DEPARTMENT OF HEALTH

MIIC Bulk Query Tool

USER GUIDANCE AND TRAINING RESOURCE

This guide describes how to query immunization records in MIIC for a large number of clients. This process involves an organization creating a list of clients and loading the list to the Minnesota Department of Health (MDH) CloudDrive site. The list is then matched to clients in MIIC, and their immunization histories are returned to the requesting organization. Input and output files are both | (pipe character) delimited .txt files.

This process does not apply to schools and institutes of higher education. Public and charter K-12 schools can access the bulk query function within the Annual Immunization Status Report (AISR) application, and private K-12 schools and institutions of higher education can use the Student Immunization Query Tool to bulk query MIIC.

School and higher education users can learn more at School Health Personnel Immunization and Disease Reporting (www.health.state.mn.us/people/immunize/ed/school.html) or email health.aisr@state.mn.us.

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CloudDrive overview

The CloudDrive was originally conceived to save money on the transcription of autopsy files from morticians. Authorized users can securely upload an audio file to MDH through a secure and simple front end, backed by an S3 bucket. The receipt of the audio file triggers a lambda function that uses the Amazon Web Services (AWS) transcription service to transcribe and create a downloadable file which includes a level of confidence for the transcription. The CloudDrive has since morphed into a critical service for MDH's COVID-19 response and general file sharing for the agency. It has been enhanced to share videos and press releases, receive COVID-19 testing results, create temporary URL's for sharing files, and for the general upload and download of data.

The key benefit of the CloudDrive is that it puts the file directly into an S3 bucket which allows for the immediate exposure to other AWS services, principally Lambda. Examples of processes that begin with the CloudDrive are the importation of community testing results into the state's Disease Surveillance system, making data readily available for health department epidemiologists or data scientists through Athena, or the storing of after-hours voice mails from citizens concerned about their COVID-19 status. All these items start with the CloudDrive which negates the necessity of building additional user interfaces for each new data ingestion request as MDH is asked to quickly pivot and react to the pandemic's ever-changing landscape.

Who are the users of MDH CloudDrive?

Local public health, other government agencies, or any people representing an organization wishing to share files with the MDH.

Getting started

1. First check internally to see if your organization is already set-up to exchange large volumes of data with MIIC using the Bulk Query via CloudDrive process. If they're not, email the MIIC Help Desk at health.miichelp@state.mn.us with the following information:

   - Name of organization

   - MIIC Organization Code

   - Primary point of contact (name/email)

   - Volume of records you wish to process

   - Frequency of processing records (monthly/weekly/etc.)

   - Who should get a CloudDrive account created for exchanging the files (name/email)?

     - Shared user accounts are not supported. Everyone who will need access to MDH CloudDrive must have their own user account.

2. MIIC staff will then confirm if your organization has a current Data Use Agreement (DUA) on file. If your organization is new to MIIC, visit Participating in MIIC (www.health.state.mn.us/people/immunize/miic/participate/index.html).

Creating the query file

1. Work with your system's vendor or IT team to pull data in a | delimited format found in the plain text notepad file: http://www.health.state.mn.us/people/immunize/miic/data/bulkquery.txt. The header row (row 1) must be present and column headers must be in all lowercase letters with underscores instead of spaces. The client's information should be filled in beginning on row 2 of the file. The input file should contain one row for each **person** that you want data on. The minimum required fields are:

   - First Name

   - Last Name

   - Date of Birth

     - Must be formatted as YYYY-MM-DD (preferred) or MM-DD-YYYY.

2. The remaining columns are optional. Providing additional demographic information can assist with the matching process.

    ▪ **id_1 through id_6**: These columns exist to help you match immunizations from the response file back to your system. These organization-specified IDs are returned in the response file and are intended to help with matching back into your querying system.

    ▪ **street_address**: Client's Street address as known to the querying organization.

    ▪ **other_address**: Should be used for apartment/suite number or P.O. box information as known to the querying organization.

    ▪ **city**: Client's city as known to the querying organization.

    ▪ **state**: Client's state as known to the querying organization. Format as two-letter state code.

    ▪ **zip_code**: Client's zip code as known to the querying organization. Can be in five or nine-digit format.

    ▪ **county**: Client's County as known to the querying organization. You should send the flat file version of the county codes, available on the MIIC Client Codes (www.health.state.mn.us/people/immunize/miic/data/clientcodes.xlsx) reference sheet found at MIIC Codes for Data Submission and Exchange (www.health.state.mn.us/people/immunize/miic/data/codes.html).

    ▪ **sex**: Client's sex as known to the querying organization. You should send the flat file version of the sex/gender codes, available on the MIIC Client Codes reference sheet found at MIIC Codes for Data Submission and Exchange.

3. The file must be saved as a | delimited .txt file. The file name must not include any spaces. Underscores are acceptable.

Logging into the CloudDrive

Cloud Drive works best when using Google Chrome. The application may not work properly if you are using a different internet browser.
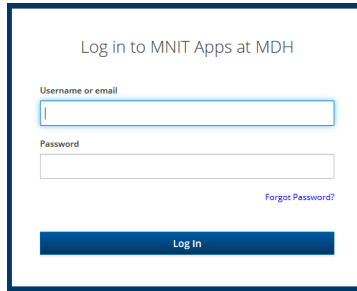
First-time users

1. You will receive a confirmation email once your CloudDrive user account has been set-up. Do not attempt to login to MDH CloudDrive until you are directed to do so. Once you have received that email, go to Log in to MNIT Apps at MDH (https://clouddrive.web.health.state.mn.us/).

2. Select the 'Forgot Password?' link and then input your email address.

3. Click 'Submit.' You will receive a separate email with instructions on how to set-up a password.

Returning users

Visit Log in to MNIT Apps at MDH (https://clouddrive.web.health.state.mn.us/). Input your email address and password and click 'Log In.'
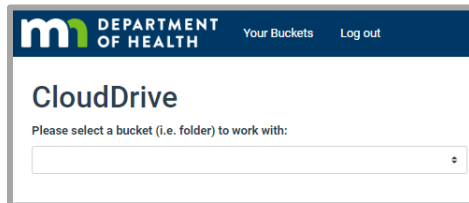
Uploading the query file

1. Once logged into CloudDrive, select the appropriate MIIC bucket from the drop-down menu.

2. Select the 'incoming' folder on the bottom half of the screen.
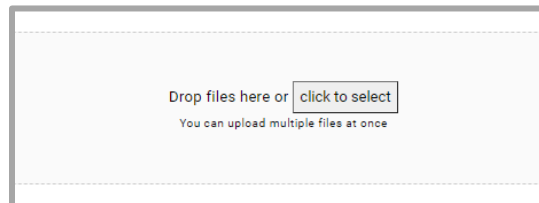

3. Drag and drop your query file in the upper part of your screen or use the 'click to select' button to search and select your query file. Your file will upload to the CloudDrive and automatically be added to the processing queue.

4. You will receive an email confirming the file has been successfully uploaded.
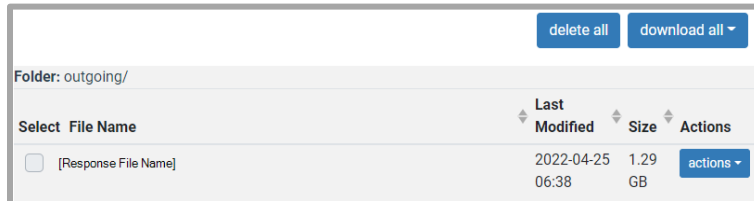
Downloading the response file

1. You will receive an email once the response file is available. Response files will be available within 2 business days.

2. Log into CloudDrive and select the appropriate MIIC bucket from the drop-down menu.

3. Select the 'outgoing' folder on the bottom half of the screen. The name of the query file followed by a date and timestamp will be the name of the response file.

4. Click the blue 'actions' button to the right of the response file and select 'download.'

5. Query and response files will be automatically deleted from your CloudDrive bucket according to the retention plan we set-up with your organization.

Interpreting the Response File

1. The outbound file will contain 1 row for each **vaccination event** on any matched person's record.

   - **id_1 through id_6**: These columns will contain the same ID that was listed in the query file and can be used to help you match immunizations from the response file back to your system.

   - **miic_client_id**: The client's unique MIIC ID. Can be helpful for troubleshooting if there are matching questions.

   - **first_name**: Client's first name as known to MIIC.

   - **last_name**: Client's last name as known to MIIC.

   - **birth_date**: Client's date of birth as known to MIIC.

   - **sex_code**: Client's sex as known to MIIC. You should expect the flat file version of the sex/gender codes, available on the MIIC Client Codes (www.health.state.mn.us/people/immunize/miic/data/clientcodes.xlsx) reference sheet found at MIIC Codes for Data Submission and Exchange (www.health.state.mn.us/people/immunize/miic/data/codes.html).

   - **race_code**: Client's race as known to MIIC. You should expect the flat file version of the race codes, available on the MIIC Client Codes reference sheet found at MIIC Codes for Data Submission and Exchange.

   - **ethnicity_code**: Client's ethnicity as known to MIIC. You should expect the flat file version of the ethnicity codes, available on the MIIC Client Codes reference sheet found at MIIC Codes for Data Submission and Exchange.

   - **immunization_id**: MIIC-specific ID. Can be helpful for troubleshooting if there are questions about specific vaccination data.

   - **vaccine_group_name**: The group that a vaccine belongs to. Combination vaccines are listed on separate rows for each antigen.

- **cpt_code**: The CPT code for the vaccine as reported to MIIC.

  - Every immunization will have CPT or CVX code, or both. MIIC Vaccines and Vaccine Codes (www.health.state.mn.us/people/immunize/miic/data/vaxcodes.xlsx) can be found at MIIC Codes for Data Submission and Exchange.

- **cvx_code**: The CVX code for the vaccine as reported to MIIC.

  - Every immunization will have CVX or CPT code, or both. MIIC Vaccines and Vaccine Codes can be found at MIIC Codes for Data Submission and Exchange.

- **trademark_name**: The Trade Name for the vaccine administered.

- **vaccination_date**: The date the vaccine was administered.

- **administration_route_code**: The route of administration for the vaccine.

  - MIIC Immunization Administration Codes (www.health.state.mn.us/people/immunize/miic/data/admincodes.xlsx) can be found at MIIC Codes for Data Submission and Exchange.

- **body_site_code:** The body site the vaccine was administered.

  - MIIC Immunization Administration Codes (Excel) can be found at MIIC Codes for Data Submission and Exchange.

- **manufacturer_code**: The manufacturer of the vaccine.

  - Manufacturers of Vaccines, MVX Code Set (www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=mvx) available from the CDC.

- **historical_indicator**: Indicates if an immunization was reported to MIIC by the administering provider or another party.

- **historical_lot_number**: The lot number for the vaccine.

Automating exchange of files

If you are interested in automating the process of exchanging files, notify the MIIC Help Desk at health.miichelp@state.mn.us.

Minnesota Department of Health
Minnesota Immunization Information Connection
PO Box 64975
St. Paul, MN 55164-0975
651-201-5207
health.miichelp@state.mn.us
www.health.state.mn.us/miic

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To obtain this information in a different format, call: 651-201-5207.