Rabies Vaccine Update
August 19, 2008

Division of Disease Control
North Dakota Department of Health
Historical Context 1

• Two manufactures of rabies vaccine
  – Sanofi Pasteur – IMOVAX (HDCV)
  – Novartis – RabAvert (PCECV)

• May 19, 2008 – CDC notice
  – Sanofi will provide IMOVAX only for PEP
  – Providers should consult with state public health before ordering vaccine
  – Novartis has RabAvert available only in limited quantities for PEP only
Historical Context 2

• Sanofi – on June 1\textsuperscript{st} shut down its rabies vaccine production facility
  – Planned shut down
  – Established an inventory based on historical sales
  – Expected to be operational by mid-to-late 2009
Historical Context 3

• June 16th, CDC update
  – Rabavert - Novartis will not release vaccine shipments not confirmed through state public health officials
    • Requires a confirmation code from state public health officials
  – Priority is for post-exposure prophylaxis (PEP)
  – Pre-exposure (PrEP) vaccine limited to those in critical occupations with state public health approval
June 17th – CDC update

- Priority use for vaccine is for PEP not PrEP
- As of this date, Novartis will temporarily cease to provide vaccine-(RabAvert) for either PEP or PrEP
- RabAvert should be available again in July
Historical Context 5

• July 15\textsuperscript{th} CDC update
  – Novartis (RabAvert) vaccine is again available only for PEP
  – Novartis will require medical providers to receive approval through state health officials to order vaccine by using a confirmation code
  – Novartis anticipates more vaccine will available this fall
Historical Context 6

- July 31\textsuperscript{st} CDC update
  - Novartis announce the confirmation code is no longer needed to order vaccine
August 11 CDC update

- IMOVAX (Sanofi) vaccine is no longer available
- Sanofi expects to have more doses available in late September – early October
- Novartis is continuing to supply RabAvert without a confirmation code
• August 15 CDC update (most current)
  – Increased demand of RabAvert causes Novartis to again require medical providers consult with state public health officials
  – Novartis is again requiring a confirmation code
    • Available from Disease Control at 800.472.2180 or 701.328.2378
    • Will change frequently
  – Vaccine for PrEP is available only for those at highest risk after consultation with state health officials.
Handling Possible Exposures

• Many local health units as well as the Division of Disease Control provide guidance regarding possible rabies exposures
  – Local health units that currently provide guidance should continue to do so
  – In situations in which the need for PEP cannot be ruled out, LPHU should consult with Disease Control
Some Critical Updates on ACIP Recommendations

- MMWR, Vol 57, May 7, 2008 – early release
  - Updates the 1999 guidelines
- Cost-effectiveness of vaccines
- Probability of rabies transmission to humans
  - i.e. For an animal that tests positive for rabies the probability of rabies transmission after exposure ranges from 0.01 to 0.7 and it is cost saving to administer PEP
  - For a dog lick from a dog with unknown status in the US, the probability is 0.000001 with a cost of $4 billion
• Nonbite exposures
  – Rarely result in rabies
  – Organ recipients, aerosols in labs, airborne in caves
  – Contamination of open wounds, cuts, abrasions (including scratches) or mucous membranes with saliva or other infectious material
    • Other material = neural tissue
  – Fragile virus (UV, dessication)
  – “non-bite exposures almost never been proven to cause rabies ..... unless the exposure met the definition...”
Bat Exposures

- Bat variant viruses are responsible for most human rabies in the United States
- “any potential exposure to a bat requires a thorough evaluation”
- Bats involved in potential exposures should be safely collected and submitted for rabies diagnosis
MMWR 4 - Bats again

- Rabies risks following an encounter with a bat is difficult to assess
  - Limited injury from the bite
  - Inaccurate recall of encounter
  - Evidence that some bat-related rabies viruses might be more likely to result in infection after inoculation into superficial epidermal layers.
  - “if the person can be reasonably certain...”
Situation which may qualify as an exposure to rabies

- Finding a bat in the same room as a person who might be unaware that a bite or direct contact had occurred
  - Waking up to find a bat in the room
  - Adult witnesses a bat in the room of a sleeping person, young child, intoxicated person, disable person, etc.
- Other situations where a bat is found in the home should be evaluated on a case by case basis.
MMWR 6 - Wild Animals

- Raccoons, skunks, foxes and terrestrial carnivores
- PEP initiated as soon as possible
  - Unless public health officials are facilitating expedited testing or if rabies testing is already negative (evaluated case by case).
  - Factors to consider before initiating PEP prior to diagnosis
    - Species, behavior/health, provoked, severity and location of the bite
MMWR 7 - Lagomorphs and Rodents

• Rabbits, Hares and Rodents
  – Rarely carry rabies and have not been known to transmit to rabies to people
  – Groundhogs
  – Muskrats
MMWR 8 - Dogs, Cats, Ferrets

• No real changes or new clarifications
  – Rule out rabies
    • Test
    • Hold and observe for ten days
  – If animal is available and is healthy, it is ok to wait to start PEP
  – Situations involving domestic animals not available for testing or observation should be handled on a case-by-case basis
MMWR 9 – Treatment (PEP)

• Three components
  – Wound treatment – don’t underestimate this measure
  – RIG – for previously unvaccinated people
    • 20 IU/kg body weight
    • As much as possible in/around the wound site
  – Vaccine
    • 5 doses (0,3,7,14,28)
    • Deviations
      – Serologic testing