

HISTORY

- MAGPIE COUNTY ANIMAL SHELTER
- MUNICIPAL, OPEN-ADMISSION FACILITY IN RURAL APPALACHIA
 - PREVIOUS SHELTER CONSULT IN 2014
 - FOLLOWED FOR 8 MONTHS POST-CONSULT
 - 100% URTD RATE
 - OVERCROWDING
 - LACK OF CLEANING, INTAKE, AND PREVENTATIVE CARE PROTOCOLS
 - LOW LRR'S
 - LOW SURGICAL STERILIZATION RATES (BOTH SHELTER ANIMALS AND COMMUNITY)



MOST RECENT (2013) DATA

- INTAKE=2200 (1200 CATS)
- ADOPTIONS=300 (25%)
 - ON-SITE =150
 - OFF-SITE=150
- TRANSFERRED=40 (3.3%)
- RTO=10 (0.8%)
- EUTHANASIA=838 (69.8%)
- UNASSISTED DEATH= 12 (1%)
- LOS = "ADOPTABLE" = 38 DAYS "UNADOPTABLE" = 8 DAYS



BASIC BUILDING DESIGN

- TWO DESIGNATED CAT HOUSING AREAS
 - ADOPTION WITH 16 STAINLESS STEEL KENNELS (61 CMX30XMX71 CM)
 - INTAKE WITH 14 SIMILAR KENNELS
- EXAM ROOM
 - CONTAINED 6 KENNELS SMALLER THAN THOSE IN ADOPTION
- LAUNDRY ROOM
 - LARGE (DOG) SCALE
 - GROOMING TUB
 - REFRIGERATOR
 - BREAK AREA



BACKGROUND INFORMATION

- LEGALLY REQUIRED HOLD TIME = 3 CALENDAR DAYS
- FOUR FULL TIME STAFF, TWO PART TIME ACO'S, THREE INMATES
- CONSULT REQUESTED SUMMER 2016 FOR "SUDDEN DEATH" IN CATS OF ALL AGES
 - REPORTS THAT UP TO 5 CATS WERE FOUND DECEASED DAILY
 - STAFF REPORTED FEW TO NO CLINICAL SIGNS PRIOR TO DEATH



SHELTER TOUR



SHELTER TOUR



























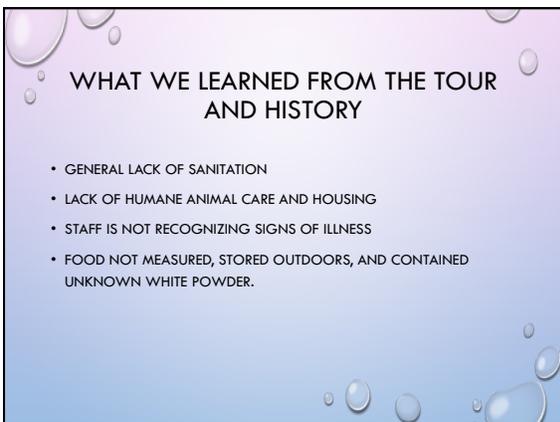












WHAT WE LEARNED FROM THE TOUR AND HISTORY

- CAT KENNELS LACKED APPROPRIATE RESOURCES
- LIMITED RECORD-KEEPING OR ANIMAL IDENTIFICATION
- A LARGE NUMBER OF FULL RABIES VIALS WERE FOUND IN SHARPS
- DOGS OVERCROWDED
 - UNRELATED DOGS HOUSED TOGETHER
 - PORTABLE KENNELS USED IN DOG HOUSING AREAS IN ADDITION TO PERMANENT HOUSING
 - EXAM ROOM USED AS DOG ISOLATION

WHAT WE LEARNED FROM THE TOUR AND HISTORY

- 70 CATS PRESENT
 - 22 IN ADOPTION ROOM IN 16 SS KENNELS AND 3 PORTABLE KENNELS
 - 18 IN INTAKE IN 14 SS KENNELS
 - 12 IN HALLWAY IN PORTABLE KENNELS
 - 11 IN LAUNDRY ROOM IN PORTABLE KENNELS
 - 7 IN LOBBY IN 3 LARGE PORTABLE KENNELS



WHAT WE LEARNED FROM OBSERVING AND TALKING TO STAFF

- CATS ROAM FREE DURING CLEANING
- THOSE CLEANING AND PROVIDING DAILY CARE DID NOT RECOGNIZE THAT PROTOCOLS EXISTED AND HAD RECEIVED NO TRAINING.
- NO DIAGNOSTICS WERE PERFORMED AT THE SHELTER

WHAT WE LEARNED FROM OBSERVING AND TALKING TO STAFF

- THE STAFF BELIEVED MOST OF THE CATS IN THE SHELTER WERE HEALTHY
- THE REFRIGERATOR DIDN'T WORK WELL.
- THE KENNEL MANAGER REPORTED ALL CATS RECEIVED FVRCP UPON INTAKE BUT HAD NO RECORDS.

PARTIAL DEFICIENCY LIST

- MANY CATS WITH ILLNESS OR INFECTION THAT WERE APPARENTLY NOT BEING TREATED
- ESSENTIALLY NO SANITATION/CLEANING PROTOCOLS
- OVERCROWDING
- NO MEDICAL RECORDS OR INTAKE DOCUMENTATION
- LACK OF BASIC ANIMAL CARE (FOOD, WATER, HEAT SOURCE)

PARTIAL DEFICIENCY LIST

- NUTRITIONAL CONCERNS
- VACCINATIONS? IF THEY WERE GIVEN, WERE THEY EFFECTIVE OR GIVEN PROPERLY? WERE RE-VACCINATIONS GIVEN? WERE THEY STORED AT THE CORRECT TEMPERATURE?
- INHUMANE HOUSING
- MISUSE OF ANTIBIOTICS

INITIAL PROBLEM LIST



- NASAL DISCHARGE
- OCULAR DISCHARGE
- SNEEZING
- BLEPHAROSPASM
- ULCERS ON TONGUE
- GINGIVITIS
- POOR BODY CONDITION
- DEHYDRATION
- DIARRHEA
- LETHARGY
- APPARENT ANOREXIA
- ECTOPARASITES
- GENERAL UNKEPT APPEARANCE
- 2 LATERALLY RECUMBENT
 - 1 UNRESPONSIVE TO STIMULI

OUTBREAK RESPONSE

EPIDEMIOLOGY REVIEW

- SPORADIC
 - GOOD PREVENTION PROTOCOLS WITH HIGH COMMUNITY VACCINATION RATES
- ENDEMIC
 - GOOD PREVENTION PROTOCOLS WITH LOW COMMUNITY VACCINATION RATES
- HYPERENDEMIC
 - POOR PREVENTION PROTOCOLS WITH LOW COMMUNITY VACCINATION RATES

EPIDEMIOLOGY REVIEW

- **OUTBREAK (EPIDEMIC)**
- **CLUSTER**
- **EPIDEMIC CURVE**
 - PLOT CASES OVER TIME
- **ATTACK RATE**
 - #CASES/TOTAL POPULATION

The slide contains two charts. The top chart is an 'Epidemic Curve' showing 'New Cases' on the y-axis (0 to 14) over five days (Day 1 to Day 5). The curve starts at 0 on Day 1, rises to 4 on Day 2, peaks at 14 on Day 3, and then declines to 4 on Day 4 and 0 on Day 5. The bottom chart is an 'Attack Rate' bar chart showing '#Cases / #Pop' on the y-axis (0 to 100) for four groups: Group 1, Group 2, Group 3, and Group 4. The bars represent approximately 20, 30, 50, and 80 cases respectively.

IS THERE AN OUTBREAK?

EPIDEMIC <ul style="list-style-type: none">• FREQUENCY OR INCIDENCE OF DISEASE IN EXCESS OF ITS EXPECTED FREQUENCY. IN SHELTERS WE LOOK AT NUMBERS IN RELATION TO THE USUAL INCIDENCE FOR THAT SEASON OR MONTH.• INCIDENCE GREATER THAN TWO STANDARD DEVIATIONS ABOVE THE AVERAGE OBSERVED INCIDENCE.	ENDEMIC <ul style="list-style-type: none">• DISEASE IS REGULARLY AND CONTINUOUSLY PRESENT. OFTEN USED AS BASELINE.• WE NEED DATA TO KNOW IF THERE IS AN OUTBREAK.
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OUTBREAK MANAGEMENT

- HAVE A PLAN IN PLACE
- IMPLEMENT THAT PLAN IMMEDIATELY
- CLOSE/DEPOPULATION/CLEAN/RE-OPEN STILL PRACTICED
 - OUTDATED
 - SHOULD NOT BE CONSIDERED AN OPTION WITH MODERN SHELTER MEDICINE

IMMEDIATE RESPONSE

- STOP MOVEMENT TO PREVENT FURTHER SPREAD.
 - DIVERT INTAKE IF POSSIBLE
 - ASK "FINDERS" TO FOSTER TEMPORARILY
 - OWNER RELINQUISHMENT WAIT LIST
 - ASK A NEARBY SHELTER TO ASSIST
 - CONSIDER A TEMPORARY SHELTER
 - HALT ADOPTIONS
 - COMMUNICATION! - DO NOT ALLOW RUMORS TO SPREAD UNCHECKED
- CLEAN BREAK IF CANNOT STOP STRAY INTAKE



GOALS OF STOPPING MOVEMENT

- ALLOWS FOR SWIFT OPERATIONAL CHANGES AND STAFF TRAINING
- IMPROVES CHANCES OF GOOD OUTCOME FOR CATS IN THE SHELTER
- ALLOWS FOR SPACE FOR QUARANTINE AND ISOLATION
- CONTAINS SPREAD OF ILLNESS AND PREVENTS SECONDARY OUTBREAKS

INITIAL RISK ASSESSMENT

- ALLOWS FOR SEGREGATION OF ILL/EXPOSED ANIMALS
- INDIVIDUAL RISK
 - IMMUNE STATUS
 - VACCINATION STATUS
 - AGE
 - HEALTH STATUS
 - LIKELIHOOD OF EXPOSURE
 - PROXIMITY TO INFECTED ANIMALS
 - CLEANLINESS OF ENVIRONMENT



RISK ASSESSMENT

- GOALS
 - ALLOW MOVEMENT THROUGH SHELTER
 - DECREASE SUFFERING
 - DECREASE EUTHANASIA

Move Animals → SAVE LIVES

INITIAL RISK ASSESSMENT

- FULL RISK ASSESSMENT ALLOWS FOR THE CREATION OF FOUR GROUPS
 - INFECTED
 - EXPOSED, NOT AT RISK
 - EXPOSED, AT RISK
 - NOT EXPOSED
- BUT WHAT ABOUT INITIAL RISK ASSESSMENT?
- HOW WOULD YOU GROUP THESE CATS?
- DO WE NEED DIFFERENTIALS FIRST?

DIFFERENTIAL DIAGNOSES NASOPHARYNGEAL DISEASE

- VIRAL
 - FHV-1, FCV, ETC.
- BACTERIAL
 - BB, MF, SEZ, ETC.
- IRRITATION FROM POOR AIR QUALITY.

DIFFERENTIAL DIAGNOSES OCULAR SIGNS

- VIRAL
 - FHV-1, FCV, ETC.
- BACTERIAL
 - MF, CF, ETC.
- IRRITATION FROM POOR AIR QUALITY



DIFFERENTIAL DIAGNOSES ORAL LESIONS

- VIRAL
 - FIV, FELV, FCV, FHV-1, ETC.
- CHEMICAL AGENTS
 - DISINFECTANTS, PESTICIDES, ETC.
- TRAUMA
- BACTERIA
 - PLAQUE



LET'S COMBINE THOSE INTO URTD

<p>MORE LIKELY</p> <ul style="list-style-type: none">• FHV-1• FCV• MF• BB• STREP CANIS• SEZ	<p>LESS LIKELY</p> <ul style="list-style-type: none">• INFLUENZA• CF• FELINE REOVIRUS• COWPOX VIRUS• UNKNOWN EMERGING DISEASE<ul style="list-style-type: none">• IS THIS UNLIKELY IN THIS SHELTER?
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LET'S COMBINE THOSE INTO URTD

- POSSIBLE SECONDARY BACTERIAL
 - PASTURELLA
 - MICROCOCCUS
 - MOXELLA
 - ESCHERICHIA

• DOES THE PURULENT DISCHARGE MEAN WE HAVE A BACTERIAL COMPONENT



**DIFFERENTIAL DIAGNOSES
POOR BODY CONDITION/WEIGHT
LOSS**

- LIMITED ACCESS TO PROPER NUTRITION
 - POOR FEEDING, LOW QUALITY FOOD, BOWLS TOO LARGE OR TOO HIGH FOR KITTENS TO REACH
- PROPER NUTRITION AVAILABLE BUT NOT INGESTED OR ABSORBED
 - DYSPHAGIA, ANOREXIA, COMPETITION FOR FOOD, ORAL/DENTAL DISEASE, VOMITING/DIARRHEA, ETC.

**DIFFERENTIAL DIAGNOSES
DEHYDRATION**

- ANOREXIA
- LACK OF ACCESS TO WATER
- INABILITY OR UNWILLINGNESS TO DRINK DUE TO ORAL DISEASE OR ANY OTHER CAUSE
- FLUID LOSS DUE TO VOMITING/DIARRHEA
- MULTITUDE OF OTHER CAUSES



DIFFERENTIAL DIAGNOSES LETHARGY

- ANY CAUSE OF INFLAMMATION OR INFECTION
- ANEMIA
- NUTRITIONAL DEFICITS
- GI DISEASE



DIFFERENTIAL DIAGNOSES ANOREXIA

- ANYTHING THAT CAUSES NAUSEA
- GI AILMENTS
- DYSPHAGIA OR ORAL PAIN
- INABILITY TO SMELL FOOD
- FEVER
- TOXINS
- ANY CONDITION THAT LEADS TO DEPRESSION OR LETHARGY



DIFFERENTIAL DIAGNOSES DIARRHEA

<ul style="list-style-type: none">• FPV• CPV• FELINE CORONAVIRUS• CAMPYLOBACTER SPP.• CLOSTRIDIUM PERFRINGENS• SALMONELLA SPP.• CRYPTOSPORIDIUM SPP.• TRITRICHOMONAS FOETUS• GIARDIA DUODENALIS	<ul style="list-style-type: none">• HISTOPLASMA CAPSULATUM• CYSTOISOSPORA SPP.• TOXOCARA CATI• TOXASCARIS LEONINE• ANCYLOSTOMA TUBAEFORME• FOOD INTOLERANCE• DIETARY CHANGE• INDISCRIMINANT FOOD INGESTION• FOREIGN BODY INGESTION• TOXIN INGESTION
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DIFFERENTIAL DIAGNOSES WHAT NEXT?



- LOOK FOR CLUES THAT HELP NARROW THE "MOST PRESSING" LIKELY DIAGNOSIS
 - AFFECTS ADULTS AS WELL AS KITTENS
 - NO APPARENT DISINFECTION PROTOCOLS IN PLACE IN SHELTER
 - HIGH NUMBER OF FATALITIES
 - WORKERS DON'T APPEAR TO RECOGNIZE EVEN SEVERE CLINICAL SIGNS
 - NO HISTORY OR RECORDS AVAILABLE TO PROVE VACCINATION STATUS
 - CATS ALLOWED TO MINGLE DURING CLEANING
 - DOGS APPEAR HEALTHY CONSIDERING THE LEVEL OF OVERCROWDING AND APPARENT LACK OF SANITATION

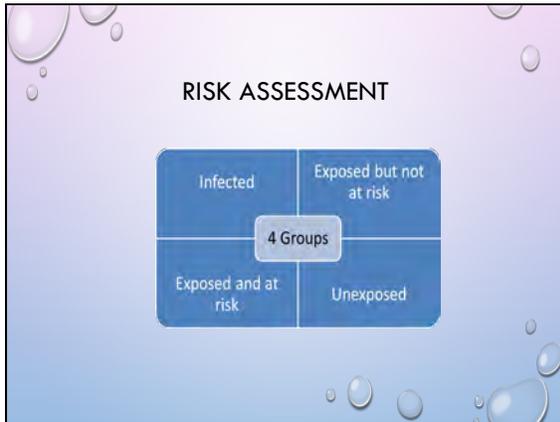
IMMEDIATE DIAGNOSTICS WE CHOSE



- IN-HOUSE CPV FECAL ANTIGEN TEST
 - FIRST 2 CATS TESTED WERE POSITIVE
- FECAL SAMPLES TO LOCAL VETERINARIAN FOR ROUTINE TESTING
 - COCCIDIA IN VERY LARGE NUMBERS IN ALL SAMPLES
 - ROUNDWORMS IN SOME SAMPLES
 - TAPEWORM SEGMENTS SEEN IN SOME SAMPLES

DIAGNOSTICS WE CHOSE

- 7 CATS SENT TO UNIVERSITY LABORATORY
 - FPV PCR
 - FECAL SPECIMEN EXAMINATIONS
 - ASKED FOR CULTURE IF PATHOLOGIST FELT DIAGNOSTIC TESTING DID NOT EXPLAIN CLINICAL SIGNS
 - RESPIRATORY PANEL PCR
 - FULL NECROPSY
 - HISTOPATHOLOGY
- HOW DID WE CHOOSE THEM?
 - COMMON CLINICAL SIGNS
 - CATS THAT WOULD BE EUTHANIZED DUE TO HUMANE REASONS ANYWAY
 - DIFFERENT AGES/SEXES/HOUSING UNITS
 - DIFFERING INTAKE DATES?



OUTBREAK MANAGEMENT – RISK ASSESSMENT

- INFECTED
 - MOVE TO ISOLATION IMMEDIATELY
 - START TREATMENT
 - ON- OR OFF- SITE
 - EUTHANASIA
 - SOMETIMES MOST HUMANE OPTION



INITIAL TRIAGE (AKA RISK ANALYSIS)

- WHAT DO WE DO WITH FPV-POSITIVE CATS IN MAGPIE COUNTY?
- BARRIERS TO CARE
 - POOR RELATIONSHIP WITH LOCAL VETS AND RESCUE GROUPS
 - LACK OF FUNDS AVAILABLE FOR TREATMENT
 - LACK OF TRAINED STAFF
 - LACK OF DIAGNOSTIC EQUIPMENT
 - LACK OF MEDICAL EQUIPMENT FOR TREATMENT
 - LACK OF ADEQUATE ISOLATION SPACE
 - LACK OF ADOPTION OPTIONS POST-TREATMENT
 - CAN WE PROVIDE THEM WITH HUMANE CARE?

OUTBREAK MANAGEMENT – RISK ASSESSMENT

- NOT EXPOSED
 - SAME RISK AS ANIMALS THAT ENTER IN NON-OUTBREAK PERIOD
 - MAINTAIN PROCEDURES THAT KEPT THEM FROM BEING EXPOSED

OUTBREAK MANAGEMENT – RISK ASSESSMENT

- SEROLOGY HELPS DESIGNATE THOSE EXPOSED AND AT RISK VS THOSE NOT AT RISK
- ONLY USEFUL FOR ASYMPTOMATIC ANIMALS
- IN-HOUSE TESTS AVAILABLE
 - BIOGAL FELINE VACCICHECK™



OUTBREAK MANAGEMENT – RISK CATEGORIES

High Risk	Intermediate Risk	Low Risk
<ul style="list-style-type: none">• Negative titer• Any age	<ul style="list-style-type: none">• Positive titer• Juveniles (<5m)	<ul style="list-style-type: none">• Positive titer• Adults

**OUTBREAK MANAGEMENT –
RISK ASSESSMENT**

- HIGH RISK ANIMALS
- QUARANTINE
 - 14 DAYS
 - BATHE AT BEGINNING AND END OF QUARANTINE
 - VERY IMPORTANT FOR JUVENILES



THIS IS NOT QUARANTINE!



THIS IS NOT QUARANTINE!



**OUTBREAK MANAGEMENT –
RISK ASSESSMENT**

- **INTERMEDIATE RISK**
 - BATHE
 - MOVE IMMEDIATELY TO FOSTER, RESCUE, ADOPTION
 - WAIVER
 - CANNOT BE SURE IF TITER DUE TO VACCINATION OR MATERNAL ANTIBODY



**OUTBREAK MANAGEMENT –
RISK ASSESSMENT**

- **LOW RISK**
 - PROCEED AS NORMAL



**OUTBREAK MANAGEMENT –
DECONTAMINATION**

- **CLEAN BREAK**
- THOROUGHLY DISINFECT EACH AREA AS MOVE ANIMALS OUT
- SHOULD YOU LET THEM SIT EMPTY FOR 2 WEEKS?

PROPER CLEANING/DISINFECTION

- 5% SODIUM HYPOCHLORITE (BLEACH) ½ CUP PER GALLON (1:32)
 - INACTIVATED BY ORGANIC MATERIAL
 - STORE IN LIGHT-PROOF CONTAINER
 - STABLE FOR 1 MONTH AFTER DILUTION
- POTASSIUM PEROXYMONOSULFATE (TRIFECTANT)
- ACCELERATED HYDROGEN PEROXIDE (RESCUE)
- FOLLOW CONTACT TIMES!



INITIAL TRIAGE ONE POTENTIAL PLAN

- ONE OF THE LARGE CAT ROOMS - QUARANTINE ROOM
- OTHER LARGE CAT ROOM - ADOPTION ROOM
- EXAM ROOM – ISOLATION



- DIVIDED CATS BY CLINICAL SIGNS AND AGE RATHER THAN COHORT OR WARD
 - LACK OF SANITATION AND PROOF OF VACCINATION MEANT EVERYONE HAD TO BE CONSIDERED EXPOSED/AT RISK UNTIL PROVEN OTHERWISE

PREPARE FOR MOVEMENT: HOW MANY CATS CAN WE CARE FOR IN THE SHELTER?

- 70 CATS-7 CHOSEN FOR NECROPSY=63 CATS
- "HUMANET" HOUSING UNITS AVAILABLE (PHYSICAL HOLDING CAPACITY)
 - 16 IN FIRST ROOM (ADOPTION)
 - 14 IN SECOND ROOM (INTAKE)
 - 6 IN EXAM ROOM
- CAPACITY FOR DAILY CARE
 - THREE INMATES SPENT 5 WORKING HOURS EACH AT SHELTER
 - 1 HOUR EACH TO CLEAN LITTER BOXES AND FOOD BOWLS
 - 15 MINUTES TO PROVIDE BASIC CARE FOR 1 CAT
 - 4x60=240 X3=720 /15=48 CATS

**TRIAGE AND RISK ASSESSMENT
ONE POTENTIAL PLAN**



- DECONTAMINATE ALL SURFACES AND EQUIPMENT
 - 1:64 DILUTION ACCELERATED H₂O₂ AS DETERGENT
 - 1:32 DILUTION AS DISINFECTANT (CONTACT TIME 10 MINUTES)
- PUT PROPER PPE IN ISOLATION AND QUARANTINE ROOMS
 - GOWNS
 - GLOVES
 - SHOE COVERS
 - SEPARATE CLEANING AND ANIMAL CARE SUPPLIES

**INITIAL TRIAGE
ONE POTENTIAL PLAN**

- PREVENTATIVE CARE ADMINISTERED DURING MOVEMENT
 - MLV FVRCP SQ
 - PYRANTEL PAMOATE 10 MG/KG PO
 - PONAURIL 50 MG/KG PO SID X 3 DAYS
 - FIPRONIL TOPICALLY
 - PRAZIQUANTEL PRN

**INITIAL TRIAGE
ONE POTENTIAL PLAN**

- FIVE GROUPS
 - BLACK TAGS
 - GUARDED OR GRAVE PROGNOSIS WITHOUT IMMEDIATE OR EXTENSIVE VETERINARY CARE
 - VETERINARY CARE NOT AVAILABLE AND HOLDING THESE CATS WAS SEEN AS INHUMANE
 - RED TAGS
 - CLINICAL SIGNS HIGHLY SUGGESTIVE OF FPV WITH OR WITHOUT URTD
 - ALL TESTED WITH CPV FECAL ANTIGEN TEST +/- BLOOD SMEAR PRIOR TO MOVEMENT

**INITIAL TRIAGE
ONE POTENTIAL PLAN**

- **YELLOW TAGS**
 - MILD GI SIGNS THAT COULD BE DUE TO ENDOPARASITES AND A POOR DIET
 - ALL TESTED FOR CPV WITH FECAL ANTIGEN TEST +/- BLOOD SMEAR
- **GREEN TAGS**
 - SIGNS OF URTD WITH NO GI SIGNS
 - ALL TESTED FOR ANTI-FPV ANTIBODY
- **WHITE TAGS**
 - NO SIGNS OF URTD OR GI SIGNS
 - ALL TESTED FOR ANTI-FPV ANTIBODY

**INITIAL TRIAGE
ONE POTENTIAL PLAN**

- **BLACK TAGS**
 - EUTHANIZED HUMANELY
 - 11 JUVENILES, 2 ADULTS
- **RED TAGS (3 ADULTS, 6 JUVENILES)**
 - IF CPV ELISA POS-HUMANELY EUTHANIZED (2 ADULTS, 4 JUVENILES)
 - IF CPV ELISA NEG-BLOOD SMEAR EVALUATION BY LOCAL VET
 - IF LEUKOPENIC-HUMANELY EUTHANIZED (1 ADULT, 2 JUVENILES)

**INITIAL TRIAGE
ONE POTENTIAL PLAN**

- **YELLOW TAGS (3 ADULTS, 7 JUVENILES)**
 - IF CPV ELISA POS-HUMANELY EUTHANIZED (1 JUVENILE)
 - IF CPV NEG-BLOOD SMEAR SENT TO LOCAL VET (NONE WERE LEUKOPENIC)
 - IF NEITHER CPV POS NOR LEUKOPENIC
 - TITER TESTED ALL 3 ADULTS (BUT STILL ISOLATED)
 - ALL POSITIVE
 - OUTCOME
 - IMPROVED FOLLOWING FENAZURIL ADMINISTRATION
 - ALL 3 LATER ADOPTED
 - ISOLATED JUVENILES AS HIGH RISK (6 JUVENILES)
 - USED EXAM ROOM AS ISOLATION WARD
 - OUTCOME
 - 5 LATER ADOPTED
 - 1 DEVELOPED SEVERE URTD AND WAS PTS



SEROLOGY RESULTS

- GREEN TAGS (17 ADULTS, 11 JUVENILES)
 - TITER TESTED ALL
 - POSITIVE TITERS 10 ADULT 6 JUVENILES
 - ADULTS CONSIDERED LOW RISK
 - JUVENILES CONSIDERED INTERMEDIATE RISK
 - OUTCOME
 - ADOPTED 10 ADULTS
 - TRANSFER TO RESCUE 6 JUVENILES
 - NEGATIVE TITERS 7 ADULT 5 JUVENILE
 - QUARANTINED AS HIGH RISK
 - OUTCOME
 - ADOPTED 6 ADULTS 2 JUVENILES
 - 1 ADULT EUTHANIZED AFTER TRYING TO BITE STAFF MEMBER
 - 3 JUVENILES LITTER MATES EUTHANIZED WHEN TESTED POSITIVE ON CPV ELISA ON DAY 2 OF QUARANTINE



SEROLOGY RESULTS

- WHITE TAGS (1 ADULTS, 2 JUVENILE)
 - TITER TESTED ALL
 - POSITIVE 1 JUVENILE 1 ADULT
 - JUVENILE CONSIDERED INTERMEDIATE RISK
 - SENT TO RESCUE
 - LATER DEVELOPED FPV AND WAS TREATED WITH OUTPATIENT PROTOCOL AND SURVIVED
 - ADULT CONSIDERED LOW RISK
 - OUTCOME
 - ADOPTED
 - NEGATIVE 1 JUVENILE
 - CONSIDERED HIGH RISK
 - QUARANTINE
 - OUTCOME
 - ADOPTED



PREVENTING DISEASE DURING RESPONSE

- PROVIDE CATS WITH APPROPRIATE RESOURCES
 - LITTER BOXES, FOOD/WATER BOWLS, HIDING BOXES
- LIMIT FOMITE SPREAD
- MEDICAL ROUNDS BID
- POPULATION ROUNDS OF ENTIRE FACILITY SID
- STRICT QUARANTINE AND ISOLATION PROTOCOLS
 - PPE
 - SEPARATION OF STAFF

MEDICAL CARE

- SUPPORTIVE CARE FOR THOSE WITH MILD GI SIGNS OR URTD
 - MONITOR BID FOR HYDRATION STATUS, APPETITE, Demeanor, STOOL CONSISTENCY
 - PROVIDE PALATABLE FOOD
 - PROVIDE HIDING BOXES, SOFT BEDDING, QUIET AREA TO DECREASE STRESS
 - KEEP HUMAN TRAFFIC TO A MINIMUM

PATHOLOGISTS RESULTS

- ONE UNRESPONSIVE CAT HAD SPLENIC MALIGNANT FIBROUS HISTIOCYTOMA WITH HEPATIC METASTASIS
 - WHAT DOES THIS TELL US ABOUT THE POPULATION?

PATHOLOGISTS RESULTS

- 4 OF 7 FPV POSITIVE
- 5 OF 7 POSITIVE FOR CYSTOISOSPORA FELIS OR RIVOLTA (OR BOTH)
- 3 OF 7 POSITIVE FOR TOXOCARA CATI

- ENDOPARASITES + FPV=?

PATHOLOGISTS RESULTS

- ALL TESTED FHV-1 NEGATIVE
 - MOST LIKELY TO BE POSITIVE 6-12 DAYS AFTER ADMITTANCE
 - FALSE NEGATIVES
 - FEW CATS TESTED
 - CATS WITH FHV-1 ALREADY DIED?
- 5 OF 7 FCV POSITIVE
- ALL CF AND BB NEGATIVE
- 4 OF 7 MF POSITIVE
- **ENDOPARASITES+FPV+FCV=?**

NOW WHAT?

Get Animals Out
the Front Door

FACILITATE ADOPTIONS

- FREE ADOPTIONS
- LOCAL VETERINARY OR VET TECH SCHOOLS
- OFFER FREE VISIT VOUCHER FOR LOCAL VET
- PROVIDE WITH INFORMATION ABOUT POTENTIAL EXPOSURES
- SEND ALL ANIMALS WITH A MEDICAL RECORD

OUTBREAK MANAGEMENT - COMMUNICATION

- AVOID "BAD PRESS"
- AVOID SECONDARY OUTBREAKS
- ADOPTERS, FOSTERS, EMPLOYEES, VOLUNTEERS, LOCAL VETERINARIANS, LOCAL MEDIA
 - ALL DESERVE ACCURATE AND TIMELY INFORMATION

COMMUNICATION MAGPIE COUNTY

- ATTEMPT TO CONTACT RECENT ADOPTERS
- RE-BUILD RELATIONSHIP WITH RESCUE PARTNERS AND OFF-SITE PET ADOPTION CENTER
- COMMUNICATE WITH LOCAL VETERINARIANS
- MEDIA

DECONTAMINATION



- AS ANIMALS MOVE OUT DECONTAMINATE ENTIRE SHELTER
- MAINTAIN CLEAN BREAK

PREVENT FUTURE OUTBREAKS: NEW PROTOCOLS IMPLEMENTED

- OPEN SELECTION
- FELINE HOUSING
- PREVENTATIVE CARE
- DISINFECTION/SANITATION
 - SPOT CLEANING
- URTD MANAGEMENT
- INTAKE



OUTCOME

- JUVENILES
 - PTS-22
 - ADOPTED-8
 - RESCUE TRANSFER- 7
 - 1 SUCCESSFULLY TREATED
 - ISOTONIC FLUID THERAPY, EARLY ENTERIC FEEDING, MAROPITANT, CEFOVECIN
- ADULTS
 - PTS-6
 - ADOPTED-20
- RETURN TO OPERATION- 10 DAYS

FOLLOW UP

- NO REPORTED CAT DEATHS POST-INVESTIGATION
- SHELTER STILL OVERCROWDED BUT IMPROVED

LONG TERM GOALS

- FORMAL VOLUNTEER PROGRAM
- FOSTER PROGRAM
- STAFF AND INMATE TRAINING PROGRAM
- PROTOCOLS FOR MANAGEMENT OF COMMON MEDICAL AND BEHAVIORAL CONDITIONS
- COMPASSION FATIGUE EDUCATION
- NUTRITIONAL PLAN

LONG TERM GOALS

- IMPROVED HOUSING FOR ALL SPECIES
- MICROSCOPE AND CENTRIFUGE IN FACILITY
- SCALE APPROPRIATE FOR CATS
- ADOPTION PROMOTION
- MEDICAL TRAINING FOR STAFF (PHLEBOTOMY, ETC.)
- CE FOR DIRECTOR AND STAFF

FINAL THOUGHT....

- DON'T FORGET THAT THE STAFF ARE HUMANS AND MAY HAVE BEEN LED TO THESE DECISIONS BY COMPASSION FATIGUE AND BURNOUT.

