Designing a Data Visualization for Primary Care Teams

**Domain Area:** Person Centered and Precision Medicine

**DBMI Course:** Human Systems Interaction

**Problem context:** Currently the health risk and behavioral data that is collected by individuals who use wearable sensors and apps is unavailable to primary care clinicians. This is important because prior evidence has shown that individuals are more likely to engage in health behavior change when their healthcare team supports them in behavior change,¹ and in order to support patient clinician need information about the individuals’ current behaviors.²

**Domain Learning Objective:** Design a data visualization that provides primary care clinicians with an at-a-glance understanding of a patient’s current health behaviors

**Data Science Learning Objectives:**

1. **Ask Questions:** Determine what data elements are needed by primary care teams to assess patients’ health related behaviors? What level of summarization is desired by clinicians of different roles? What types of decision support are desired to support them in guiding patient behavior change?

2. **Acquire and Assimilate Data**
   a. Compare different methods of collecting and integrating patient generated data from apps and sensors.

3. **Analyze Data and Design Solution:**
   a. Conduct a design-focused analysis of transcripts from end-user interviews
   b. Design a preliminary user interface that address information needs or primary care teams within constraints of available data sources

4. **Assess results and Advise:**
   a. Design evaluation study to assess efficacy of data visualization of patient behavioral data on provide support for patient behavior change

**Data sets:** 1) de-identified transcripts of interviews with primary care teams re: patient generated data, 2) de-identified data collected by 1Bios wellness platform used by University of Utah wellness program

**Data science resources:** (1) AtlasTi for thematic analysis of interviews (2) Tableau for Design of data visualization.

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