

**MEDICATION DATA MAPPING**

1 Load Medication Data View first ten input data rows below

Patient ID	Date of Service	NDC Code	Medication Name	Provider ID
10001	1/6/2015	35356060504	Adalimumab	1234
10001	12/1/2015		Azathioprine	1234
10001	8/11/2015		Prednisone	1234
10002	1/6/2015	35356060504	Adalimumab	1234
10002	12/1/2015		Azathioprine	1234
10002	8/20/2015		Prednisone	1234
10003	1/6/2015	35356060504	Adalimumab	1234
10003	12/1/2015		Azathioprine	1234
10003	8/20/2015		Prednisone	1234

2 Map each source field name to a destination field name One medication identifier is required  Optional Fields

Source Field Names

NDC Code

Provider ID

Map

Unmap

Unmap All

Destination Field Names

Patient ID >> Patient ID

Date of Service >> Date of Service

NDC Code

Medication Name >> Medication Name

Provider ID

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This screen is where the user loads and maps medication data to be analyzed. The user loads the medication records file by clicking the **Load Medication Data** button and browsing to the desired data file.

After the data are loaded, the second step is to map the **Source Field Names** (imported records data fields) to the **Destination Field Names** (analyzer data fields). First, click on a **Source Field Name**, then click on its corresponding **Destination Field Name**, and then click the **Map** button. This moves the Source Field Name to the Destination Field Names list. Note that corresponding terms may or may not match exactly and are not always positioned directly across from one another.

A sample medication records file (Sample Medication.txt) has been provided in the **Sample Data** folder to give the user experience with the software tool prior to importing their own organization's data.

**Figure S1** IBD PATH medication data mapping screen. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.

**MEDICAL DATA MAPPING**

1 Load Medical Data View first ten input data rows below

Patient ID	Date of Service	Provider ID	Procedure 1	Procedure 2	Diagnosis 1	Diagnosis 2	Diagnosis 3	Diagnosis 4	Diagnosis 5
10001	12/6/2014	1234	99221	44005	K50.0		427.31	I48.91	
10002	12/6/2014	1234	99282	72197	K50.0		427.31	I48.91	
10003	12/6/2014	1234		G8433	K50.0	F32.1	327.23	G47.33	
10004	12/6/2014	1234			K50.0		428.22	Z23	
10005	12/6/2014	1234	99221	44005	K50.0		427.31	I48.91	
10006	12/6/2014	1234	99282	74109	K50.0				
10007	12/6/2014	1234		G8433	K50.0	F32.2	719.46	M25.562	
10008	12/6/2014	1234			K50.0		599.7	R31.9	
10009	12/6/2014	1234			K50.0		787.01	R10.7	

2 Map each source field name to a destination field name Optional Fields

Source Field Names

Patient ID

Date of Service

Provider ID

Procedure 1

Procedure 2

Diagnosis 1

Diagnosis 2

Diagnosis 3

Diagnosis 4

Diagnosis 5

Map

Unmap

Unmap All

Destination Field Names

Patient ID

Date of Service

Provider ID

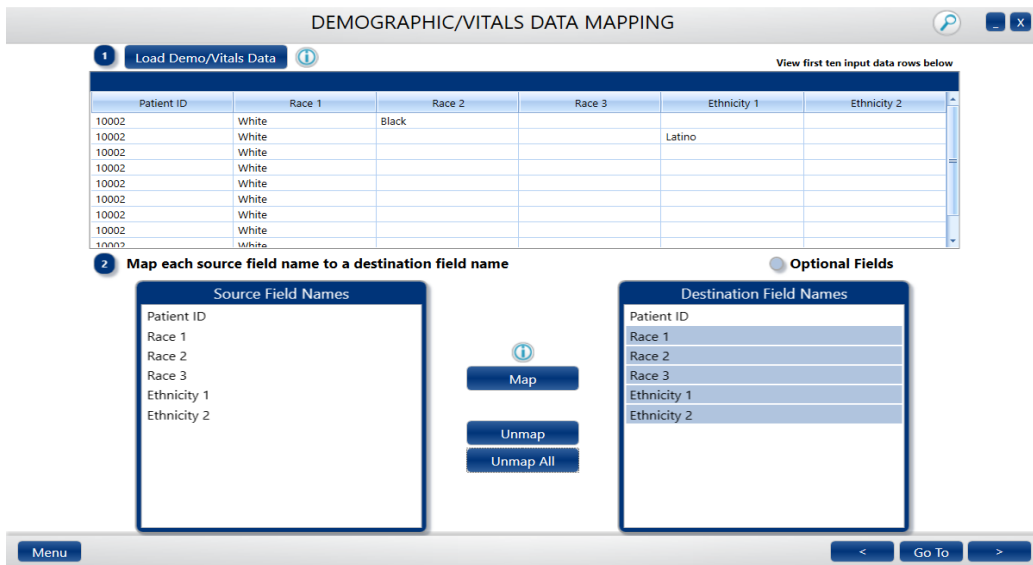
Procedure Codes

Diagnosis Codes

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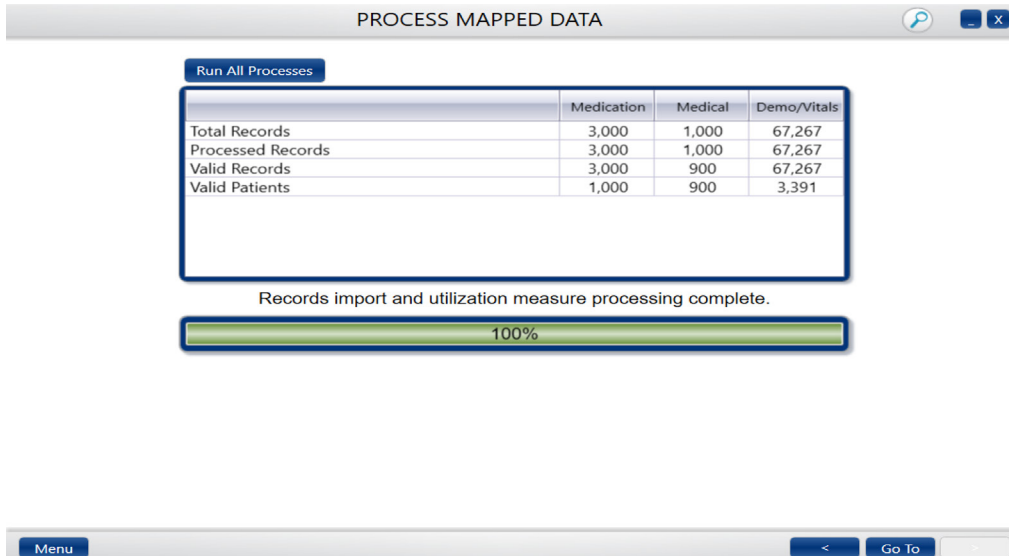
This screen is where the user loads and maps medical data to be analyzed. The process is the same as the Medication Data Mapping.

**Figure S2** IBD PATH medical data mapping screen. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.



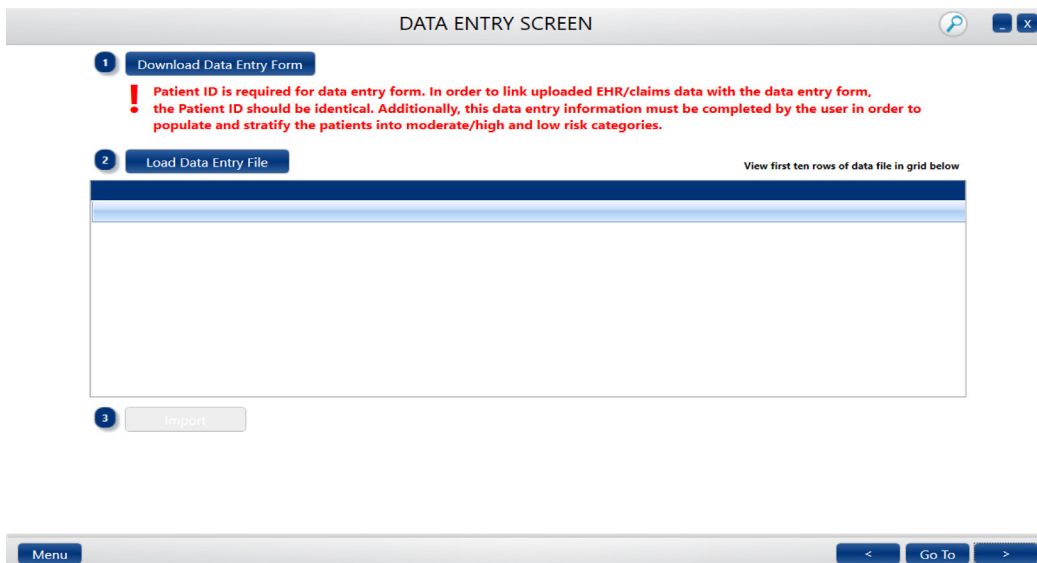
This screen is where the user loads and maps demographic and vitals data to be analyzed. The process is the same as the Medication Data Mapping.

**Figure S3** IBD PATH demographic/vitals data mapping screen. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.



This screen tracks the progress of records processing and validation and measures processing. Once all the data is loaded and mapped, click the **Run All Processes** button and the tool will begin to process and analyze the data. When the records processing is complete, the counter will display final numbers of total records, processed records, valid records, and valid patients for medication, medical, and demographic/vital.

**Figure S4** IBD PATH process mapped data. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.



This screen allows the user to download and load data entry data to be analyzed for the IBD Module. **Note: The data entry information is required to stratify the IBD population into moderate/high and low risk categories. However, the tool will run even if all this data is not uploaded.**

Figure S5 IBD PATH data entry screen. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.

Patient ID	Age at Diagnosis	Extensive anatomic involvement	Perianal disease	Severe colitis disease	Deep ulcers	Previous surgical resection	Smoking behavior	Pre-diagnosing behavior	Extensive colitis	Second resection disease	History of Hospitalization	High COP and ESR	Classification of IBD	Crohn's disease indicator	Smoking status	User Defined 1	User Defined 2
3-2389	30	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
4-3991	48	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
5-2844	38	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
6-2628	45	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
7-2628	28	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
8-2845	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
9-2848	33	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
10-2343	42	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
11-2343	25	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
12-2423	30	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
13-2389	40	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
14-2391	38	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
15-2344	42	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
16-2628	28	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
17-2628	28	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
18-2845	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
19-2848	42	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
20-2343	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
21-2343	33	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		
22-2423	42	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	non-smoker		
23-2391	25	No	No	No	No	No	No	No	No	No	No	No	No	No	non-smoker		

To start the data entry process, download the data entry form by clicking the **Download Data Entry Form**. The data entry form will prepopulate the patient IDs from the Medical file uploaded on the Medical Data Mapping screen.

The User Defined Fields allow the user to add up to three variables in the data entry form that are not pre-defined for the risk categories. These variables will be display exactly as they are entered with no calculations performed.

Figure S6 IBD PATH data entry form. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.

DATA ENTRY SCREEN

1 Download Data Entry Form

**! Patient ID is required for data entry form. In order to link uploaded EHR/claims data with the data entry form, the Patient ID should be identical. Additionally, this data entry information must be completed by the user in order to populate and stratify the patients into moderate/high and low risk categories.**

2 Load Data Entry File View first ten rows of data file in grid below

Patient ID	Age at C	Extensiv	Perianal	Severe n	Deep ulk	Previous	Stricture	Penetrat	Extensiv	Steroid-h	History/c	High CR	Clostrid	Cytomeg	Smoking	User Def	User Def
2089	30	No	No	No	No	No	No	No	No	No	No	No	No	No	smoker		
2091	40	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	nonsmo		
2604	34	No	No	No	No	No	No	No	No	No	No	No	No	No	nonsmo		
2626	45	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	smoker		
2628	28	No	No	No	No	No	No	No	No	No	No	No	No	No	nonsmo		
2645	26	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	nonsmo		
2668	32	No	No	No	No	No	No	No	No	No	No	No	No	No	nonsmo		
3245	42	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	nonsmo		
3341	25	No	No	No	No	No	No	No	No	No	No	No	No	No	nonsmo		
3425	30	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	nonsmo		

3 Import

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When the data entry information is completed, the user would click the **Load Data Entry File** button and browse to find and select the desired file. Once the file is loaded, the data will appear in the table rows then the user can click on the **Import** button to finish the process.

**Figure S7** IBD PATH data entry screen, loaded data. IBD PATH, Inflammatory Bowel Disease Population Analyzer Tool for Health Systems.