Valley Fever
Think Globally
but
Act Locally

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AzDHS ID Training Conference
July 24, 2013
www.vfce.arizona.edu
Valley Fever is a Western Hemisphere Disease
Valley Fever is a Western Hemisphere Disease
Valley Fever in the U.S.
Reported Valley Fever

*Extrapolated from Jan-June of 2013
The Valley Fever Corridor:
2/3 of all US disease occur here
Coccidioidomycosis
Spectrum of Disease

100 Infections

60 No Symptoms  →  40 Symptoms

37 Recover

Life-Long Immunity  ↔  3-4 Recur

2-4 Progress Disseminate
The case took months to diagnose. There’s no cure or vaccine. The D-Back’s centerfielder, who has been too weak for workouts, could spend the season recuperating.

- June 8, 2009 –
Common “Mild” Valley Fever

Manifestations:
- Cough, chest pain, fever, weight loss
- Fatigue
- Bone and joint pains (a.k.a. Desert Rheumatism)
- Skin rashes (painful or intense itching)

Course of illness:
- Weeks to months
- 1 of 4 college students are sick for > 4 months
- 4-fold more drop a semester for Valley Fever than for Mononucleosis
In Southern Arizona
A third of all pneumonia is Valley Fever

Visitors to Arizona have the same risk soon after returning home

1,300/yr Az tourists with Valley Fever

Valley Fever in Arizona
Findings from an AzDHS telephone survey
10% of reported cases in 2007

**Impact on People**
- Illness lasted an average of 6 months
- 75% of workers off for over 1 month

**Impact on Health Care**
- 25% needed more than 10 doctor visits
- 40% hospitalized ($86 million in 2007)

Patients who knew about Valley Fever were diagnosed sooner than those that didn’t

Tsang et al., Emerg. Inf. Dis. 2010
Age Specific Rates of Reported Coccidioidomycosis in Arizona, 2004*

N Stern Emerg. Inf. Dis. 2010
### Valley Fever at UA Campus Health
**1998-2006**

<table>
<thead>
<tr>
<th>Patient group</th>
<th>Incidence</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>Scholarship Athletes:</td>
<td></td>
<td></td>
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<tr>
<td>475 per yr</td>
<td>374</td>
<td>192-639</td>
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<tr>
<td>Non-Athletes:</td>
<td></td>
<td></td>
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<tr>
<td>35,525 per yr</td>
<td>90</td>
<td>79-103</td>
</tr>
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Chi square, $p < 0.00001$
### Valley Fever at UA Campus Health 1998-2006

<table>
<thead>
<tr>
<th>Patient group</th>
<th>Tested</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td><strong>Athletes:</strong></td>
<td></td>
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<tr>
<td>197 tests</td>
<td>4.6%</td>
<td>3.9%-5.4%</td>
</tr>
<tr>
<td><strong>Non-Athletes:</strong></td>
<td></td>
<td></td>
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<tr>
<td>2,558 tests</td>
<td>0.8%</td>
<td>.77%-.84%</td>
</tr>
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Chi square, p < 0.000001

*N Stern Emerg. Inf. Dis. 2010*
Organizing around Valley Fever in Arizona

1978: Galgiani arrives in Arizona
1995: Galgiani goes on a sabbatical
1996: Valley Fever Center for Excellence created.
2003: First Arizona Valley Fever Awareness week.
Valley Fever Center for Excellence

11th Annual Valley Fever Awareness Week
November 9th – 17th 2013

Office of the Governor

* ARIZONA VALLEY FEVER WEEK *

WHEREAS, Valley Fever infections have increased significantly in Arizona over the last decade, with 60% of all reported cases of Valley Fever in the U.S. occurring in Arizona; and

WHEREAS, Valley Fever is the second most commonly reported infectious disease in Arizona; and

WHEREAS, enhanced surveillance of Valley Fever cases demonstrates the serious impact Valley Fever has on the health of our citizens and on Arizona’s healthcare system; and

WHEREAS, the Arizona Department of Health Services, governmental entities, corporations, and organizations are united to educate the public and healthcare providers about Valley Fever in Arizona; and

WHEREAS, through public education and promoting early diagnosis, the number of individuals impacted by Valley Fever may be reduced; and

WHEREAS, Arizona is the focal point of quality clinical care and research for Valley Fever

NOW, THEREFORE, I, Janice K. Brewer, Governor of the State of Arizona, do hereby proclaim November 2-10, 2011 as

* ARIZONA VALLEY FEVER WEEK *

in recognition of the outstanding treatment and research conducted by the Valley Fever Center for Excellence at the University of Arizona and of the advances in Valley Fever education and public health by the Arizona Department of Health Services.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Arizona.

Janice K. Brewer
GOVERNOR

DONE at the Capitol in Phoenix on this twelfth day of October in the year Two Thousand and Eleven, and of the Independence of the United States of America the Two Hundred and Thirty-seventh.

ATTERT

Secretary of State
Valley Fever Corridor Project

- Started in 2008
- Goals
  - Increase understanding
  - Assist clinical research
  - Improve patient care (VFAAC)
Valley Fever Alliance of Arizona Clinicians (VFAAC)

- Patient Needing Help
- Primary Care Clinician
- Another Subspecialist
- Subspecialist
Valley Fever Center to open in Phoenix

by Ken Alltucker - Oct. 5, 2011 12:00 AM

The Arizona Republic
Valley Fever Center in Phoenix: June, 2012
Valley Fever Center in Phoenix
First Year Summary

Source of 420 Inquires

- 61% Arizona
  - Maricopa (86%)
  - Pima/ Pinal (9%)
- 13% California
- 3% each WA, TX
- 2% each UT, CO, NY
- ≤1% each of 22 states
- Also
  - Canada, Australia, Italy, Spain, Argentina

Types of Problems (132 patients)

- 25% Valley Fever unlikely or inactive
- 36% “Mild” Valley Fever pneumonia
- 22% Complicated Valley Fever pneumonia
- 15% Disseminated Valley Fever
Benefits from a VFC in Phoenix

• Build on existing expertise in Arizona
  – Doctors across Arizona can be a part of VFC/P.
  – All clinicians share a common EMR (MobileMD)

• Provide integrated management plans tailored to the specific needs of each patient.

• Provide case management services to ensure that planned care is provided.
Clinical Network and Research

Vaccines

New Drugs (Nikkomycin Z)

Better Diagnostics

Valley Fever Corridor Project; VFAAC; VFC-P
Valley Fever Costs to Arizona

Educate Arizona patients and doctors
$100 thousand/year

Referral network and case management
$300 thousand/year

Diagnostic test development
$1.5 million

Nikkomycin Z development
$40-$60 million (if things go well)

Vaccine development
$40 million before clinical trials could begin

Doing nothing
$86 million per year just for hospital costs
Thank-you
Valley Fever Center for Excellence