Role of the pre-hospital workforce in preparation and response to avian influenza

National Rural Health Conference; 8\(^{th}\)-10\(^{th}\) March, 2007

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TODAY’S PRESENTATION

1. What we know about Pandemic Influenza
2. Current (QAS) activities
3. NHMRC study.
WHAT WE KNOW ABOUT PANDEMIC INFLUENZA
WHAT WE KNOW

- Infected birds have been the primary source of infections in humans in Asia
- Human-to-human transmission (in the absence of exposure to sick birds or infected bird products) is still unclear
- Case detection is confounded by the non-specificity of the initial manifestation of the disease
WHAT WE KNOW

- Commercial rapid antigen tests are still insensitive
- Avian-induced influenza in humans differs in several ways from influenza due to human viruses
  - e.g., incubation ranges from 2-8 days; up to 17 days.
WHAT WE KNOW - TRANSMISSION

H5N1
Transmission via infected blood; droppings; poorly prepared bird flesh and other environmental exposure to sick birds.

Human Influenza
Transmission via inhalation of infectious droplets and droplet nuclei; by direct contact; fomite contact, and via self-innocation onto the upper-respiratory tract and/or conjunctival mucosa.
GLOBAL PATTERNS

Animal Cases
Affected areas with confirmed cases of H5N1 Avian Influenza since 2003 (WHO)
Current at 1st March 2007

Human Cases
Affected areas with confirmed cases of H5N1 Avian Influenza since 2003 (WHO)
Current at 1st March 2007
“1st USA DOCUMENTED CASE OF BIRD FLU”
CURRENT QAS ACTIVITIES
BACKGROUND

National Pandemic Plan

State / Territory Plans

Multi-agency development e.g, QAS; EMQ; QHealth
QAS ACTIVITIES

- QAS – 2 dedicated positions
  - Project Manager (Darren Hall)
  - Project Officer (Bronwyn Roulstone)
  - Under guidance of Commissioner and Deputy Commissioner

- Role description
  To develop an Influenza response plan that will facilitate maintenance of
  - QAS service delivery operations during a Pandemic
  - Health, safety and wellbeing of QAS staff
QAS ACTIVITIES

PPE/USP

- Air purifying respirators (APRs), and accessories, for all operational staff ($1.1M)
  - Training (on-line; face-to-face; fit-test)
  - Code of practice

- P2 masks x 200, 000
  - For staff who can not wear APR; home quarantine if required
  - Initial purchase only (to be revised in July)
QAS ACTIVITIES

- Staff awareness
  - Pandemic Influenza
  - PPE
  - Infection control

- Variety of tools
  - Newsletters;
  - Commissioner's Memoranda
  - Operational Circulars;
  - Medical Director's Circulars
  - Presentations across different forums
  - Posters
  - Media articles,
  - Articles in departmental publications
Clinical Practice

- Identification of clinical procedures that may or will be suspended during pandemic operations
- Annual influenza vaccine available to all operational staff
- Patient handover protocol (draft form)
QAS ACTIVITIES

- Demand management
  - Increased demand; reduced availability
  - Establish agreements with other emergency service providers and third party organisations to assist QAS

- Workforce management
  - Staff quarantine (officer and family support)
  - Staff screening
  - Provision of anti-viral medication
  - Staff recall
  - Work from home arrangements
  - Staff welfare and psych support
AHH CHOO!

BIRD FLU
NHMRC STUDY
NHMRC STUDY

- In February 2006, NHMRC announced $6.5 million grant funding for urgent research into avian influenza-induced pandemic (12 month limit)

- Collaborative proposal led by ACPHR related to the role of the prehospital sector in pandemic influenza was successful (partnered by VIDRL / MUCAPS / SPH)
  - Only research involving prehospital sector
  - National study
NHMRC STUDY

- CAA (Council of Ambulance Authorities)
- Ambulance Services across Australia
NHMRC STUDY

Investigators
Vivienne Tippett (ACPHR) – Chief Investigator (A)
Frank Archer (MUCAPS)
Konrad Jamrozik (UQ)
Heath Kelly (VIDRL)
Skip Burkle (Johns Hopkins)
Michael Coory (QLD Health/UQ)

Project Staff
ACPHR - Kerrianne Watt (ACPHR) – Project Manager
Steve Raven; Louise Plug
MUCAPS - Amee Morgans; Ingrid Bielajs
VIDRL - Kristina Grant
NHMRC STUDY - WHY PREHOSPITAL?

- “Front line” health workers; first point of contact
- EMS have extensive experience in dealing with the unexpected
- This is different:

  Duration (not a contained event)

  Impact on available workforce (if inadequate protection mechanisms)

  Infectious (family / friends)
NHMRC STUDY - AIMS

1. Explore the attitudes and perceptions of paramedics and their families to working and living during an influenza pandemic (Risk Perception study)

2. Explore the emerging roles of ambulance services as a key component of public health surveillance systems (Surveillance and Triage study)
RISK PERCEPTION STUDY

1. There is a high level of concern among prehospital workforce

2. Mitigation and management of perceptions and attitudes should focus on
   - Effective systems
   - Effective communication
   - Efficacy of PPE/USP
   - Consider partner concerns / perceived partner concerns
Can Ambulance communications data be used as a surveillance tool for influenza-like-illness?
Ambulance Call-taking Data vs MMLS Data 2002-2005

ILI Cases

01jan2002 01jan2003 01jan2004 01jan2005 01jan2006

wkdate

australian centre for prehospital research
TRIAGE

- Triaging at point of call-taking requires change in current triage practice

**Shift from “identify and treat”**

- Reflects severity of presentation

**Prevent secondary infection**

- Based on duration; exposure; infectiousness
- Population based
- SEIRV methodology

AUSTRALIAN CENTRE FOR PREHOSPITAL RESEARCH

QUEENSLAND AMBULANCE SERVICE

QUEENSLAND GOVERNMENT

DEPARTMENT OF EMERGENCY SERVICES
SUMMARY

1. National evidence of perceptions; expectations; behaviours of Ambulance Service staff during pandemic conditions
2. Strategies in place / being built to support and protect staff and families
3. RESEARCH / PRACTICE INTERSECTION