

Data Impact Challenge Template

Question 6i:

- For what portion of adults is an annual physical exam conducted in any given year?
 - Team and list of all team member names:
 - Health Quality Innovation Collaborative:
 - Dr. Sanjeev Goel – Team Leader
 - Bogdan Pinzaru – eHealth Intern
 - Diana Malinovskaya – Analyst/Programmer
- (all team members must have agreed to challenge rules through registration)

Describing the Data and Analysis

- Data Custodian Organization(s) and data sources: Health Quality Innovation Collaborative (HQIC).
- List of Datasets Used (e.g. names of database and/or data origins): HQIC database, from specific medical clinics with complete data and Rostered and Active Patients.
- Nature and Size of Cohort (e.g. geographic area covered, number of patients included): Medical Clinics within the HQIC database, n = 39435 patients for 2013, n = 51273 patients for 2014, and n = 44170 for 2015 to May 29th, 2015.
- Data timeframe: January 1st, 2013 to January 1st, 2014; January 1st, 2014 to January 1st, 2015; January 1st, 2015 to May 29th, 2015.

Methodology

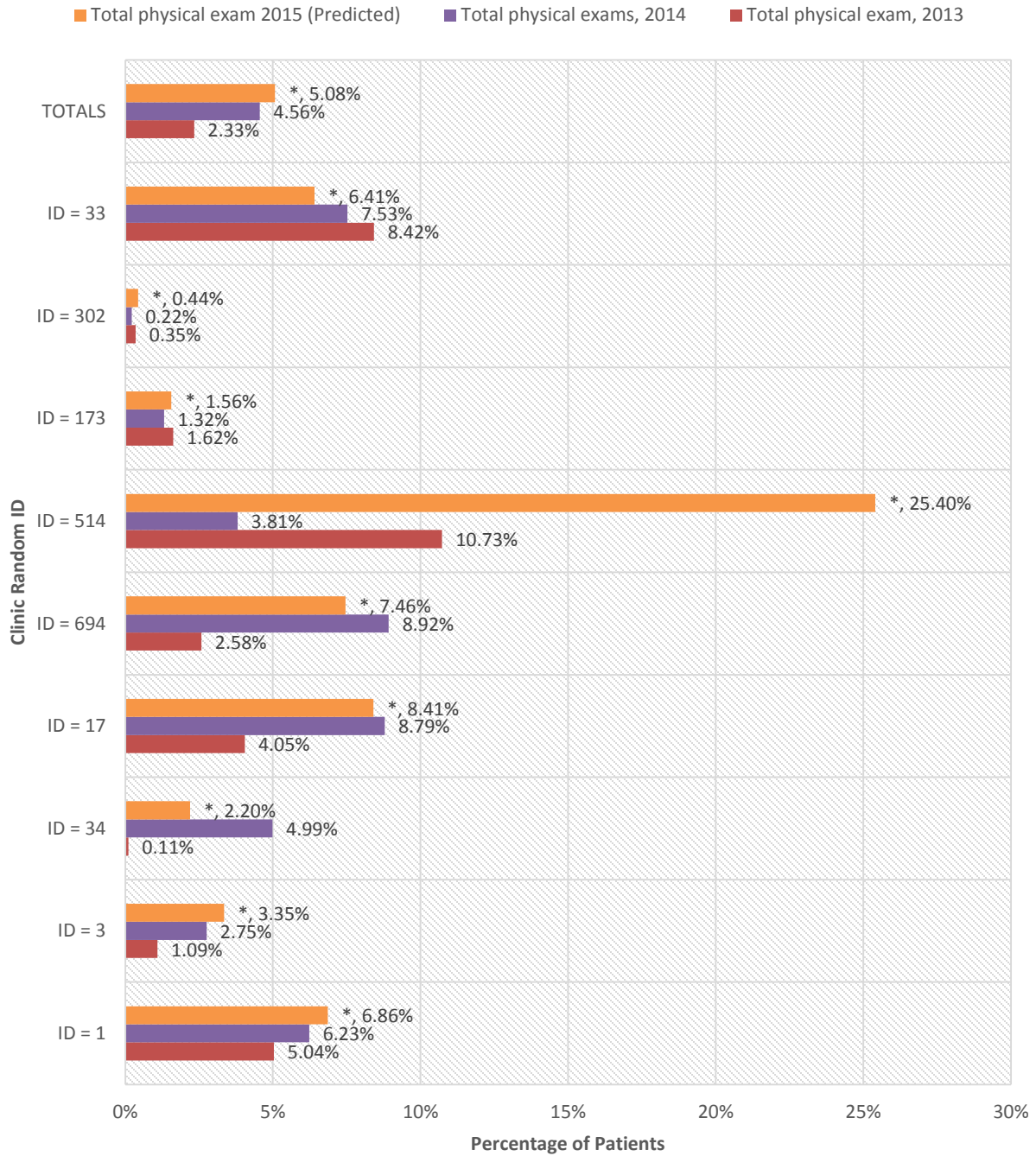
1. The data is stored on the custodian organizations server in MySQL databases.
2. Queries were developed to group and extract the respective numbers.
3. The first data extracted was the total number of patients over 18.
4. Then the team developed a query to relay the total number of patients that have been billed for a physical exam for each time period and over 18.
5. The billing codes used were A003A and K131A.
6. Query used followed described parameters such as timeframe, age, and clinic within each database.
7. The total counts were added to an excel spreadsheet.

Describing the Findings

		2013	2014	2015
• Numerator:	Total Physical exams	n = 920	n = 2337	n = 1121
• Denominator:		n = 39435	n = 51273	n = 44170

- Findings: The overall ratio of patients over 18 who have had a physical exam is considerably increasing from 2.33% in 2013 to 4.56% in 2014 with a predicted 5.08% (based on 2.54% for half a year) in 2015. Five of nine clinics have seen an increase when the physical exam code changed from 2013 to 2014.
- Recommendation: More education around evidence for unnecessary physical exams is required for both clinicians and patients. Furthermore, clinical practice guidelines are required to indicate the frequency of physical exams. More dissemination of this recommendation into primary care would be beneficial with the aid of the Canadian Task Force on Preventive Health Care.
- Key Limitations: Certain limitations are associated with such a broad analysis. When counting all of the patients, certain clinics may have higher rates than others should be taken into account. Furthermore, input errors cannot be accounted when conducting queries with such a massive database.
- Figure: Available on the next page.

Number of Patients over 18 that have had a Physical Exam in 2013, 2014, and 2015*



* The values indicated by the asterisk are predicted values based on data for half a year.