# SENTINEL WORKPLAN

**Information for Public Users of this package**
A "Workplan" is a program package executed by Sentinel Data Partners. You are reading an example workplan document that provides information to Sentinel Data Partners on what is contained in the package, what is expected to occur in its execution, what files are to be retained at their site, and what files are to be returned to the Sentinel Operations Center.

We have included a SAS LOG file of an execution of this programming package. The purpose of this LOG file is to enable you to observe example SAS code and results generated by the SAS macros in the package. It is named: 001-prod_master_MSOC.log. This example execution is based on a development database of 5 million patients, spanning approximately 6 years of data, 2004-2009.

In order to understand the data tables that are read by this package, we recommend that you review the *Sentinel Common Data Model*, available at:
http://mini-sentinel.org/data_activities/distributed_db_and_data/default.aspx.

All program packages sent to and executed by Sentinel Data Partners, including this Summary Tables package, also reference a site-specific set of files called *Common Components*. The purpose of *Common Components* is twofold: (1) Enable Data Partners to have a single set of directory paths established for locations of their data files and (2) Provide metadata about the Data Partners' data and systems for the Sentinel Operations Center. You can get more information about *Common Components* at:
http://mini-sentinel.org/data_activities/distributed_db_and_data/details.aspx?ID=167.

**Project Name**:
Sentinel SAS Summary Tables for Use in the FDA Sentinel Distributed Query Tool

**Workplan Objective:**
Once a new data refresh is approved at a Data Partner site, this workplan needs to be executed against the newly approved Common Data Model (CDM) tables in order to create **prevalent code** and **incident code** SAS summary tables stratified **by period, age-group, sex, encounter type**. These summary tables are, in turn, exported and will be used by the Query Tool for performing quick feasibility assessments (e.g., Do we have enough patients with code XYZ yet to warrant further study?) in response to FDA questions.

**Downloading and Running the Package:**

1. Download this package and extract all files into a folder structure identical to that in the ZIP file.
2. This package uses hash tables which are created in memory, so please consult the table below to ensure that the SAS Option MEMSIZE is set appropriately.

| SCDM Demographic table size | MEMSIZE suggested |
|---|---|
| Number of patients is between 1 - 15,000,000 | 2GB |
| Number of patients is between 15,000,000 – 30,000,000 | 4GB |
| Number of patients is between 30,000,000 – 70,000,000 | 8GB |

3. If MEMSIZE needs to be adjusted, it needs to be done by changing the parameter value in the SAS configuration file or on the fly as SAS command line OPTION. Please refer to SAS documentation as necessary.
4. You may see the following WARNING or ERROR messages which is normal and expected for this package *"WARNING: No CMP or C functions found in library DPTEMP.FCMP_Functions."*
5. Based on extensive beta testing at Data Partner sites, we expect that the package will take between ½ hour to 24 hours to run depending on system capabilities, data volumes, and system loads.

**Additional Instructions for Running the Package:**
Please follow the additional instructions at the top of main SAS program **qt_main_program.sas** in the **sasprograms** folder of the package and the instructions in this workplan.

**List of Files needed to complete the workplan:**

**SAS Program(s):**
qt_main_program.sas

**Input File(s):**

*1-Master SAS program*
/inputfiles/001-master_program.sas

*7- SAS dataset lookup tables*
/inputfiles/dx_icd9_3dig_lookup.sas7bat
/inputfiles/dx_icd9_4dig_lookup.sas7bdat
/inputfiles/dx_icd9_5dig_lookup.sas7bdat
/inputfiles/ndc_lookup_table.sas7bdat
/inputfiles/px_icd9_3dig_lookup.sas7bdat
/inputfiles/px_icd9_4dig_lookup.sas7bdat
/inputfiles/px_lookup.sas7bdat

*31-Include SAS module programs*
/inputfiles/module_code/ (see MSOC logs section)

*12-Include SAS utility programs called by modules*
/inputfiles/utility_code/bridge_enr_spans.sas
/inputfiles/utility_code/create_rx_episode_claims.sas
/inputfiles/utility_code/inc_next.sas
/inputfiles/utility_code/incident_rx_episodes.sas
/inputfiles/utility_code/incident_rx_summ.sas
/inputfiles/utility_code/prev_summ.sas
/inputfiles/utility_code/rx_prev_summ.sas
/inputfiles/utility_code/st_utility_macros.sas
/inputfiles/utility_code/stockpile_rx.sas
/inputfiles/utility_code/tableextract.sas
/inputfiles/utility_code/user_functions_formats.sas
/inputfiles/utility_code/utility_macros.sas

**DPLOCAL Output Files:** Running this package successfully will output these SAS datasets and text files into your DPLOCAL directory location.

*13-SAS datasets*
Age_Groups.sas7bdat
Drug_Class.sas7bdat
Enrollment.sas7bat
Generic_Name.sas7bat
HCPCS.sas7bdat
ICD9_Diagnosis.sas7bat
ICD9_Diagnosis_4_Digit.sas7bat
ICD9_Diagnosis_5_Digit.sas7bat
ICD9_Procedure.sas7bat
ICD9_Procedure_4_Digit.sas7bat
Incident_Drug_Class.sas7bat

Incident_Generic_Name.sas7bat
Incident_ICD9_Diagnosis.sas7bat

*13-tab delimited text files*
Age_Groups.txt
Drug_Class.txt
Enrollment.txt
Generic_Name.txt
HCPCS.txt
ICD9_Diagnosis.txt
ICD9_Diagnosis_4_Digit.txt
ICD9_Diagnosis_5_Digit.txt
ICD9_Procedure.txt
ICD9_Procedure_4_Digit.txt
Incident_Drug_Class.txt
Incident_Generic_Name.txt
Incident_ICD9_Diagnosis.txt

**MSOC Output Files:** Running this package successfully will output these two SAS datasets and LOG files into your MSOC directory location. Sentinel Data Partners then send these files to the Sentinel Operations Center for review.

*2- SAS datasets:*
Moduleduration.sas7bdat
Overall_SignatureFile.sas7bdat

*28- Log files:*
001-prod_master.log
Age_groups.log
Dem_etl.log
Dx_code_files.log
Dx_etl.log
Dx3_incident_episodes.log
Dx3_prev.log
Dx4_prev.log
Dx5_prev.log
Enr_etl.log
Enrollment.log
Export.log
Incident_drug_class.log
Incident_dx3.log
Incident_generic_name.log
Prev_pat_keys.log
Px_code_files.log
Px_etl.log
Px_hcpcs_prev.log
Px_icd9_3d_prev.log
Px_icd9_4d_prev.log
Rx_attach_keys.log
Rx_drug_class.log
Rx_drug_class_incident_episodes.log
Rx_etl.log
Rx_generic_name.log
Rx_generic_name_episodes.log
Rx_lookup_keys.log

Note:
The log output for modules 000-startup.sas, 999-shutdown.sas, and utility_code.sas are contained in 001-prod_master.log