

Southeastern United States Provider Knowledge Gaps in Rabies Education, Management, and Treatment

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Presenter information

- Doctorate of Health Science
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- REHS, CP-FS, CHES
- Currently working as an Environmental Health Specialist

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BACKGROUND

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Animal Bites and Rabies in the US

- Rabies is a concern with animal bites
- Rabies is 100% fatal, but preventable with post-exposure prophylaxis (PEP)
- There are an estimated 4.5 million dog bites in the United States

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Rabies Treatment in the US

- Many urgent care clinics and low acuity rapid assessment portions of emergency rooms handle animal bites
- These are often staffed with advanced practice providers
- Patients may need complex care including PEP, wound care, vaccinations, and pain management

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Gaps in Provider Knowledge

- Physicians found to be unfamiliar with PEP schedule, vaccination location, and transmission routes
- A lack of knowledge in rabies was noted in various health professions in the South-West US
- Lack of rabies knowledge has been identified in adjacent and non-medical roles such as wildlife professionals and veterinarians

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Research Questions

- **RQ₁**: How well do advanced practice practitioners understand and utilize evidence-based practice for the diagnosis and treatment of rabies?
- **RQ₂**: How well are advanced practice practitioners able to educate their patients on occupational and travel-based risks?

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METHODS

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Methods

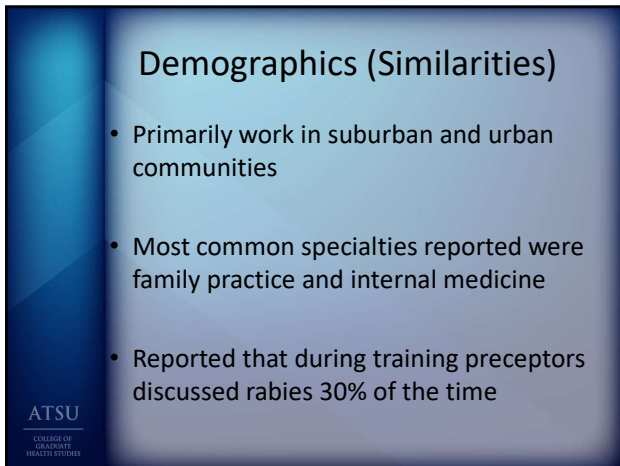
- Survey was created and reviewed for validity
- Survey was distributed to participants from April to August of 2022
- Covered demographic information and rabies treatment/management
- IRB approval was obtained

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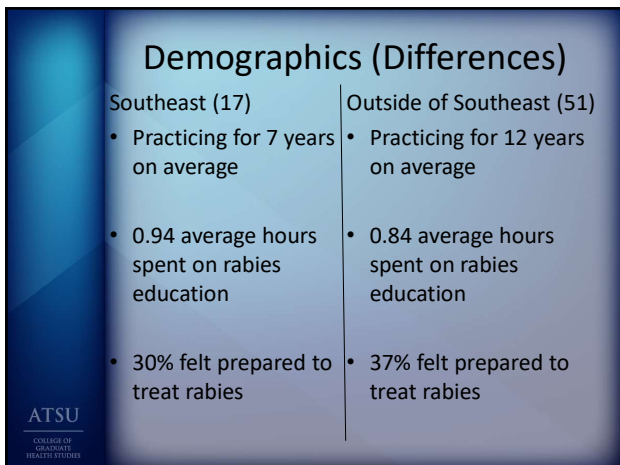
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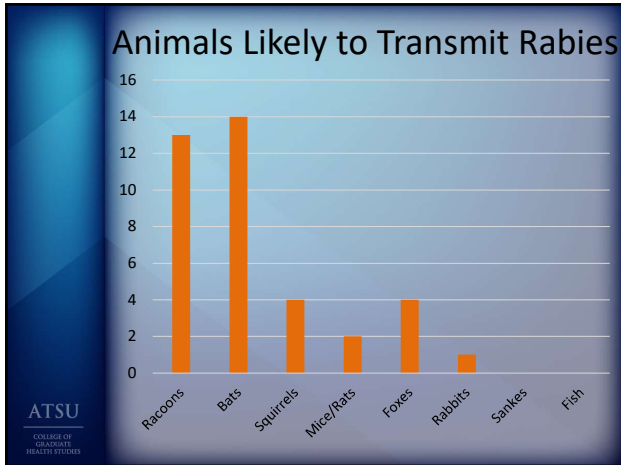
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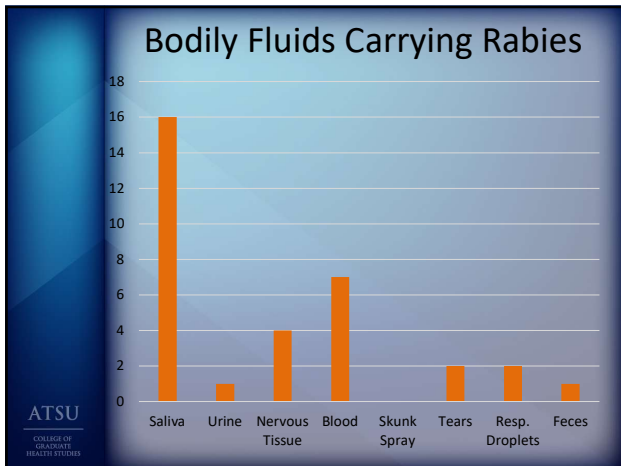
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Rabies Treatment Knowledge

- ~45% of both populations were able to identify the correct PEP schedule
- Providers in the Southeast more often reported the correct immunoglobulin administration location
- ~85% of both populations reported that patients should receive PEP for an animal bite even if they received PEP in the past

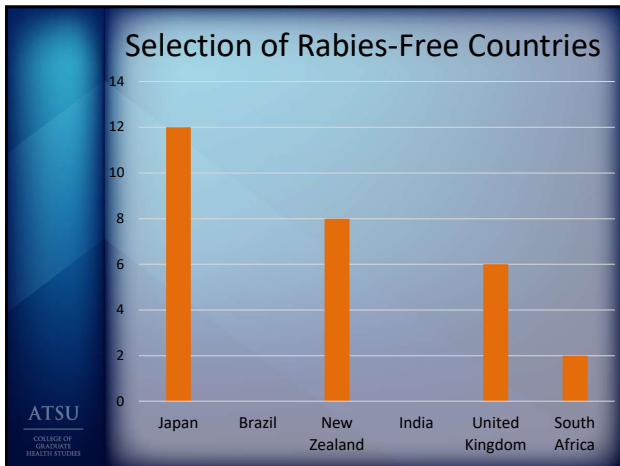
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Rabies Treatment Knowledge (con.)

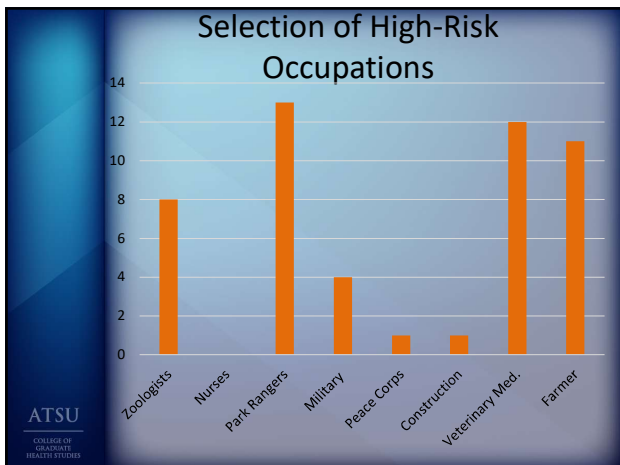
- ~1/3rd of both populations identified that symptomatic animals would die within 10 days, with over 50% reporting shorter time frames
- Nearly 2/3^{ds} of both populations report that they or their staff routinely report animal bites to the health department/animal control

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Discussing the Risks

- 21% reported discussing PrEP and risk of rabies with those travelling abroad and 29% reported that they discuss PrEP and the risk of rabies with high-risk occupations
- Providers outside the South-East less often reported discussing PrEP and the risk of rabies with high-risk occupations

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Rabies Situations

- 31% of SE providers report that they would not vaccinate a patient after a stray dog bite if they previously received PEP
- Half of SE providers would not vaccinate a patient who finds a bat in their bedroom when they wake up
- All SE providers would vaccinate a vet tech who had done dental work on a rabid cow
- One SE provider would vaccinate a farm treating livestock attacked by an unknown animal

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DISCUSSION

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Discussion

- Providers being unaware of animals and fluids that transmit rabies may result in unnecessary vaccination
- Providers underestimating large animals such as foxes and stray dogs may result in missing needed vaccinations
- There are opportunities to be discussing rabies risk with patients that are being missed
- The low reporting rate may be contributing to these

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What can be done?

- Increased initial and continuing medical education may improve outcomes and reduce costs
- Increasing health department/animal control reporting may help with vaccination continuation and risk assessment
- Further research should be done at all levels of health professionals/providers

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QUESTIONS

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“Since rabies is not [a] problem for advanced countries where most of the research takes place, no one is in [a] hurry to establish an answer.”

-Dr. Ashok Banga

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