

TB Genotyping Information Management System (TB GIMS)

What is TB GIMS?

The TB Genotyping Information Management System (TB GIMS) is a secure web-based system that:

- Stores and manages genotyping data on TB patients in the United States
- Allows users to submit and track *Mycobacterium tuberculosis* isolates to and from the contract genotyping labs
- Provides immediate notification of genotyping results and updates to TB labs and programs
- Links isolate data to patient-level surveillance data
- Provides reports on genotype clusters, including national genotype distribution
- Provides national, state, and county maps of genotype clusters

What are the objectives of TB GIMS?

- To improve access to and dissemination of genotyping information nationwide
- To serve as a standard database that local programs can use to
 - Track *Mycobacterium tuberculosis* complex isolates sent to contract genotyping laboratories
 - Receive and update genotyping information on TB patients
 - Access nationwide genotyping information
- To provide a way to alert users about potential TB outbreaks in their jurisdictions

Who are the primary users of TB GIMS?

- TB laboratories that submit isolates for genotyping
- Contract genotyping laboratories in California and Michigan
- TB programs
- CDC

How do I access TB GIMS?

Access to TB GIMS will be coordinated by a designated person in a state known as TB GIMS Administrator. Check with the TB Controller in your state for details. Registration for TB GIMS will be done in phases, starting in spring 2010. There are different user roles and access levels in TB GIMS:

- Super User
- Standard User
- Restricted-access User

(See table 1 for more information on TB GIMS user roles)

What can a Super User do?

Super Users will have unrestricted access to TB GIMS for their jurisdiction. They will be able to update, edit, enter, upload, review, search, import, and export all TB GIMS data.

CDC suggests that most jurisdictions should designate two Super Users. It is suggested that the two Super Users be the:

1. Person in the laboratory with primary responsibility for submitting isolates to the genotyping laboratories; and
2. Person from the TB program with the primary responsibility for managing, validating, and analyzing genotype-related activities for their jurisdiction.

What can a Standard User do?

A Standard User has access to genotyping data, but cannot edit data in the system. Standard Users can search for genotyping results by case (using patient identifiers) or by specific genotype strains (e.g., spoligotype or MIRU patterns), and can view details related to their queries on genotype clusters.

CDC assumes that most TB GIMS users will be Standard Users. TB Program managers and other staff who use genotype data in contact investigations, TB program evaluation, incident response, and other TB control activities are suggested to be Standard Users.

What can a Restricted-access User do?

Restricted-access Users will not have access to patient-level data, but will be able to view aggregate summary data reports. CDC envisions Restricted-access Users to be partners not directly involved with patient-level or programmatic activities.

Is there a difference between an Administrator and a Super User?

An Administrator may or may not be a Super User. If an Administrator chooses to be a Super User, he or she is responsible for regular maintenance of the TB GIMS data along with providing a list of applicants for their jurisdiction.

How does TB GIMS affect laboratories that submit isolates for genotyping?

TB GIMS will replace the Excel spreadsheets that were previously used to submit isolates and receive genotyping results. Laboratories that routinely submit isolates to the contract genotyping laboratory should register for user access for their jurisdiction. Laboratory user roles will be similar to TB program user roles (e.g., Super User, Standard User) and will have laboratory-specific functions such as submitting and tracking isolates to and from the contract genotyping laboratories.

Table 1: TB GIMS User Roles

	Super User	Standard User	Restricted-access User
Access to GIMS data?	Unrestricted access	Regular access	Limited access
Search Data?	Yes	Yes	No
View Data?	<ul style="list-style-type: none"> • Can view aggregated data • Can see line-listed data 	<ul style="list-style-type: none"> • Can view aggregated data • Can see line-listed data 	<ul style="list-style-type: none"> • Can view aggregated data • Cannot see line-listed data
Edit Data?	Yes	No	No
Export Data?	<ul style="list-style-type: none"> • Can export line-listed data • Can export reports 	<ul style="list-style-type: none"> • Can export line-listed data • Can export reports 	<ul style="list-style-type: none"> • Do not have access to line-listed data • Can export reports
View Maps?	<ul style="list-style-type: none"> • Can view national, state, and county level maps at zip code level 	<ul style="list-style-type: none"> • Can view national, state, and county level maps at zip code level 	<ul style="list-style-type: none"> • Can view national and state maps • Cannot view county level maps
Typical Users?	Program epidemiologists, genotype coordinators of a jurisdiction who deal with daily genotype-related activities	Program managers and other staff who use genotype data in contact investigations, TB program evaluation, incident response and other TB control activities	Researchers and other partners not directly involved with patient-level or programmatic activities

Will Regional Training and Medical Consultation Centers (RTMCCs) and other academic institutions be able to access TB GIMS?

Users who want TB GIMS data from multiple jurisdictions will need to apply for access to each of the desired jurisdictions. For example, if the Heartland National TB Center wants to view genotyping data for the states in their region, the nurse consultant from the Center would apply to each state in their region for access as a user. This feature will be available at a later phase of TB GIMS.

Will TB GIMS allow for sharing genotyping data across jurisdictions?

TB GIMS does allow for sharing data across jurisdictions. All users will have access to maps and aggregate cluster distribution reports similar to currently disseminated “National Distribution Reports.” Patient-level data cannot be shared across jurisdiction in the first phase that will be released in 2010.

How is information protected in TB GIMS?

CDC is committed to maintaining strict confidentiality and security of the national surveillance information through the National TB Surveillance System (NTSS). TB GIMS is an extension of NTSS and will be protected in the following ways:

1. Data encryption will be employed when data is transmitted between users and TB GIMS;
2. Only authorized users with accounts authenticated via CDC’s Secure Access Management System (SAMS) will be able to gain access to the system;
3. TB GIMS data will be separately housed on servers protected by SAMS and application firewalls to prevent unauthorized access;
4. TB GIMS is designed to display data/information based on user roles to ensure users only have access to what they have been authorized by Administrators;
5. All potential users must be individually invited and authorized by local TB GIMS Administrators and CDC Administrators.

What are CDC data use agreements and “rules of behavior”?

CDC data use agreements and “rules of behavior” provide general instructions on the appropriate use of Information Technology resources. “Rules of behavior” are not to be used in place of existing policy. Rather they are intended to supplement the Health and Human Services (HHS) Information Security Program Policy [<http://www.cms.hhs.gov/InformationSecurity/>]. All TB GIMS users must sign these agreements electronically to access and view genotype data.

What will happen to previously submitted genotyping data?

TB GIMS will contain all CDC genotyping results that have been reported since 2004. Matching patient surveillance data will be available for all isolates that have been assigned a state case number. Super users can identify isolates with no assigned matching state case number and designate an assignment within TB GIMS.

Can data be exported from TB GIMS? In what format?

Data can be exported from TB GIMS by Super Users only. The current format for exporting line-listed data is in an Excel spreadsheet, which can be manipulated directly or imported into a statistical package of your choice.

For all other queries and standard reports and maps, PDF format will be used and data can be printed directly from TB GIMS by using a simple print function at the bottom of each screen.

How much will TB GIMS cost users and public health departments?

TB GIMS is a web-based application provided by CDC for better dissemination and understanding of genotyping results and reports. TB GIMS is available to users and health departments free of charge.

Additional Information

For more information on TB GIMS, please contact DTBESupport@cdc.gov.