Monthly Upload:
PHI Scrubber

PHI Scrubber Overview

- Allows sites to remove staff and patient identifiers before transferring data to the MPOG Central database

- Must be executed before each transfer

- Any case that is not PHI Scrubbed, will not be transferred to MPOG Central
  - Fields that are NOT PHI Scrubbed and are NOT transferred to MPOG Central

– AIMS_first_name,	– AIMS_Address_Street_2,
– AIMS_last_name,	– AIMS_Address_City,
– AIMS_middle_name,	– AIMS_Address_State_Province,
– AIMS_reg_num,	– AIMS_Address_Postal_Code,
– AIMS_dob,	– AIMS_Phone_Number,
– AIMS_ssn,	– AIMS_Medicaid_Identifier
– AIMS_Address_Street_1,	

PHI Scrubber Dictionary

- Several dictionaries have been preloaded into the application including a list of the most common first and last names from the US Census Bureau and the Snomed dictionary to identify healthcare terminology that should remain with the transfer.

- The site technical team must load the local institution-specific provider names and identifier dictionary to allow scrubbing of staff identifiers.

Accessing the PHI Scrubber

Contact: support@mpog.zendesk.com

PHI Scrubbing Options

- Three options for selecting a 'Case Set' to be scrubbed
  - **PHI scrub all cases (Including previous cases already PHI scrubbed):** Allows users to scrub all cases including those that have been scrubbed in the past.
  - **Cases Waiting for PHI scrub:** Allows users to scrub only those cases marked as needing to be scrubbed.
  - **Specific Case:** Allows users to scrub a single case using the MPOG Case ID. A date range should not be selected for scrubbing a single case.

- **Date Range:** Selecting a date range is optional but is often used to assist with limiting the scrubbing procedure to only those cases the user wishes to transfer. Again, a 'Case Set' must be selected in addition to a date range in order to proceed with the scrubbing process.

Initiating PHI Scrubber

- Once the case set is selected, click 'Start PHI Scrubbing' to start the process.

- There are options to 'Pause' or 'Stop' PHI Scrubbing.
  - If pausing the PHI Scrubber, the application must remain open in order to 'un-pause' and restart the scrubbing process.
  - If for some reason, the user exits out of the application while 'paused,' the Case Set and Date Range (if applicable) will need to be selected again to continue scrubbing.

PHI Scrubbing

- The Progress Bar displays the percent complete and number of cases completed. The tool also assigns an Estimated Time Remaining to the job.
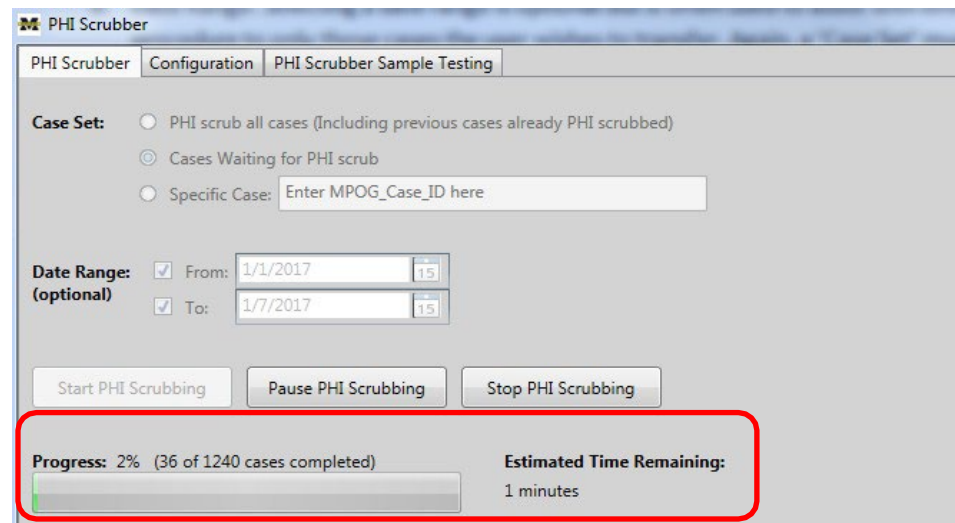
- When the process is complete, it will highlight in the taskbar
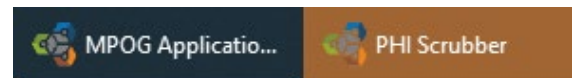
Pause PHI Scrubber

- If you need to Pause PHI Scrubbing, click the Pause button.

- When you are ready to resume, click the 'Un-Pause PHI Scrubber'.

  - PHI Scrubber will resume scrubbing any cases that still need to be scrubbed from the original request. Any cases that were scrubbed before the pause will remain scrubbed.

  - Progress will reset to 0% completed, but the total number to scrub will be updated, removing those previously scrubbed.

Stop PHI Scrubbing

- If you need to Stop PHI Scrubbing, click the Stop button.

- This will stop the PHI Scrubbing session
  - To resume scrubbing, you will need to re-initiate the process by selecting a case set and date range.
  - Any cases that were scrubbed before stopping will remain scrubbed

AIMS Dictionary Configuration

- The **Configuration tab** provides access to the AIMS PHI Dictionary and allows you to search through several dictionaries to establish what words/strings should be considered PHI and removed, and which should remain.

- The AIMS PHI Dictionary should be previously loaded by your designated technical team and consists of all institution-specific provider names and identifiers.

- The purpose of the institution specific provider PHI dictionary is to allow the PHI scrubbing process to remove provider names or identifiers that you do not want included in your MPOG contribution.

- Although the scrubbing algorithm can use MPOG dictionaries to remove nationally known common names (e.g. Kevin), local dictionaries are needed for uncommon names (e.g. Sachin).

Configuration

- To search specific strings, select 'All Search Strings' and then click 'Search' to display the list of strings in your local database. Each institution must determine what provider information they are comfortable leaving in their database (i.e. provider numbers, initials, clinical terms, etc.)

- **Note:** If the custom search string checkbox is not selected, the program will display all the words found in the dictionary for the selected categories.

Configuration

- If 'Search String' is selected, the program will search the selected categories for the specified search string indicated.

- To remove a string from the AIMS PHI Dictionary, simply highlight the desired string and click 'Remove from AIMS Dictionary.'

- Assess the list to determine which terms are common words that you want to keep.

- For example, you may have a provider name of "Pain," you must determine the research value vs. privacy risk

Configuration

- Clinical terms will need to be removed from the local dictionary. All instances of clinical terms such as Miller and Macintosh will not be scrubbed unless it is the patient's name.

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Configuration

- The 'Compare provider strings to common words' function searches through the preloaded dictionaries to identify PHI, which strings should be removed, and which strings should be kept.

- Once you have removed all terms in your local dictionary, click on 'Compare provider strings to common words.'

- This will compare the provider names in your local dictionary to clinical terms which are listed in Snomed (such as CRNA, attending, and Miller).

Configuration

- The MPOG PHI Dictionary can also be tested to identify medical terminology and provider names already existing in the default dictionary.

- The MPOG Dictionary includes:
  - US Census: Includes all common first and last names (strings to remove)
  - Snomed: Includes comprehensive list of medical terms (strings to keep)
  - Common Perioperative Terms and Acronyms (strings to keep)

Configuration

- To test the 'Configuration' function, select the 'Configuration' tab at the top.

- Select 'First Names' and 'Last Names,' then click 'Search.'

- Provider names from the PHI dictionary should display in the Results section as shown below.

- If the Results display is empty, contact your technical team to load your local PHI dictionary data.
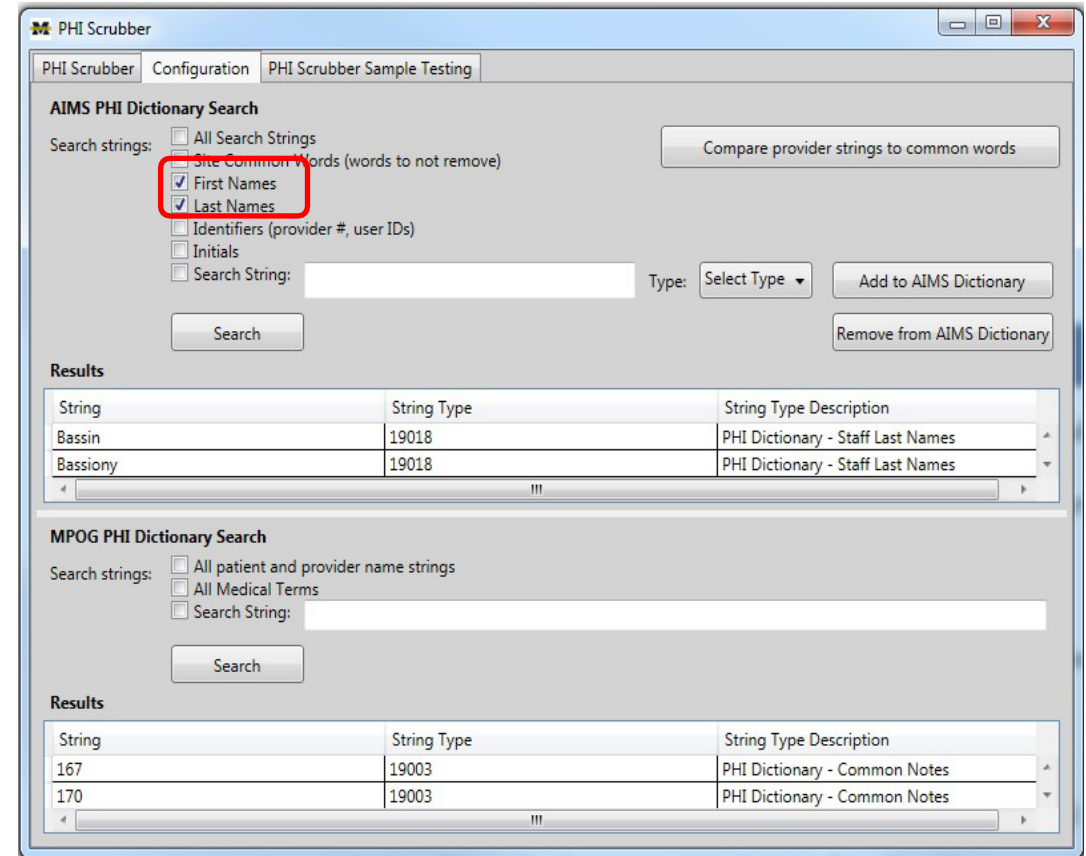
Configuration - Adding to the PHI Dictionary

- It is important to note that while the PHI Scrubber will remove as many identifiers as it detects, there will always be a minimal (non-zero) risk of identifiers transferring via free text notes.
  - For example, "Dr. Uncommon-Name spoke with the patient about smoking cessation."

- While it is infrequent, it does rarely occur that uncommon names slip through, and you will need to add those names to the PHI Dictionary.

- If the last name is two words with a space between, you may have to add them as two separate names

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Configuration -Adding to the PHI Dictionary

- To add names to the PHI dictionary, click on the 'Configuration' tab.

- Check the box to the left of 'Search String' then type the name you wish to add in the box to the right.

- Choose the appropriate Type then click 'Add to AIMS Dictionary'.

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PHI Scrubber Sampling Test

- The 'PHI Scrubber Sample Testing' runs scrubbing logic for a given sample string and categorizes each word.

- This function is used to run a test string to determine if identified PHI information (in this case, staff names) will be properly excluded.

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PHI Scrubber Logic will display included and excluded variables within your test string phrase, indicating PHI has been removed as displayed in the 'Resulting String.' A grid will display the following elements:

- **Source Word:** Original word(s) entered into the 'Test String' prior to PHI removal

- **Rule Triggered:** The reason why the word was or was not removed

- **Resulting Word:** The word(s) after 'PHI Scrubber Logic' has been applied and PHI has been removed

- **Note:** Clinical terms will need to be removed from the local dictionary. All instances of clinical terms such as Miller, Macintosh, and Brown will not be scrubbed unless it is the patient name.
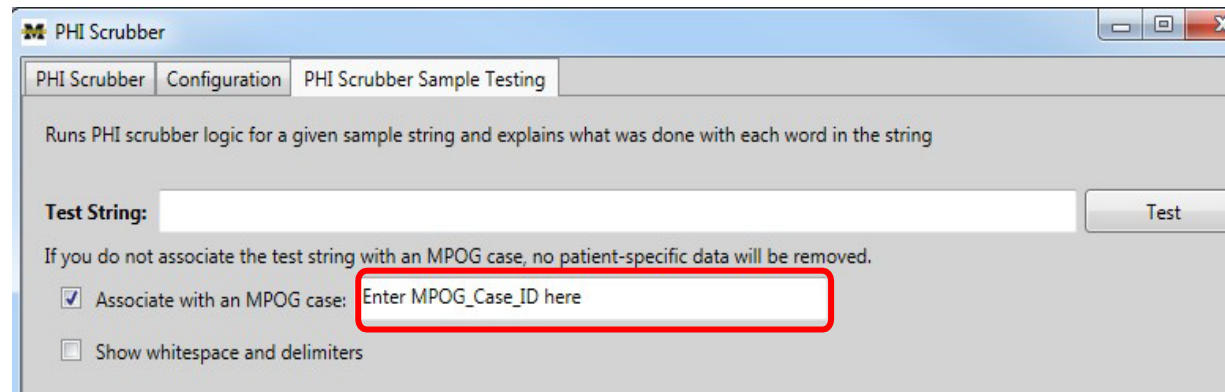
PHI Scrubber Logic

Source Word	Rule Triggered	Resulting Word	
Dr	Keep because word is commonly found in medical notes	Dr	
Reed	Remove because word is a known first or last name	[PHI]	
is	Keep because word is a common 1 or 2 letter word	is	
a	Keep because word length < 3	a	
good	Keep because word is commonly found in medical notes	good	
doctor	Keep because word is commonly found in medical notes	doctor	

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Associate with an MPOG Case

- You can also run a 'Test String' against a specific case to ensure PHI is being scrubbed from cases.

- This allows users to enter a valid case ID, which will run the results of the' PHI Scrubber' process.

- Without associating with an MPOG case, no patient specific data scrubbing can be tested. Only name strings in the US Census Bureau and MPOG staff identifier list would be removed. If there is patient PHI in the test string that is not a common name or institution-specific staff name, association with an MPOG case will show the patient name and will not be scrubbed.

Associate with an MPOG Case

- Select 'Associate with an MPOG case' then click 'Test.'

- The MPOG case ID can be obtained from the MPOG case viewer application.

- 'Show whitespace and delimiters" displays the whitespace and the delimiter characters that were present in the test string as words in the Results data grid.

Associate with an MPOG Case