

RMSF

(Rocky Mountain Spotted Fever)

3rd Arizona Statewide Tribal, IHS, ADHS, CDC
Rocky Mountain Spotted Fever Meeting

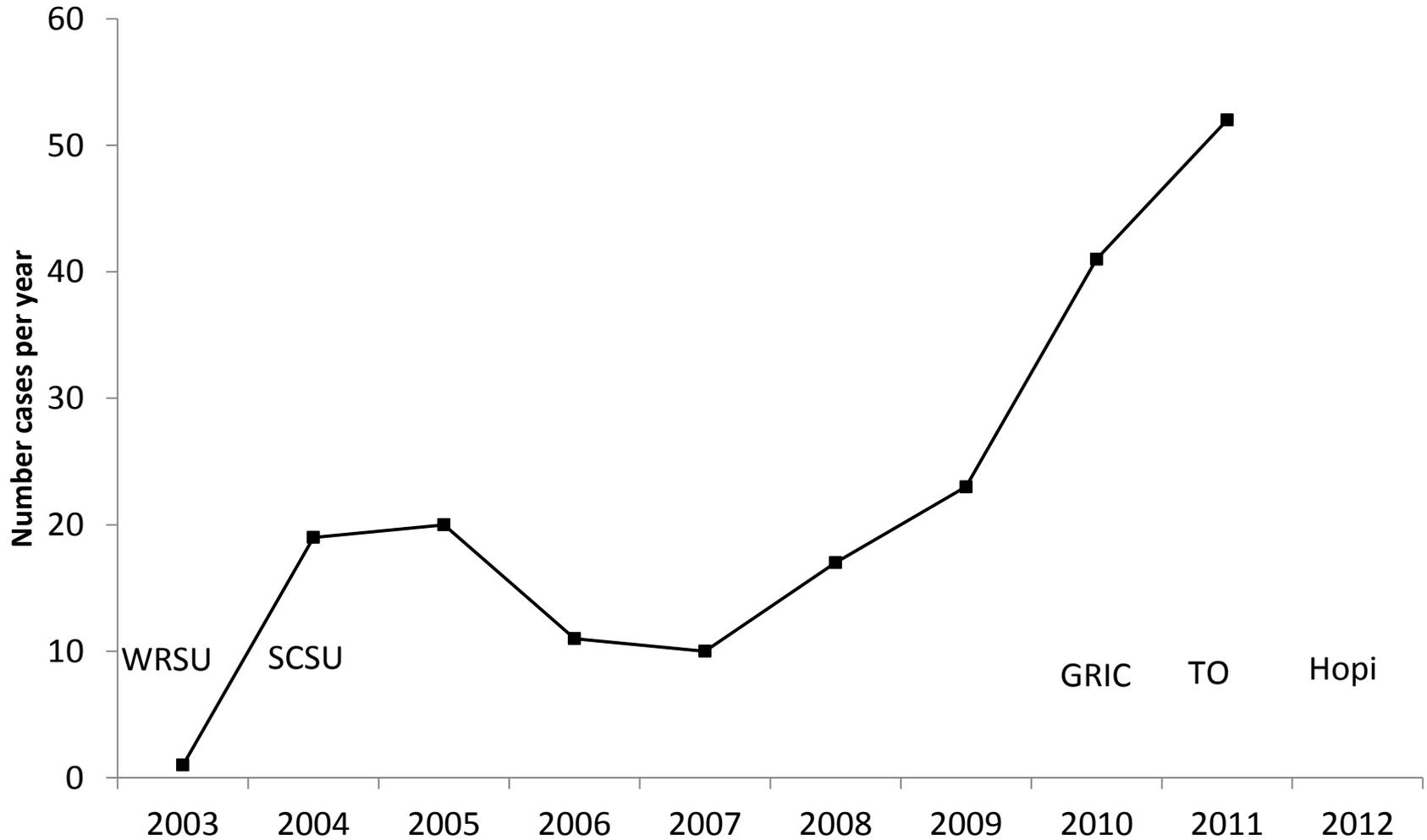
December 3, 2013

RMSF: Background

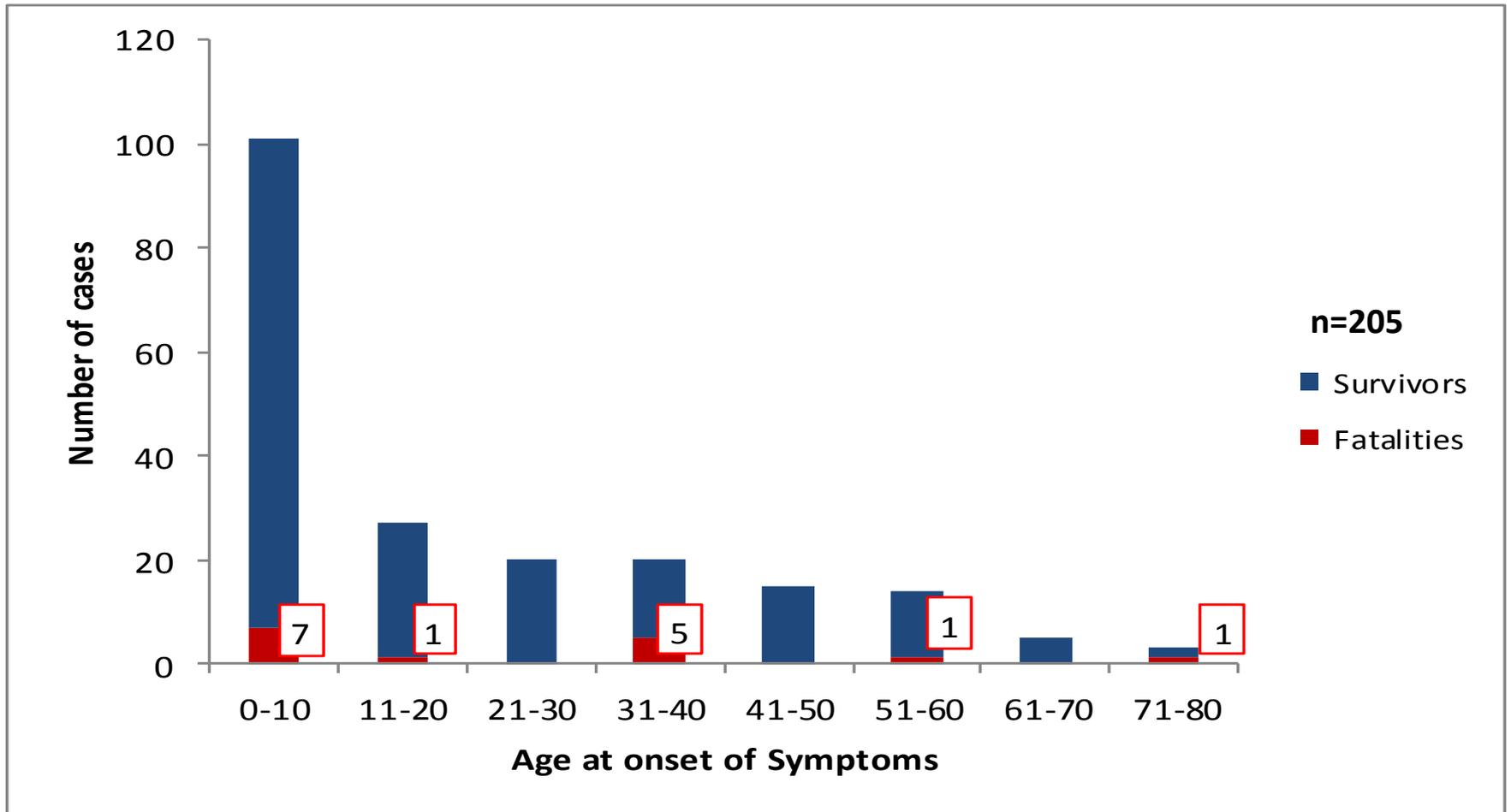


- Caused by *Rickettsia rickettsii*
 - Tickborne , no person-to-person transmission
 - Found in several species of ticks throughout North and South America
- Intracellular bacterial pathogen
- Infects endothelial cells, causes widespread vascular damage
- Effectively treated with doxycycline
 - Other antibiotics (even broad spectrum) ineffective

Number of Cases of RMSF

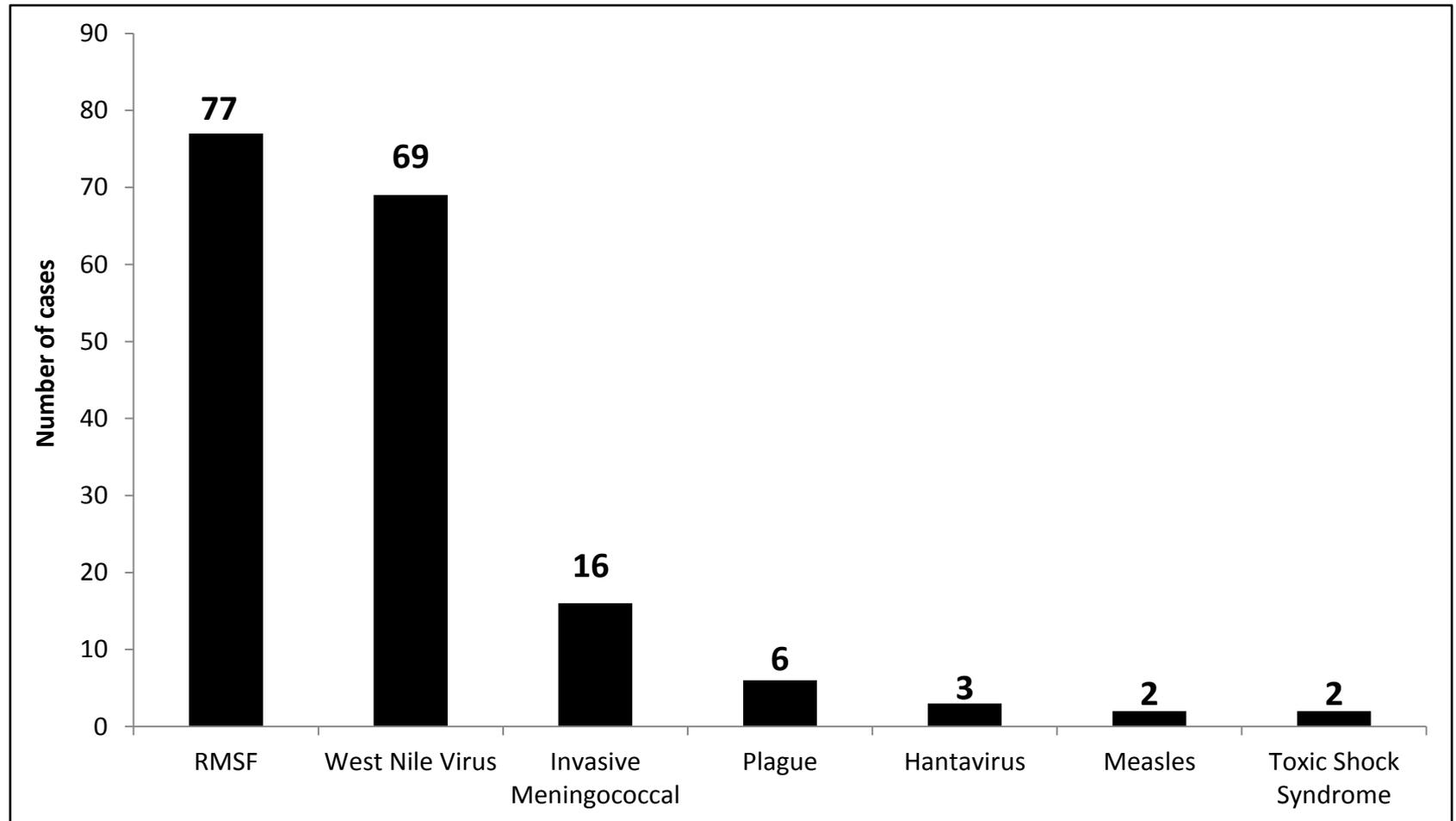


Onset of RMSF symptoms by age in two Arizona communities



CDC unpublished data from chart review of RMSF cases in two communities in Arizona, 2002-2011

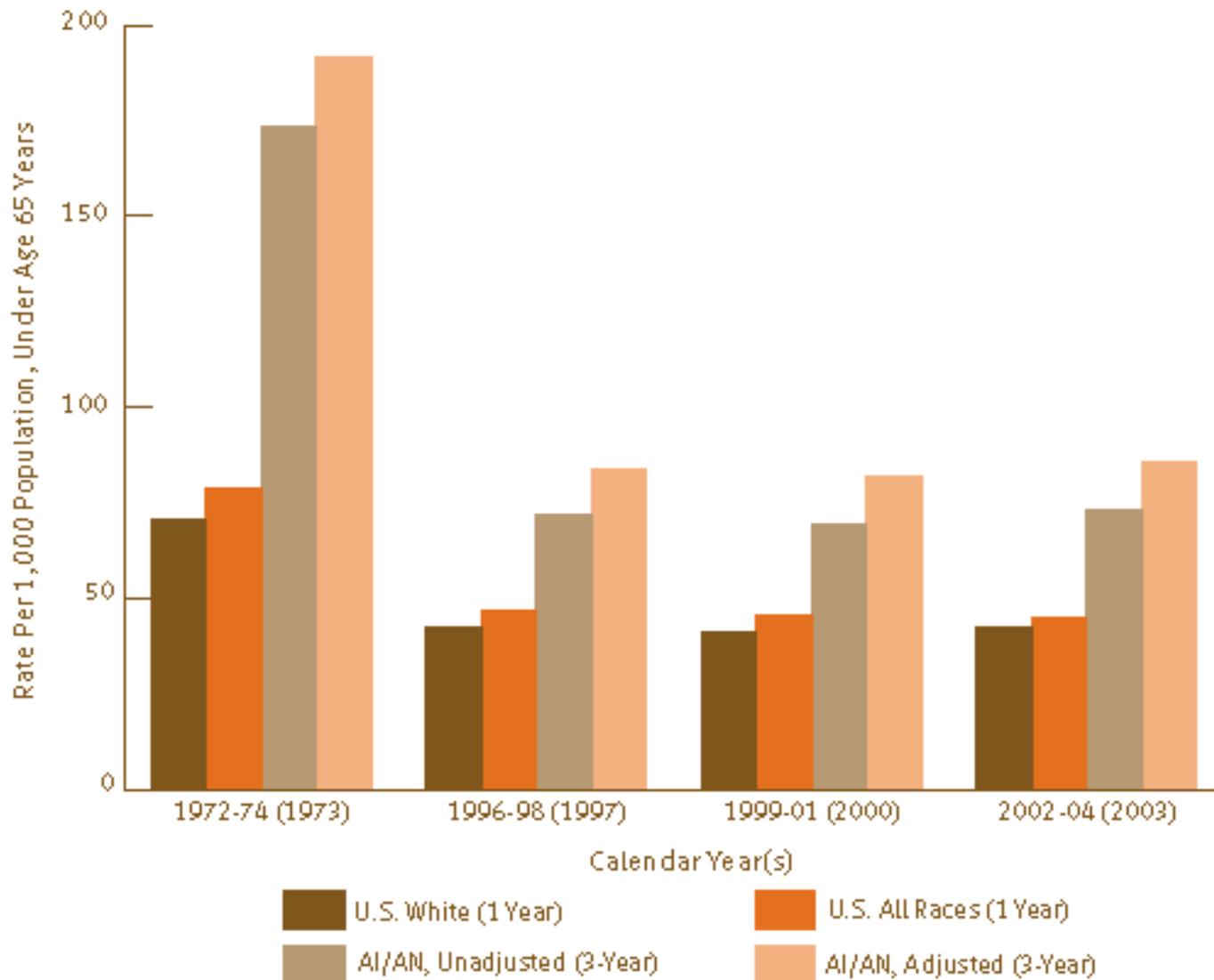
Selected reportable disease case counts Arizona, 2011



Data from MMWR: Summary of Notifiable Diseases, United States, 2011



Years of Potential Life Lost (YPLL)

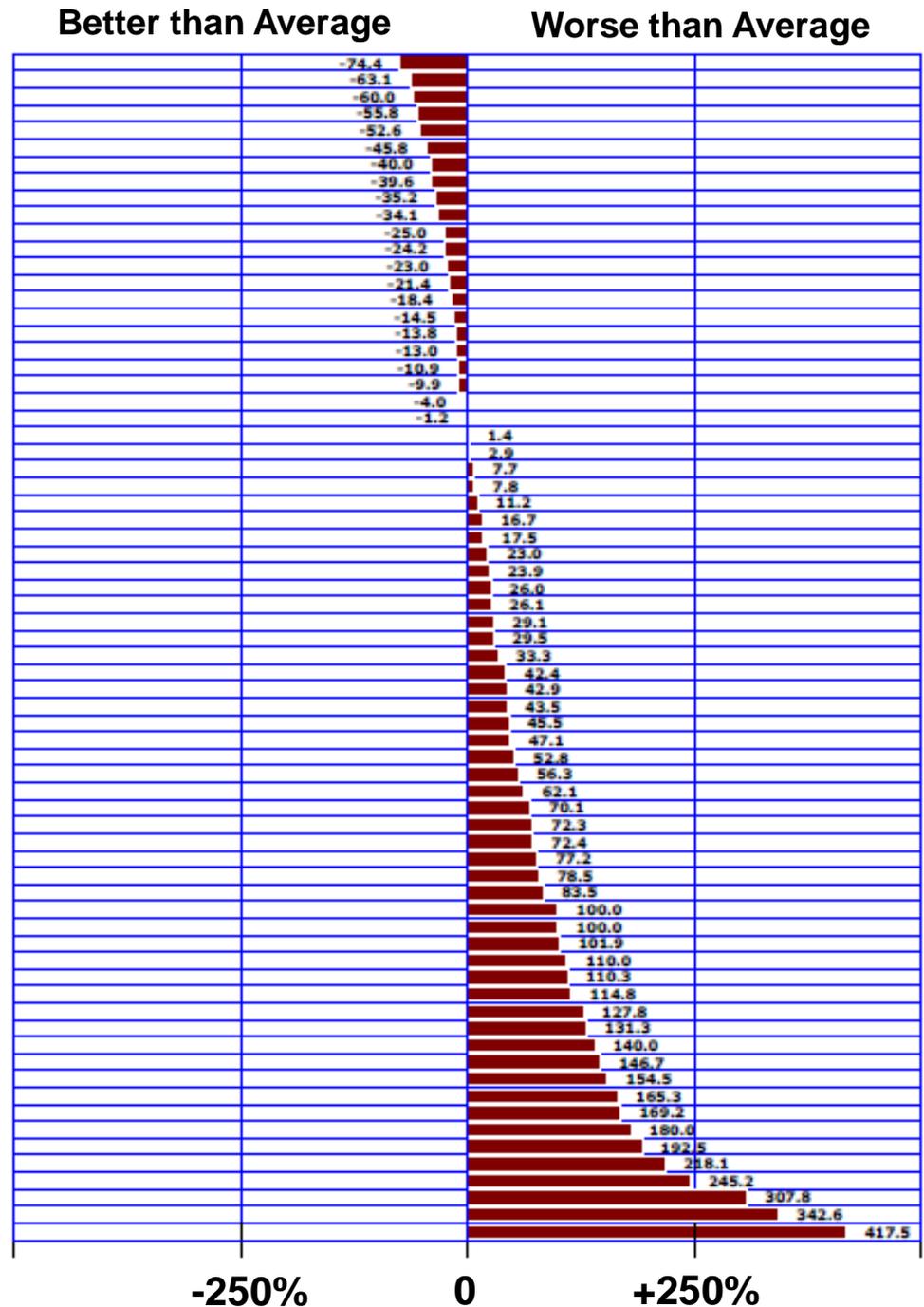


Risk Profile of American Indians

2009

(Percent above
or below the
average rate or
ratio of all
Arizona
residents in
2009)

- 5-7. Lung cancer
- 5-17. Alzheimer's disease
- 4-1. Incidence of hyaline membrane disease
- 4-9. Mortality of infants from low birthweight
- 5-5. Chronic lower respiratory diseases
- 2-2. Tobacco use during pregnancy
- 2-9. Genital herpes during pregnancy
- 5-8. Breast cancer
- 6-5. Injury by firearms
- 5-10. Colorectal cancer
- 4-5. Born too small: <1,500 grams
- 4-2. Incidence of newborn intensive care
- 5-6. Malignant neoplasm (cancer)
- 6-6. Drug-induced deaths
- 5-3. Coronary heart disease
- 5-4. Cerebrovascular disease
- 5-2. Diseases of the heart
- 5-1. Cardiovascular disease
- 5-11. Prostate cancer
- 4-4. Born too small: <2,500 grams
- 4-3. Born too early (preterm or < 37 weeks)
- 6-8. Intentional self-harm (suicide)
- 9-2. Incidence of gonorrhoea
- 5-19. Essential (primary) hypertension
- 4-10. Neonatal mortality
- 9-5. Incidence of HIV/AIDS
- 1-4. Pregnancies among females 18-19 years
- 3-3. No prenatal care
- 8-3. Median age at death among females
- 8-1. Median age at death from all causes
- 1-1. Pregnancies among females 19 and younger
- 8-2. Median age at death among males
- 5-20. Total mortality from all causes
- 2-10. Weight gain of less than 21 pounds
- 1-3. Pregnancies among females 15-17 years
- 4-6. Incidence of congenital anomalies
- 4-7. Infant mortality
- 1-2. Pregnancies among females 14 and younger
- 7-4. Mortality of middle-aged adults 45-64 years
- 8-4. Deaths before expected years of life reached
- 6-3. Fall-related injuries
- 2-8. Pregnancy-associated hypertension
- 2-5. Dysfunctional labor
- 4-8. Sudden Infant Death Syndrome (SIDS)
- 2-1. Unmarried mothers
- 9-3. Incidence of chlamydia
- 3-1. No care in the 1st trimester
- 7-1. Mortality of children 1-14 years
- 9-1. Incidence of early syphilis
- 7-2. Mortality of adolescents 15-19 years
- 2-4. Chronic hypertension
- 2-6. Anemia during pregnancy
- 3-2. Fewer than five prenatal visits
- 4-11. Postneonatal mortality
- 2-7. Diabetes during pregnancy
- 6-1. Unintentional injuries
- 5-9. Cervical cancer
- 5-15. HIV disease
- 6-9. Assault (homicide)
- 6-4. Drowning mortality
- 5-18. Nephritis, nephrotic syndrome and nephrosis
- 7-3. Mortality of young adults 20-44 years
- 9-4. Incidence of genital herpes
- 2-3. Alcohol use during pregnancy
- 5-12. Influenza and pneumonia
- 6-2. Motor vehicle-related injuries
- 5-13. Diabetes
- 5-16. Septicemia
- 5-14. Chronic liver disease and cirrhosis
- 6-7. Alcohol-induced deaths

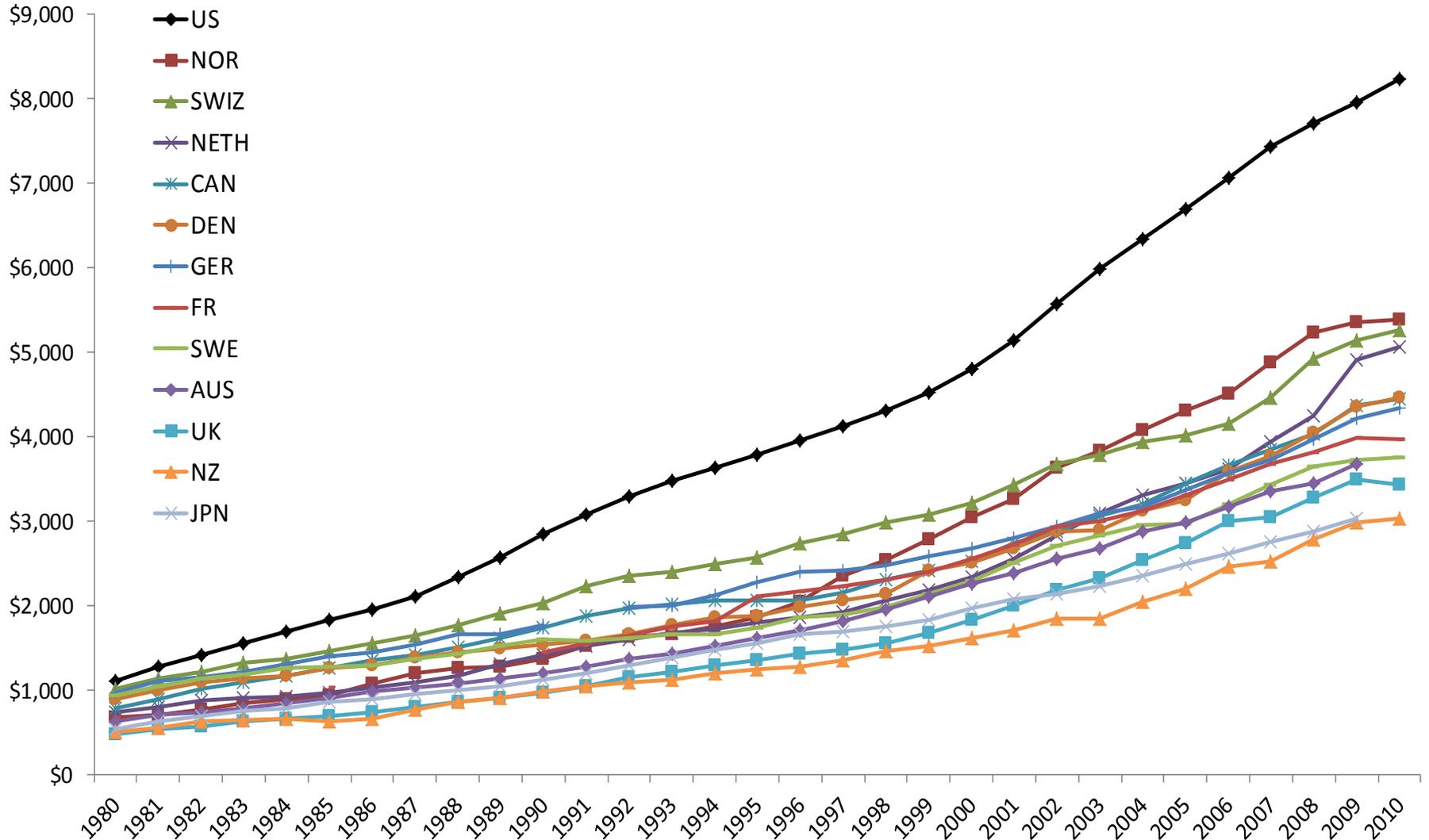


6-1. Unintentional injuries	114.8	
5-9. Cervical cancer	127.8	
5-15. HIV disease	131.3	
6-9. Assault (homicide)	140.0	
6-4. Drowning mortality	146.7	
5-18. Nephritis, nephrotic syndrome and nephrosis	154.5	
7-3. Mortality of young adults 20-44 years	165.3	
9-4. Incidence of genital herpes	169.2	
2-3. Alcohol use during pregnancy	180.0	
5-12. Influenza and pneumonia	192.5	
6-2. Motor vehicle-related injuries	218.1	
5-13. Diabetes	245.2	
5-16. Septicemia	307.8	
5-14. Chronic liver disease and cirrhosis	342.6	
6-7. Alcohol-induced deaths		417.5

Ticks



International Comparison of Spending on Health



Source: Commonwealth Fund, based on OECD Health Data 2012.

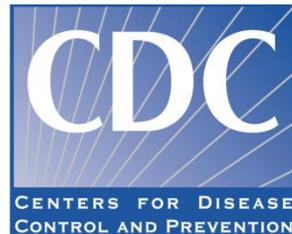
Clinical Education and Enhanced Surveillance

Highly Impacted	At Risk	
White Mountain Apache Tribe	Ak chin Indian Community	Chemehuevi
San Carlos Apache Tribe	Colorado River Indian Tribes	Cocopah Tribe
Low Impact	Ft McDowell Yavapai Nation	Ft Mojave Tribe
Tohono O’Odham Nation	Havasupai	Hualapai Tribe
Hopi Tribe	Kaibab Band of Paiute Indians	Navajo Tribe
Gila River Indian Community	Phoenix Service Unit	Quechan Tribe
	Salt River Indian Community	San Lucy Village
	Tonto Apache Tribe of Arizona	Yavapai Prescott Tribe
	Yavapai Apache Indian Community	

RMSF Rodeo Partners



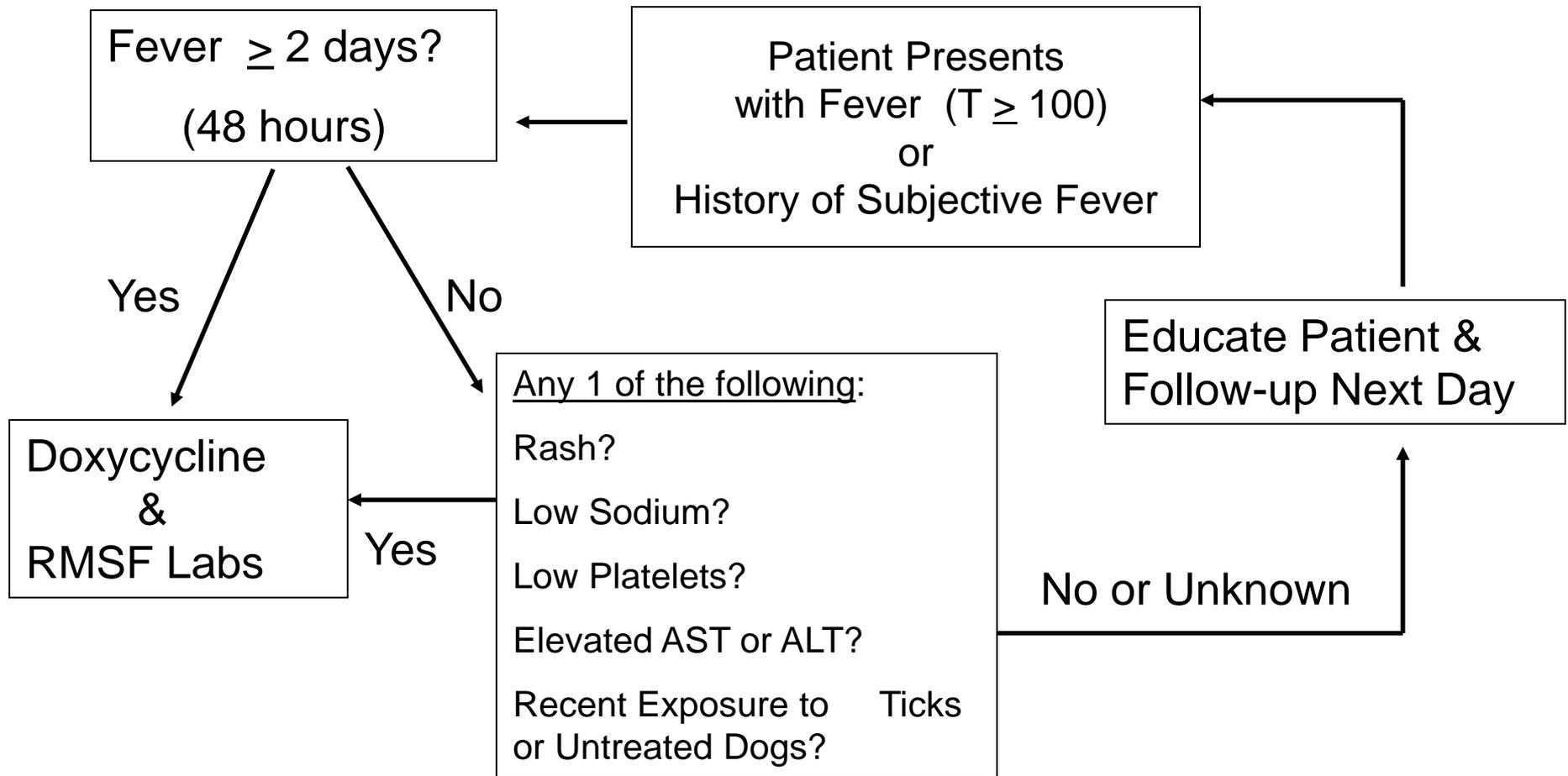
Bayer HealthCare



Virginia-Maryland
Regional College of
Veterinary Medicine



The diagnosis and treatment algorithm for AZ



Where we are...

- Awareness and education
- Science
- Will
- Prevention
- Treatment
- Infrastructure
- Temporary funding