SARS in Singapore
Dr. Chris Wynne, Christchurch Hospital
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SARS IN SINGAPORE
Learning From Experience

Chris Wynne
Clinical Director of Radiation Oncology
Christchurch Hospital, New Zealand

Hosted by Jane Barnett
jane@webbertraining.com

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Case one

• 22 yr female
• Shopping trip to Hong Kong Feb 20-25
• Dry cough Feb 25
• Hospital admission, pneumonia, March 1
• Infected 21 persons, 9 health care workers

Case 2

• Nurse 27 yrs
• Cared for case 1
• March 7 fever
• Admitted March 10
• Isolated March 13
• Infected 23 persons, 11 HCWs
Case 3

- 64 yr vegetable seller
- Had visited sister in hospital
- April 5 myalgia, cough, coryza, temp=37.7
- Died April 12
- Infected 15 persons: 5 HCWs, 2 inpatients, 2 family, 1 visitor, 2 taxi drivers, 2 vegetable sellers, ED visitor

Steps taken in Radiotherapy Centre

- One dept closed
- Current patients continued treatment
- No new patients started
- Half staff levels
- Compliance with hospital IC policy
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SARS

• Feb-July 03 only 8437 cases
• 813 deaths

• In 2002, 40 million people infected with HIV

What is unique

• High mortality
• Rapid global spread
• International co-operation
• Novelty

Lessons from SARS

• Better prepared for pandemic
• Need trust-worthy data
• Value of strict quarantine
• Appreciation of the morality of medicine

Emanuel, Ann Int Med 2003; 139:7
Generic Lessons from SARS

- Understand the natural history
  - acquisition of epidemiological data
  - recognition of atypical infection
- Risk reduction

Generic lessons

- Non proven therapy
- Non compliance
- Leadership
- Personal …fright and flight

The only thing we learn from history
is that we learn nothing from history
Previous Pandemics

- 1918 Spanish flu  H1 N1
- 1957 Asian flu     H2 N2
- 1968 HK flu        H3 N2
- 1977 Russian flu   H1 N1

New diseases

- H 9  N2   2 children in HK in 1999
- H 5  N1   HK 1997  33% mortality
           Vietnam 2003  67% mortality

1918 Flu in New Zealand

- The first New Zealand illness
- Second wave of influenza spreading globally in August
- Troopship Tahiti, 1087 men, took on coal off Sierra Leone
- Day 2, 84 had flu
- Day 7, 800 cases
- 76 deaths
Sept-Oct 1918

• Serious epidemic causing closure of shops in Wellington
• No deaths
• Christ’s College 127 boys sick
• Mild first wave

The role of the prime minister

• PM Massey and Finance Minister Ward
• returning from Imperial War conference
• on board Niagara

• 2 days out from Honolulu, flu developed
• Auckland arrival, 100 ill crew, 1 death, hospitalisation required for 25

• Advised
  – Zinc sulphate inhalation
  – Isolation of cases
  – Minister of Health decided not to quarantine the ship
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• Within 2 weeks, hospital staff were ill
• Ward cover by nurses was impossible
• 3 of 23 firemen were on duty
• 80% telephone exchange workers were ill

Community action
• Citizens committee led by mayor
• Local action groups
• Closure of all pubs, schools, gatherings
• Churches closed
• 8 Nov news of end of war, people everywhere

Christchurch
• Time for preparation
• Auxiliary hospitals
• October, first wave, rumours of overcrowding and disorganization
• Nov 5, District Health Officer, closed theatres, schools. Chemists asked to stay open
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- Show Day Nov 9
- Armistice celebrations Nov 12, huge crowds
- 14 Nov 145 flu admissions
- Matron and Med superintendent ill
- Appeals for nurses

- Central committee divided city into blocks
- Boy scouts, AA
- GPs rostered
- Chemists, wharfies and funeral directors
- Linwood cemetery filled up
- Dec 2 relief effort over

Christchurch Hospital
- 722 admissions
- 232 deaths
- Controversy re treatment

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Ethics

10 key principles

- Individual liberty
- Protection of the public from harm
- Proportionality
- Reciprocity
- Transparency
- Privacy
- Protection of communities from undue stigmatisation
- Duty to provide care
- Equity
- Solidarity
Individual Liberty

• A nurse at a hospital affected by SARS feels unwell and has a fever

• Worried about her mortgage
• Goes to work
• Shown to have SARS
• ?quarantine
• ?name her

Collateral Damage

• Surgery for a patient with breast cancer is postponed during the SARS outbreak

• Denial of care
• Reduced care
• Loss of family support

Duty of care

• A nurse is worried about the risk to her family and decides not to go to work

• Firemen don’t only attend little fires
• Health workers training paid for by public
• Dire circumstances may require may cost lives

• Reciprocity
  – Acknowledgement
  – Insurance
  – Provision of adequate personal protection
The Flu War Game

- Canterbury experience

- Public health, primary health, secondary care, managers

- Deficiencies rapidly exposed in many areas
  - Protective equipment
  - Community treatment
  - Security
  - Communications

Oncology Plan

- Risk of harm to patients from continuing treatment

- Redeployment of staff

- Use of physical structure

Research Opportunities

- Social science
  - Belief systems
    - Workers
    - Ethnicity
    - Deprived groups
  - Models of care
    - Authoritarian vs laissez faire

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Research Opportunities

- Drug trials
  - Tamiflu: when, how long
  - Steroids
  - Vaccine
- Epidemiology
- Genetic markers of response

Summary

- We ignore history at our peril

- We can be better prepared
  - Staff
  - Equipment
  - Public
  - Leaders

The Next Few Teleclasses

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<td>October 5</td>
<td>Neonatal Sepsis, A 2006 Update</td>
<td>Dr. Anne Matlow, Hospital for Sick Children</td>
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<td>October 12</td>
<td>The Changing Role of Infection Prevention and Control as Documented by the CBIC Practice Analysis</td>
<td>members of the CBIC Board</td>
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<td>October 19</td>
<td>Hand Hygiene – Improving Compliance</td>
<td>Dr. John Boyce, Hospital of Saint Raphael</td>
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