Early in the HIV/AIDS epidemic, the ideologies of scientists, clinicians, and politicians worked against one another as they affected decisions about paying attention to a new and emerging disease. These decisions and the ideology inherent in them were intertwined with beliefs about sexuality and sexual health. The challenge continues today as ideologic and political entities criticize the National Institutes of Health for research funding decisions, not on the basis of scientific merit, but because these groups and persons find research about commercial sex workers, truck drivers, and sexually transmitted diseases to be inappropriate as public health research topics. In this example, ideology pushes political action to question science and compromise public health.

In each of the cases so far described, both politics and ideology have come into play, and when ideology clouds scientific and public health judgment, decisions go awry and politics become dangerous. Having an ideology or even shouting it from rooftops is perfectly appropriate. One of the fundamental freedoms in our country is the right to believe what we want and express it. But when a person's beliefs bring about public policies that hurt people, they should be held accountable. Condoms and abstinence are well-established, effective means of birth control and STD prevention. Both have flaws in practical application. Both can be tools in our pursuit of improved health. The denigration of either practice suggests a preference for ideology over science.

Scientists and public health professionals often offer opinions on policy and political issues, and politicians offer theirs on public health policies, sometimes with the support of evidence. This interaction is appropriate and healthy, and valuable insights can be acquired by these cross-discussions. Nevertheless the interaction provides an opportunity for inappropriate and self-serving commentary, for public grandstanding, and for promoting public anxiety for partisan political purposes.

Public health professionals should work with politicians to resist ideologic influence, to demand good science, and to make wise decisions and policies.

Conclusion

For scientists focused exclusively on winning at "NIH bingo," accumulating R01s, KO1s, K15s, RO3s, R13s, and R21s, the interplay between science and politics may be irrelevant.

However, most public health scientists and practitioners want to see their efforts improve the public's health. At the same time, scientists require an environment that permits them to work as efficiently and objectively as possible.

The issue can be succinctly addressed with a simple diagram. On the left is science, essential to inform the practice of public health. In the middle is public health, where science is interpreted and appropriate responses are developed. And on the right is political will and policies necessary to carry out the public health impetus. The tendency is to struggle against the intrusion of politics when it is counter to our own opinion, ignores or misinterprets the science, or is driven by ideology beyond politics as usual. We are right to raise our voices against the intrusion of politics into public health in the second and third circumstances, but should take care in the first one.

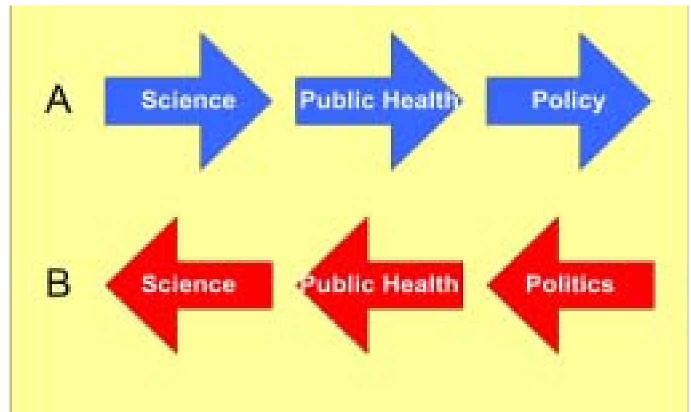

Figure. Proper (A) and improper (B) pathways of developing public health policy.

The diagram has a clear direction of flow. Science informs public health, which leads to political change. This approach is appropriate and effective to improve health, but the process should only flow in one direction. Reversing directions in public health decision-making is just as hazardous as it is in sewage lines. Even more insidious can be the intrusion of ideology into the process, attempting to reverse the current of the science, public health, politics stream. We have seen cases where ideology or political considerations determine a desirable policy and then seek scientific justification for it, often employing faulty science. When this happens, ideology can diminish the field, discredit the discipline and its practitioners, and undermine what scientists do.

How should infectious disease scientists handle political and ideologic pressures in their own work? One way to handle these pressures is to be connected to the rest of the public health community. Every area of public health faces the same issues: a similar commentary would apply to chronic disease or environmental health. Science and politics are intertwined in myriad ways, and ideologic influences are encountered everywhere. Tremendous concern exists in the United States about infectious diseases. Infectious diseases research no doubt gained the spotlight, and accompanying resources, after the events of September 11, 2001, and the anthrax attacks later that year. But political winds change quickly, and this focus could easily shift.

The infectious disease community needs to see their role within the larger public health context and work actively to forge alliances and collaborations between their work and the work of others. The diagram can continue to flow in the right direction, science to public health to policy, but maintaining this direction requires work, which can be accomplished by recognizing interconnectedness and using the political system to improve public health through good science. Several concrete ways to accomplish the goal exist: 1) Be an advocate for infectious disease control, not just emerging infectious diseases or bioterrorism. 2) Be an advocate for public health, not just infectious diseases. 3) Be an advocate for wise public policy based on science in the context of broader societal considerations. 4) Respect the value of the interplay of science, public health, and politics, but recognize any reversal of flow and resist it when it occurs. We all need to be strong advocates for good science, good public health, and good policies and the positive value that politics can provide for all three of these.

HEMNZ Health Emergency Management New Zealand

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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Editor's soapbox

Risk Management standard AS/ NZS4360:2004, in discussing "communicate and consult," offers this:

Communication and consultation are important considerations at each step of the risk management process. They should involve a dialogue with stakeholders with efforts focused on consultation rather than a one way flow of information from the decision makers to other stakeholders . . . . . Stakeholders are likely to make judgments about risk based on their perceptions.

A session at the Risk Society conference included a presentation from Transpower on how they were communicating with their stakeholders on the proposed 400kV Otahuhu-Whakamaru transmission line. The impression I and others I spoke with were left with was this was a "head office just shut up and listen" approach.

Were we wrong? I note that consultation on the proposed line has gone pear shaped with protest meetings being held all along the proposed route. Transpower's approach seems to offer a great case study on how not to do it. Are we smarter than NASA scientists and able to learn from Transpower's difficulties. Effective communication and consultation are key risks to manage in bringing all health service providers into our planning processes

Bruce Parkes

NASA is a slow learner

Keynote speaker at this month's Risk Society conference was Professor John Logsdon addressing the organizational cultural problems that contributed to the Columbia space ship tragedy. Most of those who listened to Professor Logsdon might have imagined that things have since improved at NASA. Not so!! How often do we use the phrase, "It doesn't take a rocket scientist to follow simple directions: "this end up", say, or "fragile, handle with care". However, the latest news from NASA, America's space agency, suggests that a rocket scientist might be the last person you would want.

In September, *Genesis*, a NASA space probe that had been sampling the solar wind, returned to Earth. The mission looked like a publicist's dream—if not for the basic science being done, then certainly for the theatrical method of recovery. The plan was for *Genesis*'s parachute to be snagged by a hook dangling from a helicopter flown by a Hollywood stuntman.

The bad news was that the parachute did not open. The worse news, according to a preliminary statement issued this week by NASA investigators, is that the reason it did not open was that the switches designed to trigger its release were fitted backwards. (The investigative team is still tracing the branches of a "fault tree")

The good news is that many of the sensitive wafers which had been collecting particles of solar wind (charged atoms and molecules that stream out of the sun) survived the subsequent crash intact. The scientists behind *Genesis* consider the mission a success.

Luckily, *Stardust*, a sister mission to *Genesis* which gathered bits of a comet in the same way, and is due back in 2006, seems to have its switches in the right way up. At least, it does according to a review of *Stardust*'s construction undertaken as the *Genesis* revelations came to light. Both *Genesis* and *Stardust* were built by Lockheed Martin, a defence and aerospace contractor.

Among Lockheed's other projects was *Mars Climate Orbiter* which, in 1999, did not so much orbit Mars as slam into it. That time, Lockheed's rocket scientists confused yards and metres. Earlier this month, the firm was given a $330m contract by NASA to design a robotic maintenance mission for the *Hubble* space telescope. *Hubble*, too, was built by Lockheed, but its own near-fatal flaw, an improperly shaped mirror which crippled the telescope for three years, was the fault of the mirror's manufacturer, Perkin-Elmer. Rocket scientists, it seems, are everywhere.

Up coming Events

2 - 3 December 2004
Emergency Management Workshop
"Learning from Sharing"
Brentwood Hotel, Wellington
More information from
nhep@moh.govt.nz

9 - 10 December 2004
Improving Safety and Security in the Health Workforce
Carlton Crest Hotel, Auckland
More information from
www.archi.net.au

16 - 17 February 2005
4th Annual Emergency Management Conference
Wellington Town Hall
Cost $1295 +GST early bird
More information from
www.conferenz.co.nz