

**ARIZONA STATEWIDE TRIBAL, INDIAN HEALTH SERVICE,  
ARIZONA DEPARTMENT OF HEALTH SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION  
2/17/12 ROCKY MOUNTAIN SPOTTED FEVER MEETING REPORT**

PREPARED BY  
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Arizona Department of Health Services



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Location and Attendance: This Statewide Arizona Tribal/Indian Health Service (IHS)/Arizona Department of Health Services (ADHS)/Centers for Disease Control and Prevention (CDC) Rocky Mountain Spotted Fever (RMSF) Meeting was held on February 17, 2012 (8:30am-4pm) in Chandler Arizona. There were 64 participants that attended. The breakdown of participants were 36 from seven Tribes, 2 from the Inter Tribal Council of Arizona, Inc. (ITCA), 12 from IHS, 6 from ADHS, 5 from CDC, 2 from counties, and 1 University representative. The seven Tribes represented were the Navajo Nation, Yavapai-Prescott Indian Tribe, White Mountain Apache Tribe, San Carlos Apache Tribe, Gila River Indian Community, Tohono O’odham Nation and the Pascua Yaqui Tribe. See Attachment 1 for a full listing of the participants.

Acknowledgement: This document is an expansion of a meeting synopsis prepared by Dr. Joanna Regan, Medical Officer, Rickettsial Zoonoses Branch, Division of Vector-borne Diseases, CDC.

Background: RMSF is a potentially fatal tickborne disease. In 2003, a new RMSF tick vector (the brown dog tick) was identified in Arizona in association with an emerging focus of human RMSF cases in an area where the disease had not been previously reported. This tick is extremely common, feeds primarily on dogs, and lives in and around homes. This close contact with humans makes the incidence of RMSF higher in these communities than in areas of the country where woodland ticks are the vectors. Per ADHS statistical records since 2003, over 195 human cases, including 15 deaths, have been reported from 4 Tribes (White Mountain Apache Tribe, San Carlos Apache Tribe, Gila River Indian Community, and the Tohono O’odham Nation) in Arizona. Two additional Tribes (Navajo Nation and Hopi Tribe) have also had evidence of RMSF in dogs. Lack of access to animal control, veterinary services, and pest control has allowed this tick vector to flourish on affected reservations. The Tribes, IHS, ADHS and CDC have committed staff and resources to addressing this public health problem since 2003, but despite these efforts, the number of cases reported each year has continued to increase. More importantly, fatalities have continued to occur, especially among children. Limited resources and infrastructure are hampering important interventions such as an effective animal control program, veterinary care to control the dog population through permanent spay-neuter programs, integrated pest management techniques, and sustained physician education for early treatment of human cases.

This meeting was organized and sponsored to discuss actions that have been taken during the last decade, resources that may be required, and next steps that should be taken to address this public health emergency. The following is an overview of the proceeding of the meeting following the meeting agenda. See Attachment 2 for a copy of the meeting agenda.

Welcome, Blessing and Opening Comments: Michael Allison, Native American Liaison, ADHS provided welcoming remarks. Harry Antone, Tribal Elder, Gila River Indian Community provided the meeting blessing. Ken Komatsu, State Epidemiologist, ADHS provided an overview of RMSF in Arizona. He discussed the increasing number of reported cases and increase in number of affected Tribes. Honorable Ned Norris, Jr., Chairman, Tohono O’odham Nation discussed the importance of this issue and how the Tohono O’odham Nation began to have cases in late 2011. He commented that many Tribal members and elected officials were unaware of the impact this problem had been having on neighboring Tribes or the risk factors for emergence in their community. He encouraged collaboration with resources, community involvement, sharing of information/successes/failures for development of solutions.

Panel One: RMSF Coalition Development and Community Education: Carrie Senseman, Food Safety and Environmental Health Program Manager, Bureau of Epidemiology and Disease Control, ADHS moderated this panel. The Panel Members were Velda Williams, Executive Director, Department of Health and Human Services, San Carlos Apache Tribe, Wayne J. Ivins, CHR/CAN, White Mountain Apache Tribe and Judith Lavelle, Health Communication Specialist, Division of Vector-borne Disease, CDC.

Velda Williams discussed several educational campaigns the Tribe had initiated since 2005 when Tribal cases were first discovered. These educational campaigns consisted of multiple TV PSAs (tribal cable station), newspaper articles, parade floats, health fair booths and campaigns in the schools to teach children about ticks and pet care. She stated there will be 3 free animal clinics held in San Carlos this year to be conducted by Rural Area Veterinary Services including a single one-week spay/neuter clinic.

Wayne Ivins commented on the many educational campaigns used by the White Mountain Apache Tribe since 2003. He stated due to difficulty to change elders' beliefs and attitudes they began targeting children. A flipchart on spotting ticks on dogs, demonstrations using stuffed animals were used in Headstart, brochures on tick removal and tweezers were sent home with the children. Sixth graders were also targeted for education. Brochures on pesticide types were also developed. Post intervention evaluations have showed increased knowledge. The Tribe is in need of financial resources to continue and expand their efforts. Wayne stated he is willing to share educational materials with other Tribes.

Judith Lavelle discussed that the high level of community awareness about RMSF has unfortunately not led to a decrease in cases. She used a power point that showed graphic images of infected dogs, one showed that 2 unsprayed dogs in 6 years can multiply to 67,000 dogs. She encouraged using evidenced-based practices and engaging the community for lifestyle changes. Existing Tribal animal control laws and regulations need to be enforced. Limitations include need for additional funding and resources. CDC can help with educational materials.

Panel Two: Tick Control, Clinical Education and Surveillance: Erica Weis, Epidemiologist, Bureau of Epidemiology & Disease Control, ADHS moderated this panel. The panel members were Dr. Scott Bender, Tribal Veterinarian, Navajo Nation, Dr. Kara Levri, Prevention & Public Health Medical Officer, IHS Sells Service Unit, and Dr. Joanna Regan, Medical Officer, Rickettsial Zoonoses Branch, National Center for Emerging and Zoonotic Infectious Diseases, CDC.

Dr. Bender discussed how the Navajo Nation has had a 60% seropositivity rate for RMSF among dogs (from a sample performed in 2005). Human cases have not yet been identified. Possible reasons for this are effective animal control and pest management programs available to the Tribe. The Nation has 4 animal control shelters. Another possibility is the lack of surveillance for human cases. Human cases may have been missed because physicians sometimes use doxycycline to treat suspected plague and Q fever.

Dr. Levri discussed the treatment algorithm currently used on the Tohono O'odham Nation to test and treat for RMSF since October 2011. She commented currently, patients that have experienced 2 days of fever are treated

according to the algorithm. Approximately 25% of patients identified with this algorithm on Tohono O'odham have tested positive for RMSF with many lab results still pending. She is notified via the electronic medical record system of patients who have RMSF tests or orders for doxycycline. After ensuring that all patients tested for RMSF are treated with doxycycline and all patients with doxycycline ordered are tested for RMSF, an investigation team comprised of community health representatives and public health nurses is sent to interview the patient, treat the dogs, and apply acaricide around homes. She conducts monthly clinical education.

Dr. Regan discussed how RMSF is treatable in the first few days stating it is extremely difficult to diagnose and a potentially high case fatality rate. Due to concerns about negative publicity, publication has been limited, and many physicians outside the immediate communities are not knowledgeable about RMSF and the urgent need for doxycycline. Physicians still hesitate to treat children with doxycycline due to unfounded concerns of dental staining. CDC and ADHS conducted many Continuing Medical Education lectures for clinicians, but high turnover of providers is a limitation. The high number of patients that need to be tested and treated create a problem for emergency departments and long hospital stays. ICU care and other services for RMSF patients have been an enormous expense. Preventing cases is more effective than attempting to diagnose and treat. Effective animal control, integrated pest management, etc. are integral to saving lives.

Panel Three: Animal Control, Codes, and Community Clean Up: Laverne Dallas, Director, Health Resource Department, Gila River Indian Community moderated this panel. The panel members were: Glenda Davis, Program Director, Navajo Nation Veterinary and Livestock Program, Adolph Robles Sr., Animal Control Officer, Gila River Indian Community and Stephen Piontkowski, District Environmental Health Officer, Office of Environmental Health & Engineering, IHS.

Glenda Davis discussed the Navajo Nation's Emergency Response Plan to a foreign animal disease. This plan allows for the planning and mobilization of a Tribal government to respond to a foreign animal disease either through a declaration of emergency or Tribal executive order; especially an animal disease that has a public health impact. The Navajo Nation activated this plan in response to the West Nile Virus; developing an action plan for the coordination of Tribal resources to target outreach education, BTI treatments, the vaccination of over 5,000 horses in 2003, etc. As a direct result of the WNV activation, "The Navajo Nation Livestock and Foreign Animal Disease Response Act of 2006" was developed to include inspection, seizure, penalties, and the first Tribal Livestock Health Code. The Act includes cruelty and extreme cruelty, and a mechanism to quarantine livestock. To supplement Tribal Resources, the Navajo Nation Veterinary & Livestock Program developed and tested the Navajo National Veterinary Stockpile Plan (NNVS). The NNVS documents the process to request for, receive and distribute critical veterinary medical assets should there be a Navajo declaration of emergency versus a foreign animal disease. The Nation conducted a full scale exercise in April 2011 to test the NNVS plan; the federal government (USDA NVS) deployed the veterinary assets and the Navajo Nation was in receipt of the medical support. She described additional services used on the Navajo Nation such as dipping dogs for ticks over a 7 year period to reduce the number of ticks within housing communities. At each of the Navajo Housing Authority animal wellness and dips sites the San Carlos Apache Tribe RMSF education materials were distributed.

Adolf Robles Sr. discussed how education is important to implement before an ordinance is put in place and how animal control should be considered a public health issue rather than just a public safety issue. The Community operates an 18 cage shelter. Ample staffing is important for success. Dogs are not allowed to roam in urban areas. Tribal laws are changing to restrict roaming in rural areas due to RMSF. There is allowance for 4 animals per household. The Tribal Governor supports their efforts. Funding for this activity is through their Health Resource Department.

Stephen Piontkowski discussed cleanup efforts that are targeted for tick harborage sites. 87% of the White Mountain Apache tribal members are in support of Animal Control programs. The Prevention effort started at the Tribal Police Department and is now with the Tribal Health Department. Spay and neuter clinics have been financially sponsored by an off reservation Foundation. The Tribe has a partnership with the Gila County Rabies Control Program. The Tribe has a "lean and clean" partnership with the Tribal diabetes prevention program. Citizens and volunteers worked to remove large items on properties such as mattresses and couches. The cost of transportation and dumping has been a limitation in controlling the buildup of tick harborage.

Panel Four: Tribal Leaders Round Table: Jennie Becenti, Executive Director, Department of Health & Human Services, Tohono O'odham Nation moderated this panel. The panel members were: Mitchell Hoffman, Vice Chairman, Health & Social Services Committee, San Carlos Apache Tribal Council, Augustine Toro, Natural Resources Director, Tohono O'odham Nation, Eva Ybarra, Public Health Emergency Preparedness Coordinator, Tohono O'odham Nation, Delsen Liston, Assistant Manager, Community Health Services, Tohono O'odham Nation and Chester Antone, Chairman, Health & Human Services Committee, Tohono O'odham Nation Tribal Council.

Councilman Hoffman discussed animal control efforts on the San Carlos Apache Reservation, the impact of the disease on the community and personal loss of a family member to RMSF. He expressed a need for direct congressional funding for Tribal Animal Control Programs.

Augustine Toro discussed how the tribe distributed tick control resources to the districts. The tribe encouraged working families to buy their own supplies. The Nation does not have animal shelters.

Eva Ybarra and Delsen Liston discussed how the tribe responded to the first case of RMSF in October 2011 with investigation, environmental treatment, animal treatment, community education, and distribution of materials. The Nation declared an RMSF Outbreak. The Nation received technical assistance from the San Carlos Apache Tribe. The Nation's Tribal ordinance allows for 2 dogs per family. Human cases were found through medical chart reviews and laboratory testing. A CDC Epi-Aid conducted a dog sero-survey showing the disease had spread to much of the Nation.

Councilman Antone discussed venues in which the presence and threat of emergence of RMSF should be discussed and where requests for funding should be made. Venues such as upcoming Regional and National HHS Tribal Consultation Meetings were felt to be an effective avenue to pursue this serious issue. State, county and IHS support should be requested. CDC will continue to provide data. There may be other agencies that

could contribute as well. Tribal resolutions are needed. Tribal, state and federal leaders need to be made aware of this critical public health issue.

Panel Five: Federal, State, County Leaders Round Table: Don Herrington, Assistant Director, Public Health Preparedness Services, ADHS moderated this panel. The panel members were: George Bearpaw, Acting Area Director, Tucson IHS Area Office, Craig Levy, Epizootologist, Office of Epidemiology, Maricopa County Department of Public Health, Robert Massung, Branch Chief, Rickettsial Zoonoses Branch, National Center for Emerging and Zoonotic Infectious Disease, CDC.

George Bearpaw discussed the Tohono O’odham Tribal resolution declaring an outbreak. He stated today’s meeting is a good start to find solutions. The Pascua Yaqui Tribe has an excellent animal control program. The Tohono O’odham Nation is requesting assistance from IHS to start up an animal control program. Past public health emergency preparedness activities has been extremely helpful for tribal RMSF community response.

Craig Levy discussed the role and potential for partnerships with county health departments. Eight counties have or currently are providing RMSF activity assistance to Tribes. Each county varies in their capacity to provide assistance and resources. In June 2012 Maricopa County provided RMSF assistance to the White Mountain Apache Tribe. Counties are available for partnerships.

Robert Massung discussed mechanism for declaring Epi-Aid and numerous tribal CDC projects and involvement over the years. This branch will continue to provide consultation and scientific expertise for Tribes.

Don Herrington commented that the CDC funded Public Health Emergency Preparedness funds will be combined with Hospital Preparedness funds and most likely will be reduced.

Next Steps: A group-wide discussion about next steps included:

1. Contacting the Arizona Local Health Officers and Arizona Local Environmental Health Officers to update them and look for coordination opportunities.
2. Share data among Tribes to better understand the scope of the problem and coordinate efforts to search and apply for resources and funding.
3. Moving this issue forward to the HHS Regional and National Tribal Consultation Meetings through a working group. The HHS Region IX Tribal Consultation Meeting will be held in Phoenix on March 21, 2012.
4. Approach Inter Tribal Council of Arizona, Inc. for collaboration and support.
5. Reach out to other Tribes and make them aware of the situation and current efforts around the state.
6. Have a second meeting in June to share current data and focus upon the specific needs of each affected tribe. Flagstaff was suggested as a location for the meeting.

Conclusions: Although significant effort has been put forth by affected Tribes, state and federal partners the incidence of RMSF is increasing. Funding has been inadequate and sporadic due to the lack of designated RMSF funding. A sufficiently funded and sustainable integrated approach is needed to control this disease in the

impacted Tribal lands and to prevent the emergence of RMSF in new areas. A successful integrated approach would include adequately staffing and equipment for the following:

1. Pest management (tick control for homes and dogs)
2. Medical and public health response (physician education, public health response to cases, environmental assessment, RMSF detection/monitoring in dogs)
3. Animal Control and Sheltering (control of free roaming dogs, control dog populations)
4. Veterinarian Services (spay/neuter for dog population control)
5. Solid Waste (reduce tick harborage around homes)
6. Housing management (sealing homes, dog-proof fencing for yards, managing properties)
7. Surveillance for spread of the disease to new areas

In the span of only 10 years, RMSF has emerged in and spread from Northern to Southern Arizona. There are currently four Tribal areas where human cases have been detected and at least two additional Tribes where evidence has been reported in dogs. Unlike RMSF in other parts of the country, which occurs sporadically, RMSF with the brown dog ticks has the potential to occur as large community outbreaks, and requires a large, coordinated community and Tribal intervention for effective control. Without an immediate and significant control effort, RMSF can be expected to spread to other Tribal and county areas. The cost of these control programs would vary depending on Tribal population and land mass. To significantly control the spread of this disease funding assistance is needed from several federal Departments (Health and Human Services, Housing and Urban Development, and Environmental Protection Agency).



## LIST OF PARTICIPANTS

LAST NAME	FIRST NAME	TITLE	ORGANIZATION
Aguilar	Tina	Interim Senior Program Manager, DH&HS	Tohono O'Odham Nation
Allison	Michael	Native American Liaison	Arizona Department of Health Services
Amos	Agatha	Health Education Director	White Mountain Apache Tribe
Antone	Chester	Chairman, Health & Human Services Committee	Tohono O'Odham Nation Tribal Council
Antone	Frances G.	Councilwoman	Tohono O'Odham Nation Tribal Council
Ayala	Rosemary	Public Health Nurse	Sells Service Unit
Bahe	Joseph	Veterinarian	Gila River Indian Community
Bearpaw	George	Acting Area Director	IHS Tucson Area Office
Becenti	Jennie	Health Director, DH&HS	Tohono O'Odham Nation
Begay	Mae-Gilene	Program Director	Navajo CHR/Outreach Program
Bender	Scott	Tribal Veterinarian, NNVL	Navajo Nation
Bendle	Harty	Animal Control Officer	San Carlos Apache Tribe
Bloedel	Cassandra	Environmental Program Supervisor	Navajo Nation Environmental Protection Agency
Bullis	Kevin	Animal Control Officer	San Carlos Apache Tribe
Bunko-Patterson	Andreas	Epidemiologist	Maricopa County Dept. Public Health
Bury	Jill	Environmental Health Specialist	Yavapai-Prescott Indian Tribe
Cleveland	Harlan	Emergency Services Liaison	Navajo Nation Dept of Emergency Management
Cosen	Darren	Community Health Representative	San Carlos Apache Tribe
Cowboy	Brandii	Health Education Technician	Navajo Nation Health Education Program
Cruz	Feliciano	PHEP Coordinator	Pascua Yaqui Tribe
Dallas	Laverne	Health Resource Department Director	Gila River Indian Community
Davis	Glenda	Program Director- NNVL	Navajo Nation
Dodge	Vanessa	Intern	Inter-Tribal Council of Arizona, Inc.
Dude	Natasha	Animal Control Officer	San Carlos Apache Tribe
Fallon	Angela	Public Health Nurse	Sells Service Unit
Gerding	Justin	Environmental Health Officer	Centers for Disease Control and Prevention
Goseyoun	Cye	Animal Control Officer	San Carlos Apache Tribe
Gouge	Dawn	Entomologist	University of Arizona
Herrington	Don	Assistant Director, Pub. Health Preparedness Svcs Vice Chairman, Health & Social Services Committee	Arizona Department of Health Services
Hoffman	Mitchell		San Carlos Apache Tribal Council
Homer	Juanita	Senior Program Manager	Tohono O'odham Nation
Hovet	Regina	Deputy Director, PHHS	San Carlos Apache Tribe
Hoyt	Daniel	Senior Sanitarian	Gila River Indian Community
Hupp	George	Public Health Nurse	Indian Health Service
Ivins	Wayne	CHR/CAN	White Mountain Apache Tribe
Johnson	Preo	CHR Program Director	White Mountain Apache Tribe
Komatsu	Ken	State Epidemiologist	Arizona Department of Health Services

Lavelle	Judith	Health Communication Specialist	Centers for Disease Control and Prevention
Levri	Kara	Preventative & Public Health Medical Officer	IHS Sells Service Unit
Levy	Craig	Epizootologist	Maricopa County Dept. Public Health
Liston	Delsen	Assistant Mgr , Community Hlth Svcs, DH&HS	Tohono O'odham Nation
Martinez	Rebecca	Associate Director	Pascua Yaqui Tribe
Massung	Robert	Branch Chief, Rickettsial Zoonoses Branch	Centers for Disease Control and Prevention
Miller	Mark	Senior Environmental Health Officer	Centers for Disease Control and Prevention
Muttart	Dorie	Public Health Nurse	IHS San Carlos Service Unit
Norris	Ned	Chairman	Tohon O'odham Nation
Oosahwe	Quannee	Administrative Coordinator	Inter-Tribal Council of Arizona, Inc.
Osife	Preston	PHN Health Tech	IHS Sells Service Unit
Piontkowski	Stephen	District Environmental Health Officer	IHS, OEH&E, White Mountain
Platero	Faye	Emergency Services Coordinator	Navajo Nation Emergency Management
Ray	Mistin	Environmental Health Specialist	OEHE Western Arizona District Office
Regan	Joanna	Medical Officer	Centers for Disease Control and Prevention
Reidhead	Charles	Chief Medical Officer	IHS Phoenix Area
Rigler	Jessica	Acting Office Chief	Arizona Department of Health Services
Robles	Adolph	Senior Animal Control Officer Food Safety and Environmental Health Program Manger	Gila River Indian Community
Senseman	Carrie		Arizona Department of Health Services
Slayton-Garcia	Vincent	District Environmental Health Officer	IHS OEHE Western Arizona District Office
Sneezy	Patsy	CHR Manager	San Carlos Apache Tribe
Toro	Augustine	Natural Resources Director	Tohono O'odham Nation
Traeger	Marc	Prevention Medicine Officer	IHS Whiteriver Service Unit
Weis	Erica	Laboratory Surveillance Epidemiologist	Arizona Department of Health Services
Wero	Maeuneka	Senior Health Educator	Navajo Health Education
Williams	Velda	Executive Director, DH&HS	San Carlos Apache Tribe
Ybarra	Eva	PHEP Coordinator	Tohono O'odham Nation



Moderator: Laverne Dallas, Director, Health Resource Department, Gila River Indian Community

Panel Members:

Glenda Davis, Program Director, Navajo Nation Veterinary & Livestock Program  
Adolph Robles Sr., Animal Control Officer, Gila River Indian Community  
Stephen Piontkowski, District Environmental Health Officer, Office of Environmental Health & Engineering, IHS

12:30pm NO HOST LUNCH BREAK

Afternoon Session “Creating Sustainability”

1:30 – 1:35pm WELCOME BACK REMARKS

1:35 – 2:35pm PANEL FOUR: TRIBAL LEADERS ROUND TABLE

Moderator: Jennie Becenti, Executive Director, Department of Health & Human Services, Tohono O’odham Nation

Panel Members:

Representative, San Carlos Apache Tribal Council  
Wavalene Romero, Vice-Chairwoman, Tohono O’odham Nation (Invited)  
Chester Antone, Chairman, Health & Human Services Committee, Tohono O’odham Nation

2:35 – 2:50pm BREAK

2:50 – 3:50pm PANEL FIVE: FEDERAL, STATE, COUNTY LEADERS ROUND TABLE

Moderator: Don Herrington, Assistant Director, Public Health Preparedness Services, ADHS

Panel Members:

George Bearpaw, Acting Area Director, Tucson IHS Area Office  
Craig Levy, Epizootologist, Office of Epidemiology, Maricopa County Department of Public Health  
Robert Massung, Branch Chief, Rickettsial Zoonoses Branch, National Center for Emerging and Zoonotic Infectious Disease, CDC

3:50pm CLOSING REMARKS:

4:00pm BLESSING: Tribal Elder (To Be Invited)