

# SBAR: Implementing the Ambulatory Recognition and Management of Valley Fever Clinical Practice

May 1, 2018

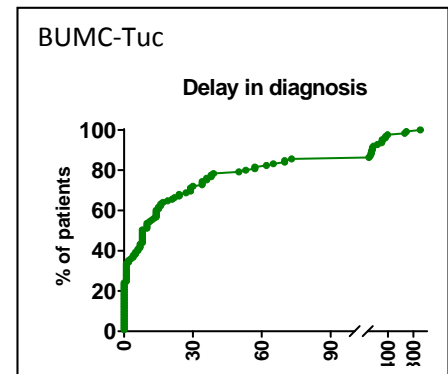
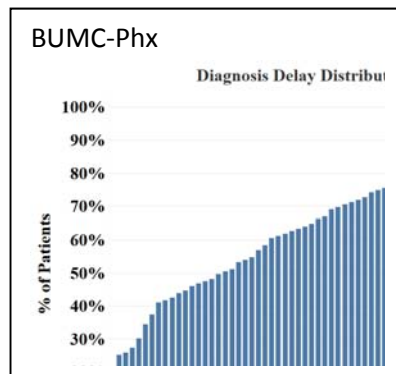
<b>Requester</b>	John N Galgiani, MD
<b>Presenter</b>	John N Galgiani, MD
<b>Title of Request</b>	Ambulatory Recognition and Management of Valley Fever
<b>CM Team to Present to:</b>	Primary Care Ambulatory Practices
<b>Departments and Disciplines Affected</b>	Medicine, Family Medicine, Urgent Care, Emergency Medicine
<b>Goal of Presentation</b>	<input type="checkbox"/> Decision Needed <input checked="" type="checkbox"/> Seeking Feedback <input type="checkbox"/> Informational Only

**S**ituation  
*Please describe what is happening at the present time.*

- In Arizona, where two-thirds of all U.S. Valley Fever infections occur, Banner physicians frequently miss early recognition and appropriate management of this disease.
- Delays result in worse outcomes and costly unnecessary health care.

**B**ackground  
*Please describe the circumstances leading up to this situation.*

- Infectious Diseases Society of America, the Arizona Medical Association, and other medical organizations endorse the pursuit of early diagnosis of valley fever infections.
- In 2008, Arizona Department of Health Services reported that only 2%-13% of physicians ordered blood tests for Valley fever when they should. A follow-up study of 13,294 ED visits in 2014 for CAP (pneumonia, organism unspecified; influenza) found that only 371 (2.8%) had coccidioidal serologies ordered.
- In 2018, two retrospective reviews from Banner Medical Centers in Phoenix and Tucson found that 45% and 30%, respectively, of Banner outpatients eventually diagnosed with Valley fever had their diagnosis delayed from one to over six months. Delays and the costs associated with those delays are shown below:



Billings Associated with Delays in Diagnosis, BUMC-Phx					
Delay in Months	N	Before Diagnosis		After Diagnosis	
		Median	Total	Median	Total
< 1	56	\$376	\$ 43,361	\$ 662	\$307,942
1-3	37	791	217,662	2,707	436,233
4-6	27	915	338,810	1,199	710,911
No Symptoms	19	N/A		2,751	786,337
<b>Overall</b>	<b>139</b>	<b>\$640</b>	<b>\$599,833</b>	<b>\$875</b>	<b>\$2,241,422</b>

Medicare-estimated Reimbursements Associated with Delays in Diagnosis, BUMC-Tuc			
Presentation	N	Before Diagnosis	
		Median	Total
Primary Pulm	76	\$336	\$ 113,867
Dissemination	11	325	14,999
Chronic Pulm	18	975	28,635
Asympt. Nodule	20	443	37,004
<b>Overall</b>	<b>125</b>	<b>\$640</b>	<b>\$194,505</b>

- With the merger of Banner with University Health, the Valley Fever Center for Excellence initiated a collaboration that also included Sonora Quest Laboratories to form the Banner University Valley Fever Program (BUVFP).
- Phase I of the BUVFP development has accomplished the following:
  1. Established Valley Fever Specialty Clinics at BUMC-T and BUMC-P.
  2. Developed a CCG Clinical Practice, “Identification, Evaluation, and Management of Coccidioidomycosis in Adult Outpatients.” Implementation will begin in May, 2018 with meetings of clinicians from each of the primary care clinical units of Banner University Medical and Banner Health Medical to discuss the clinical practice and best ways for its implementation.
  3. Conducted two independent retrospective studies of how much delay and how much cost is incurred within Banner (source of data above).
  4. Facilitated Sonora Quest Laboratories sharing data with Arizona Department of Health Services to create “early warning” procedures based upon coccidioidal serologic trends (number of tests ordered; proportion that are positive) to inform Arizona clinicians of increased coccidioidal disease activity in the state.
  5. Initiated NIH-sponsored research that enrolls subjects at both Phoenix and Tucson Medical Centers.
- Support of the BUVFP to date has come from the following sources:
  1. 0.1 FTE for Dr. Galgiani to administer the BUVFP at BUMC-P.
  2. CDC contract (~\$100K) to UA to conduct the BUMC-Tuc retrospective review mentioned above.
  3. NIH-sponsored research budgets for subject recruitment.
- Nowhere else in the nation does a comparable comprehensive program exist to improve the clinical care of patients with coccidioidomycosis.

**A**ssessment

*What do you think the problem is?*

- The initiatives of the BUVFP’s first phase creates the opportunity for this clinical practice.

**R**ecommendation

*What should be done to correct the problem?*

**Phase I, Implementation planning with stakeholders.** Dr. Galgiani will arrange meetings with BUH and BMG clinical unit clinicians to review:

- This SBAR
- The flow diagram developed during the clinical practice design
- The metrics that are to be used to assess the effectiveness of the implementation of the clinical practice
- Resources that will be available to clinicians to assist with their expansion of the scope of practice

A key issue that the design team has identified for effective implementation of this clinical practice is how to increase appropriate ordering of coccidioidal serologic tests. During each clinical unit meeting, this issue will be discussed and unit members will be asked to provide suggestion of how this would be best integrated into their work. Also as

	<p>part of the clinical unit meeting, Dr. Galgiani and the unit's clinical director will identify a clinician who will assist with implementation.</p> <p><b>Phase II. Implementation of the clinical practice to BMG, BUMG, and urgent care sites.</b></p> <p><b>Phase II. Expand the clinical practice to BHN.</b></p>
Key Dates, Comments, Feedback	<ol style="list-style-type: none"> <li>1. Phase I completed by the end of August.</li> <li>2. Phase II initiated in mid September.</li> <li>3. Phase III initiated by August 2019.</li> </ol>