Category: Emerging Technology – Work in Progress

Leveraging ICD-10 Patient Volume Data to Improve Clinical Trial Feasibility and Portfolio Management

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1. Background

Knowing the cancer center's patient disease population is valuable, but not easily accessible owing to the various databases that contain pertinent data. Initially staff used a monthly report listing all new patients per clinic which was inefficient and required significant manual work. As a result, there was limited success in trial matching. Because patients often screen for multiple trials simultaneously, the inefficiencies were compounded. Honing in on ICD-10 codes would assist staff to quickly eliminating grossly ineligible patients. Additionally, trial portfolio addition and accrual goals were historically determined by the principal investigator's experience in his/her clinic. This sometimes led to trials that struggled with enrollment or over-estimation of accrual projections. A tool was needed to assist in screening efforts and identifying actual center patient populations for trial consideration and setting achievable accrual goals.

We developed the ICD-10 Code Patient Volume Dashboard to streamline these screening efforts and assist in portfolio management. The dashboard captures our institution-wide, location-specific, physician-specific, and/or diagnosis-specific patient volumes.

2. Goals

The key goals for this new dashboard are two-fold. Firstly, the tool assists in more accurate trial feasibility review and accrual pace determination as it would be based on actual patient volumes. This assists in portfolio management by identifying gaps and assists with strategic decision making for trials to open at our geographically distributed Moffitt ambulatory centers (MACs). Secondly, the tool assists in rapid patient identification of patients that may be grossly eligible for clinical trials.

3. Solutions and Methods

The initial process to pull ICD-10 codes per physician and location began in July 2025. The dashboard was initially rolled out October 2025. The Malignant Hematology program piloted the dashboard followed by roll out to each clinic in a step-wise fashion focusing on two physicians per clinic. The top 20 codes per those physicians were shared with operational leaders for accuracy review. The third stage then pulled the ICD-10 codes for every physician in the center, including our MACs.

4. Outcomes

Utilizing the dashboard, overall patient volumes may be followed across all Moffitt Cancer Center sites. The dashboard also allows drilling down to new patient volumes by specific ICD-10 code, physician, and/or location. This assists with screening, identifying portfolio gaps and has also been useful in identifying rare disease patients for trials experiencing global accrual difficulties.

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5. Lessons Learned and Future Directions

One limitation with utilizingICD-10 codes for many solid tumors is lack of specificity for metastatic disease and inability to identify histology or biomarker information. Although this information is available in another system, we have not found a way to reliably pull it into this dashboard. Work on this with the collaborative data services and health data services teams continues which will allow us to more efficiently identify potential patients and manage trial portfolios based on real-life data.