

Aligning Cancer Center Priorities With Catchment Needs via Integration of COE and Administrative Data

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1. Background

National Cancer Institute (NCI)-Designated Cancer Centers are expected to align research, publications, and funding with the needs and disparities of their catchment areas. At the University of Arizona Cancer Center (UACC), the Community Outreach and Engagement (COE) team maintains a comprehensive data system that centralizes catchment data on demographics, cancer burden, social determinants of health, and barriers to care. Separately, administrative systems (RLOGX) track research portfolios, publications, and funding. Historically, these datasets have existed in silos, limiting the center's ability to systematically compare where the burden is greatest with where institutional resources and scholarship are concentrated.

2. Goals

This project aims to:

- Integrate COE catchment data with UACC administrative (RLOGX) data to create a single analytic view of “burden vs. activity”
- Develop a DOMO-based dashboard that allows leadership to examine research, publications, and funding by cancer site, population, geography, and priority area
- Establish reproducible metrics (e.g., portfolio-to-burden ratios by cancer type, population group, or county) that can inform strategic planning, partnership development, and funding decisions

3. Solutions and Methods

We catalogued key variables in the COE codebook and three RLOGX views (funding, custom allocations, and publications) and worked with COE and administrative stakeholders to define common dimensions: cancer site groupings, priority populations, geographic units, and UACC strategic themes. Using a Structured Query Language (SQL) Server connection into DOMO, we built an automated data pipeline to extract RLOGX records, standardize key fields (e.g., cancer site categories, county and Zone Improvement Plan mappings, population descriptors), and create look-up tables to crosswalk COE and RLOGX taxonomies. These curated tables feed a DOMO data mart that joins catchment indicators (burden, disparities, barriers) with administrative outputs (projects, grants, publications) at shared levels of aggregation. Interactive dashboard views allow users to filter by cancer site, county, and population group, and to visualize how institutional activity aligns with COE-defined priorities.

4. Outcomes

The integrated data mart and prototype dashboard demonstrate the feasibility of routinely linking catchment data with research and funding portfolios within an enterprise BI (Business Intelligence) tool. Leadership can now view, in a single environment, how UACC activity maps onto cancer sites and populations with documented disparities and barriers, and begin to identify areas where high burden is not yet matched by research, publications, or investment. The work has also highlighted data quality and taxonomy gaps, prompting refinement of both the COE codebook and RLOGX administrative fields and leading to more consistent and analysis-ready data.

5. Lessons Learned and Future Directions

Centralizing previously siloed COE and administrative data into a single, governed DOMO environment emerged as the most critical lesson learned. Building automated, direct SQL integrations and scheduled dataflows enabled near real-time refreshes of catchment indicators and RLOGX outputs, greatly reducing manual file handling, version control issues, and delays in getting updated insights to leadership. We also established shared taxonomies (cancer sites, geographies, and priority populations) and clear integration rules across COE and administrative teams.

Future steps include expanding the data model to incorporate clinical trials and community-engaged programs, adding equity-focused metrics (e.g., activity per high-risk population group), and formalizing governance for ongoing updates. The data model, crosswalk tables, and dashboard specifications will be documented and packaged as a reusable framework that other cancer centers can adapt to link their own COE and administrative data to guide catchment-aligned priorities.