How to Use EMR Data to Formulate and Answer Real-World Questions in Integrated Behavioral Health Care

Example of Process for Thinking Through How to Use EMR Data from the Presentation

Step 1: Pinpoint a specific question

- VA mandates for IBHC differ depending by clinic size: medical centers and very large community clinics are required to have full-time IBHC, including Primary Care Behavioral Health (PCBH) type services
- However, requirements vary for small, medium, and large community clinics (do not have to offer IBHC, do not have to use a particular model, or do not have to provide IBHC full-time, respectively)
- Given differences in policy mandates between smaller and larger clinics, we wondered how well smaller clinics were doing at offering access to IBHC in primary care since they have less staffing / resources
- We eventually narrowed down to a specific question: Does access to IBHC differ by clinic size?
    - Access was defined as (1) overall penetration rate and (2) same-day access rate
    - Clinic size was defined as smaller (small / medium / large) vs. larger (very large / medical centers)

Step 2: Identify relevant variables in the EMR

- We considered variables that are present in IBHC progress notes as well as in the EMR generally
- Examples include clinic/site, primary care and IBHC encounter dates, demographics, medical diagnoses

Step 3: Operationalize a question that maps on to available EMR variables

- Access to IBHC and clinic size were not directly available from the EMR, but we identified a way to construct them based on existing variables that were in the EMR
- Overall penetration rate is the proportion of the primary care population that has accessed IBHC. This can be calculated by dividing the number of primary care patients who met with an IBHC provider (in an individual or group visit) by the total number of primary care patients in the clinic panel
- Same-day access rate is the proportion of initial (individual) IBHC encounters that occur on the same day that primary care staff see / refer the patient to IBHC (AKA those seen as “warm handoffs). This can be calculated by dividing the number of primary care patients who initial visit with IBHC occurs on the same day as a primary care appointment by the total number of primary care patients who have initial visits with IBHC. We identify primary care vs. IBHC encounters based on a “stop code” that identifies the workgroup.
- Clinic size for our purposes refers to smaller (small, medium, and large community clinics) and larger (very large community clinics and medical centers). Each encounter has a site code connected to it “behind the scenes” in the EMR. Standard clinic size classifications were used to determine the size of each clinic based on the total number of unique patients seen in primary care annually. We then recoded all small, medium, and large community clinics as “small” and all very large clinics and medical centers as “larger.”
- Other variables of interest such as age, sex, race, and diagnoses are directly available in the EMR.

Step 4: Gain access to EMR data

- There are many ways to go about this, such as partnering with health information technology staff, working with EMR-savvy administrators who have access to data, training research staff to pull EMR data, etc.
- See other handout for more tips on this topic

Step 5: Prepare Raw Data

- We caution against using raw EMR data – very important to examine and “clean” the data first
- Consider how you want to deal with missing data or discrepant data
- May have to combine / recode certain variables to construct the specific metric of interest