

**PACCARB**  
**Case Scenario Discussion**  
Infection prevention/control and  
biosecurity – agricultural  
workforce

Jeff Bender DVM, MS DACVPM  
School of Public Health  
University of Minnesota



# Case Study - Avian Influenza



# H5N2 Outbreak in Minnesota

- First detection on March 4, 2015
- 110 premises affected (6 considered dangerous contacts)
  - Most were commercial turkey growers
- \$647.2 million estimated lost turkey and egg production
- \$171.7 million of lost wages, salaries, and benefits
- 2,500 jobs were affected



# After Action Review - 2016

- Positives
  - Ability to work together under stressful circumstances
  - Find solutions and improve systems
  - Existing positive working relationships prior to the outbreak



# Gaps and Discrepancies Identified After Action Review – 2016

- Secure and timely sharing of information
- Mobilizing resources
  - Between federal agencies and County emergency operations
  - ICS training
- Shared goals and consistent processes
  - Federal premise ID
  - Wildlife surveillance
  - Worker and responder safety





Courtesy of Dr. Montse Torremorell

MAJOR ARTICLE

## Live Animal Markets in Minnesota: A Potential Source for Emergence of Novel Influenza A Viruses and Interspecies Transmission

Mary J. Choi,<sup>1,a</sup> Montserrat Torremorell,<sup>2,a</sup> Jeff B. Bender,<sup>2</sup> Kirk Smith,<sup>3</sup> David Boxrud,<sup>3</sup> Jon R. Ertl,<sup>2</sup> My Yang,<sup>2</sup> Kamol Suwannakarn,<sup>2</sup> Duachi Her,<sup>3</sup> Jennifer Nguyen,<sup>3</sup> Timothy M. Uyeki,<sup>1</sup> Min Levine,<sup>1</sup> Stephen Lindstrom,<sup>1</sup> Jacqueline M. Katz,<sup>1</sup> Michael Jhung,<sup>1</sup> Sara Vetter,<sup>3</sup> Karen K. Wong,<sup>1</sup> Srinand Sreevatsan,<sup>2</sup> and Ruth Lynfield<sup>3</sup>

<sup>1</sup>Centers for Disease Control and Prevention, Atlanta, Georgia; <sup>2</sup>University of Minnesota College of Veterinary Medicine, Minnesota Center of Excellence for Influenza Research and Surveillance, and <sup>3</sup>Minnesota Department of Health, St Paul

# LIVE ANIMAL MARKET CASE STUDY

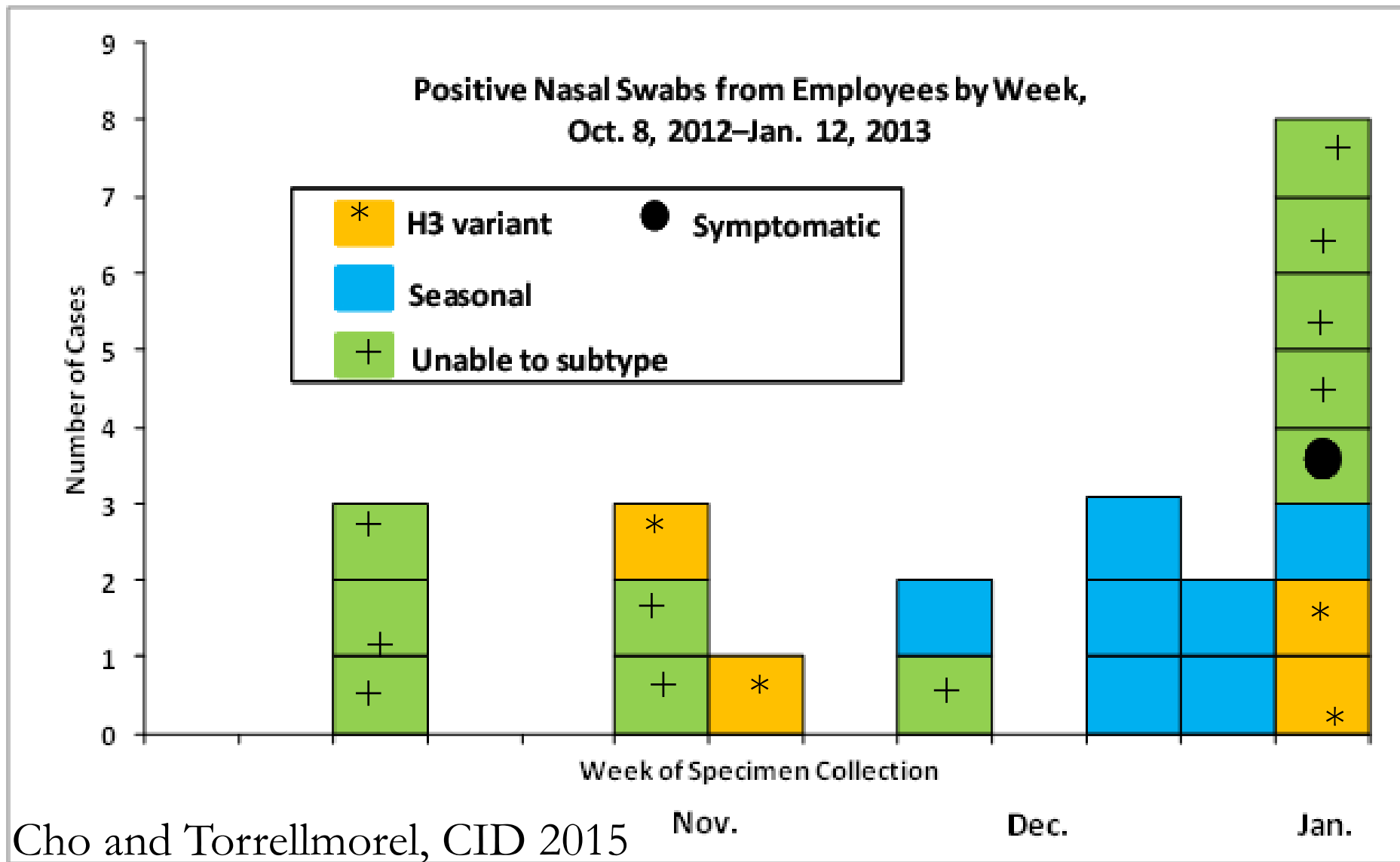


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Driven to Discover<sup>SM</sup>

# IAVs identified by rRT-PCR and virus isolation, Live Animal Market

	rRT-PCR positive/#tested	virus isolation positive/#tested	Subtype (n = No. virus isolates)
Swine lungs	70/150 (47%)	72/84 (86%)	H1N1 (n=3), H1N2 (n=22), H3N2 (n=39), co-infections (n=7)
Oral fluids	47/49 (96%)	13/46 (28%)	H1N2 (n=3), H3N2 (n=9), co-infections (n=1)
Air, swine pens	30/57 (53%)	30/45 (66.6%)	H1N2 (n=7), H3N2 (n=22), co-infections (n=1)
Railings, swine pens	16/34 (47%)	5/21 (23.8%)	H3N2 (n=5)
Door, animal holding area	1/25 (4%)	1/4 (25%)	H3N2 (n=1)
Sink/faucet	1/24 (4%)	2/4 (50%)	H3N2 (n=2)
Total	164/364 (45%)	123/204 (60%)	H1N1 (n=3), H1N2 (n= 32), H3N2 (n=81), co-infections (n=9)





# What Does this Mean for the Public/Workers?

- IAVs were common among swine and were readily isolated from environmental samples
- Multiple IAV strains and subtypes were co-circulating
- Interspecies transmission of IAV



# One Health Response to HPAI Outbreak:

What occupational Issues would you expect?

- How to protect the people exposed to the infected turkeys and chickens?
- What information do they need?
- What are their risks?
  - Exposure to euthanasia elements (i.e. foaming agents), heat stress, appropriate PPE
- Are the messages getting to the right people?

What are environmental issues/concerns? (i.e. mass disposal)



# Likely Needs

- Quick development of guidance documents
- Useable guidance for the workforce
- Emotional and psychological support for the stress of response and depopulation



# Hierarchy of Control Methods

