

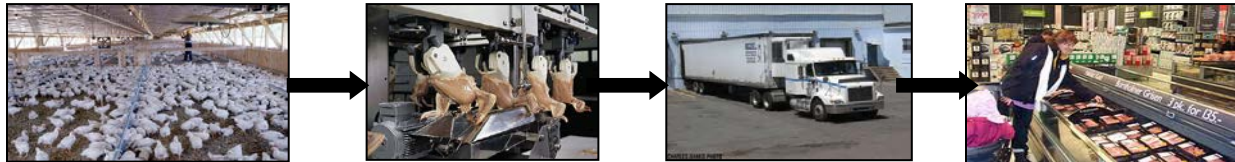
Proactive Risk Assessment to Support Managed Movement of Livestock and Poultry

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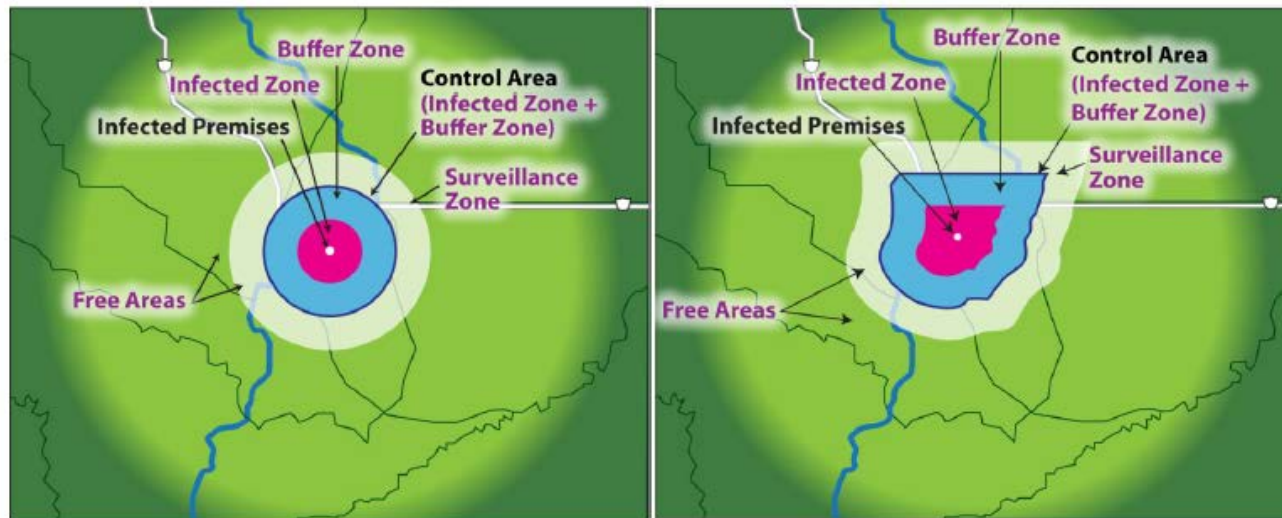
Current Food Production System

- Today's food system is based on fewer larger farms and global supply chain
 - Consolidated vertically integrated system to efficiently produce safe, abundant, affordable food
 - “Just-in-Time” food systems



Quarantine and Movement Control

- “Control Areas”
 - geographic area for affected premises and nearby unaffected premises considered at-risk



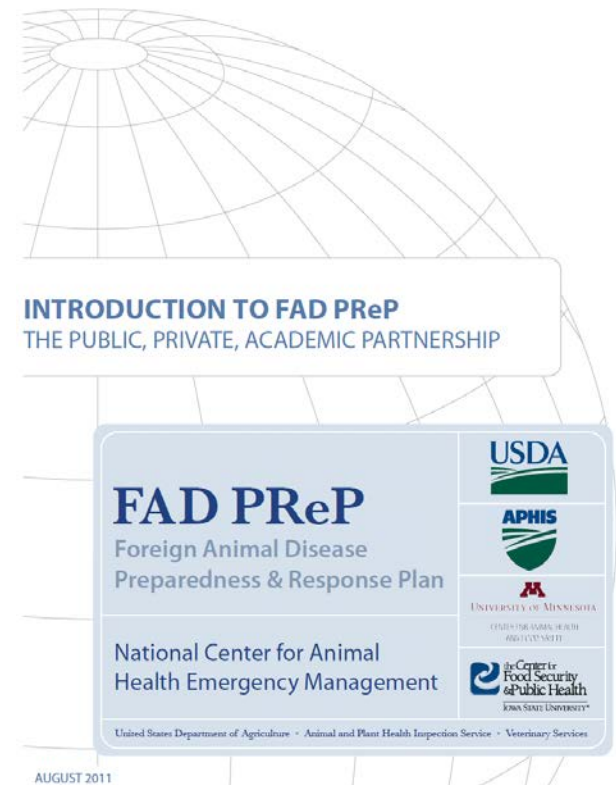
APHIS Framework for Foreign Animal Disease
Preparedness and Response, Draft July 2010

Unintended Consequences

- Animal Health and Welfare
- Public Health and Welfare
- Environmental Health and Welfare
- Economic Health and Welfare of:
 - Affected producers
 - Food businesses
 - Rural communities
 - Nation

Preparedness and Response Goals

1. Detect, control, and contain the FAD in animals as quickly as possible
2. Eradicate the FAD using strategies that seek to stabilize animal agriculture, the food supply, the economy, and protect public health; and
3. Provide science- and risk-based approaches and systems to facilitate continuity of business for non-infected animals and non-contaminated animal products.



Continuity of Business (Managed Movement)

COB is the managed movement of non-infected animals and non-contaminated animal products from non-infected premises in an FAD outbreak. This helps to facilitate agriculture and food industries in maintaining normal business operations, while simultaneously mitigating the risk of disease spread from this movement.

Key Elements for Managed Movement during an Outbreak

- Proactive risk assessment
- Surveillance requirements
- Biosecurity guidelines
- C&D procedures
- Epi - trace forward/backward
- Permitting guidance for movement
- Information management

Secure Food Supply Projects

Continuity of Business

- Development of protocols and tools to eliminate or minimize unintended negative consequences of the disease and disease response on agriculture and consumers while at the same time achieving the goals of disease control and response.

Secure Food Supply Plans

High Path Avian Influenza (HPAI)

- Secure Egg Supply
 - Eggs and egg products
- Secure Turkey Supply
 - Movement of birds
- Secure Broiler Supply
 - Movement of birds, hatching chicks and eggs



Foot and Mouth Disease (FMD)

- Secure Milk Supply
 - Movement of milk



FMD, Classical Swine Fever, African Swine Fever, and Swine Vesicular Disease

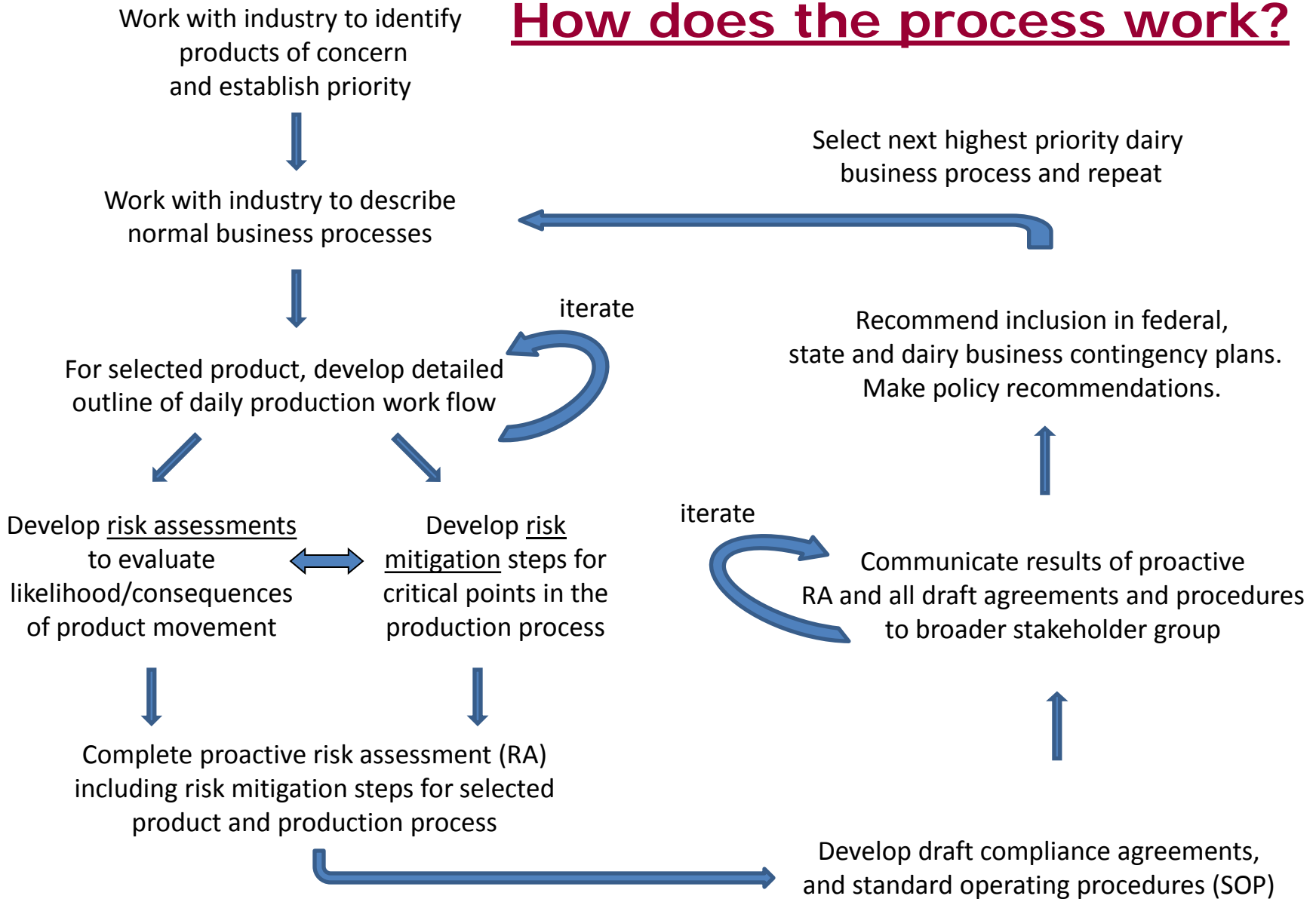
- Secure Pork Supply
 - Movement of animals



Proactive Risk Assessment

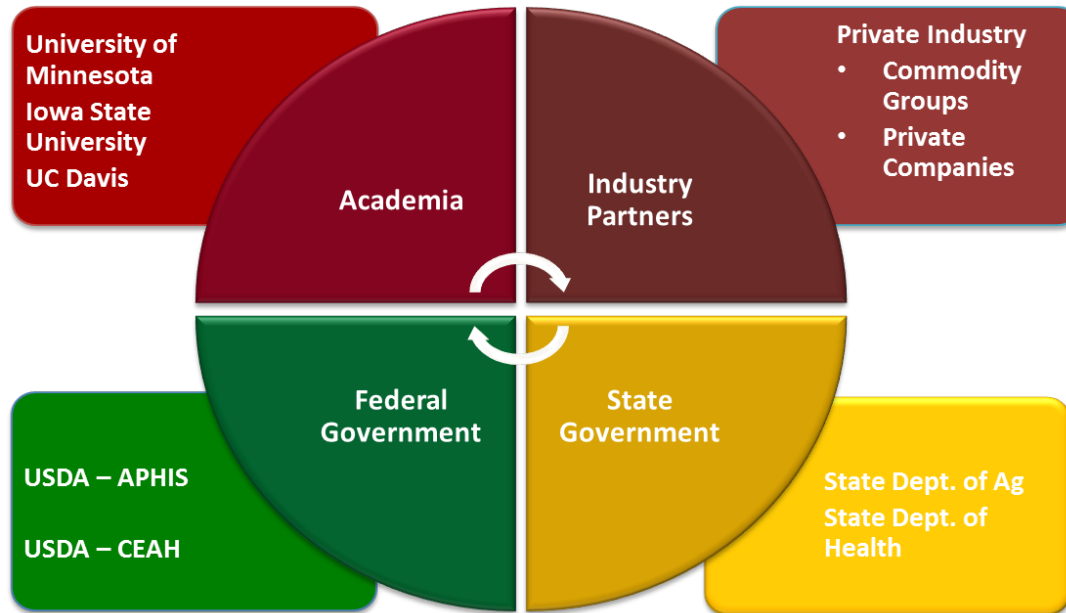
- Promote business continuity
 - movement of non-infected animal and non-contaminated animal products from uninfected farms
- Facilitate emergency response planning
- Develop/evaluate mitigation measures
- Informs movement permitting decisions
 - Must be supported by a risk assessment (or a scientifically based logical argument) to demonstrate the risk of disease spread associated with the movement of the product is acceptable

How does the process work?



Public Private Partnership Approach

Government – Industry – Academic



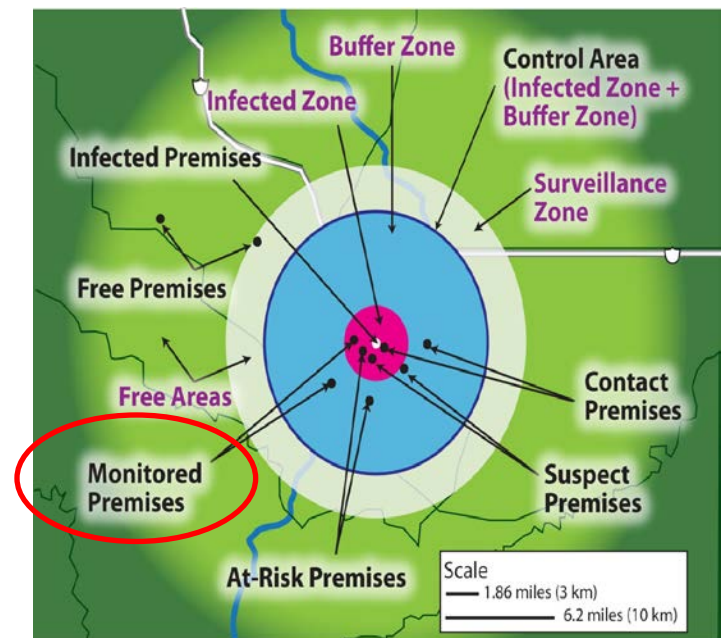
- Focus on shared interests and identify mutual benefits
- Understand perspectives, priorities and responsibilities
- Adapt to changing realities and needs
- Increase knowledge of risk and science-based approaches
- Prevention & management as well as control
- Recognize 'acceptable risk'

Proactive Risk Assessment Steps

Scope and Assumptions

- Specific commodity, disease, and situation
- Infected but undetected farm scenario
 - (conservative plausible assumption not “worst case”)
- Outbreak has already occurred

	Animal Infected	Animal Not Infected
Disease Detected	Infected and Disease Detected	Not Infected and Disease Detected
Disease Undetected	Infected and Disease Undetected	Not Infected and Disease Undetected



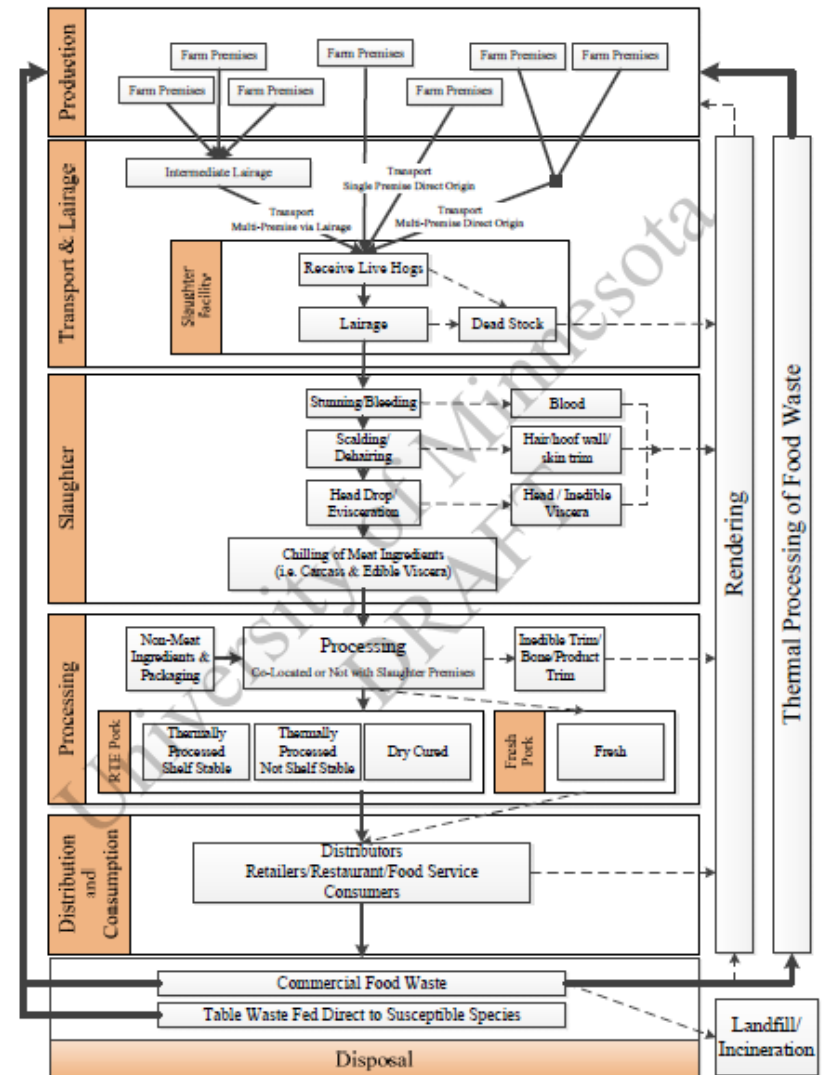
Proactive Risk Assessment Steps

Hazard ID

- Characterize the virus behavior
- Historical outbreak information
- Literature Review

Characterize the Industry

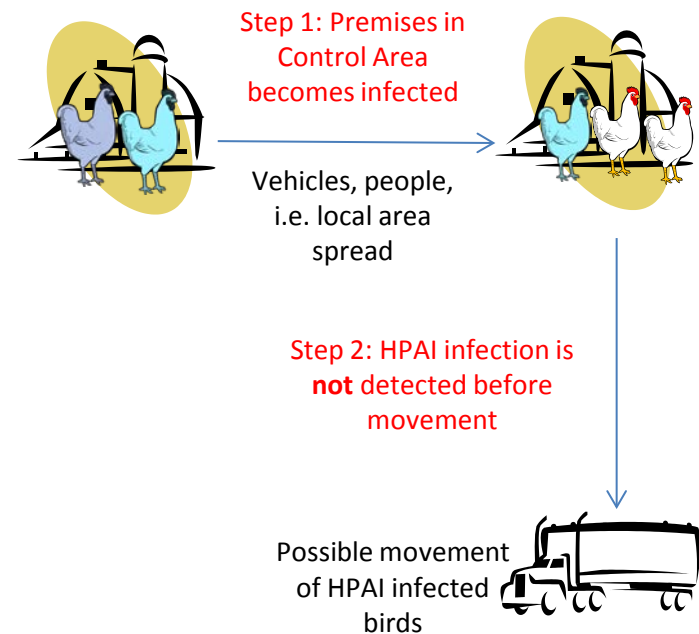
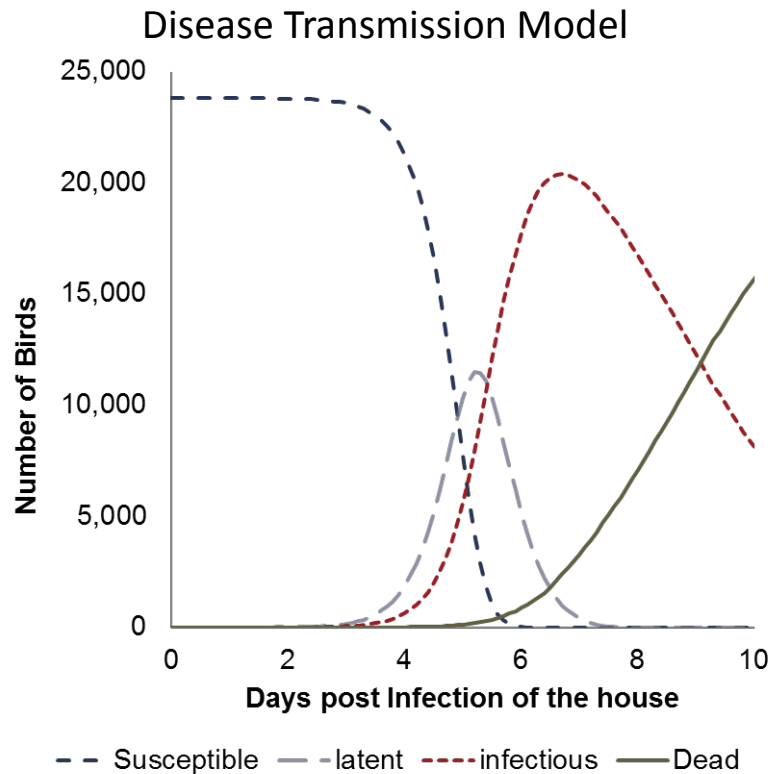
- Current industry structure, GMPs, SOPs, regulations, etc



Proactive Risk Assessment Steps

Pathway Analysis

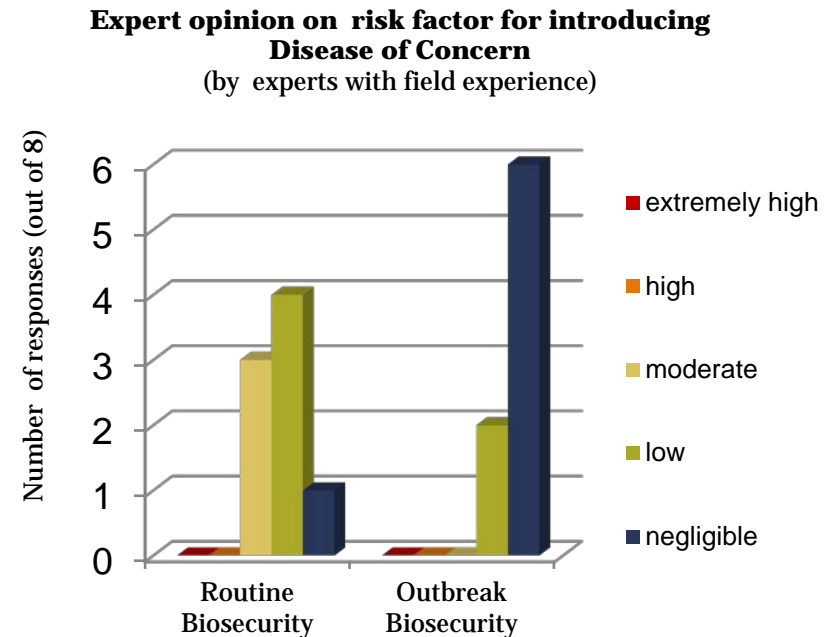
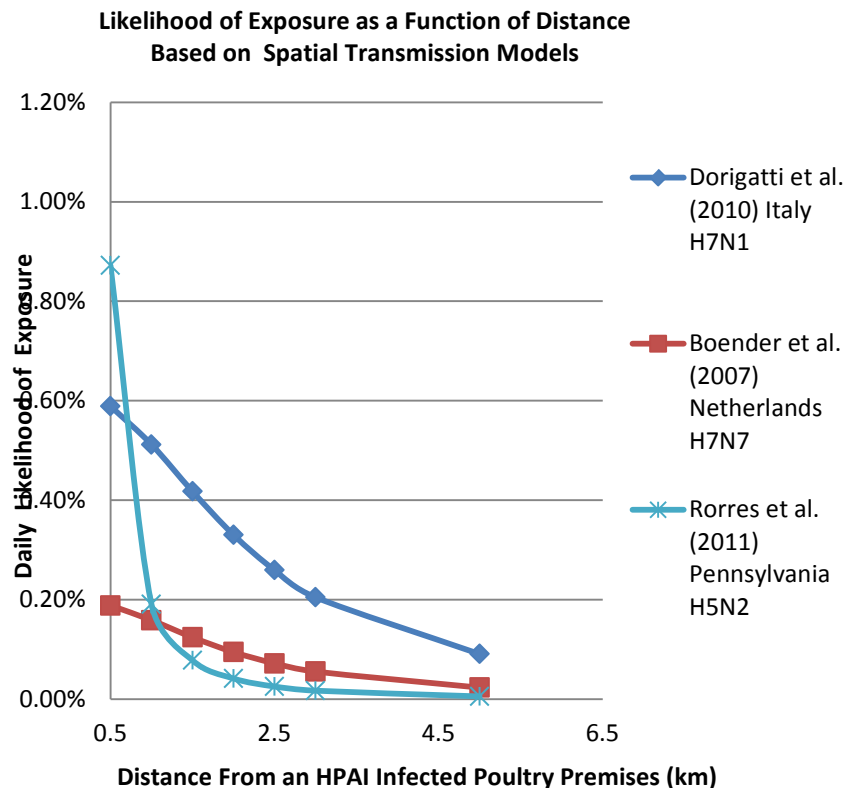
- Identify pathways that allow movement of virus
- Modeling – disease spread, viral load in commodities and environment



Proactive Risk Assessment Steps

Evaluate Risk; Entry / Exposure Assessment

- Qualitative and Quantitative approaches
- Expert opinion, literature review, and modeling approaches
- Each pathway and overall risk of movement



Release/Entry Assessment

Live Animal / Bird Movement

- Likelihood of the flock becoming infected **before** movement
- Likelihood that infection is **not detected** by the time of movement
- For product assessments, the premises was conservatively assumed to be infected, undetected

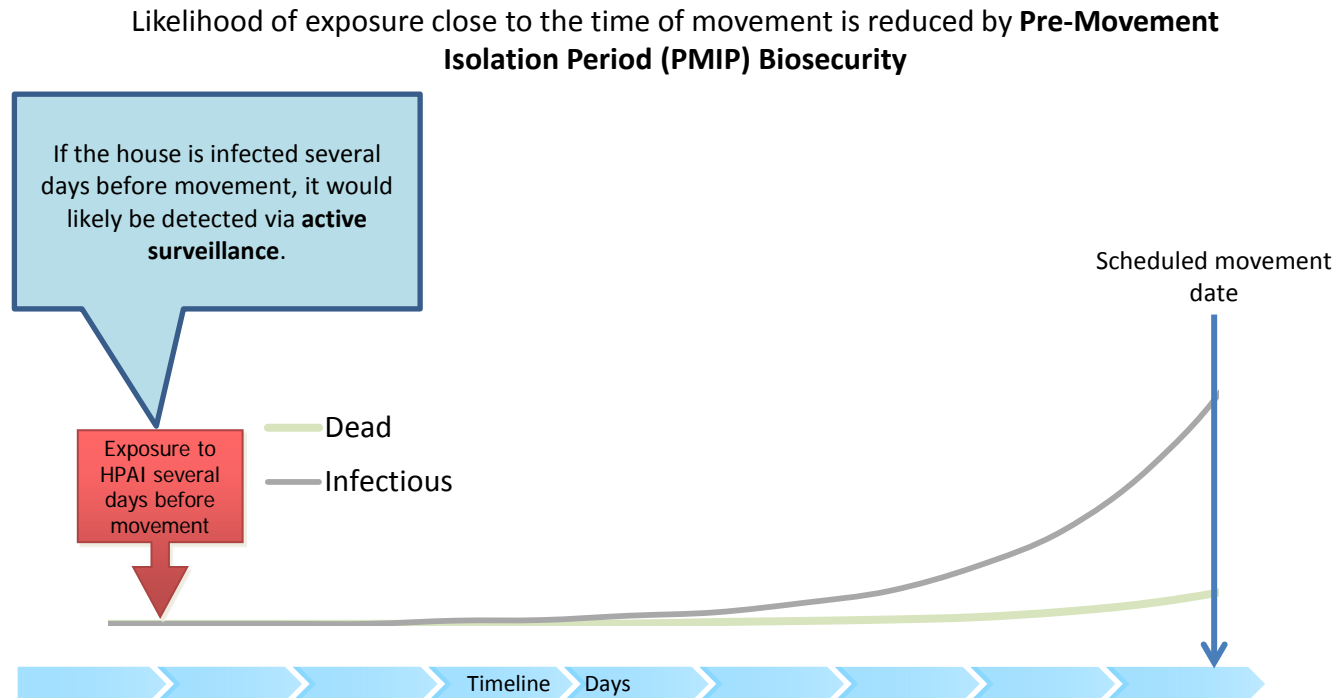
Risk Categories

Risk Category	Descriptor
High	More than an even chance that the event will occur
Moderate	The event is unlikely but does occur
Low	It is very unlikely that the event will occur
Very Low	It is highly unlikely, but is not negligible
Negligible	Likelihood that event will occur is insignificant

No Zero Risk

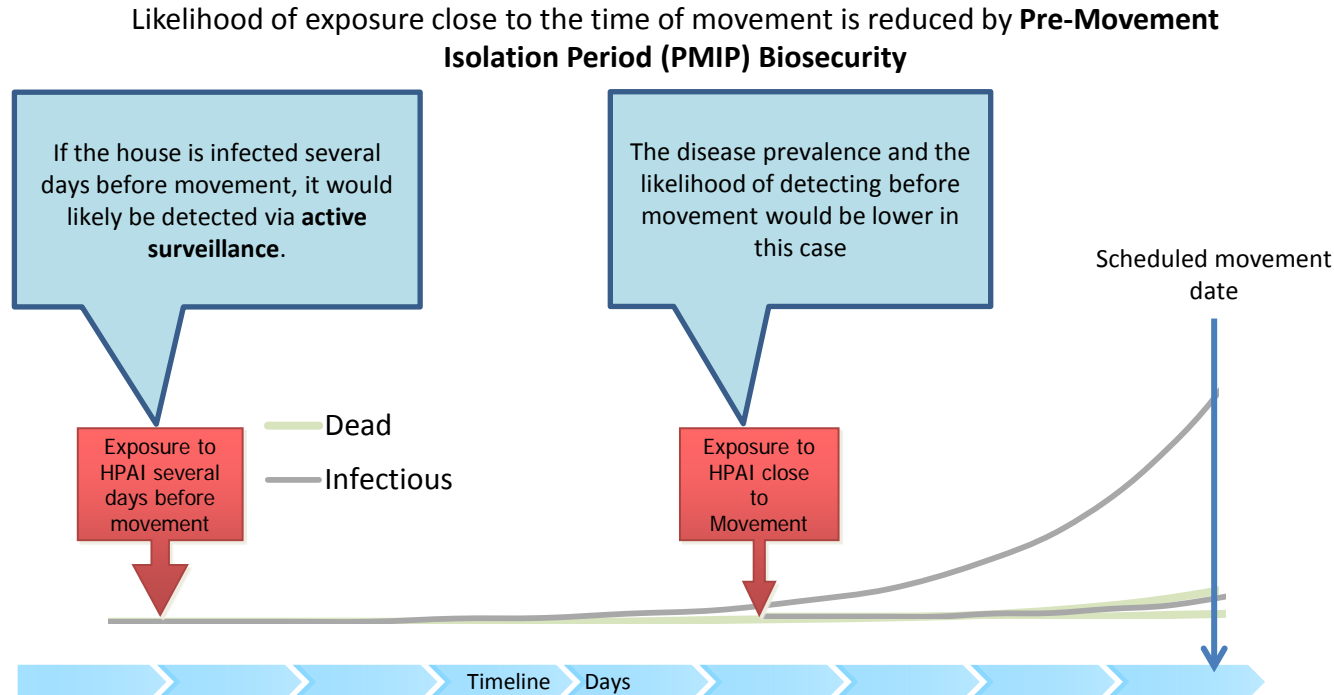
Develop / apply mitigation measures = Final Risk Level

- Each pathway and overall risk of movement



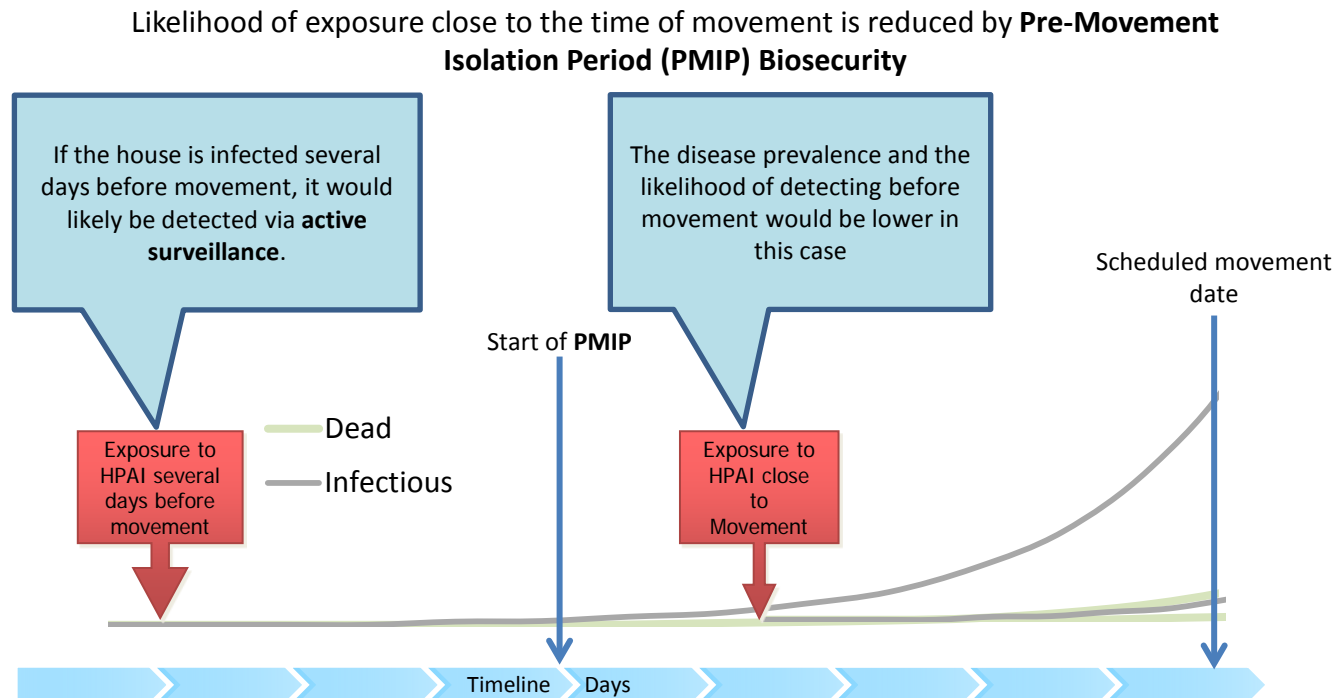
Develop / apply mitigation measures = Final Risk Level

- Each pathway and overall risk of movement



Develop / apply mitigation measures = Final Risk Level

- Each pathway and overall risk of movement



Permitting Guidance Requirements

Product	The proactive risk assessment for movement is:	And traceability information (premises ID, GPS coordinates, or other) is available:	And production parameters are normal:	And the following biosecurity measures are in place (please see the product-specific sections for the list of steps involved in each of these measures):	And the premises biosecurity is acceptable?	And the epidemiological assessment is acceptable?	And the RRT-PCR result is negative?	Action:	Permit guidance to move product:	And the second RRT-PCR result is negative?	Action:	Permit guidance to move product:
Pasteurized liquid egg	Negligible	YES	YES	1. Truck and driver biosecurity		These steps are not required for this product.						Issue PERMIT to move to market
Non-pasteurized liquid egg	Negligible	YES	YES	1. Truck and driver biosecurity	NA	NA	YES	→	Issue PERMIT to move to pasteurization	Non-pasteurized liquid egg becomes pasteurized liquid egg		
Washed and sanitized shell eggs (to premises without poultry)	Negligible	YES	YES	1. Truck and driver biosecurity 2. Product-specific biosecurity	YES	YES	YES	→	Issue PERMIT to move off premises to a storage or holding area	YES	→	Issue PERMIT to move to market for eggs collected 2 days earlier
Washed and sanitized shell eggs (to premises with poultry)	Low	YES	YES	1. Truck and driver biosecurity 2. Product-specific biosecurity	YES	YES	YES	→	Issue PERMIT to move off premises to a storage or holding area	YES	→	Issue PERMIT to move to market for eggs collected 2 days earlier
Nest run shell eggs	Low	YES	YES	1. Truck and driver biosecurity 2. Product-specific biosecurity	YES	YES	YES	→	NO PERMIT issued until 2 negative RRT-PCR tests	YES	→	Issue PERMIT to move to processing for eggs collected 2 days earlier (can move immediately to market after processing)
Layer hatching eggs	Low	YES for both the breeder farm and the hatchery	YES	1. Truck and driver biosecurity 2. Product-specific biosecurity	YES	YES	YES	→	NO PERMIT issued until 2 negative RRT-PCR tests	YES	→	Issue PERMIT to move to hatchery or processing for eggs collected 2 days earlier
Layer day-old chicks	Low	YES for both the hatchery and the pullet farm	NA	1. Truck and driver biosecurity 2. Product-specific biosecurity 3. No eggs from RRT-PCR positive breeder flocks in hatchery egg room	YES	YES	NA		NA	NA		Issue PERMIT to move layer day-old chicks to pullet farm; 21-day quarantine at pullet premises

Lessons Learned / Challenges

- Industry participation and input is necessary
- This is a new approach
- This is an ongoing process
- Communication
- Risk Management approach is not the single answer – part of the solution
- NOT GOLDEN TICKET: Political Pressure and Public Perception still have great influence

Acknowledgments

- USDA – AHPIS - VS
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- University of MN CAHFS; VPHPM Residents, Staff, and Faculty
- CFSPH Iowa State University
- UC Davis
- State Animal Health Officials
- Industry Stakeholders

Questions / More Information

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- Secure Food Supply Websites
<http://secureeggsupply.com/>
<http://www.securebroilersupply.com/>
<http://www.secureturkeysupply.com/>
<http://www.securepork.org/>
<http://securemilksupply.org/>
- USDA FAD PReP Materials and References
<http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/emergencyresponse?1dmy&urile=wcm%3apath%3a%2Faphis+content+library%2Fsa+our+focus%2Fsa+animal+health%2Fsa+emergency+management%2Fct+fadprep>

Thank You