**Open Data Visualization Prototype Demonstration Project: Exploring Quality and Price Data for Health Consumers [DRAFT: for discussion purposes only - 5-27-15 version]**

***Background***

The New York State Department of Health has been tasked with providing quality and price data to consumers through ease-to-use visualizations and tools. The Department received a Cycle III grant from the Center for Medicaid and Medicare Services in 2014 to build a consumer-facing price transparency website. To be able to fully realize price transparency, the Department will need to be able to integrate price data with quality data and other types of data so that consumers can understand the value they are receiving.

***Problem statement***

The Department of Health currently publishes data, including quality data about the managed health care plans, on Health Data NY, the Department’s open data platform. The Department also hosts this same data on its public facing website, but in static form. The problem is that the tools and technologies used are not efficient or set up to connect the data that is hosted on the DOH public website with the Health Data NY platform. As a result, research scientists spend many hours working with the static data on the DOH website to publish more user friendly reports on the Health Data NY.

One example of the type of information that DOH publishes on Health Data NY are the **Health Plan Quality Comparison Visualizations.**  Currently, DOH provides this data in an easy-to-read pdf report and web page. One aspect of price transparency starts with the value a consumer is getting from their insurance plan. Consumers must choose a health insurance plan that meets their needs and the needs of their family.

The Department needs to investigate more agile visualization tools and the ability to connect data and tools through application programming interfaces (APIs) so that (a) consumers can more easily use data and (b) the department can more easily connect appropriate quality and price data in the future.

***Description of project and Approach***

The Center for Technology in Government, University at Albany will partner with the NYS Department of Health Office of Quality and Patient Safety and Public Affairs Group to test the feasibility of connecting from the open data site to the DOH public web, utilizing different techniques and a variety of visualization tools. The goals of the project are (a) test whether and how DOH can connect more dynamically to the Health Data NY site, (b) demonstrate the recreation of the existing eQARR online tool more efficiently, (c) demonstrate how the existing concept of eQARR can be improved by prototyping different types of visualizations, and (d) increase DOH’s understanding of the ongoing costs and reusability of this approach with other data sets.

CTG and DOH will achieve the above goals by using a research to practice partnership approach where the CTG team (identified below) will collaborate with the assigned DOH staff members in a lab like setting. This lab like setting will involve a series of meetings at CTG involving the DOH and CTG project teams. These meetings will be used to facilitate CTG’s understanding of existing DOH systems, data, and stakeholder needs. This setting also will facilitate the transfer of the best practices research and lessons learned to the DOH team. See Table 1 below for Task Plan.

***Deliverables***

The project will produce the following deliverables:

1. New eQARR online tool that more efficiently pulls data from Health Data NY
2. Working prototype of visualizations for a reimagined eQARR (health plan quality comparisons)
3. Prototype demonstration and lessons learned presentation to DOH partners.

***Timeline***

The project will run for 12 weeks from June 1through August 21, 2015

***CTG Personnel***

* Mr. Derek Werthmuller, technical subject matter expert
* Mr. James Costello, technical subject matter expert
* Mr. G. Brian Burke, project manager
* Dr. Ramon Gil-Garcia, data scientist
* 3-4 computer science student interns

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| **Table 1. Task Plan**  **Task/Week** | **1**  **(6/1-5)** | **2** | **3**  **(6/15-19)** | **4**  **(6/22-26)** | **5** | **6**  **(7/6-10)** | **7** | **8** | **9**  **(7/27-31)** | **10** | **11** | **12**  **(8/17-21)** |
| 1**. Meet** with DOH to learn about how the web pages are used now, learn about how and how uses the data and for what purpose. |  |  | **X** | **X** |  |  |  |  |  |  |  |  |
| 2**. Meet** with DOH for introduction on the actual data (raw data) found in the data platform and instructions on how we can go from raw data to the charts/graphs.  What calculations are needed etc. |  |  | **X** | **X** |  |  |  |  |  |  |  |  |
| 3. Research on current visualization tools in use including, but not limited to, D3 and Tableau. | **X** | **X** | **X** | **X** |  |  |  |  |  |  |  |  |
| 4. Develop new eQARR online reports can pull data dynamically from Health Data NY site |  |  | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| 5. Develop prototype of alternative ways for visualizing the eQARR information using a sample of different visualization tools. |  |  | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| 6. **Demo** new tool and prototype for DOH team for feedback and discussion on lessons learned so far |  |  |  |  |  |  | **X** |  |  |  |  |  |
| 7. Refine prototype based on feedback and develop final lessons learned presentation |  |  |  |  |  |  | **X** | **X** | **X** | **X** | **X** |  |
| 8. **Demo** of final prototype and lessons learned presentation. |  |  |  |  |  |  |  |  |  |  |  | **X** |