Incident Management System (IMS) in the public health response: From SARS to pandemic H1N1

Richard Bochenek
Erik Kristjanson
Brian Schwartz

Ontario Agency for Health Protection & Promotion
Learning from the Past
STILL WORRIED ABOUT TERRORISTS?

NO... CANADIANS
SARS Chronology

• Spring 2003
  – 44 deaths: 3 were Health Care Workers (HCW)
  – 375 probable & suspect cases (50% HCW’s)

• Ontario Legislation in place at the time:
  – Health Protection and Promotion Act, (1983)
    • Based on Public Health Act, 1884
  – Emergency Management Act, revised 2002
    • Activated entire EM mechanism of Ontario
H1N1 Chronology

• April 2009
  – Mexico asked Canada to analyse a novel virus
    • Had been percolating in Mexico for some time…
    – Quickly spread to California and Texas

• June 2009
  – WHO declared Pandemic H1N1 Influenza
SARS Challenges

• No test
• No diagnostic criteria
• No idea of clinical course
• No treatment
• No knowledge of disease transmission
• No idea of duration of infectivity

• No common emergency management structure
H1N1 Challenges

• Initially presented similar to SARS

• Generated all the same fears of SARS!
  – Permeated the healthcare system
  – Permeated the healthcare response
Best Evidence for SARS

- Expert opinion
- Anecdotal lessons learned
- Extrapolation to other venues
Best Evidence for H1N1

• Rapid molecular analysis at Public Health Labs
  – Polymerase Chain Reaction (PCR) testing identified the organism as Influenza
    • Novel strain of H1N1 (swine) flu
    • Obvious pandemic potential

But, we had an ace up our sleeve…
Best Evidence for H1N1

Pandemic Planning!

- 15 years of pandemic influenza planning
  - Ontario Health Plan for an Influenza Pandemic (OHPIP)
  - Many plans developed and shared at other venues
    - Municipal, regional, federal, international
SARS Science Decision Making

- Review by committee
- Sent “upstairs” to operations
- Edits based on reality checks
- Approval by PEOC
SARS Response Challenges

• Communication, communication, communication

• Lack of clear authority: Who’s in charge?

• Disconnect between province and public health units
• Difficulties in accessing data
• Lack of a clear mandate
• Psycho-social impact on Health Care Workers
The SARS Legacy

She is one of thousands of health care professionals who are on the front line in our war against SARS. They are dealing with something that we have never faced before and they have been doing it twenty-four hours a day, seven days a week for over a month. It’s exhausting. Their families worry about them. They worry about you and the safety of us all.

We thank them.

While SARS has put Ontario on the world stage, our hospital and health care workers are proving us to be world class.

These are Ontario’s heroes.
Emergency Management Unit

- Created in 2003 as an outcome of SARS
- Fulfills current MOHLTC obligations under *Emergency Management and Civil Protection Act*
  - Responsibility to prepare for and respond to “human health, disease, and epidemics, and health services during an emergency”
- Maintains state of readiness to respond to emergencies (MOHLTC)
  - Supports health sector during emergencies where local capacities have been or have the potential to be exceeded
SARS Commissions x 3

1. Naylor: PHAC
2. Walker: EMU & OAHPP
3. Campbell: Occupational Health & Safety

All recommended:
Infection Prevention & Control
Command & Control systems
Ontario Agency for Health Protection & Promotion

- Recommended by Walker Report
  - began operations in 2008

- Provides support to Public Health in Ontario:
  - Infectious Diseases, Surveillance & Epidemiology, Environmental, Chronic Disease Prevention

- Support in emergencies and exigent events
  - as requested by CMOH
Implementing IMS in Public Health

What is IMS?

• A way of creating (some!) order out of chaos

• A framework

• A tool
Where Did IMS Come From?
Why Should We Care?

- In day-to-day operations, health care organizations often very insular
  - “Our” procedures don’t have to be same as “their” procedures
  - Applies within as well as between organizations

- In a health emergency we cannot operate in a vacuum!
  - Need way to communicate / coordinate efforts
IMS - Components

1. Unified command structure
2. Common terminology
3. Modular organization
4. Integrated communication
5. Consolidated action plans
6. Job Action Sheets
7. Manageable & sensible span of control
8. Designated facilities
9. Comprehensive resource management
IMS Structure

- Command
  - Operations
    - Doers
  - Planning
    - Thinkers
  - Logistics
    - Getters
  - Finance / Administration
    - Payers
SARS Reporting Structure

Emergency Management Act, 2002

Tony Clement
Minister of Health & Long Term Care

Phil Hassen
Deputy Minister MOHLTC

Allison Stuart
SARS Executive Lead

Dr. Jim Young
Commissioner Public Safety & Security

Dr. Colin D'Cunha
Commissioner of Public Health

Ontario SARS Scientific Advisory Committee

EMS
Medical Support Communications Legal

37 Public Health Units
- Toronto
- York
- Peel
- Durham

Who is in charge?

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**Incident Command**

- Directs activities of personnel in the Emergency Operations Centre (EOC)
- Most senior trained responder
  - In Public Health, may start as on-call Medical Officer of Health, Nurse, Manager or Public Health Inspector
- As response progresses:
  - IC position may be “handed off” to more senior person
IMS Structure at the EMU
SARS Reporting Structure (reprise)

Tony Clement
Minister of Health & Long Term Care

Phil Hossack
Deputy Minister MOHLTC

Allison Stuart
SARS Executive Lead

Dr. Jim Young
Commissioner Public Safety & Security

Dr. Colin D’Cunha
Commissioner of Public Health

Ontario SARS Scientific Advisory Committee

SARS Epidemiology Unit

EMS
Medical Support
Communications
Legal

37 Public Health Units

- Toronto
- York
- Peel
- Durham
Public Health Incident Manager

Chair, Board of Health Medical Officer of Health

Safety
Public Information
Liaison

Operations
- Mass Vaccination/Post Exposure Prophylaxis
- Hotline Operation
- Reception Centre/Mass Care
- Case Management/Contact Tracing
- Environmental Inspection & Sampling
- Epidemiology
- Psychosocial Intervention

Planning
- Situation Assessment
- Staffing & Resource Needs
- Resource Deployment
- Documentation
- Demobilization & Recovery

Logistics
- Facilities
- Human Resources
- Communications Equipment
- Miscellaneous Supplies
- Nutrition/staff accommodation

Administration
- Claims/Compensation
- Costing
- Procurement

Public Health Unit IMS

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IMS - Components

1. Unified command structure
2. Common terminology
3. Modular organization
4. Integrated communication
5. Consolidated action plans
6. **Job Action Sheets**
7. Manageable & sensible span of control
8. Designated facilities
9. Comprehensive resource management
Role title

Reports to:

Overall Responsibility:

Emergency Response Function Checklist

Immediate (Tasks to be completed first upon assuming the role)
- Obtain a full briefing of the Incident and obtain appropriate Function Checklists and any pertinent forms
- Participate in developing and implementing objectives and strategies for the Incident Action Plan,
- Assist in determining appropriate resources for Operations function to initiate the response

Intermediate (Tasks to be completed after the immediate tasks are addressed)
- Brief all Operations sub-function leads on current situations and add or delete tasks to corresponding Function Checklists as appropriate
- Maintain communications with field operations staff through each sub-function lead in each established Operational sub-function (e.g. hotline, case management and contact tracing)
- Coordinate on-site TPH resources and equipment
- Monitor Operations function to achieve objectives – request resources as needed through PHIM.
- Ensure that staff assigned to Operations are aware of potential hazards and appropriate precautionary and/or take appropriate measures, wear personal protective equipment provided and have obtained appropriate training

On-Going
- Observe staff for signs of stress and report concerns to Operations-Psychosocial Intervention.
- Ensure rest periods and relief for staff
- Prepare end of shift briefing and update for back up Operations lead
- Plan for the possibility of extended deployment
- Attend meetings designated by PHIM as part of the emergency planning cycle
- Monitor and review work progress of Operations sub-functions
- Routinely update Operations sub-function leads on the status of the incident
- Maintain communications with other function leads e.g. Liaison, Planning
- Verify that Operations staff are performing work safely
IMS - Components

1. Unified command structure
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6. Job Action Sheets
7. Manageable & sensible span of control
8. Designated facilities
9. Comprehensive resource management
Span of Control: The number of subordinates that a superior can manage effectively

- Ineffective
  - Was “management by committee”

- Effective
  - Now each person reports up to one supervisor
How Does This Work in Real Life in a PHU?

• Incident occurs
• Notification
  – Official (eg – Police / MOHLTC EMU)
  – Unofficial (ie people start calling…!)
• On-call Medical Officer of Health (MOH) becomes Incident Commander/Manager
Initial Response

Incident Commander = On-Call MOH

Operations
- PH Nurse or Inspector

Planning
- PH Nurse or Inspector

Logistics

Finance
Initial Response (cont’d)

• Priorities and objectives established
• On-site command developed
• Multi agency communication established
• Resource needs and allocation identified

NEEDS EXCEED AVAILABLE RESOURCES
The Incident Progresses...

- Decision to initiate local / regional plans
- Fan-Out process
  - Health unit staff
  - Leadership
- Senior on-site leader assumes IC role
  - Establishes EOC / Command Post
  - Begins to assign roles / responsibilities
- Replaced by more senior staff as they arrive
- Call OAHPP?
Full-Scale Public Health Response

- Incident Commander appoints key personnel
  - Four section Chiefs
  - Liaison / Information / Security
- Job Action Sheets distributed and checklists begin
- Priorities and objectives established
  - Incident Action Plan(s) developed
- Span(s) of control established
Full-Scale PH Response (cont’d)

- Multi-agency communication established (Hospitals, EMS, Other PHUs, Public Health Lab, OAHPP)
- Resource allocation identified
- Tracking, evaluation, and cost recovery initiated
- Off-site command established (as needed)
- Information released to media / public
- Recovery processes developed
Questions ?