Population Health Intelligence Through Analytics Exercise Workbook

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Welcome to i2iTracks Population Health Intelligence through Analytics Training

With i2iTracks, Population Health Intelligence data is at your fingertips.

In this training you will learn how to use the i2iTracks analytics tools as your path to data and information. You will receive step-by-step instructions and gain insights on how to successfully build, update and generate reports, searches and dashboards.

Through the various scenarios, exercises, and hands-on training, you'll feel confident in your abilities to:

- Customize the Population Health Analytics Toolkit
- Create reports and dashboards
- Optimize Patient Searches
- And more!

You also learn techniques to effectively utilize the data that is presented to you through these tools, how to validate your report data, and how analytics can help you in your quest to have a healthier population.

We look forward to making a Population Analytics wizard out of you!

Easy & Customizable Health Registry Reports

Health Registry Reports are easy and customizable disease management reports. These reports can be quickly created and provide a wealth of knowledge about a specified population of patients.

Every Health Registry report starts with some standard data:

- Total Patient and Visit Counts
- Demographic Information: Age, Gender, Race, Language, Insurance
- Vitals Information: BMI, Blood Pressure

The remaining part of the report is customizable. You can include profile items, women's health items, or even labs.

To create a Health Registry Report:

Go to Setup > Printing and Reporting > Health Registry Reports.

Define the POPULATION in the Patients tab. The POPULATION is the group of patients that meet the criteria entered on this screen.

Use all of the other tabs to define what STATISTICS you want to see on the report (Profile Items, Labs, etc.).

Health Registry Report Exercise

Create a Health Registry Report for your patients with Diabetes.

***Population*:** Active patients assigned to the Diabetes Tracking Type who had at least one visit (of any type) in the past 1 year. Include the Items:

- Education: Diet/Nutrition
- Immunizations: Flu, Pneumovax
  Procedures: Eye Exam, Foot Screening
- Labs: HbA1c, LDL, HDL

Customize date ranges as follows:

- Flu: 1 / year
- Pneumovax: 1 ever
- Diet/Nutrition Counseling: 1 / year
- A1c: 6 mos

Customize lab value range:

- A1c: <7, 7-9, >9

Run your report for the period 7/1/17 - 6/30/18.

Record:

1. Total Patient Included: _____
2. Female Patients: _____
3. Age 65+: _____
4. BMI >29: _____
5. Average BP: _____
6. Flu Vaccine Recvd: _____
7. Pneumovax Recvd: _____
8. A1c Average: _____
9. A1c <7: _____

Patient Search

The Patient Search provides an easy tool to query i2iTracks to identify a population.

- Who needs a flu shot?
- Who are my diabetic patients who have been seen in the last 1 year?
- Who are my HTN patients who need to have a BP check?
- Who has >5 problems?

The Patient Search can be used to assist in the care management of your patients with chronic diseases many ways.

- Identify patients who need follow-up
- Create patient lists by provider or facility
- Find out who has had an abnormal lab/test
- Discover who is overdue for a visit

When you run a Patient Search, you are presented with a list of patient who matches your search criteria. This patient list is ACTIONABLE.

- Send a letter or email or text
- Print a form
- Display a Morning Huddle Report
- Manage Tracking Types
- Inactivate patients

Searches are made up of **FILTERS** and **FIELDS**.

FILTERS: The filters define WHO your population will be. They are your search CRITERIA / FILTERS.

FIELDS: The fields define WHAT information you want to see about your list of patients.

What is the difference between a 'Patient Search' and a 'Report'?

- A Patient Search returns a list of patients that match your criteria.
- A Report returns statistics (numbers) about the population.

Filters

General	
	Active
	Deceased
	Appointments
	Tracking Types
	Inactive Tracking Type
	Framingham Risk Value
Demographic	
	Age
	DOB
	Gender
	Default Location
	Default Providers
	Financial Classification
	Can Be Contacted
	Language
	Race
	Ethnicity
	Address 1
	Zip Code
	Homeless Status
	Migrant Status
Data Elements	
	Allergies
	Educations
	External Allergies
	External Medications
	External Problems
	Goals
	Immunizations
	Medications
	Medication Categories
	Problems
	Problems (# of current)
	Problems (# of times diagnosed)
	Procedures / Referrals
	Treatment Plans
	Other Profile Items
Visit History	
	Labs
	Vitals
	Visits
	Weight Gained
	Weight Lost
Childhood Immunization Tracking	
	Due for Immunizations
	Late for Immunizations
	Vaccine Doses
Perinatal Tracking	
	Pregnancies
Referral Tracking	
	Referrals
Mammogram Tracking	
	Mammogram Events
Pap Tracking	
	Pap Events
Pharmacy Tracking	
	Require a Refill
	No Remaining Refills
Follow-ups	
	Follow-Ups
	Require Immediate Follow-Up
	Require Immediate or Future Follow-Up
Recalls / Patient Correspondence	
	E-Mail
	Letters
	Recalls
EyePACS	
	EyePACS Cases
IHS	Tribe, Community, Blood Quantum, Ben Class,
	Service Area, Eligibility

Fields

Demographics	ID
	Name (can choose First, Middle, Last or Full Name)
	DOB, Age, Gender, Med Rec#, SSN, Race, Ethnicity
	Language
	Homeless Status
	Migrant Status
	Address 1, 2
	City / State / Zip
	Home / Work / Cell Phone
	Email Address
	Can be Contacted
	Financial Classification
	Communication Preference
	Status / Status Notes
Default Location	ID, Name
Default Provider	ID, Name
Secondary Provider	ID, Name
Allergies	Last, 2nd, 3rd last Value and Date
Educations	Last, 2nd, 3rd last Value and Date
External Allergies	Last, 2nd, 3rd last Value and Date
External Problems	Last, 2nd, 3rd last Value and Date
Goals	Last, 2nd, 3rd last Value and Date
Immunizations	Last, 2nd, 3rd last Value and Date
Medications	Last, 2nd, 3rd last Value and Date
Problems	Last, 2nd, 3rd last Value and Date
Procedure/Referrals	Last, 2nd, 3rd last Value and Date
Treatment Plans	Last, 2nd, 3rd last Value and Date
Other Profile Items	Last, 2nd, 3rd last Value and Date
Framingham Risk	
Labs	Last, 2nd, 3rd last Value and Date
Vitals	Last, 2nd, 3rd last Value and Date, Change, Change %
Weight Gain/Loss	
Appointments	Next/Last Date, Time, Prov, Facility, Location, Resource, Status
Visits	Last Visit DOS, Provider, Facility, Payer, 2nd, 3rd, 4th, 5th last provider, Visit Count
Pregnancies	Delivery Date, Start Date, Gestational Age, EDC/EDD

Patient Search Exercise

Exploring Populations with the Patient Search

Log in to the Patient Search tool.

Creating Simple Patient Searches

Now let's create a few easy Searches. (Start by setting up a new Search Group)

1. Patients with Diabetes Tracking Type. Total: _____
2. Female Patients Age 21-64. Total: _____
3. Patients with 2 or more any visits in the last 1 year. Total: _____
4. Patients with BMI > or = 25 in last 6 months. Total: _____
5. Patients with a visit in the past year who have the Problem of Hypertension. Total:_____
6. Patients with most recent HbA1c test >9 in last 1 year. Total: _____

Advanced Patient Search

Let's take a deeper look at Advanced Patient Search. Some searches require more 'logic' to filter down to the population that you need. Below is the list of logic operators available in the Patient Search:

AND

'***this***' AND '***that***'

Example: Diabetes AND most recent HbA1c >9

Patients on this list would be all patients with diabetes who had an HbA1c >9 on their most recent test.

OR

'***this***' OR '***that***'

Example: Diabetes OR most recent HbA1c >9

Patients on this list would be all patients with diabetes (no matter their HbA1c result), and patient who had an HbA1c >9 on their most recent test (no matter if they were diagnosed with Diabetes).

NOT

'***this***' but NOT '***that***'

Example: Diabetes and NOT most recent HbA1c > 7

Patients on this list would be all patients with diabetes but will ***exclude*** patients who had an HbA1c >7 on their most recent test.

( ) Parentheses

'***this***' and (either '***that***' or '***a different that***')

Example: Diabetes AND **(**most recent HbA1c >9 or most recent LDL >100**)**

Patients on this list would be all patients with Diabetes who had either an HbA1c most recent test >9 or had an LDL most recent test >100.

Patient Search Advanced Exercise

Creating Advanced Patient Searches

First, set up a new Search Group called Advanced Searches.

Create the following Diabetes Patient Searches:

1. All patients with problem of Diabetes who have had any type of visit in the last 1 year who do not have an appointment in the next 1 week and who have not had an HbA1c in the last 6 months. Total: _____

2. All patients with problem of Diabetes who have had any type of visit in the last 1 year who have had an LDL in the last 1 year where the most recent result is >100 or had an HbA1c in the last 6 months where the most recent result is > 9.
   Total:_____
   a. Who has the highest LDL?_____

3. All patients with problem of Diabetes who have had any type of visit in the last 1 year who have a BP > 140/90. Include fields: HbA1c result, Flu vaccine last date, and age. Total: _____
   - Who has the highest HbA1c? _____
   - How many are due for their flu vaccines? _____
   - How many are age 50+? _____

4. All diabetic patients seen in the last 1 year whose most recent BMI >25. To be a diabetic, they are either in Diabetes Tracking OR had 2 or more Diabetes Visits in the last 1 year. Total: _____

5. Patients with problem of Diabetes with any of the following: no Flu in the last year, no Pneumovax ever, no Diabetes education in the last year, no HbA1C test in the last year. Total: _____

6. All patients age 40-69 with problem of Diabetes who also have Depression OR all patients age 20-69 with problem of HTN that also have Depression. Total: _____

7. All patients with problem of Diabetes with 1 visit in the last 1 year. Include as fields the 3 most recent HbA1c tests and PCP. Total:_____. What is the name of the patient who has the highest value for their most recent HbA1c? _____. Who is their PCP? _____

Population Health Analytics - Reports

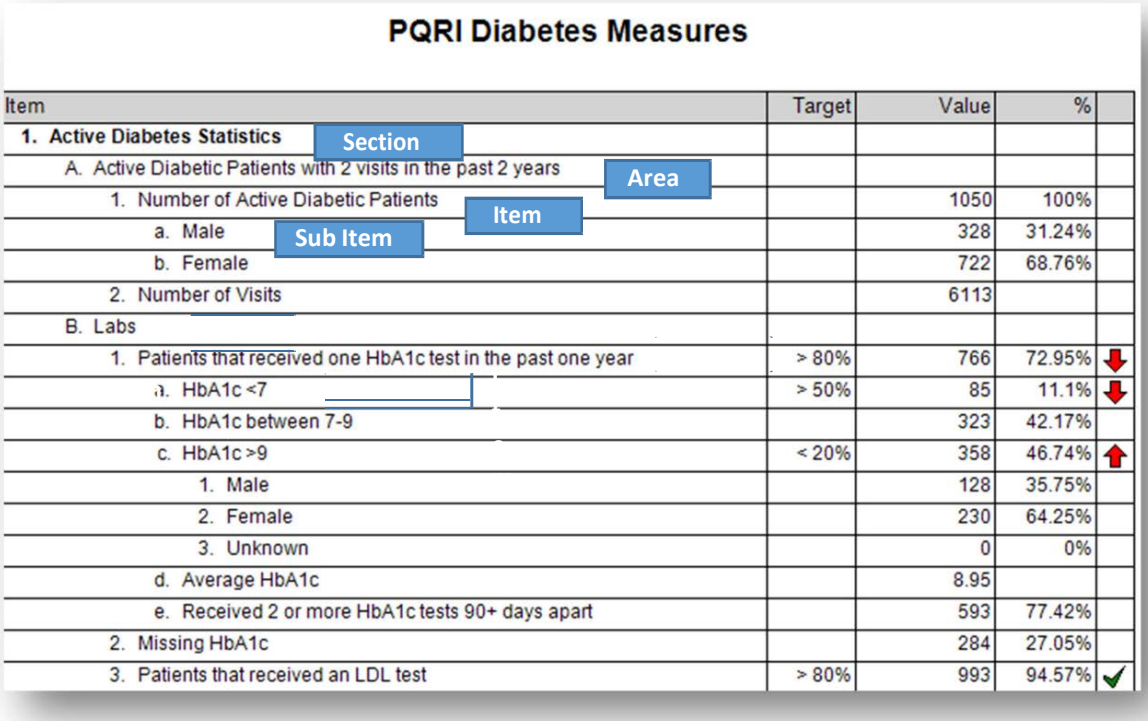
How is Population Analytics Reports different from Health Registry Reports?

- Population Health Analytics Reports can be used to generate statistics on **multiple** populations all on the same report. Health Registry Reports are about **one** population.
- Population Health Analytics Reports are **completely customizable** - you start with a blank report. The Health Registry Reports starts with standard data items and then you can add more items selected from the menu.
- Population Analytics lets you define how and when different pieces of data will be used. For example, Age can be calculated from the beginning of the reporting period, end of the reporting period, current age, or age as of a specific date.
- Population Analytics Reports can be imported from other i2iTracks Users.

How to access: ***Setup > Printing and Reporting > Population Analytics > Reports***

Report Design

I. Section
   A. Area
      1. Item
         a. Sub Item



PQRI Diabetes Measures

Item	Target	Value	%	
1. Active Diabetes Statistics (Section)				
A. Active Diabetic Patients with 2 visits in the past 2 years (Area)				
1. Number of Active Diabetic Patients (Item)		1050	100%	
a. Male (Sub Item)		328	31.24%	
b. Female		722	68.76%	
2. Number of Visits		6113		
B. Labs				
1. Patients that received one HbA1c test in the past one year	> 80%	766	72.95%	↓
a. HbA1c <7	> 50%	85	11.1%	↓
b. HbA1c between 7-9		323	42.17%	
c. HbA1c >9	< 20%	358	46.74%	↑
1. Male		128	35.75%	
2. Female		230	64.25%	
3. Unknown		0	0%	
d. Average HbA1c		8.95		
e. Received 2 or more HbA1c tests 90+ days apart		593	77.42%	
2. Missing HbA1c		284	27.05%	
3. Patients that received an LDL test	> 80%	993	94.57%	✓

Report Item Types

- **Count:** Number of patients that meet criteria
- **Value:** Average, Min, Max, Sum
- **Multi:** Breakdown of item by… gender, language, race, ethnicity, financial class, or a custom element like age range, lab value, etc.
- **Text:** Just text

Data Elements

Reports are made up of Data Elements. Each piece of data that is included in a report is a data element. You will need to have a data element for:

- Every filter option that defines your patient populations
- Every indicator in the report
- Every data field to print in an audit

Data Element Types

- Standard, Labs, Vitals, Data Elements

Data Element Manager

The Data Element Manager stores your specific data elements that are not part of the standard, labs, or vitals list.

E x a m p l e s :

- Allergies
- Educations
- Problems/Diagnoses
- Encounter/Visit Types
- Goals
- Treatment Plans
- Immunizations
- Medications
- Procedures
- Other Profile Items
- Tracking Types

Getting Ready

For your first report, it is a good idea to use the Report Template to design your report on paper before you create it in i2iTracks. This gives you the opportunity to get to know the terms and format of a report.

Population Health Analytics Reports Exercise

Scenario: Meadow Clinic needs a report for their diabetes grant. Review the scenario and reporting requirements below and design the report on the template.

On 7/1/17 Meadow Clinic received a United Way grant award to offer extended diabetes services to their diabetic patients that are age 50 and older. For a patient to qualify, they must have been seen for one medical visit in the last three years. Run the report from 7.1.17 to 6.30.18.

For these patients, they want the following statistics:

- Number of diabetic patients
- Gender
- Number of patients that had at least one HbA1c test during the previous 6 months
- HbA1c value breakdown: <7, 7-9, >9
- Number of patient that did not have at least one HbA1c test during the previous 6 months
- Number of patients that had at least one LDL test during the previous 1 year
- LDL value breakdown: <100, >=100
- Number of patients that did not have at least one LDL test during the previous 1 year
- For the previous 1 year period:
    - How many had education on diabetes
    - How many had education on nutrition
    - How many had a flu vaccine
    - How many had a dental visit
    - How many had an eye exam
    - How many had a foot screening
    - How many had a depression screening

Population Health Analytics – Dashboards

A Population Health Analytics Dashboard consists of a series of graphs/charts that provide you with a visual representation of trended data. Use Dashboards to easily see if you have improved your performance over time.

Dashboards can be presented in your i2iTracks Today screen for a quick snapshot of how you are doing today, or you can choose to print dashboards for presenting to leadership or your care teams.

Graphs can show as:

- Patient Count
- Percentage
- Value (Average, Sum, Min or Max)

You can view the dashboards in a variety of different graph/chart types:

- Line Graphs
- Vertical Bar
- Horizontal Bar
- Area Graph

You can create as many dashboards as you need – each one containing multiple graphs.

How to access: ***Setup > Printing and Reporting > Population Analytics > Dashboards***

Dashboard Exercises:

Create a Diabetes Dashboard

Important information for all of the graphs for the diabetes key indicators:

Active Diabetic Patients are defined as patients assigned to Diabetes Tracking Type with one medical visit in the past two years. Set your graph so that you can see two years of data, broken up into 3 month time periods – with your ending date of 6/30/17.

Graphs:

Graph 1: Series 1: Percent active Diabetic patients that received at least one HbA1c in the last 6 months. Your goal percentage is 80-100%.

Graph 2: Series 1: Average HbA1c for your active Diabetic patients. Your goal range is 6.5 – 8.0.

Graph 3: Series 1: Number of Active diabetic patients that had at least one visit in the last 1 year. Series 2: Number of active Diabetic patients that had two or more visits in the last 1 year.

Create a Preventive Care Dashboard

For this dashboard, create the denominators for each of the three graphs in the Population box under the Patients tab. Important information for all of the graphs:

Active Patients are defined as patients with one medical visit in the past three years. Set your graph so that you can see two years of data, broken up into 3 month time periods – with your ending date of 6/30/17.

Graphs:

Graph 1: Breast Cancer Screening

- Series 1: Active, Female patients, Age 50-74
- Series 2: Mammogram received in the past 2 years

Graph 2: Cervical Cancer Screening

- Series 1: Active, Female patients, Age 21-64
- Series 2: Pap Smear received in the past 3 years

Graph 3: Colorectal Cancer Screening

- Series 1: Active, Age 50-75
- Series 2: Colorectal Cancer Screening is defined as: FOBT (lab) in last 1 year OR FIT (lab) in last 3 year OR Colonoscopy in last 10 years.

Multiple Population iPHA Report Exercise

Measure	Definition
1. Ischemic Vascular Disease (IVD): Complete Lipid Profile	Numerator: A complete lipid profile performed during the measurement year, as identified by claim/encounter or automated laboratory data. (Lipid profile includes Cholesterol total, HDL, LDL) Denominator: All patients aged 18 years and older with Problem of IVD and who had two Medical visits, during the measurement year or the year prior to the measurement year.
2. Ischemic Vascular Disease (IVD): Use of Aspirin or Another Antithrombotic	Numerator: Documentation of use of aspirin or another antithrombotic during the 12-month measurement period. Denominator: All patients aged 18 years and older who have Problem of IVD
3. Controlling High Blood Pressure	Numerator: The number of patients in the denominator whose most recent blood pressure is adequately controlled during the measurement year. For a patient's BP to be controlled, *both* the systolic and the diastolic BP must be <140/90 mm Hg (adequate control). Denominator: Patients 18-85 years of age, with a Problem of hypertension in the measurement year.
4. Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	Numerator: Patients with BMI calculated within the past six months and a follow-up plan documented if the BMI is outside of parameters (>25) Denominator: All patients 18 and older with 1 medical office visit in the measurement year
5. Preventive Care and Screening: Influenza Immunization for Patients > 1 Year Old	Numerator: Patients who received an influenza immunization during the flu season (September through April). Denominator: All patients aged 1 year and older who have at least one medical office visit during the measurement year.