Captive Orangutan Health
The SSP Advisorship

Nancy P. Lung, VMD, MS
Fort Worth Zoo
Veterinary Advisor, Orangutan SSP
AZA’s SSP Advisor Program

- Veterinary advisor
- Pathology advisor
- Nutrition advisor
- Behavior advisor
- Field advisor
- Education advisor
Orangutan SSP Vet Advisor History

• Dr. Rita McManamon 1987-2007
• Dr. Chris Bonar 2007-2010
• Drs. Nancy Lung and Joe Smith 2010-now
Dr. Joe Smith
Fort Wayne Children’s Zoo
The Vet Advisor’s Responsibility

- Collate health data from AZA institutions
- Be available for consultations
- Investigate population-wide concerns
- Serve as a reference library
- Make recommendations for preventive care and disease treatment
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Collating Data

• This is really hard!!

• Surveys
  – Lots of small ones, or one big one?
  – Poor compliance
  – Bugging the recipients

• Telephone calls
  – Better compliance, but time consuming!

• Physical Visits
  – Expensive
  – Labor intensive
SURVEYS ARE COMING!!

Tell your vets!
Beg your vets!
Offer to help your vets!
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Consultations

• A great way to learn!!

• Reproductive issues
  – Contraception
  – Perinatal care
  – Pediatrics (handrearing, surrogacy, vaccines)
  – Reproductive pathology

• Respiratory issues
  – Throat sac management
  – Sinusitis/allergies
  – Chronic recurrent pneumonia
Consultations cont.

- Cardiac
  - Surveillance (GAHP)
  - Diagnosis/management of disease

- Miscellaneous
  - Cancer
  - Parasite Control
  - Constipation/Diarrhea
  - Nutrition (rickets)
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Investigation

• Literature Searches

• Identifying and consulting with experts
  – Soliciting interest from MD, DVM, nursing, technical and PhD specialists
  – Bringing together specialists from different zoos
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Reference Material

• Using the Dropbox to centralize information
• Reference List
• Image datasets (anatomy, surgery, CT, radiology)
• Update of the Medical Management of the Orangutan
Using the DropBox
Orangutan Health Bibliography

• Publications related to orangutan health
  – J. Med Primatology. Airsacculitis in fourteen juvenile southern Bornean orangutans (*Pongo pygaeus wurmbii*)

• Publications related to the specific disease processes common to orangutans
Image Reference Sets
Medical Management Update
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Prevention, Prevention, Prevention

• Husbandry
  – Ventilation, temperature, air quality, cleaning practices, nutrition

• Reducing Reverse Zoonosis
  – Exhibit design
  – Personnel practices
The Science of Zoonosis Control
One-directional thinking
Pathogen Flow is Dynamic
“Jackie” the Lowland Gorilla

- 10yr old female
- Flu-like symptoms in family group
- Rapid decline in Jackie—recumbent within 48 hrs
- Confirmed Parainfluenza 3
- Placed on life support for 7 days
- Eventually made a full recovery
“Ramses”  
31 yr old gorilla  
• Pneumococcal pneumonia  
• Maintained in oxygen cage  
• Outcome--recovered

“Kate”  
39 yr old gorilla  
• Influenza A  
• Secondary pericarditis  
• Outcome--died
Chimpanzee Group
Lincoln Park Zoo

- 7 animals in a single family group
- All 7 had cold/flu-like symptoms
- 9 yr old male—status declined rapidly
- Outcome—young male died, others recovered
- Confirmed human metapneumoniavirus

“Basan”
4yr old orangutan

- Upper and lower respiratory infection
- Confirmed Haemophilus influenzae
- Outcome--recovered
Kimberly Clarke Chimpanzee Forest
Dallas Zoo
Personnel Practices

• You owe it to your animals!!!!!!!
  – Respiratory infections
  – GI infections
  – Herpesvirus infection (cold sores)
• Get your flu and pneumocococcus vaccines
• Wash your hands before each interaction
• Wear masks and gloves
• Get TB tested regularly
• Don’t work animals if you aren’t feeling well
• Police each other!!
• Educate the public
Other recommendations

• Vaccine protocols—esp for infants
• Parasite control—esp for strongyloides and balantidium
• Handrearing—formula, surrogacy, bloat, constipation, diarrhea
• Nebulization—type of equipment, which products to use, frequency, training, etc.
• Anesthesia protocols
What is the priority?

To gain a better understanding of the top health and husbandry issues facing captive orangutans
What do we know so far?

• Pathology Survey identified the top five health issues:
  – Cardiac disease
  – Respiratory disease
  – Gastro-intestinal
  – Reproductive/neonatal
  – Renal disease
What do we know so far?

• Illness is disproportionately hitting the younger age group compared to other apes and humans.
  – Orangutan reproductive biology makes this particularly problematic
    • Longest adolescence (14yr)
    • 7yr inter-birth interval
    • Female will only produce 4 offspring in her lifetime
  – Effect on the population
Orangutan Health Workshop

• Bring together “orangutan people” and “medical specialists” to look at each of the top five health issues and make a strategy for how best to move forward
Orangutan health Workshop

• Spring of 2012
• Hosted at the Fort Worth zoo
• Attendance by Invitation Only
• 30-35 people
• Veterinarians, animal managers, human and veterinary specialists
What can you do to help?

• Let your vets and managers know this is not an educational meeting, it is a working meeting
• Encourage your vets and managers to support the GAHP
• Encourage your vets and managers to complete surveys
• Encourage your vets and managers to communicate regularly with the SSP chair and advisors
• Engage in training your orangutans for medical procedures and provide feedback
• You, yourself, support and believe in these efforts!!
Believe that it’s important!!
See the big picture!!!