



**Health Services  
Clinical Activity Mining  
User Manual**



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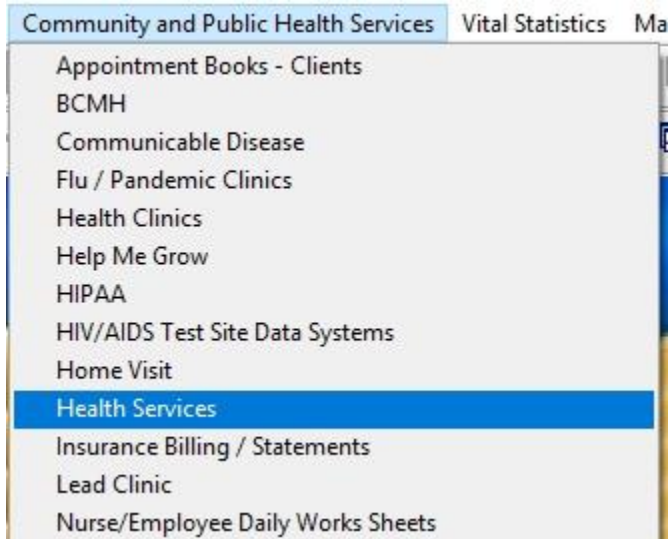
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## Getting Started

Upon installation, Health Services can be accessed by going to **Community and Public Health Services -> Health Services**, as shown here:



From the **Health Services** menu, navigate to **Reports -> Clinical Activity Mining**, shown below:



When **Clinical Activity Mining** is selected, the program might warn you that this is a data intensive operation not recommended for use on slower computers or slower network connections.

The program may take a while to load due to the process of gathering and preparing to analyze large amounts of data.

A window titled **Review Health Services Activities** is displayed. The data mining screen provides an overview of all attributes related to Health Services activities. Attributes provided in this mining program are **Date Range, Dose #, Vaccines/Activities, Diseases/Services, Age in, Nurses, Political Subdivisions, and Clinic Sites.**

The screenshot shows a software window titled "Data Mine Clinic Activities" with the main heading "Review Health Services Activities". It contains several filter sections:

- Date Range:** Start: 06/30/2016, End: 06/30/2017
- Dose #:** Min: [ ], Max: [ ]
- Nurses:** List of nurses with checkboxes: BARTON, CLARA; BRADLEY, RUBY; CAVELL, EDITH; CURIE, MARIE. Includes "Set All" and "Clear All" buttons.
- Political Subdivisions:** List of subdivisions with checkboxes: ATLANTIS TWP.; BGI TWP.; BORGVILLE TWP.; ENTERPRISE TWP. Includes "Set All" and "Clear All" buttons.
- Vaccines / Activities:** Table with columns: Vaccine / Activity, Disease / Service, Show. Includes "Set All" and "Clear All" buttons.
- Diseases / Services:** List of diseases with checkboxes: BCG, CHOLERA, DIPHTHERIA ANTITOXIN, DIPHTHERIA, TETANUS, ACELLULAR PERTUSSIS. Includes "Set All" and "Clear All" buttons.
- Age in:** Start/End fields for Months and Years.
- Clinic Sites:** List of sites with checkboxes: BIONICVILLE, BIONICVILLE CLINIC, BROWNVILLE HIGH SCHOOL, BROWNVILLE MIDDLE SCHOOL. Includes "Set All" and "Clear All" buttons.

Below the filters is an "Apply Filter Selections" button and a "Selection" table:

Site	Date	Nurse	Age	Dob	Age Mos	Age Yrs	Disease	Vaccine	Type	Dose	It
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	150	12	MENINGITIS	MCV4	MET	1	L
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	150	12	HUMAN PAPILLOMA	HPV9	HPV9	1	F
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	150	12	DIPHTHERIA, TETANUS, A/Td	TD	TD	4	F
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	150	12	DIPHTHERIA, TETANUS, A/Tdap	TDAP	TDAP	6	L
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	150	12	HEPATITIS A	HepA	HEPA	1	L
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	150	12	MENINGITIS	MCV4	MET	1	F
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	150	12	HUMAN PAPILLOMA	HPV9	HPV9	1	F
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	10/17/1998	150	12	MENINGITIS	MCV4	MET	1	F
BIONICVILLE	09/26/2016	FAIRCHILD, HELEN	17	04/21/1999	150	12	HUMAN PAPILLOMA	HPV9	HPV9	2	L
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	150	12	HUMAN PAPILLOMA	HPV, quadrivalent	HPV	1	F
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	150	12	MENINGITIS	MCV4	MET	1	L

At the bottom of the window is a "Save Visit List" button.

The screen will display with the date range default to the last year, ending on current date, with all options for filter values selected.

The result of health services data extracted for the default criteria is displayed in the grid in the bottom section of the screen.

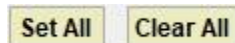
## Buttons

The filter selections are provided to specify the criteria used to extract the information you desire and display in the **Selection** area.

Each filter option displays the list of all values defined for that filter option. For each of the filter options, you will find two buttons beneath the list of values.

### **Set All / Clear All**

The **Set All** button selects all of the values defined for the filter. **Clear All** deselects all values selected for the filter. This makes it easier than going through and clicking each choice.



To select a single or a few selections, you can first click the **Clear All** button, then select the single/few selections desired. Similarly, to select all but one or a few selections, first click the **Set All** button, then deselect the one/few selections not desired.

The deselection of all selections without subsequent selection of one/few selections is equivalent to having clicked the **Set All** button.

### **Apply Filter Selections**

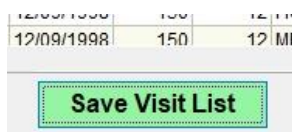
Upon modifying the selection of one or more filter options, the extraction of data to match to the updated filter selection can be achieved by clicking the **Apply Filter Selection** button



When the extraction of data matching the updated filter selections is complete, the grid display will be updated to reflect the data extracted per the updated filter criteria.

### **Save Visit List**

The Save Visit List button displayed below the grid is provided to save the current data set displayed in the grid to an Excel compatible file.



The process of saving extracted data to a file is discussed in the **Saving Extracted Activity Details** section on page 10.

**Clinical Activities Filter Criteria**

The following pages discuss the options available for specifying the criteria of data details for which to extract clinical activities.

For the options of Nurses, Political Subdivisions and Clinic Sites are effective to the extent to which those values are specified when the clinical activities are entered (per Nurses and Clinic Sites) and when the patient/client demographic details (Political Subdivisions) are entered into HDIS. If those values are entered on an irregular basis, or not at all, then you will want to have all options selected.

When extracting data details for activities in the distant past there are likely to be options which do not apply currently, such as nurses who are no longer with the health department. Therefore, make sure all the options possible for that time period, or all options entirely, are selected.

**Date Range:** The date range of clinical activities to be extracted. The date range values will default to 1 year ending on current date.

Date Range	
Start	06/30/2016
End	06/30/2017

**Dose #:** The **minimum** and **maximum** dose event # range for clinical activities to be extracted. To extract all dosage events, leave both values blank.

Dose #	
Min	<input type="text"/>
Max	<input type="text"/>

**Nurses:** Specify the nurse(s) who provided the clinical activities to be extracted.

Nurses	
Nurse	Show <input type="checkbox"/>
BARTON, CLARA	<input checked="" type="checkbox"/>
BRADLEY, RUBY	<input checked="" type="checkbox"/>
CAVELL, EDITH	<input checked="" type="checkbox"/>
CURIE, MARIE	<input checked="" type="checkbox"/>

Set All   Clear All

**Clinic Activities Filter Criteria** (continued)

**Political Subdivisions:** The political subdivision(s) which the clients receiving the clinical services reside in, which are to be extracted

Political Subdivisions		
Political Subdivision City	Show	^
ATLANTIS TWP.	<input checked="" type="checkbox"/>	
BGI TWP.	<input checked="" type="checkbox"/>	
BORGVILLE TWP.	<input checked="" type="checkbox"/>	
ENTERPRISE TWP.	<input checked="" type="checkbox"/>	▼

Set All Clear All

**Vaccines / Activities:** The Vaccine / Activity specified in the clinical service details which are to be extracted.

Vaccines / Activities		
Vaccine / Activity	Disease / Service	Show
BCG	BCG	<input checked="" type="checkbox"/>
BXSERO	MENINGOCOCCAL B	<input checked="" type="checkbox"/>
Cholera	CHOLERA	<input checked="" type="checkbox"/>
DECLINE *	HAEMOPHILUS	<input checked="" type="checkbox"/>

Set All Clear All

**Diseases / Services:** The Disease / Service specified in the clinical service details which are to be extracted

Diseases / Services	
Disease / Service	Show
BCG	<input checked="" type="checkbox"/>
CHOLERA	<input checked="" type="checkbox"/>
DIPHThERIA ANTITOXIN	<input checked="" type="checkbox"/>
DIPHThERIA, TETANUS, ACELLULAR PERTUSSIS	<input checked="" type="checkbox"/>

Set All Clear All

**Specifying criteria for Diseases / Services and Vaccines / Activities**

The Disease/Vaccine and Services/Activities definitions are organized in a parent/child relationship such that upon selecting a disease/service definition during data entry, only those vaccines/activities designated with that disease/service specification are available for selection in the health service details.

The restriction of selecting vaccines/activities associated to the disease/service selected is not enforced here in the Clinical Activity Mining screen.



**Clinic Activities Filter Criteria** (continued)

**Age in:** Specify the age of the client, at the time the clinical service was provided, for the clinical service details to be extracted.

		Age in	
		Months	Years
Start	<input type="text"/>	<input type="text"/>	<input type="text"/>
End	<input type="text"/>	<input type="text"/>	<input type="text"/>

With ability to specify age in two manners, Months and Years, the filter criteria for Age is applied in two parts – the first component for the Months criteria, the second component for the Years criteria.

Examples for specifying age criteria :

Months (start,end)	Years (start,end)	Result
1, 12	5,	Activity for clients 1-12 months and 5 yrs and up
1, 12	, 5	Activity for clients 5 yrs and younger (which covers the 1-12 months specification as well)
, 36	65,	Activity for infants up to 36 months and seniors 65+
	13,18	Activity for adolescents 13 – 18 years of age

**Clinic Sites:** Specify the clinic site(s) where clinical services were provided for the clinical service details to be extracted.

Clinic Sites		
Site	Abbrev	Show ^
BIONICVILLE	MCAU	<input checked="" type="checkbox"/>
BIONICVILLE CLINIC	ASC	<input checked="" type="checkbox"/>
BROWNVILLE HIGHSCHOOL	CHS	<input checked="" type="checkbox"/>
BROWNVILLE MIDDLE SCHOOL	CMS	<input checked="" type="checkbox"/>

**Review Clinic Activities Extract**

Once the criteria is specified and the data satisfying such criteria has been extracted, the extracted data set will be displayed in the grid located in the bottom section of the screen with the label **Selection**.

The extracted data will be displayed as sorted by the Clinic Site detail. An example of extracted data displayed in the Selection grid is shown below.

Selection										
Site	Date	Nurse	Age	Dob	Age Mos	Age Yrs	Disease	Vaccine	Type	Dose
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	144	12	MENINGITIS	MCV4	MET	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	144	12	HUMAN PAPILLOMA	HPV9	HPV9	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	12	08/16/2004	144	12	DIPHThERIA, TETANUS, A/Td		TD	4
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	149	12	DIPHThERIA, TETANUS, A/Tdap		TDAP	6
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	149	12	HEPATITIS A	HepA	HEPA	1
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	149	12	MENINGITIS	MCV4	MET	1
BIONICVILLE	04/17/2017	FAIRCHILD, HELEN	12	11/08/2004	149	12	HUMAN PAPILLOMA	HPV9	HPV9	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	10/17/1998	214	17	MENINGITIS	MCV4	MET	1
BIONICVILLE	09/26/2016	FAIRCHILD, HELEN	17	04/21/1999	209	17	HUMAN PAPILLOMA	HPV9	HPV9	2
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	212	17	HUMAN PAPILLOMA	HPV, quadrivalent	HPV	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	212	17	MENINGITIS	MCV4	MET	1

Upon entry to the Clinical Activity Mining screen, an extract of data for all activities occurring during the previous 12 months, with no filter selections, is displayed.

The extracted data will display in ascending order based on the first column, Site.

**Change Order of Display**

The order in which the extracted data is displayed can be changed by clicking the mouse on the header display for the data value which you want to sort by. The display of the grid below reflects a change to display by clinical service / vaccination date.

Site	Date	Nurse	Age	Dob	Age Mos	Age Yrs	Disease	Vaccine	Type	Dose
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	10/17/1998	214	17	MENINGITIS	MCV4	MET	1
BIONICVILLE	09/26/2016	FAIRCHILD, HELEN	17	10/30/1998	214	17	VARICELLA	Var	VAR	2
BIONICVILLE	09/26/2016	FAIRCHILD, HELEN	17	10/30/1998	214	17	MENINGITIS	MCV4	MET	1
BIONICVILLE	09/07/2016	FAIRCHILD, HELEN	17	11/16/1998	213	17	MENINGITIS	MCV4	MET	2
BIONICVILLE	09/07/2016	FAIRCHILD, HELEN	17	11/16/1998	213	17	HEPATITIS A	HepA	HEPA	2
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	11/18/1998	213	17	DIPHThERIA, TETANUS, A/Tdap		TDAP	7
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	11/18/1998	213	17	VARICELLA	Var	VAR	2
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	11/18/1998	213	17	MENINGITIS	MCV4	MET	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	212	17	HUMAN PAPILLOMA	HPV, quadrivalent	HPV	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	212	17	MENINGITIS	MCV4	MET	1
BIONICVILLE	08/25/2016	FAIRCHILD, HELEN	17	12/09/1998	212	17	HEPATITIS A	HepA	HFPA	1

Upon clicking the heading display for the Date column again, the extracted data will be displayed with the date values in descending order.

Note : Upon clicking a header display of a different column, the extracted data will be (re)displayed in order based on the newly selected column. The Ascending / Descending characteristic of the sorting will reset to Ascending.

Upon updating extract criteria and clicking to Apply (updated) Filter Selections, the display order for the new extract of data will remain the same as that of the previous extract at time the Apply Filter Selections button is clicked.

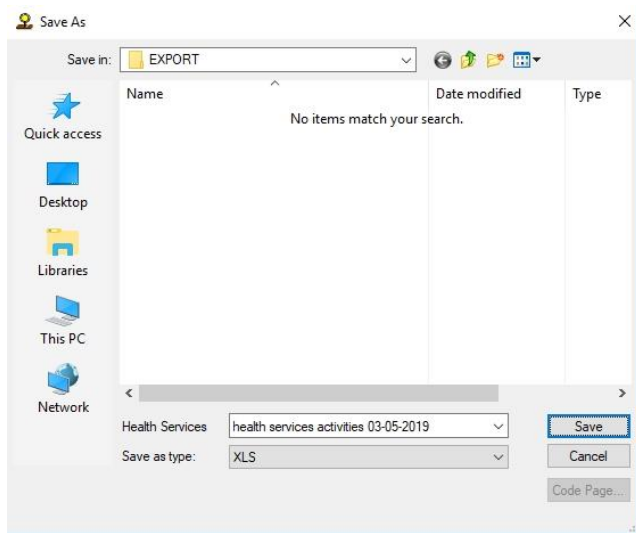
**Saving Extracted Activity Details**

Upon clicking the **Save Visit List** button, a dialogue box (shown below) is displayed for the user to specify the name of the file which to save the data details to and the location of the folder to save the file in.

The filename and folder will default with the following:

Filename	health services activities mm-dd-yyyy	using current date
Save as Type	XLS	Excel file

The display defaults to save the file to the **C:\HDIS\Export** directory on the workstation.



You may change the name of the file which to save the extracted data details as well as the folder to save the file in (via the 'Save in' specification at top of display).

Upon completing specifying details of the file which to save the extracted data to, click the Save button. Select the Cancel button to exit the screen without saving the data to file.