

## New York City Department of Health and Mental Hygiene (DOHMH) Emergency Department (ED) Surveillance System Data Requirements

ED syndromic surveillance was established in September, 2001 to enhance New York City's ability to detect community-wide disease outbreaks. As of October 2003, 40 (60%) of NYC's 67 EDs participated in the system. Outlined below are the technical requirements for participating EDs. To join the system or for additional information please contact the DOHMH staff listed at the bottom of this page.

Acceptable file formats (see page 3 of this document for more detailed specifications)

1. **raw text fixed-width column** [We have found this to be the most reliable.]
- or 2. **raw text delimited** [pipe-delimited best as commas and quotes may appear in chief complaint]  
*Please use simple hard carriage returns at the end of each line.*

### File names

If possible, indicate hospital and date in name (Eg. NYH011502.txt for ED visits on 11/15/02)

Transmit daily by 9AM all ED visits in previous **96** hours ending 12 midnight. Each 96-hour file will overlap with the previous 3 days so that if a file fails to transmit the data will be received the following day. At some hospitals 96-hour files will also allow discharge diagnosis to be populated for ED visits made 2-3 days prior to transmission.

Second Transmission: Schedule a second transmission at 2PM that includes current-day ED visits, from 12AM up to the time of transmission. When investigating unusual clusters, the NYCDOH will first check this mid-day file to see if an increase of illness in the previous day's data is continuing on the current day. If not, often no further follow-up is needed, reducing the number of calls to ED and hospital IT staff. The filename for this mid-day file should be different from the AM file, but can be static so that the file is overwritten each day.

### Required fields

**hospital name** (can be indicated in name of data file)

**ED name or code** (only needed if file contains data from more than one ED location)

**date of visit** (mm/dd/yy); **time of visit** (hh:mm)

**mode of arrival** (eg. ambulance, walk-in, ...)

**gender**

**age** (*not date of birth, please verify that age 0-11 months is coded as 0 years*)

**chief complaint** (*full-length field; please do not truncate, if multiple chief complaint fields please send all*)

**patient's home zip code**

**unique patient identifier** (*usually medical record number*) This facilitates elimination of duplicate visits by same patient for same illness, as well as identification of the chart in the rare event that follow-up is conducted on an individual patient.

**ED discharge diagnoses** [If available, even if incomplete for most recent day]

**ICD9 codes** for chief complaint and discharge diagnosis [If available]

**Disposition**, in particular if patient was admitted or sent home [If available]

### Desired fields:

**Chest x-ray ordered** [If available]

**Blood culture ordered, yes/no** [If available]

**(Arterial) Blood gas ordered, yes/no** [If available]

**Total white count** [If available]

**Maximum temperature** [If available]

*For syndromic surveillance the Department of Health does not collect personal identifiers such as name, date of birth, address, or telephone number.*

For more information, please contact:

Emergency Department Surveillance Program  
Rick Heffernan, MPH, Research Scientist  
Tel: (212) 788-5391 Fax: (212) 788-5470  
[rheffern@health.nyc.gov](mailto:rheffern@health.nyc.gov)

Debjani Das, MPH, Research Scientist  
Tel: (212) 788-4318 Fax: (212) 788-5470  
[ddas@health.nyc.gov](mailto:ddas@health.nyc.gov)

## **Data transmission options available for the DOHMH ED surveillance system**

The DOHMH supports the transmission methods listed below. We strongly recommend automating the transmission process so that no daily effort is required on the part of hospital staff and using encrypted transmission (PGP or SSL). Some hospitals have managed to program automatic pager or email alerts to hospital IT staff when transmission fails. DOHMH technical assistance is available for any of the following methods.

### Preferred:

1. PGP encryption: Using any of the transmission options 2-5, encryption software (eg. PGP) is used to encrypt the data file prior to transmission using a public encryption key provided by DOHMH. The files can then be de-encrypted and read only by DOHMH using a private key known only to DOHMH staff involved in ED surveillance. Hospitals that do not already have PGP software would need to install it. Some versions are freely available over the internet.
2. Secure FTP (SFTP): This method requires software at the hospital that establishes a secure channel with similar software at the FTP site. Passwords and data can be safely transmitted through this channel.
3. Secure Sockets Layer (SSL): Any hospital with web access can use this method manually by logging onto a DOHMH website and following the instructions to upload a file. This is a highly secure method (similar to on-line credit card transactions) but is more difficult to automate. We're told that one can automate the SSL process using Java scripts.

### Not recommended:

4. Standard FTP: This is the easiest automated method to implement. A username and password restricts access to the FTP site, however both password and data are transmitted without encryption.
5. Send data file as email attachment: Anyone with access to email can do this. This is not secure and is not easily automated.

## Data Specifications

DOHMH can read most data formats. The following in a fixed-width column or pipe-delimited file is one example of an acceptable format. DOHMH will also accept data that conform to HL7 2.3.1, HL7 3.0, or DEEDS 1.0 (Data Elements for Emergency Department Systems).

Field name	Description	Format	Length
<b>Required Fields</b>			
Hospital_name	Abbreviated label that uniquely identifies hospital.	Character	3-15
ED_name	Abbreviated label that uniquely identifies ED facility.	Character	3-15
ID	Unique patient identifier (usu. medical record number)	Character	8-20
Mode of arrival	Code identifying mode of arrival.	Character	3-5
Date	Arrival date	mm/dd/yyyy	10
Time	Arrival time	hh:mm	5
<i>or DateTime</i>	<i>Arrival date and time as datetime field</i>	12Nov2003 10:42	15
Age	Age in years	Numeric	3
Sex	'M' or 'F' or 'U' (unknown)	Character	1
Zip	Patient's home zip code.	Numeric	5
Chief_Complaint	Free-text. Do not truncate.	Character	50-200
Disposition	Coded value from	Character	3-5
<b>Desired fields</b>			
Chief_Complaint2	Secondary chief complaint.	Character	50-200
Discharge_Diagnosis	Primary discharge diagnosis text descriptor.	Character	50-200
Discharge_ICD9	Primary discharge diagnosis ICD9 code.	Numeric xxx.xx	6
Discharge_Diagnosis_2	Secondary discharge diagnosis text descriptor.	Character	50-200
Discharge_ICD9_2	Secondary discharge diagnosis ICD9 code.	Numeric xxx.xx	6
Chest x-ray ordered	'Y' or 'N' or 'U' (Unk.)	Character	1
Blood culture ordered	'Y' or 'N' or 'U' (Unk.)	Character	1
(Arterial) blood gas ordered	'Y' or 'N' or 'U' (Unk.)	Character	1
Total white count	Cells x 1000 / mm3	Numeric xx.x	4
Max_temp	Patient's maximum temperature.	Numeric xxx.x	5