Communication before, during and after emergencies: The Christchurch Experience

Dr. Alistair Humphrey
Medical Officer of Health for Canterbury, New Zealand Ministry of Health
Success is measured by what does not occur:

- The school that did not collapse.
- The building that did not fall.
- The village that was not destroyed.
Public Health: Valkyrie or Guardian Angel?
New Zealand

- South Pacific nation
- Population: 4,409,224
- Area: 270,534 km²

NOTE: Juan de Fuca is the only significant fault line on the Ring of Fire NOT to have experienced a major earthquake in the last 50 years.
Christchurch, Canterbury
New Zealand

Christchurch Population - 341,469 (2013)
22\textsuperscript{nd} February 2011, 12.51pm
This presentation:

- The Feb 22\textsuperscript{nd} earthquake was, in fact, an aftershock from a cluster which began on September 4\textsuperscript{th} 2010
  - There have been more than 10,000 aftershocks since Sept 4\textsuperscript{th} 2010

- It was New Zealand’s only national disaster
  - (though New Zealand regularly has earthquakes and volcanic eruptions)

- This presentation will discuss health communications before, during and after the earthquakes
The Christchurch Earthquake on February 22nd 2011

- 6.3 magnitude earthquake
- Modified Mercalli up to 10 (2.24G Peak ground acceleration)
- 182 Confirmed fatalities in the first 24 hours (3 later)
- 3129 people injured (1293 later)
- 7 amputations among other trauma
- 1368 residential properties “red stickered”
- 1359 Commercial properties red stickered (including public health unit)
- 90,000 people displaced initially
- 55,000 people not working from city
- Extensive damage to infrastructure:
  - Power (generally not phones)
  - Roads
  - Bridges
  - Reticulation system
  - Sewerage
3 Purpose

The purpose of this Act is to—

a) improve and promote the sustainable management of hazards in a way that contributes to the social, economic, cultural, and environmental well-being and safety of the public
Health

is a state of complete physical, mental and social wellbeing,

and not merely the absence of disease or injury

WHO 1981
The New Zealand Health Act 1956

- S7a of Health Act 1956 describes Medical Officers of Health
- Designated by Director-General of Health
- Specified District (s)
- Public Health Physician with legislative authority
A Declaration of an Emergency confers “Special Powers” on the Medical Officer of Health.

Special Powers of the Medical Officer of Health!
70 Special powers of medical officer of health

(1) For the purpose of preventing the outbreak or spread of any infectious disease, the medical officer of health may ... if a state of emergency has been declared ...

(a) declare any land, building, or thing to be insanitary, and prohibit its use for any specified purpose:
Special powers of Medical Officer of Health

(a) declare any land, building, or thing to be insanitary, and prohibit its use for any specified purpose:
(b) cause any insanitary building to be pulled down, and the timber and other materials thereof to be destroyed or otherwise disposed of as he thinks fit:
(c) cause insanitary things to be destroyed or otherwise disposed of as he thinks fit:
(d) cause infected animals to be destroyed in such manner as he thinks fit:
(e) require persons to report themselves or submit themselves for medical examination at specified times and places:
(ea) if the spread of the disease would be a significant risk to the public, require people to report, or submit themselves for medical testing, at stated times and places:
(f) require persons, places, buildings, ships, vehicles, aircraft, animals, or things to be isolated, quarantined, or disinfected as he thinks fit:
(fa) if the spread of the disease would be a significant risk to the public, require people, places, buildings, ships, vehicles, aircraft, animals, or things to be tested as he or she thinks fit:
(g) forbid persons, ships, vehicles, aircraft, animals, or things to come or be brought to any port or place in the health district from any port or place which is or is supposed to be infected with any infectious disease:
(h) require people to remain in the health district or the place in which they are isolated or quarantined until they have been medically examined and found to be free from infectious disease, and until they have undergone such preventive treatment as he may in any such case prescribe:
(i) forbid the removal of ships, vehicles, aircraft, animals, or things from the health district, or from one port or part thereof to another, or from the place where they are isolated or quarantined, until they have been disinfected or examined and found to be free from infection:
(j) prohibit the keeping of animals or of any species of animal in any specified part of the health district:
(k) forbid the discharge of sewage, drainage, or insanitary matter of any description into any watercourse, stream, lake, or source of water supply:
(l) use or authorise any local authority to use as a temporary site for a special hospital or place of isolation any reserve or endowment suitable for the purpose, notwithstanding that such use may conflict with any trust, enactment, or condition affecting the reserve or endowment:
(la) by written order to the person appearing to be in charge of the premises concerned, do either or both of the following:
   (i) require to be closed immediately, until further order or for a fixed period, any premises within the health district (or a stated area of the district):
(m) by order published in a newspaper circulating in the health district or by announcement broadcast by a television channel or radio station that can be received by most households in the health district, do any of the following:

(i) require to be closed, until further order or for a fixed period, all premises within the district (or a stated area of the district) of any stated kind or description:

(ii) require to be closed, until further order or for a fixed period, all premises within the district (or a stated area of the district) of any stated kind or description in which infection control measures described in the order are not operating:

(iii) forbid people to congregate in outdoor places of amusement or recreation of any stated kind or description (whether public or private) within the district (or a stated area of the district):

(iv) forbid people to congregate in outdoor places of amusement or recreation of any stated kind or description (whether public or private) within the district (or a stated area of the district) in which infection control measures described in the order are not operating.

(1C) If the medical officer of health publishes an order under subsection (1)(m) in a newspaper circulating in the health district, he or she must also make reasonable efforts to have the contents or gist of the order published by announcement broadcast by a television channel or radio station that can be received by most households in the health district.

(1D) The medical officer of health may publish in any other manner he or she thinks appropriate an order under paragraph (la) or (m) of subsection (1) or its gist.

(2) The medical officer of health, and any environmental health officer or other person authorised in that behalf by the medical officer of health, may at any time, with or without assistants, enter on any lands, buildings, or ships, and inspect the same and all things thereon or therein; and may do, with respect to any persons, places, lands, buildings, ships, animals, or things, whatever in the opinion of the medical officer of health is necessary or expedient for the purpose of carrying out the foregoing provisions of this section.

(3) In no case shall the medical officer of health, or any environmental health officer or assistant or other person, incur any personal liability by reason of anything lawfully done by him under the powers conferred by this section.
What Legislation underpins Health’s response to an emergency in the countries where you have worked?

What implications does this have for communication and health?

Who are your spokespeople?
The Four "R"s of Emergency Preparedness

- Risk awareness/reduction
- Readiness (including resilience)
- Response
- Recovery

Clear and Effective Communication is required in every phase!
Coordinated Incident Management System (CIMS)

- Incident Controller
  - Communications
  - Safety
  - Liaïson
- Operations
- Logistics
- Intelligence
Coordinated Incident Management System

CIMS Values

- Adaptable to any emergency incident
- Suitable for use regardless of jurisdiction or agencies involved
- Employs a common organisational structure
- Utilises common command structures and consolidated action planning
- Utilises common terminology
- Consistent with emergency management principles adopted by government

CIMS Principles

- Common terminology
- Modular organisation
- Integrated communications
- Consolidated incident action plans
- Manageable span of control
- Designated incident facilities
- Comprehensive resource management
Pandemic CIMS

Incident Controller

- Communications
- Safety
- Liaïson

Operations
- Border control – PHU
- Cluster Control – PHU
- Manage It – Primary Care

Logistics

Intelligence

Health Board

Public Health
The spectre of “birdflu” - 2005 and beyond

- Assumptions:
  - Health and welfare would have few staff
  - No access to vaccines
  - Efficacy of antivirals uncertain

- Leadership important
  - Primary Care
  - Hospital
  - Public Health

…ebola…?
Monthly pandemic meetings

- Primary care led involving all health organisations
- Media an integral part of planning
- All government agencies involved
- Private sector also involved
  - Eg. Hotels, Airlines, Bus services
Thesis

Trust, terrorism and public health

Martin McKee, Richard Coker

European Public Health, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK
Address correspondence to Martin McKee, E-mail: martin.mckee@lshtm.ac.uk.

ABSTRACT

Policies to promote public health are based on trust. There is a danger that public trust may be lost, especially where policies are seen to be influenced by vested interests or conflict with available evidence. Although trust in public health policies in the UK is high, some commentators have questioned recent responses to the threat of pandemic flu, suggesting that they may be driven, in part, by those seeking to profit from health scares, and drawing a direct comparison with terrorist scares. We argue that the approach to evidence by the public health and counter-terrorist communities differ markedly. Public health professionals must ensure that their actions do not undermine their credibility, in particular those involved in response to the threat of bioterrorism.
You're Not Going To Believe This Dept.

SEE, YOU DON'T GO INTO A WORLD-WIDE INFLUENZA PANIC WITH THE MEDICINE YOU WANT...

You go in with the one I got...

Tamiflu Patent Holder is Gilead Corporation whose former executive and still major shareholder is Donald Rumsfeld.

Yes, THAT Donald Rumsfeld...

FDA Approved, I presume...

GET SICK SOON

Jeff Danziger NYT 28th Nov 2005
The Pandemic Roadshow

- Exhibition and workshops aimed at
  - Local government
  - Community groups
  - Teachers

- Website
  (http://www.fluinfo.org.nz)

- Simple messages
We can reduce our risk... significantly

- C  Cover coughs
- H  Hand washing
- I  Isolation
- R  Reduce germs
- P  Prepare yourself
National Public Information

- TV advertising
- Leaflet drops
- Print media
- Website

www.getthru.govt.nz
Prepare yourself-
Self reliance

- We will not be able to care for you
  - Our staff will be sick
  - Our staff will be caring for their families

- You must be able to care for yourselves
  - Food and water for one week
  - Hand washing and isolation

- You must know your neighbours
Did the information make a difference?

- 11% Cantabrians were aware of pandemics (vs 6% national average)
- 68% Cantabrians felt they were well prepared (vs 54% national average)
Media reports of “deadly” flu virus in Mexico

Canterbury Emergency Operations Centre set up in response to media alerts

NZ1 arrives with school party from Mexico via LA (11 cases)

Auckland family doctor reports “Mexican” ILI to Public Health
A simple pandemic plan

1. Keep It Out
2. Stamp It Out
3. Manage It
4. Recover From It
Communicating with the Community
Collaboration between public health, primary care and Samoan migrant community
Successful aspects of pandemic response

- Clear information
  - Collaborative media
  - Recognisable, trusted spokespeople

- Collaborative response
  - Between agencies
  - Between health providers
  - With communities
  - With media
  - With private sector

= Trust

- Clear Budget for response
Group Discussion (2)

- What are your most important health messages?

- What processes are you using to build trust in your health messaging?

- What means are you using to deliver your public health messages?
Health and Emergencies

Time after disaster

- Initial event
- Days to weeks
- Weeks to Months
- Years

Issues

- Trauma
- WASH
- Mental Health
- Property issues
- Health determinants
“Public Health” Emergencies?

When is an emergency *not* a public health emergency?

- Terrorist attack?
- Flood?
- Earthquake?
- Tsunami?
- Drought/Heatwave?
- Power failure?
- Storm?
- Global Financial Crisis?
- Industrial failure?
- Flu Pandemic?
- Ebola outbreak?
- Fire?
- Solar flare?
- Near Earth Object (NEO)?
Which health issues are involved in these emergencies?

- Terrorist attack?
- Flood?
- Earthquake?
- Tsunami?
- Drought/Heatwave?
- Power failure?
- Storm?

- Global Financial Crisis?
- Industrial failure?
- Flu Pandemic?
- Ebola outbreak?
- Fire?
- Solar flare?
- Near Earth Object (NEO)?
Zombie Apocalypse!

Office of Public Health Preparedness and Response

Zombie Preparedness

Wonder why Zombies, Zombie Apocalypse, and Zombie Preparedness continue to live or walk dead on a CDC website? As it turns out what first began as a tongue in cheek campaign to engage new audiences with preparedness messages has proven to be a very effective platform. We continue to reach and engage a wide variety of audiences on all hazards preparedness via Zombie Preparedness.

Zombie Products

Zombie Blog
September 4th 2010, 04h35
- The Darfield Earthquake

- 7.1 magnitude
- Zero mortality
- Minor damage
- Practice run?
The Press Newspaper: 22.2.11
The Press Building: 22.2.11

INSIDE

THE ROOF
Immediate Local, Regional and National response

- Establish Emergency Operations Centres
- USAR
- Building inspection
- Establish electricity
- Cordon/security
- Welfare centres
- Boil water notice
- Water tankers
- Portaloos

National civil defence emergency declared on 23rd Feb 2011
National Controller: Air Force?

- CCC CEO
- NCMC
- Recovery

Director Operations
- Air Operations
- PIM

Operations
- USAR
- Security
- Building inspection
- Volunteers
- Welfare
- Health
- Infrastructure

Logistics
- Fuel
- Facilities
- Materiel
- Telecoms

Planning
- USAR (Fire)
- Security (Police)
- Building inspection
- Volunteers
- Welfare
- Health
- Partner agencies

Intelligence
- Collate
- Analyse
- Display (GIS)
- Disseminate

Log Plans
- Fuel
- Water
- Shelter
- Transport
- Human resource

Medical Officer of Health

Staff Support

Director Plans

Facilities Management
Lesson 1 from the pandemic:
Use credible, articulate spokespeople

Rudy Giuliani, NYC

- Honesty
  - We do not know how many casualties there are

- Empathy
  - It will be more than we can bear

- Hope
  - Our city will come back stronger
Bob Parker, Christchurch

- We have people to find
- We will grieve together
- In this space will grow a city renewed
Lessons from the Pandemic 2: Diverse, open communication

- Face to face contact at community briefings
- Mailbox Leaflet drop
- Free phone lines
- Websites
- Social media
- Newspapers
- TV
- Radio
Lessons from the Pandemic 3: Self reliant/resilient communities

...You know you're from Christchurch when....

1. You know all your neighbours and their names
2. You know all the insides of their houses
3. You know what garden tools they have
4. You know where they used to work
5. You know what their cooking tastes like
Liquefaction damage
Day 1:
70% households without water

- 50% city without power
- 80% trunk sewers damaged
- Damage from source to tap:
  - Reservoirs, wells
  - Pump station damage
  - Mains rupture
Water supply issues (1)

- Some source waters unusable
- Damage to well casings
- Subsidence

- Damage to pump stations
- Damage to reservoirs
Water supply issues (2)

- Ruptured sewers
- Broken water mains
Christchurch Earthquake day 11: Water Pipe Breaks 4th March 2011
Christchurch Earthquake Day 12 -
Parts of city with no water
Christchurch sewer line breaks February 2011 = Significant risk of cross contamination
E. coli transgression clusters
Solutions

- Boil water notice and home chlorination
- Bottled and tankered water
- Testing/monitoring/GIS
- Extra staff
- Quality liaison
- Chlorination
- Community resilience tapped
- Communication
Tankered Water

- Only 4 registered water carriers in Canterbury region
- Un-registered carriers used under State of Emergency
- *All* water boiled message
Water tanker location sites
Pushing chlorine through the system
More than 10,000 aftershocks since September 4th 2010

You know you're from Christchurch when....

...GeoNet is your home page...
“If you want to fix my mental health, I don’t need a counsellor, I need a drainlayer!”
Wheelie bins used for sewage collection... and “dunny” competitions...!
You know you're from Christchurch when…

...you fight with the dog for a space to poo in the back garden...
...and what was the community doing...

- Boiling their water
  - 88% were still boiling water 6 weeks later

- Washing their hands
  - No outbreaks occurred at all

- Digging silt from liquefaction
  - The student army
  - [http://www.youtube.com/watch?v=4YgDoL8zoNU](http://www.youtube.com/watch?v=4YgDoL8zoNU)

- Providing equipment to assist
  - The “farmy” army

- Establishing their own welfare centres
  - Tradesmen helped build laundries etc

- Accommodating their neighbours
  - Many had to accommodate two or three families
  - Sports clubs provided showers
You know you're from Christchurch when...

...a bunch of students turn up at your house and leave it tidier than when they arrived...
This report draws on the experiences and lessons learned from Digital Democracy’s work with Haitian women’s organizations in the aftermath of the January 2010 earthquake. With support from the U.S. Institute of Peace, Digital Democracy has conducted training for Haitian women on how to use cell phone and other forms of information technology to prevent violence.
Five aspects to building Community Resilience

- Communication
- Learning
- Adaptation
- Risk Awareness
- Social Capital

How well did Cantabrians perform?

- **Learning**
  - Get ready get thru
- **Risk Awareness**
  - Pandemic roadshow
- **Communication**
  - Community briefings,
  - Websites and other media
- **Adaptation**
  - Application of learning to different situations
- **Social Capital**
  - Student army/ Farmy army
  - Celebration of community achievements
Lesson not learnt from the Pandemic: Recovery

Share an Idea

- Community consultation
  - Online
  - In person
  - Organised by
    Christchurch City Council

- 106,000 ideas
Enormous Community Response
The Themes of the Public Response
The Categorization of the Public Response: Complete Physical, Mental and Social Well Being?

- Green City
  - Clean air, water
  - Gardens and parks
- Transport choice
  - Bicycles and walkways
  - Public transport
- City life
  - Active and healthy
- Distinctive city
  - Culture
  - Low rise
- Market city
  - Business, broadband
Human ecology model of a settlement


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Built on Intersectoral goodwill
Interagency collaboration to avoid "silo-ing"
Health is everybody's business
Canterbury Earthquake Recovery Authority (CERA)
All Right? is a social marketing campaign designed to help Canterbury think about our mental health and wellbeing and ways we can improve it.

**Why is it needed?**
There are lots of things about the recovery that cause frustration and stress. Acknowledging this, and providing simple tips that support people to boost their wellbeing can reduce the likelihood of increased mental illness and help people to flourish.

**Phase 1: We're Just Asking**
It's normal to feel how you do.
- We've all been through a lot and it's normal to feel a whole range of emotions.
- You can be everything from frustrated to stoic, even at the same time.

**Phase 2: We're Not Preaching**
There are things you can do to boost your wellbeing.
- We need to make time to care for ourselves.
- This is to instil the real pain that many are experiencing - it is to remind people that we can, and already do, take care of ourselves and each other in very simple ways.
- All based on the 3 winning ways to wellbeing: keep learning, be active, connect, give and take notice.

**Phase 3: Cantabrians Telling Their Own Stories**
People know what works for them.
- We don't have a monopoly on wellbeing!
- We want to provide a forum so people can share what works for them to boost their wellbeing.

**Why it's working**
It's local
- We're informed by local research - we are reflecting back the voices of Cantabrians.
- Made in Canterbury - for us, by us.
- A very consultative development process.

Phase 1: We're just asking
- The question mark is a crucial All Right? is not a statement because there are many aspects of our lives as Cantabrians that are definitely not all right.
- We're not telling people to do or feel anything.
- However they're feeling is all right.

Phase 2 – We're not preaching
- Our messages are not rocket science - but they are proven to boost your wellbeing.
- Light hearted illustrations + use of question mark = not seen as directive.

Phase 3 – Cantabrians are telling the story
- Everyone has their own ideas on what makes them feel good.
- We're collecting people's ideas and sharing them with others.
- Having local people's ideas on bus shelters around the city is helping start a community conversation about wellbeing in Canterbury.

**It's all right to ask for help**
- When talking about how we're doing, it's all right to answer 'No, I'm really not all right at the moment.'
- It's definitely all right to ask for help and free help and support is still available to all Cantabrians.

**Knowing we're making a difference**
- Evaluation has been built into the project. We're also using market research, website analytics, and public feedback to ensure we're making a positive difference.

Thank you to everyone involved in this campaign. Because of the wonderful Naps, I was prompted to go on the website and tried. I was able to access funded counselling. I have had five sessions and they have helped me ENORMOUSLY! THANKS! Thank you thank you thank you! I am now coping and dealing with things so much better than I had been. Naps x

Rodney
The Christchurch Earthquake
Four years on - 4th September 2014

- 761 Central City buildings demolished (130 partially demolished)
- 60 Commercial buildings awaiting demolition
- 7409 Red zoned dwellings accepted government pay-out
- 5227 red zoned dwellings demolished (970 awaiting demolition)
- 168,996 building insurance claims
  - 34% repaired
  - 52% paid out
  - 14% not yet resolved
- 186,622 Contents insurance claims completed
- 146,820 land insurance claims completed
- 69,746 home repairs completed (87% of total)
- Population of Christchurch down 2% by 6987
- Population of Canterbury up 3.4% by 17,601
What long term (health) issues persist following emergencies you have experienced?

What solutions have you found to these problems?

What is the role of communication in the solution?