Disease Outbreak Management 101
Your Presenter

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Outline

Facilities
- Holding
- Quarantine
- Isolation

Outbreak Management
- Stop the spread!
- Diagnosis & isolation
- Risk assessment
- Decontamination
- Communication
- Documentation
Holding

What?
• Housing for animals awaiting next steps

Who?
• Healthy animals
• Not immediately available for adoption
• ± animals with non-contagious illness
Holding

Why?

• Awaiting examination, spay-neuter, behavior evaluation, etc.

When?

• Legal requirements
• Intake housing
Holding

Where?

In Shelter
- Hold in place
- Designated area

Out of Shelter
- Foster home
- Veterinary clinic
Do we need a “holding area”?

If it’s there, you’ll use it!

Increased animal movement
- Stress
- Disease transmission

Flow delays
- Increased LOS
- Crowding
What?

- Housing for animals that may have been exposed to infectious disease

Who?

- Appear healthy - no clinical signs
- Most susceptible animals
Quarantine

Why?

• Separation for observation
• Allows response to vaccination

When?

• Legal mandate (rabies)
• During disease outbreak
• Intake? Pre/post transport?
Quarantine

Where?

In Shelter
- Quarantine in place
- Designated area

Out of of Shelter
- Veterinary clinic
- Boarding kennel
- Foster home
Quarantine

How?

• Basic biosecurity needed
  - Assess mode of transmission
  - Observe traffic flow patterns

• Incubation period
  - Time from infection to the development of clinical signs

• All-in, all-out
  - Reset clock with every new addition or signs of disease
## Quarantine

<table>
<thead>
<tr>
<th>Disease</th>
<th>Typical Incubation Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feline respiratory</td>
<td>&lt;1 week</td>
</tr>
<tr>
<td>Canine respiratory*</td>
<td>10-14 days</td>
</tr>
<tr>
<td>Parvoviruses</td>
<td>14 days</td>
</tr>
<tr>
<td>Ringworm</td>
<td>2-4 weeks</td>
</tr>
</tbody>
</table>

*Longer for canine distemper virus
Quarantine...or not?

Observation for illness

Time for vaccination response

Increased shelter population

Increased risk of disease development

Increased length of stay
Isolation

What?
• Housing for animals with contagious disease

Who?
• Animals with visible signs of illness
Isolation

Why?

• Prevent further transmission
• Allow individual observation and treatment

When?

• Signs of illness: nasal discharge, coughing, sneezing, vomiting, diarrhea, hair loss, etc.
Isolation

Where?

In Shelter
- Aerosols
- Physically separate area
- Fomite and vector
- Designated areas
- Isolate in place

Out of Shelter
- Veterinary clinic
- Foster home
Isolation

**How?**

- **Strict biosecurity**
  - Designated staff, equipment, supplies

- **Isolate by mode of transmission**
  - **Respiratory** (Aerosol – dogs; Fomites – cats)
  - **Gastrointestinal** (Fomites, vectors)
  - **Dermatologic** (Fomites, vectors, environment)
Isolation – Plan A

Parvo

Gowns, gloves and booties required at all times.

Authorized personnel only
Isolation – Plan A

K. Walsh

L. Guyton

K. Walsh
Isolation – Plan B
Isolation – Plan C
Outbreak Management

Is it an outbreak?

- Increase in frequency
- Increase in severity
- New disease
- Multiple cases
- Active transmission
Outbreak Management

- Stop the spread!
- Diagnose & Isolate
- Assess Risk
- Decontaminate
- Communicate
- Document
Stop the spread!

Goals

- Minimize further cases
- Prevent new exposures
Stop the spread!

**Tactics**

- Suspend intake
- Divert intake
- Vaccinate before intake
- Identify uncontaminated area
Diagnose & Isolate

Goals

- Care for affected animals
- Prevent further exposure and disease spread
Diagnose & Isolate

- Establish criteria for diagnosis
- Test clinically ill animals
- Remove sick animals from population
- Cease movement of animals
- Monitor for new cases
Assess Risk

Goals

Establish level of risk for exposed animals

Make management decisions
Assess Risk

Tactics

- Measure antibody titers
- Evaluate clinical factors
- Low risk = adopt/transfer
- High risk = quarantine
Decontaminate

Goals

- Prevent spread
- Eliminate pathogen from environment
Decontaminate

Tactics

• Heighten biosecurity protocols
• Review traffic flow patterns
• Enforce use of PPE
• Discard contaminated items
• Perform thorough sanitation
Communicate

Goals

- Ensure compliance
- Protect community animal health
- Maintain positive relationships
Communicate

Tactics

- Train staff & volunteers
- Contact recent adopters
- Reach out to veterinary practitioners
- Local media
Document

Goals
- Identify source
- Prevent recurrence
Document

Tactics

- Keep individual medical records
- Analyze trends
- Identify who, how, & which control measures were effective
- Review operations to mitigate risk
Next Steps

1. Identify the best location for isolation of sick animals.
2. Identify a plan for suspending intake.
3. Create a outbreak response plan for the most common infectious disease in your shelter.

- Stop the spread!
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- Assess Risk
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- Document
Thank you!

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