

# The Role of the Industrial Hygienist in a Pandemic

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# Presentation Outline

- Background Information
- Pandemic Planning
- Recommended Controls
- Communication/Coordination Tasks
- Resources

# American Industrial Hygiene Association (AIHA)

## Guideline 7 – 2006

Approval Date: May 4, 2006

American Industrial Hygiene Association

Stock Number: SEPG06-711

ISBN: 1-931504-70-9

# Disclaimer

*This document is neither a comprehensive treatment of issues concerning a pandemic nor a stand-alone resource. Scientific and practical knowledge in this area are rapidly accumulating and evolving. It is intended to complement policies and procedures put into practice by other disciplines within a healthcare environment and should be used by the industrial hygienist in conjunction with existing information.*

# Disclaimer

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# Disclaimer

*Specific mention of manufacturers, membership organizations, and products in this guideline does not represent an endorsement by AIHA.*

## *Furthermore .....*

The guideline represents a consensus statement by a group of experts about important aspects of the “state of the science”. The guidance offered is practical information, does not claim to be definitive or comprehensive, and should *always* be used in addition to existing guidance documents as well as professional judgment.

# Contributing Authors

This guideline is sponsored and maintained by the American Industrial Hygiene Association Biosafety and Environmental Microbiology Committee Project Team comprised of members from several AIHA volunteer groups, and other occupational health and safety agencies and professional associations.

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*hereby acknowledge the source of the information  
communicated by this presentation to be the  
direct work product of the American Industrial  
Hygiene Association's (AIHA's)*

*"AIHA Guideline 7 – 2006: The Role of the  
Industrial Hygienist in a Pandemic".*

# Background Information: Overview

- Role of Industrial Hygienist (IH) Expanded
  - New Technologies
  - Terrorism
  - Emergency Preparedness and Response
  - Emerging Infectious Diseases
    - SARS
    - Plague
    - Influenza
  - *Possibility of Pandemic*
    - AIHA Recognizes IHs' Needs for Resources/Information/Tools
- Guideline Developed to Meet Respective Needs of IHs

# Background Information: Overview

## PANDEMIC

*An outbreak of a disease that initiates simultaneous infections of humans throughout the world.*

*Example: Global outbreak that occurs when a new influenza virus causes serious human illness and spreads easily from person to person.*

# Background Information: Overview

- Agent of Concern
  - H5N1 Currently Feared
    - Worldwide Immunological Vulnerability
    - Estimated 52 – 55 % Mortality Rates
  - Subtype of Avian Influenza Virus
  - Mutation May Initiate Pandemic
  - Must Acquire Ability to Spread Human to Human

# Background Information: Purpose

*To provide industrial hygienists with resources, information, and tools to advise and provide recommendations to general workers, health care workers, and management, in order to protect workers.*

NOTE: ..... and the Communities at Large?

# Roles and Responsibilities

- Provide “Controls” Advice and Recommendations
  - Administrative
  - Personal Protective Equipment
  - Engineering
- Coordinate with Infection Prevention/Control Specialist

# Hazards

*Hazard identification and risk assessment when evaluating biological agents versus chemical and physical agents differ.*

*Chemical and physical agents normally evaluated quantitatively (compare exposure concentrations to published limits); biological agents evaluated qualitatively with significant variations expected.*

# Hazards

- Risk Groups (RGs)
  - RG1
    - Agents Not Associated with Disease in Healthy Adults
  - RG2
    - Agents Associated with Human Disease
    - Rarely Serious
    - Preventive/Therapeutic Interventions Typically Available
  - RG3
    - Agents Associated with Serious/Lethal Human Disease
    - Preventive/Therapeutic Interventions Possibly Available
    - High Individual Risk; Low Community Risk
  - RG4
    - Agents Likely Cause Serious/Lethal Human Disease
    - Preventive/Therapeutic Interventions Typically Lacking
    - High Individual Risk; High Community Risk

# Hazards

*H5N1*

*Typically Considered  
RG3 or RG4 Agents*

# Recommended Controls

- Administrative/Work Practices
  - Education and Training
  - Workplace Access and Security
    - Limit Workplace Access
    - Establish "Fit For Work" Screening Tool (Process)
    - Implement "Social Distancing" Strategy
  - Cleaning, Disinfection and Sterilization
  - Labor Relations
  - Communications
    - Call-In Hotline
    - Up-to-the-Minute Web Information
    - Dedicated "Grapevine"

# Recommended Controls

- Engineering Controls
  - Negative-Pressure Rooms
  - General Ventilation
  - Construction of Temporary Structures
  - Protective Operations/Maintenance Procedures

# Recommended Controls

- Personal Protective Equipment
  - Mesh Industrial Hygiene with Infection Control Practices

# Communication/Coordination

- Coordination with Infection/Prevention Control Specialists
- Emergency Responders/Emergency Preparedness Personnel
- Communications Planning
- Plan for Organizational/Mission Impact from Pandemic
- Plan for Staff Impact from Pandemic
- Establish Policies

# Communication/Coordination

- Allocate Staff Protection Resources
- Communicate/Educate Staff and Community(ies)
- Coordinate with External Organizations/Help Community
- Communication/Coordination with Workforce  
(Business Continuity Plan)
- Communication/Coordination with Public

# Resources

## ■ Issue-Specific References

- American Industrial Hygiene Association
- American Biological Safety Association
- American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc.
- Association for Professionals in Infection Control and Epidemiology
- Center for Disease Control and Prevention
- Environmental Protection Agency
- Infectious Disease Society of America
- Health and Human Services
- National Institutes of Health, Biosafety in Biomedical and Microbiological Laboratories
- New Zealand Ministry of Economic Development
- Occupational Safety and Health Administration
- World Health Organization

## ■ General References

# Appendices

- No. 1: Industrial Hygiene Planning Checklist
  - Recommended Controls
  - Communications Coordination
  - Communication/Coordination with Public
- No. 2: Standard Precautions
  - Handwashing
  - Gloves
  - Mask, Eye Protection, Face Shield
  - Gown
- No. 3: Pandemic Planning Template
  - Recommended Controls
  - Communication/Coordination
  - Resources

*Questions/Comments?*