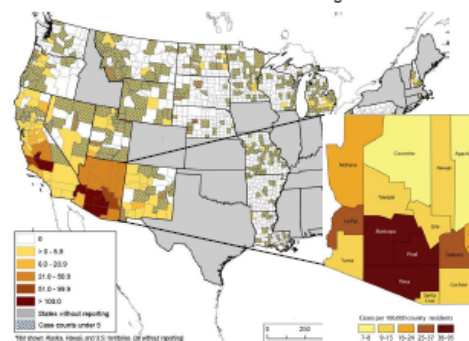




Background

- Coccidioidomycosis (Valley Fever) is a fungal infection contracted by inhaling spores found in dust of endemic regions³
- Southern Arizona has highest incidence in the nation^{4, 3}
- Valley Fever (VF) responsible for 1/3 of all pneumonia in Southern Arizona⁶
- However, only 2-13% of Arizona providers test for VF^{8, 13}
 - 80% providers never received prior VF training
- Average 1-month diagnosis delay, 80% are misdiagnosed^{4, 13}
- Rural Arizona communities experience unique risks:
 - High-risk occupations: agriculture, construction^{9, 11}
 - Poor VF specialist access (all in urban areas)
 - Native Americans have 4-fold higher risk^{10, 15}



Coccidioidomycosis Cases in the United States, 2017^{1, 12}

Methods

- Partnership with a rural community health organization in Marana, Arizona with 14 clinics serving 60,000 patients
- Synchronous, 30-minute virtual educational training
 - Content developed from IDSA clinical practice guidelines, VFCE PCP manual, CDC guidelines^{2, 5, 14}
- Virtual introduction to VF expert from Valley Fever Center for Excellence (VFCE) during presentation
- Pocket-sized PCP manual and printed clinician VF decision-making flowchart provided
- Qualtrics post-pre survey link given to participants
 - Descriptive and inferential statistics used in analysis

Participant Characteristics

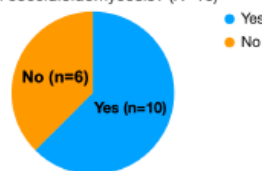
- 51 primary care providers invited to attend
- 31 attended, 19 surveys submitted (4 partial completions)
- 11 NPs, 3 DOs, 5 unspecified
- Mean years lived in Arizona 21.4 (SD 3.4)
- Majority (67%) had less than 5 years experience practicing as a provider in Arizona
- Only 20% of Arizona trained providers reported receiving prior education on VF

Results: Provider Practice

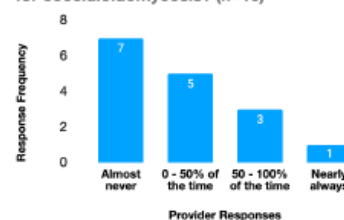
Current provider practice for VF:

- Nearly 40% had never diagnosed a patient with Valley Fever
- Only 6% appropriately test for VF per guidelines
- 44% report "almost never" testing for VF

Q6: Have you ever diagnosed a patient with coccidioidomycosis? (N=16)

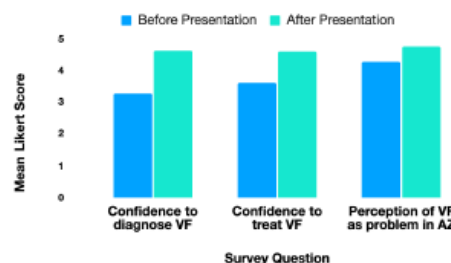


Q7: How often do you test patients with CAP for coccidioidomycosis? (n=16)



Results: Provider Attitudes & Beliefs

Provider Attitudes Before and After Intervention



After Educational Training:

- Statistically significant improvement ($p = 0.001$) in provider confidence in ability to diagnosis VF
- Statistically significant improvement ($p = 0.011$) in provider confidence in ability to treat VF
- Statistically significant improvement ($p = 0.024$) in provider perception of VF as a problem in Arizona

Results: Provider Knowledge

After Educational Training:

- Statistically significant improvement in provider knowledge of lab testing for VF
- Improvement in knowledge of health department surveillance of VF
- Mixed results on whether improvement in knowledge of vaccine for VF

Provider Knowledge Before and After Training

	Pre-Intervention (n, %)	Post-Intervention (n, %)	p-value
Knowledge of VF lab testing	8 (50%)	16 (100%)	.030
Knowledge of AZ Health Dept Reporting	5 (31%)	15 (93%)	.091
Knowledge of VF vaccine availability	7 (41%)	11 (65%)	.289

Discussion

- Results of current provider practice correlated with prior studies, demonstrating significant knowledge gap VF management in Arizona providers^{4, 6, 13}
- Primary care provider in-service training may be an effective method for improving provider confidence to diagnose, manage, and treat VF
- Statistically significant improvements in rural provider VF knowledge and confidence were demonstrated
- Connecting rural providers with urban experts such as the VFCE could improve outcomes
- Further support is needed to include VF training in curricula of Arizona academic health professions programs
- Development of free provider CEs on VF management may be helpful to further VF awareness

Future Research

- Continued research linking rural health professionals to urban specialty resources is needed
- Further research on Valley Fever in rural settings is indicated to mitigate risks, further examine rural risk factors, and plan interventions

Acknowledgements:



References

