



# Veterans Health Administration (VHA)

## Mobile Applications Agile Requirements Addendum

Application Owner/Analyst fills out this Addendum

**Version Control** Version information is required for final SQA testing.

<b>Name of Mobile Application</b> Antibiogram 2.0		<b>Name of JIRA Project</b> Antibiogram App (ABA)		<b>Web address where mobile application can be viewed:</b> (Will be updated once integrated in MAE)			
<b>Description of Mobile Application</b> Antibiogram 2.0 is a web-based application developed to provide Department of Veteran's (VA) Medical staff with facility-level Antibiogram data, specifically the facility data used to estimate the likelihood that certain organisms are susceptible to specific antibiotics. Antibiogram 2.0 has evolved to provide the ability to express the Antibiogram data using nationally recognized reference and authoritative terminology standards (e.g., Logical Observation Identifiers, Names and Codes (LOINC), and Systemized Nomenclature of Medicine – Clinical Terms (SNOMED CT), as well as advanced filtering features to allow for aggregate, consolidated, and expansive search results. Antibiogram 2.0 also allows the user to select a default facility to persist throughout the application.							
Date	RSD/ARD MA Addendum Version	Author	Description of Document Change	Associated BRD Version	Associated Concept/Scope Version	Other Assoc.	Other Assoc.
12/19/2014	1.0		First iteration	1.0	2.0.0	1.0	

### Application Owner/Analyst/PM Contact Information

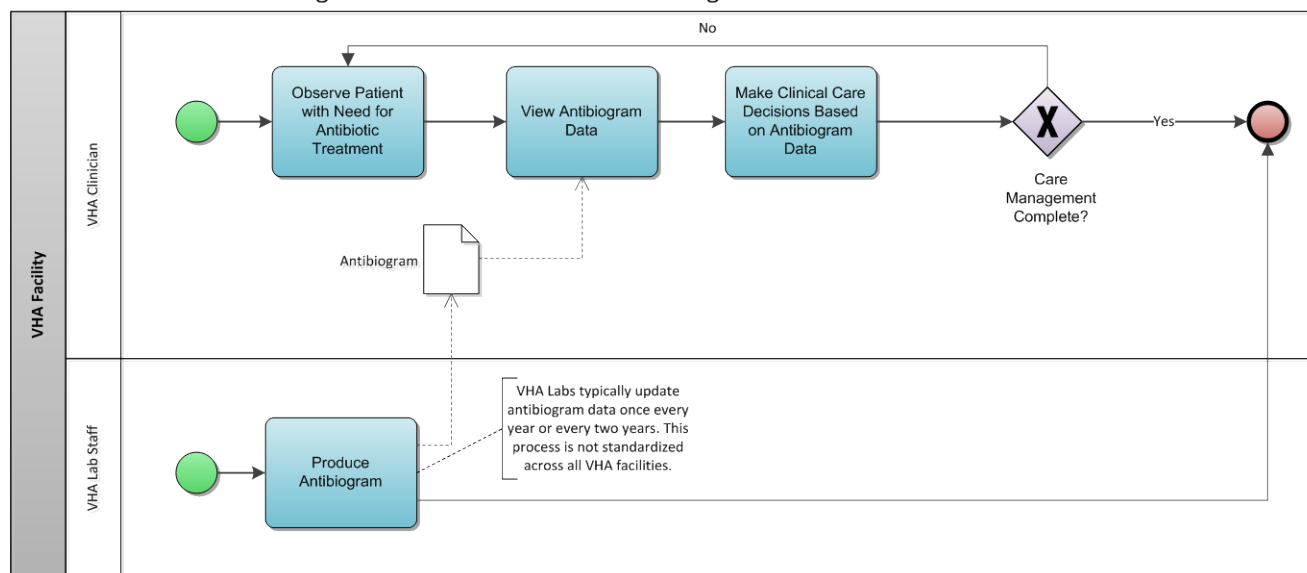
<b>Application Owner/Analyst Name/Point of Contact (POC)</b>	<b>VA E-Mail Address</b>	<b>Phone Number</b>

### Mobile Application Information

Intended Audience (User) for Mobile Application: <input type="checkbox"/> Veteran <input type="checkbox"/> Caregiver <input checked="" type="checkbox"/> Provider <input type="checkbox"/> Public
<b>Business Needs</b>
Describe and/or model the expected workflow:  The Antibiogram Expansion Mobile Application will build upon the application's existing functionality to enable VA medical staff to more easily view the antibiogram data that is most useful to them, and export the data. Antibiogram data is an important tool for medical staff members when making clinical decisions about which antibiotics are most likely to be effective for patients. The antibiogram shows clinicians the probability that an organism will be susceptible to a specific antibiotic treatment. By referencing

a facility's antibiogram, a clinician can make an informed decision about which antibiotic(s) to choose, and which antibiotic(s) over time will improve patient outcomes and decrease the probability that ineffective antibiotics will be overprescribed.

#### Business Process for Antibiogram Use in Clinical Decision Making



#### Front End:

- User launches Antibiogram 2.0 from the LaunchPad and is prompted to accept a EULA and review a Tour of the App page the first time the application is launched.
- User queries for facility selection and clinical data such as gram stain, species, or organism search
- User has the option to select filters in the left column to view Organisms and Susceptibility on the right.
  - User can remain on the 'Gram' tab to view a list of species and organism roll-ups by Gram Stain, or user can select the 'Search' tab to enter the name of the species or organism to review.
  - User can select and update the data based on 12 or 24 months.
  - Once data has been populated based on the entered search criterion, user can select one of two filters that refines the data based on the enabled filter:
    - Show only common species: The list of common species are identified in the corresponding Concept Paper for Antibiogram 2.0. If the "Show Only Common Species" filter is selected, the user will see aggregate species data for the most common species for the particular Gram Stain selected. MSSA, MRSA and Staphylococcus lugdunensis organisms are included in the respective aggregate (parent) calculation, but will remain broken out and visible on their own rows. These are the only exceptions that will be displayed at the organism level when the "Show Only Common Species" filter is enabled.
    - Hide low isolate data: Similarly, if the "Hide Low Isolate" filter is selected, any rows with a total number of isolates less than 30 will be hidden. These filters are meant to help consolidate unhelpful data or refine the antibiogram data to meet the needs of the end user.
  - User can generate a complete Antibiogram PDF to save or send

#### Back End:

- Facility information (facility name and site code) and EULA acceptance status is stored. The browser stores the facility name and site code inside its localStorage mechanism if the user chooses to set a default facility. An initial EULA acceptance flag is also set within localStorage when the user accepts the EULA for the application. Facility site information (name and site code) is queried from CDW so the user can quickly access antibiogram data for the same facility upon reusing the app. The browser's localStorage mechanism is used to store facility site information, which is pulled from CDW through the application's backend resource.

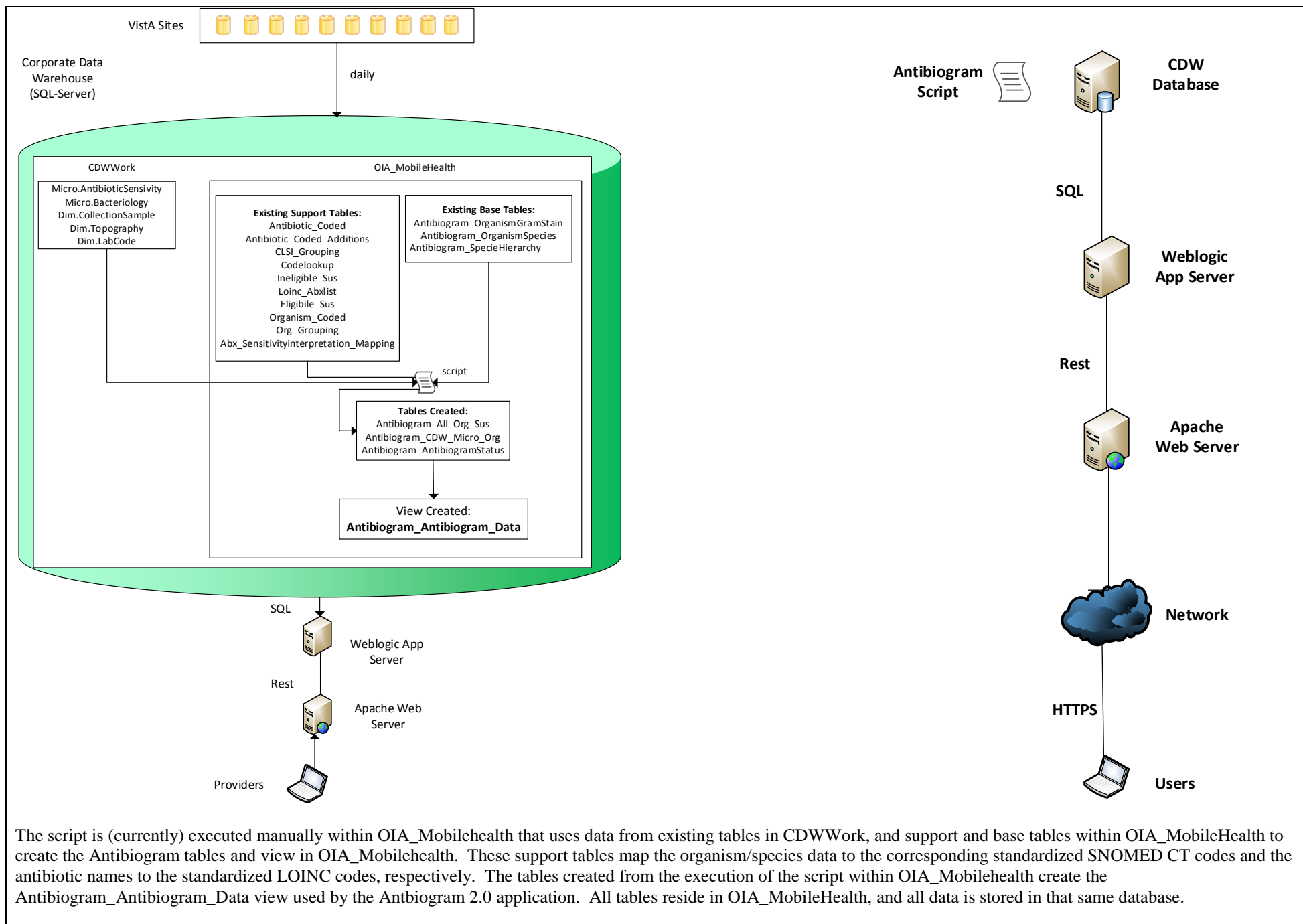
- User queries for facility selection and clinical data such as gram stain, species, or organism search. The application's backend queries against data from a datamart. The application runs queries against tables built from CDW tables, but never directly interacts with CDW. The application backend consumes the data and forwards it to the frontend, which is then displayed to the user through the user's browser.

#### Hardware infrastructure and environments:

Antibiogram 2.0.1 is a staff-facing web application developed to provide Department of Veteran's (VA) Medical staff with facility-level Antibiogram data, specifically the facility data used to estimate the likelihood that certain organisms and species are susceptible to specific antibiotics.

The app services will be hosted in the VA mobile Framework in Terremark which has the capacity to host the apps on virtual machines already allocated in the VAMF. Antibiogram 2.0.1 is used by both VA and non-VA staff as an HTML5 web application. The web application makes REST calls using a web service hosted by a Weblogic application server that resides on the VA network. This Antibiogram Rest API on the Weblogic application makes data queries against CDW SqlServer Database to populate the application with the data generated from the script execution.


The data in CDWork and OIA\_Mobilehealth are pulled using a script to generate the three application tables that create the Antibiogram 2.0.1 view. The data flows from the CDW database to the webservice then to the front-end web application where the end user is accessing through the web. Network traffic consists of Internet traffic to and from the VAMF in Terremark, through the VA Trusted Internet Connection (TIC) and within the VA WAN for the Antibiogram 2.0 application. This traffic also traverses the Business Partner Extranet to and from Terremark through the VA TIC.



The script is (currently) executed manually within OIA\_Mobilehealth that uses data from existing tables in CDWork, and support and base tables within OIA\_MobileHealth to create the Antibigram tables and view in OIA\_Mobilehealth. These support tables map the organism/species data to the corresponding standardized SNOMED CT codes and the antibiotic names to the standardized LOINC codes, respectively. The tables created from the execution of the script within OIA\_Mobilehealth create the Antibigram\_Antibigram\_Data view used by the Antibigram 2.0 application. All tables reside in OIA\_MobileHealth, and all data is stored in that same database.

**Note:** The support tables will remain static for this release. If a new organism, species or antibiotic is added, the support tables will need to be updated.

#### Describe all Business Needs

Ref. ID	Need	Business Value
1.	Refer to the AntibioGram 2.0 Expansion concept paper on the MAE Wiki: 	

What laws / regulations cover the implementation of the app? (To ensure compliance)

There are no known laws/regulations that cover the implementation of the app at this time to ensure compliance.

What is the expected & maximum size of the user base?

Approximately 10,000 VA providers will use this mobile application. The application service layer must be able to grow and shrink, accommodating up to 150,000 clinical staff users, depending on the rate of adoption of the application.

#### Requirements

USER STORY/ID	Requirement	Sub-Tasks in MAE JIRA	Associated USER STORY Acceptance Criteria
<a href="#">ABA-433</a>	Update the Calculation of the AntibioGram Hierarchy	ABA-435, ABA-436, ABA-437, ABA-438, ABA-439, ABA-440, ABA-441, ABA-442	As a Provider I want to see Species Group aggregate data for common species So that I can see reflective data per CLSI standards.  User Acceptance Criteria:  1.) Supplemental data is added to test 2.) Regression test has been performed 3.) Test scripts have been updated and loaded on the MAE Wiki intake page. 4.) RTM has been updated and loaded on the MAE Wiki intake page.
<a href="#">ABA-415</a>	Updates to Error Message Verbiage	ABA-416	As a Provider I want to ensure the error message is descriptive So that the user understands why there is an error.  The following changes need to be made to the error messages in the app: 1. Error message is generated if there is no data is found for the Gram Stain, Species, or Organism selected for the facility in context  “Error: No antibiogram data for the filters and facility selected. Please revise your search”  2. Error message is generated there isn’t a facility that matches the letters/name entered in facility search.

			<p>“Error: No facility found that matches the name entered. Please revise your search.”</p> <p>3. Error message is generated if while loading an antibiogram or searching for a facility/organism, the search request happens to take more than 30 seconds. Spinner is displayed after 4 seconds, then error after 30:</p> <p>“Error: Connection time out. Please try again.”</p>
<a href="#">ABA-409</a>	PMAS - Fortify	ABA-410, ABA-411	<p>As a developer I need to create and audit the final set of fortify artifacts in order to complete the fortify PMAS requirement.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) Audit backend</li> <li>2.) Audit frontend</li> </ol>
<a href="#">ABA-403</a>	Update Visual Help so that menu only has links to the Antibiogram and Launchpad		
<a href="#">ABA-398</a>	Architecture for Antibiogram 2.0	ABA-399, ABA-400, ABA-401, ABA-402	<p>As a PO</p> <p>I want to see a diagram of the architecture</p> <p>So I can understand the information flow.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) A diagram of the architecture for Antibiogram 2.0 containing information flow is created.</li> </ol>
<a href="#">ABA-380</a>	Calculation Algorithm - Roll low isolate, # of Isolates, Specie sumup	ABA-381, ABA-382, ABA-385, ABA-389, ABA-390, ABA-391, ABA-392	<p>As a Provider</p> <p>I want to calculate antibiogram data</p> <p>So that the data is meaningful to me.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) Low isolate data is included in species level calculation across the board.</li> <li>2.) Total number of isolates for a species is calculated using Dr. Jones scripts</li> <li>3.) Number of isolates column for a particular organism is calculated using Dr. Jones scripts.</li> </ol>
<a href="#">ABA-337</a>	Add Common Species Exceptions	ABA-345, ABA-346, ABA-347, ABA-414	<p>As a Provider</p> <p>I want to keep certain organisms outside of the species roll-up</p> <p>So I can quickly see their individual antibiogram data.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) If "Show Only Common Species" filter is checked, the following organisms should be displayed under their parent species: MRSA, MSSA, and</li> </ol>

			<p>Lugudenensis.</p> <p>2.) Species level calculation will be the same and should include rollup data.</p>
<a href="#">ABA-336</a>	Left Justify the Legend	ABA-374, ABA-375, ABA-377, ABA-378	<p>As a Product Owner, I want to ensure the legend is left justified So that it meets usability standards.</p> <p>User Acceptance Criteria:</p> <p>1.) The legend is left justified on both the web and phone versions.</p>
<a href="#">ABA-335</a>	Change Font on Visual Help Page	ABA-370, ABA-371, ABA-372, ABA-373, ABA-376	<p>As a Product Owner I want to ensure all fonts are consistent within the visual help page so that the visual help content passes usability.</p> <p>User Acceptance Criteria:</p> <p>1.) Change font so that only the main title and titles of the two sections are in Georgia.</p> <p>2.) All other text should be Arial.</p>
<a href="#">ABA-334</a>	Display Data as Whole Numbers	ABA-366, ABA-367, ABA-368, ABA-369	<p>As a Provider I want to view whole numbers in the data So I understand that the data is a percentage.</p> <p>User Acceptance Criteria:</p> <p>1.) All data displayed under percentages should be rounded to the nearest whole.</p>
<a href="#">ABA-333</a>	Low Isolate Species Indicator on Legend	ABA-353, ABA-354, ABA-355, ABA-356, ABA-357, ABA-358	<p>As a Provider I want to see an updated legend for species level data with low isolates So that I know when to take caution when interpreting results.</p> <p>User Acceptance Criteria:</p> <p>1.) The legend is updated to read ** Aggregate data is hidden due to low isolate results in display and PDF</p>
<a href="#">ABA-332</a>	Low Isolate Species Indicator	ABA-338, ABA-348, ABA-349, ABA-350, ABA-351, ABA-352	<p>As a Provider I want to know when a species level has only low isolate data So that I am aware of low isolate dependents.</p> <p>User Acceptance Criteria:</p> <p>1.) When aggregate data is zero due to hidden low isolate results, there is an indicator (**) along the species level in both the display results</p>

			2.) (**) indicator is reflected in the PDF data
<a href="#">ABA-329</a>	Include User Guide Content	ABA-379, ABA-431	<p>As a PO I need to create a user guide to be linked within the application So the user is able to leverage the user guide whenever necessary.</p> <p>User Acceptance Criteria:</p> <p>1.) User Guide content is included in the User Guide template that can be launched from within the Tour of the App and from the About page.</p>
<a href="#">ABA-325</a>	display search by name list by Rank/Occurence	ABA-359, ABA-360, ABA-361, ABA-362, ABA-365	<p>As a Provider I want to see my search results displayed by rank So I can quickly choose the data I am looking for.</p> <p>User Acceptance Criteria:</p> <p>1.) User can see the top 5 results based on Rank/Occurence when searching for the entered organism or species.</p> <p>2.) User sees "There are too many results. Add more letters to refine your search."</p>
<a href="#">ABA-320</a>	Test the validity of the Antibigram Data and Calculations	ABA-339, ABA-340, ABA-341, ABA-342, ABA-343, ABA-344, ABA-383	<p>As a tester I need to ensure the functionality of Antibigram 2.0 So that I can verify that all of the data seen by the end user is reflecting accurately as it is stored in production CDW.</p> <p>User Acceptance Criteria:</p> <p>1.) Verify the accuracy of the hierarchy structure. 2.) Verify the validity and accuracy of the hierarchy aggregate (species) calculation. 3.) Verify the accuracy of excluding low isolate data. 4.) Verify the accuracy of the common species filter and calculation.</p>
<a href="#">ABA-292</a>	Update Visual Help	ABA-307, ABA-330, ABA-331	<p>User Acceptance Criteria:</p> <p>1.) Visual Help file reflects updated UI changes and functionality.</p>
<a href="#">ABA-291</a>	LaunchPad	ABA-311, ABA-312	<p>As a VA Provider, I want to be able to access this application from LaunchPad So that it is convenient to me when accessing other applications.</p> <p>User Acceptance Criteria:</p> <p>1.) The app is accessible from LaunchPad 2.) LaunchPad can be reached from within the app using the header menu</p>
<a href="#">ABA-290</a>	Front End Updates	ABA-301, ABA-302, ABA-303,	As a Product Owner



		ABA-304, ABA-305, ABA-306, ABA-313, ABA-314, ABA-315, ABA-317	<p>I want to make changes to the front end display So that it matches what is desirable by the SMEs</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) "Hide Uncommon Species" filter is changed to "Show Only Common Species" on both phone and web versions.</li> <li>2.) Make all links within the Visual Help page (Tour of the App) clickable.</li> <li>3.) Generate Antibigram button on phone can only be clickable when organism, species, or gram stain is selected.</li> <li>4.) LaunchPad is the only available functionality in the menu until both the EULA and Tour of the App terms are accepted by user.</li> <li>5.) Once user has accepted EULA and Tour of the App for the first time, the user will not see the 'Continue to Antibigram' nor 'Do Not Share This Tutorial Again' option at the bottom of the page when selecting Tour of the App from the menu.</li> <li>6.) Gram buckets are ordered 'Gram Positive Cocci, Gram Negative Rods, Gram Negative Cocci, Gram Negative Rods'</li> <li>7.) Update Error Message content.</li> </ol>
<a href="#">ABA-289</a>	Incorporate Hierarchical Structure	ABA-298, ABA-299, ABA-316	<p>As a VA provider I want the preferred organism and species names to be displayed based on the SNOMED heirarchy So that I can see all organism roll-up data for a particular species.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) The user is able to see accurate hierarchical structure for the facility selected.</li> <li>2.) Organism and species names are displayed as the preferred SNOMED names</li> </ol>
<a href="#">ABA-288</a>	Change Group, Species and Organisms to pull real data	ABA-293, ABA-294, ABA-295, ABA-296, ABA-297, ABA-309, ABA-310, ABA-327, ABA-328	<p>As a VA provider, I want to do a search based on preferred names and facility selected so that I can see real data as reflected in CDW.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) User is able to search based on preferred name of organism and/or species and see updated results based on facility in context.</li> <li>2.) User is able to see accurate auto-complete names of organisms, species, and gram stain.</li> <li>3.) From the search tab (not gram buckets search panel), user can type in the preferred name of any organism and see any organism data within the dataset given, even if species level is 'NULL'</li> </ol>

			4) Total Number of Isolate calculation for species level is updated. 5.) Species level calculation does not include low isolate data.
<a href="#">ABA-224</a>	Modify autocomplete to include group strains	ABA-232, ABA-233, ABA-280, ABA-281, ABA-282, ABA-283	As an user i want to have the ability to also search for groups.
<a href="#">ABA-223</a>	Facility Search from CDW	ABA-225, ABA-226, ABA-227, ABA-276, ABA-277, ABA-278, ABA-279	As a user I want to change the way the app is currently pulling the facility code from HA to CDW So that the app is faster and more reliable.  User Acceptance Criteria:  1.) Return data from CDW matches current data
<a href="#">ABA-216</a>	Modify Search and Display Results	ABA-247, ABA-284, ABA-285, ABA-286, ABA-287	As a PO I need to change the search feature So that it allows the user to pull only the specified data.  User acceptance criteria:  1.) User can search by fixed buckets of Gram Positive Rods, Gram Positive Cocci, Gram Negative Rods, Gram Negative Cocci and see applicable antibiogram data in search results.
<a href="#">ABA-215</a>	Document AB 2.0 Script Process	ABA-228, ABA-229, ABA-230, ABA-231	As a developer I need to document test scripts So that future developers are aware of how the data is generated  User acceptance criteria:  1.) Document of the comprehensive script process is saved on SharePoint
<a href="#">ABA-212</a>	Update Help Page with Technical Contact Information	ABA-222	As a PO, I need to make sure contact information is displayed on the Help page so that users are able to report issues or provide feedback.  User Acceptance Criteria:  1.) User can see contact information on the Help page.
<a href="#">ABA-211</a>	Tour of the App Page on Phone	ABA-262, ABA-263, ABA-264, ABA-265, ABA-275	User Acceptance Criteria:  1.) User prompted with Tour of the App content when first logged in 2.) User can access the Tour of the App link from the Help page after logged in. 3.) User can access the documents using the embedded links within the Tour of the App page 4.) User is taken to the landing page upon confirming the content 5.) User can select an option if it is a shared workstation  Note: Screenshots need to be completed post-wireframe finalization

<a href="#">ABA-168</a>	Tour of the App and User Guide	ABA-248, ABA-249, ABA-254, ABA-255, ABA-256, ABA-257	<p>As a usability compliance body I want to ensure the user understands how to filter the data so that I can ensure the app is usable by all users regardless of their experience with antibiogram data.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) User prompted with Tour of the App content when first logged in after the accepting the EULA agreement</li> <li>2.) User can access the Tour of the App link from the Help page after logged in.</li> <li>3.) User can access the documents using the embedded links within the Tour of the App page</li> <li>4.) User is taken to the landing page upon confirming the content</li> <li>5.) User can select an option if it is a shared workstation</li> </ol> <p>Note: Screenshots need to be completed post-wireframe finalization</p>
<a href="#">ABA-167</a>	Hiding Search Panel		<p>As a PO, I want to ensure that the search panel can be hidden so the user is able to view a full view of the antibiogram data.</p> <p>Use Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) Search panel can be hidden from the search results page so the user can view the full screen.</li> </ol>
<a href="#">ABA-166</a>	Displaying Species Rollup in Search Results	ABA-169, ABA-170, ABA-171, ABA-172, ABA-173, ABA-174	<p>As a PO, I want to ensure all of the appropriate data is displayed in the search results so I can ensure the antibiogram data is useful to the SMEs.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) All search results display the group, species and/or organism rollups, number of isolates, and antibiotics (see screen shot for table layout).</li> </ol>
<a href="#">ABA-165</a>	Create EULA for the Adaptive Phone Design	ABA-266, ABA-267, ABA-268, ABA-269, ABA-270	<p>As a user I want to be able to complete a EULA So that I can use the app</p> <p>User Acceptance Criteria :</p> <p>Upon using the app for the first time, the user will need to accept a EULA User will not have to update the EULA for a web app unless the current EULA is newer than the date signed The user will have to sign a web app EULA for each device/browser combo used On a hybrid app the EULA must be presented and accepted for each new downloaded version</p> <p>• Note: EULA text is standard</p>

			Dev Note: This is a standard pattern and standard test for Veteran/Patient apps. Include standard test link.
<a href="#">ABA-164</a>	Create a EULA Page for HTML Version	ABA-245, ABA-258, ABA-259, ABA-260, ABA-261	<p>As a legal rep of the VA I want the user to confirm that they understand the legal implications of using the app so that the VA has is not legally liable for software misuse</p> <p>User Acceptance Criteria :</p> <p>Upon using the app for the first time, the user will need to accept a EULA  User is prompted to accept again if the EULA has changed  The user will have to sign a web app EULA for each device/browser combo used  User cannot use app and is returned to launchpad if EULA is declined</p> <p>• Note: EULA text is standard</p> <p>Dev Note: This is a standard pattern and standard test for Veteran/Patient apps. Include standard test link.</p>
<a href="#">ABA-163</a>	Complete Share Antibigram pdf output	ABA-175, ABA-176, ABA-177, ABA-178, ABA-179, ABA-180, ABA-181, ABA-206	<p>As a PO, I want to ensure the format for the complete Antibigram PDF is displays the appropriate heirarchy of data so I can ensure the users are able to understand the species and isolate rollups.</p> <p>User Acceptance Criteria:</p> <p>1.) The PDF data should display the same headers as displayed in the app search results  2.) Legend should be added to each page/table of Share Antibigram pdf</p>
<a href="#">ABA-162</a>	View Legend in Data Table	ABA-182, ABA-183, ABA-184, ABA-185, ABA-186	<p>As a PO, I need to ensure the user is able to view a legend so that they are able to interpret the data appropriately.</p> <p>User Acceptance Criteria:</p> <p>1.) Standard key/legend should be displayed in the bottom left hand corner of the active search results page.  2.) Move legend to just below the table</p>
<a href="#">ABA-158</a>	Keeping User Informed of Status of the App	ABA-213, ABA-214	<p>As a PO, I need to ensure that the user is aware that the data does not have data to display based on search results or load time so they are not confused.</p> <p>1.) If the application takes longer than 4 seconds to load, a spinner must be displayed indicating the table is still loading.  2.) Users must be informed when no data is available (either based on a filter)</p>
<a href="#">ABA-157</a>	Run the Fortify Scan and Complete Document	ABA-318, ABA-319, ABA-322, ABA-323	<p>As a PO, I need to ensure the fortify scan has been completed and remediated, as well as all associated documentation, so I can ensure the app is in compliance</p>

			<p>with the PMAS documentation.</p> <ol style="list-style-type: none"> <li>1.) The fortify scan has been completed and remediated on the most recent artifact.</li> <li>2.) Fortify scan intake page/form has been completed and loaded on the SharePoint.</li> </ol>
<a href="#">ABA-156</a>	Create an Adaptive Design for the Display Results on Phone	ABA-161, ABA-234, ABA-235, ABA-236, ABA-250, ABA-251, ABA-252, ABA-253	<p>As a PO, I need to ensure the antibiogram application is functional on a phone so that primary users are able to access the application using their personal phones.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) User should see version number (2.0.0) in the footer of the app.</li> <li>2.) User should be able to select the hamburger to navigate to the About, Help, and Launchpad.</li> <li>3.) User should be able to select and change default facility to see updated results.</li> <li>4.) User should be able to toggle between Ratio and Percent filters to see updated results.</li> <li>5.) Organism results should be displayed in the rows, and Antibiotics in the column, both alphabetically. Organism names can be wrapped if necessary.</li> <li>6.) Legend is frozen at the bottom of the screen pane and should always remain visible.</li> <li>7.) Antibiogram rows and columns should remain in a fixed pane so users can scroll to the right and still see the organism/antibiotic name.</li> <li>8.) Data table should reflect same formatting as legend.</li> <li>9.) User should be able to navigate through the data displayed.</li> </ol>
<a href="#">ABA-155</a>	Creating Adaptive Design for Search Page on Phone	ABA-217, ABA-218, ABA-219, ABA-220, ABA-221	<p>As a PO, I need to ensure that the application is functional on a phone so that users are able to access the app using their personal phones.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) User can filter by 12 and 24 months.</li> <li>2.) User can hide low isolate data.</li> <li>3.) User can populate table results by entering name of isolate group, species, or organism in the search field.</li> <li>4.) User can change and select a new default facility and see updated results.</li> <li>5.) User can see the Last Updated field displaying the date that the app was last refreshed.</li> <li>6.) User can access link to launch the full Antibiogram 2.0 HTML5 app.</li> <li>7.) User can select the PDF and will be able to use whatever features are inherent on the device being used to open or share the antibiogram data.</li> <li>8.) User can select the hamburger from the upper left hand corner to navigate to the Tour of the App page, About page, the Help page, and Launchpad.</li> </ol> <p>Adaptive design should reflect the following wireframe functionality:  <a href="http://1d0k2s.axshare.com/#p=phone_home">http://1d0k2s.axshare.com/#p=phone_home</a></p>

<a href="#">ABA-154</a>	Include Last Updated On Feature	ABA-199, ABA-200, ABA-201, ABA-202, ABA-203, ABA-204, ABA-205	<p>As a PO, I need to incorporate a feature that allows the user to know when the application was last updated so that I can make sure the app passes compliance reviews.</p> <p>User Acceptance Criteria:</p> <p>1). The Last Updated On date is displayed every time the application is refreshed.</p>
<a href="#">ABA-153</a>	Update Front-End to Reflect New Wireframes	ABA-187, ABA-188, ABA-189, ABA-190, ABA-191, ABA-192, ABA-193, ABA-194, ABA-207, ABA-208	<p>As a UI/UX expert, I need to incorporate feedback and suggestions from the patient safety and usability compliance bodies, so the app can pass the final V&amp;V, compliance, and SQA reviews.</p> <p>User Acceptance Criteria:</p> <p>1.) Change search features to separate tabs  2.) Complete PDF -Visually indicate low isolate data cells (* and gray italicized)  3.) Rename filter to "Hide Uncommon Species"  4.) Rename filter to "Ratio of susceptible to number tested"  5.) Rename data table to "Antibiotics (Percent Susceptible)" and "Antibiotics (Ratio of Susceptible to Number Tested)"  6.) Show Low Isolate as a default view  7.) All filters in bottom left column under a 'Filters' header</p>
<a href="#">ABA-149</a>	Add 'x' to search boxes (as per wireframes; clears entered text input)	ABA-246, ABA-271, ABA-272, ABA-273, ABA-274	3 search functions: Search Facility (landing page), Change Facility (header), and Organism Search
<a href="#">ABA-125</a>	Make Facility Search 508 Compliant		<p>As a Provider  I want to know when there is no data  So that I know to refine my filters.</p> <p>User Acceptance Criteria:</p> <p>the user should be notified when facility search results are both found and not found AND change facility error handling when Set Facility tapped when no facility provided</p>
<a href="#">ABA-114</a>	Changing Default Facility	ABA-160	<p>As a user, I want to be able to change my (default) facility so I can see Antibigram data for a different facility.</p> <p>User Acceptance Criteria:</p> <p>1.) User can click on the embedded default facility (after one has been selected) and be prompted to enter a new facility.</p> <p>2.) The new facility remains in context after selected until manually changed again.</p> <p>3.) The antibiogram table reflects the data from the updated facility.</p>

<a href="#">ABA-77</a>	#NF Make App Deployable to Test Environments	ABA-95, ABA-96, ABA-97	<p>As a PO, I need to ensure the app can be demo'ed to the stakeholders So that we can obtain business owner acceptance upon every sprint completion.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) New set of Jenkins jobs have been created.</li> <li>2.) Back end and front end are deployable.</li> </ol>
<a href="#">ABA-58</a>	Technical Spike: Mapping the Backend	ABA-78, ABA-79, ABA-80, ABA-81, ABA-82	<p>Taking time perform independent research to understand the scripts and map the backend.</p> <p>Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) Data mapped and completed table containing the appropriate mock data.</li> </ol>
<a href="#">ABA-57</a>	Add Content to the Help Page	ABA-94, ABA-110, ABA-111, ABA-112	<p>As a Patient Safety reviewer, I want to ensure there is a comprehensive Help page so that users understand the context of the app.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) The Help page contains the following static text:</li> </ol> <p>The empiric antibiotic regimen chosen should include, in general, antibiotics to which the suspected etiological pathogen(s) will demonstrate in vitro susceptibility. Be aware that when the number of isolates tested is low, the percent susceptible becomes unreliable and it may be necessary to refer to the literature or to specialists. Risk factors for antibiotic resistance, including admission from a nursing home, previous antibiotic exposure, etc, should be taken under consideration when making this choice.</p> <p>There is no universally recommended minimum percent susceptible for empiric treatment with an agent. The exclusive use of agents that demonstrate 100% susceptibility will lead to the routine use of overly broad-spectrum antibiotics. Not covering a pathogen adequately has been linked to higher patient morbidity and mortality. This decision should be made by an experienced physician. Please also be aware that, for some organisms, in vitro susceptibility may correlate poorly with clinical treatment success. For example, Enterobacter species may appear susceptible to cephalosporins, but treatment failure can ensue after cephalosporin use through the selection of subpopulations with de-repressed AmpC beta-lactamases. Because Antibigrams do not indicate agents of choice for particular diseases, Antibigrams should always be used by or under the guidance of clinicians who are familiar with both the likely disease and the antibiotics listed.</p> <p>Pharmacokinetics and pharmacodynamics (PK/PD) must also be considered, i.e., how drug levels change over time in the different tissues relative to the likely</p>

			<p>minimal inhibitory concentration of the pathogen. For example, be aware that there are different penicillin breakpoints for <i>Streptococcus pneumoniae</i> depending on whether the infection is pneumonia or not. Other examples: Nitrofurantoin should only be used for urinary tract infections as it does not attain appreciable levels in other tissues. Daptomycin binds to surfactant and should never be used to treat pneumonia. Also, please note that the published breakpoints for susceptibility may be too high, particularly for new antibiotics. For example, even though the tigecycline MIC was set at 2.0mg/L for Gram-negative enteric bacteria, the probability of attaining PK/PD targets at this MIC was almost zero (EUCAST citing manufacturer's data). An Antibigram should never be used alone to select therapy.</p> <p>The potential for synergy and antagonism should also be considered. The combination of beta-lactams and aminoglycosides is a well-studied example of synergy. Historically, children treated with chloramphenicol plus tetracycline for meningitis fared worse than those treated with chloramphenicol alone. Although various synergy studies exist, they should always be interpreted with the help of an infectious disease specialist.</p> <p>Toxicity and allergies should be considered in light of the patient's history, condition, and comorbidities. For example, the use of aminoglycosides in individuals with renal or hearing impairment should be considered in light of the patient's whole clinical condition. Navigating the cross-reactivity above different classes of beta-lactam antibiotics should be performed with guidance from allergists or infectious disease specialists.</p> <p>Individuals who are unfamiliar with the use of an Antibigram should consult with a more knowledgeable physician because there are several instances where it assumes knowledge of the reader. For instance, methicillin-susceptible <i>Staphylococcus aureus</i> should not be treated with methicillin; methicillin is a toxic antibiotic that is no longer commercially available and is simply a marker for resistance to beta-lactams in general. In complex cases, pharmacy and/or infectious diseases should be consulted.</p> <p>2.) The user can select the hamburger icon to return back to the Antibigram app from the Help page.</p>
<a href="#">ABA-56</a>	Content on the Landing/Home Page	ABA-93, ABA-107, ABA-108, ABA-109, ABA-113	<p>As a PO, I want to ensure that the landing page reflects the wireframe mock ups, so i can ensure all of the appropriate information is contained.</p> <p>User Acceptance Criteria:</p> <p>1.) The following text is contained on the landing page (see attached for content).</p> <p>2.)The VA logo is placed appropriately on the landing page (see attached).</p>



			<p>3.) The search panel is displayed containing the various search features.</p> <p>4.) Verify the facility in context is accurate based on entered facility.</p> <p>5.) The "Full Screen" feature is disabled (as no information has been entered)</p>
<a href="#">ABA-55</a>	#NF Set Up the Automated Testing Environment	ABA-83	<p>As a tester, I need to ensure that the automated testing environment has been set up so that testing and code changes can be stored in the appropriate environment.</p> <p>User Acceptance Criteria:</p> <p>1.) Set up the automated testing environment so that they can push it to the release branch.</p> <p>2.) All code is stored on Stash.</p>
<a href="#">ABA-50</a>	Preparing the App to Be Integrated into MAE	ABA-404, ABA-405, ABA-406, ABA-407	<p>As a PO, I need to ensure the application is deployable in the MAE environment so that it can move through SQA testing.</p> <p>User Acceptance Criteria:</p> <p>1.) Documented instructions on how to deploy the app to integration into MAE (includes the script along with instructions for getting the icon on LaunchPad, as well as instructions for deploying the backend resource to weblogic (as applicable).</p> <p>2.) Antibigram data is integrated into the MAE environment to be used for UAT/Pilot.</p>
<a href="#">ABA-49</a>	Preparing the App for Integration into QVE		<p>User Acceptance Criteria:</p> <p>1.) Sufficient Instructions to deploy app to QVE are uploaded on the Antibigram Wiki intake page.</p>
<a href="#">ABA-42</a>	Add Content to the About Page	ABA-89, ABA-90, ABA-101, ABA-102, ABA-103	<p>As a Patient Safety compliance reviewer, I want to ensure the About section of the app contains the necessary context needed for a user to understand the application so that the user is not confused.</p> <p>User Acceptance Criteria:</p> <p>1.) The following text is contained on the About page</p> <p>Overview</p> <p>This mobile application provides VA medical staff easy access to Antibigram (antibiotic resistance data collected from actual in-vitro testing) from any VA Medical Center (VAMC) facility.</p>

			<p>Features</p> <ul style="list-style-type: none"> <li>• View the Antibigram(s) for a selected VAMC facility for information to assist with antibiotic selection for specific organisms or groups (Gram).</li> <li>• Select a duration of 12 or 24 months for the Antibigram data display for a selected VAMC facility.</li> <li>• View a visual indicator anytime the number of isolates is below 30, alerting the user of the limited value of the data.</li> <li>• Access a PDF version of the Complete Antibigram to email or print using capabilities on the user's device.</li> <li>• This Antibigram is best viewed on high resolution devices.</li> </ul> <p>Version 2.0</p> <p>Note: VA Logo to be displayed at the bottom center of page. See attached.</p>
<a href="#">ABA-41</a>	Patient Safety 1.1 Remediation: Add Content to the Help Page		<p>As a Patient Safety compliance reviewer, I want to ensure there is a Help page that the user can reference so that he/she can understand the context and purpose of the Antibigram data.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1. The Help page contains the following text:</li> </ol>

			<p>The empiric antibiotic regimen chosen should include, in general, antibiotics to which the suspected etiological pathogen(s) will demonstrate in vitro susceptibility. Be aware that when the number of isolates tested is low, the percent susceptible becomes unreliable and it may be necessary to refer to the literature or to specialists. Risk factors for antibiotic resistance, including admission from a nursing home, previous antibiotic exposure, etc, should be taken under consideration when making this choice.</p> <p>There is no universally recommended minimum percent susceptible for empiric treatment with an agent. The exclusive use of agents that demonstrate 100% susceptibility will lead to the routine use of overly broad-spectrum antibiotics. Not covering a pathogen adequately has been linked to higher patient morbidity and mortality. This decision should be made by an experienced physician. Please also be aware that, for some organisms, in vitro susceptibility may correlate poorly with clinical treatment success. For example, Enterobacter species may appear susceptible to cephalosporins, but treatment failure can ensue after cephalosporin use through the selection of subpopulations with de-repressed AmpC beta-lactamases. Because Antibigrams do not indicate agents of choice for particular diseases, Antibigrams should always be used by or under the guidance of clinicians who are familiar with both the likely disease and the antibiotics listed.</p> <p>Pharmacokinetics and pharmacodynamics (PK/PD) must also be considered, i.e., how drug levels change over time in the different tissues relative to the likely minimal inhibitory concentration of the pathogen. For example, be aware that there are different penicillin breakpoints for Streptococcus pneumoniae depending on whether the infection is pneumonia or not. Other examples: Nitrofurantoin should only be used for urinary tract infections as it does not attain appreciable levels in other tissues. Daptomycin binds to surfactant and should never be used to treat pneumonia. Also, please note that the published breakpoints for susceptibility may be too high, particularly for new antibiotics. For example, even though the tigecycline MIC was set at 2.0mg/L for Gram-negative enteric bacteria, the probability of attaining PK/PD targets at this MIC was almost zero (EUCAST citing manufacturer's data). An Antibigram should never be used alone to select therapy.</p> <p>The potential for synergy and antagonism should also be considered. The combination of beta-lactams and aminoglycosides is a well-studied example of</p>
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			<p>synergy. Historically, children treated with chloramphenicol plus tetracycline for meningitis fared worse than those treated with chloramphenicol alone. Although various synergy studies exist, they should always be interpreted with the help of an infectious disease specialist.</p> <p>Toxicity and allergies should be considered in light of the patient's history, condition, and comorbidities. For example, the use of aminoglycosides in individuals with renal or hearing impairment should be considered in light of the patient's whole clinical condition. Navigating the cross-reactivity above different classes of beta-lactam antibiotics should be performed with guidance from allergists or infectious disease specialists.</p> <p>Individuals who are unfamiliar with the use of an Antibigram should consult with a more knowledgeable physician because there are several instances where it assumes knowledge of the reader. For instance, methicillin-susceptible <i>Staphylococcus aureus</i> should not be treated with methicillin; methicillin is a toxic antibiotic that is no longer commercially available and is simply a marker for resistance to beta-lactams in general. In complex cases, pharmacy and/or infectious diseases should be consulted.</p> <p>Note: Text provided by Dr. Jones. This addresses Patient Safety issue attached.</p>
<a href="#">ABA-40</a>	Add a Hamburger Icon with the About, Help, Antibigram and LaunchPad Options	ABA-91, ABA-92, ABA-98, ABA-104, ABA-105, ABA-106	<p>As a user, I want to select the hamburger icon to navigate so that I can explore additional features and sections of the application.</p> <p>User Acceptance Criteria:</p> <p>1.) The hamburger icon contains the following features/pages:</p> <p>About page Antibigram (return to app/home) Help page Return to Launch Pad</p> <p>2.) The hamburger should include the 'menu' text as shown on the attached screenshot (per usability suggestion).</p> <p>3.) The hamburger icon should be displayed on the landing page, as well as the active home/search page</p>
<a href="#">ABA-39</a>	Sharing Antibigram Data	ABA-139, ABA-140, ABA-141, ABA-142, ABA-143, ABA-144, ABA-146, ABA-152	As a VA provider, I need to be able to PDF and email the facility Antibigram information so that I can share any trends or distinguishing data with colleagues.

			<p>User Acceptance Criteria:</p> <p>1.) User can use the inherent features on his or her local device to open, share, email or print the Antibigram PDF.</p>
<a href="#">ABA-38</a>	#NF Backend Development and Data Display		<p>As a VA provider, I need to be able to ensure the isolate, species, or organism name displayed is mapped to the corresponding SNOMED CT and LOINC codes and reflected in the application accordingly so I can quickly identify the species or organism I am viewing based on CLSI standards.</p> <p>User Acceptance Criteria:</p> <p>1.) The data displayed will be expressed using nationally recognized reference and authoritative terminology standards such as LOINC and SNOMED codes stored within the CDW.</p> <p>2.) Any organism or species name entered by a lab technician that does not map to an existing SNOMED CT within the appropriate table will be excluded from the Antibigram 2.0 application, and not included in any calculations.</p>
<a href="#">ABA-37</a>	Selecting a Default Facility from Landing Page	ABA-84, ABA-85, ABA-86, ABA-87, ABA-88, ABA-120, ABA-121, ABA-122	<p>As a VA Provider, I would like to be able to select a default facility so that I do not have to search for my home location every time I launch the application.</p> <p>User Acceptance Criteria:</p> <p>1.) The user is prompted with an option to enter a facility from the landing page. Once the location has been selected, the user is prompted with a question to make the selected facility their default location.</p> <p>2.) If the user confirms the location as their default location, the location should be embedded in the header (top left hand corner) of the active page to persist throughout the application.</p> <p>3.) If the default facility option is not enabled, the facility will not remain in context if the application is refreshed.</p> <p>4.) Entered text should prompt auto-complete of facility.</p> <p>Usability note: Ensure that users will never have to delete the placeholder text manually before entering their own. Consider writing tip out and placing below label to avoid placeholder text problems.</p>
<a href="#">ABA-36</a>	Filter Low Isolate Data for 12 and 24 Months	ABA-195, ABA-196, ABA-197, ABA-198	<p>As a VA Provider, I want to be able to hide low isolate data if it is not meaningful for my search and analysis over a period of 12 and 24 months.</p> <p>User Acceptance Criteria:</p> <p>1.) Users can select an option on the search panel to display or suppress low</p>

			<p>isolate results (organisms with less than 30 isolates)</p> <p>2.) Users can select to view results based on the past 12 or 24 months. Option will default to 12 months.</p>
<a href="#">ABA-35</a>	Implement "Show Only Common Species" Search Filter	ABA-300, ABA-308	<p>As a VA Provider, I want to see a list of the most common species so that the Antibigram app search results provide an easy way to see the most desirable results for an experienced user.</p> <p>User Acceptance Criteria:</p> <p>1.) When "Show Only Common Species" filter is selected, only the common species will be displayed at an aggregate level.</p> <p>Buisness Rule(s):</p> <p>a. From the fixed bucket list (Gram Positive Cocci, Gram Positive Rods, Gram Negative Cocci, Gram Negative Rods):</p> <p>1.If the 'Show Only Common Species' filter is selected, the common species listed will be displayed (as applicable) at an aggregate level, with no organism roll-ups.</p> <p>2.If the 'Show Only Common Species' filter is not selected, all SNOMEDCUI within the gram attribute that have a direct species roll-up will be displayed in their SNOMED hierarchy. Note: If the species field is 'NULL' it will not be included in Antibigram 2.0. The species field must have a mapped SNOMEDCUI to be displayed in this view.</p> <p>ii. From the Search tab:</p> <p>3. If one of the four gram stain(s) is entered, refer to (i) for how dataset will be displayed.</p> <p>b. *Exceptions*:</p> <p>i. All aggregate data will use the same algorithm as applied to the entire data set with the exception of the following:</p> <p>1. Staphylococcus aureus (Calculation = sum of all child SNOMEDCUI data including MSSA and MRSA)</p> <p>2. a. Staphylococcus aureus (MSSA) (Calculation = display SNOMEDCUI data for this organism at child level)</p> <p>3. b. Staphylococcus aureus (MRSA) (Calculation = display SNOMEDCUI data for this organism at child level)</p> <p>4. 2. Staphylococcus coagulase-negative (Calculation = sum of all child SNOMEDCUI data including SNOMEDCUI data for Staphylococcus lugunensis)</p> <p>5. a. Staphylococcus lugdunensis (Calculation = display SNOMEDCUI data for this organism at child level)</p> <p>ii. SNOMEDCUI data for S. Saprophyticus will be grouped into Staphylococcus coagulase-negative and not displayed individually.</p>
<a href="#">ABA-34</a>	Search Feature 2: Search by Gram Positive or Gram	ABA-133, ABA-134, ABA-135, ABA-136, ABA-137, ABA-138	<p>As a VA Provider, I want to use an interactive search panel to display rollups of Gram Positive or Gram Negative so I can ensure I am able to view the slice of</p>

	Negative (or subsets)		<p>data most meaningful to me.</p> <p>User Acceptance Criteria:</p> <p>Search Filters:</p> <p>1.) Users can search by Gram Positive or Gram Negative to see Antibigram data by Gram Positive or Gram Negative.</p> <p>2.) Users can filter further by Gram Positive Cocci or Gram Positive Rods (as a subset of Gram Positive), and Gram Negative Cocci and Gram Negative Rods (as a subset of Gram Negative) to see Antibigram rollups.</p> <p>Search Results:</p> <p>4.) Search results should be displayed as a ratio or as a percentage, depending on which (respective) option is selected in the search panel.</p> <p>6.) Search panel can be hidden so the user can view the full screen.</p> <p>See screen shot for proposed wireframe.</p>
<a href="#">ABA-33</a>	Search Feature 1: Directly Type in or Drill Down to select Organism, Species, Group Name	ABA-115, ABA-116, ABA-117, ABA-118	<p>As a VA Provider, I want to be able to use an interactive search panel to display data by isolate group, species, and/or organisms so I can ensure I am able to view the slice of data most meaningful to me.</p> <p>User Acceptance Criteria:</p> <p>1.) Users can directly type in the name of the organism, species, or isolate group in the left hand search window to view respective results.</p> <p>2.) The name of the organism, species, or isolate will auto-populate matching results and the respective hierarchical data allowing the user to drill-down to the level of detail needed.</p> <p>3.) Search results should be displayed as a ratio or as a percentage, depending on which (respective) option is selected in the search panel.</p> <p>4.) Search results display the group, species and/or organism rollups, number of isolates, and antibiotics (see screen shot for table layout).</p> <p>5.) Standard key/legend should be displayed in the bottom left hand corner of the active search results page.</p> <p>6.) Search panel can be hidden so the user can view the full screen.</p>

			See attached screen shot.
<a href="#">ABA-32</a>	Develop all Required PMAS Documentation	ABA-237, ABA-238, ABA-239, ABA-240, ABA-241, ABA-242, ABA-243, ABA-244	<p>As a QVE Reviewer, I need to ensure all PMAS documentation has been completed as part of Antibigram 2.0 development so I can verify that it meets all VA requirements.</p> <p>User Acceptance Criteria:</p> <p>The following documents have been loaded to the release intake page and version control has been maintained (as applicable):</p> <ol style="list-style-type: none"> <li>1.) Concept Paper - PO</li> <li>2.) User Guide - PO</li> <li>3.) Privacy Application Checklist - PO/Developer</li> <li>4.) Develop the Requirements Traceability Matrix (RTM) -Team</li> <li>5.) Develop Version Description Document (VDD) - Team</li> <li>6.) Develop Systems Design Document (SDD) - Team</li> <li>7.) Develop V&amp;V Intake Form - Team</li> <li>8.) Develop/Provide Summary Test Script - Team</li> <li>9.) Requirements Specification Document (RSD) - Team</li> <li>11.) Code Review Questionnaire - Code Review/Security Bodies</li> <li>12.) All dependencies are documented on intake page - Team</li> <li>13.) Instructions have been included on the intake page on how to deploy the app to QVE</li> <li>14.) Instructions on how to deploy to SQA have been included on the intake page</li> </ol> <p>Need: Create Antibigram PMAS Intake Page</p>
<a href="#">ABA-31</a>	Expressing Antibiotic Susceptibility as Percentage and Ratio	ABA-126, ABA-127, ABA-128, ABA-129, ABA-130, ABA-131, ABA-132, ABA-159	<p>As a VA Provider, I want to be able to see the number of susceptible isolates (the percentage numerator) and total number of tested isolates (the percentage denominator) for a given bacteria and antibiotic treatment so I can understand the validity of the ratio.</p> <p>User Acceptance Criteria:</p> <ol style="list-style-type: none"> <li>1.) User can select feature on the search panel to view search results in terms of percentage or rate.</li> <li>2.) Ratio and percentage are calculated as:  # of susceptible isolates/total number of tested isolates</li> </ol> <p>See attached for visual representation.</p> <ol style="list-style-type: none"> <li>3) Table updates when facility is changed</li> </ol>
<b>References</b>			
<b>Reference Description</b>			<b>Link or Attachment</b>



Antibiogram Expansion Concept Paper		
Antibiogram 2.0.1 SDD		
<b>Program Level Requirement Changes</b>		
<b>List any required changes to program level RSD</b>	<b>JIRA Change Request Issue Number</b>	<b>Link or Attachment of Change Pages</b>
N/A		

**Signature Section**

<b>I have reviewed the Mobile Application Requirements Addendum and find it acceptable.</b>	
_____ <b>Signature or E-signature of Lead Analyst or Application Owner</b>	_____ <b>Date</b>
<b>I have reviewed the Mobile Application Design Addendum and find it acceptable.</b>	
_____ <b>Signature or E-signature of WMS Project Manager</b>	_____ <b>Date</b>
<b>I have reviewed the Mobile Application Design Addendum and find it acceptable.</b>	
_____ <b>Signature or E-signature of VA OI&amp;T Project Manager</b>	_____ <b>Date</b>