Retrospective database analysis

With more than 180 peer-reviewed publications based on retrospective administrative claims analyses to date, Optum™ has an outstanding track record in the conduct of comparative effectiveness research and other database analysis as a means of demonstrating value for client products.

As a division of a diversified health and well-being company that serves more than 80 million people globally, Optum accesses one of the largest and most robust proprietary health care databases in the world — massive, comprehensive, and mature, it features extremely detailed data captured since 1993. This uniquely rich database enables us to deliver timely, meaningful information to support every aspect of product decision making.

Unparalleled data assets

The size and breadth of our databases — which includes enrollment information from 1993 to present day on more than 111 million lives — allows us to link physician and patient survey data, clinical evidence abstracted from medical records and clinical laboratory results to pharmacy and medical claims history. The completeness of the data allows us to investigate any number of patient, physician, treatment and clinical attributes. Geographic diversity, combined with the longitudinal nature of these data and the ability to see treatments in many settings, affords a unique perspective to the researcher.

This unique perspective is enhanced by an exceptional ability to study subjects longitudinally. Our proprietary research database allows us to identify enrollees as unique members over time. Even individuals who disenroll and re-enroll can be identified — a significant advantage over most commercially available databases that count multiple enrollments as separate members, a drawback that can introduce measurement error into study results.

Extensive experience with our data on more than 100 projects annually gives us a nuanced understanding that enables us to ramp up quickly for new engagements. Our database build team tracks changes in claims processing and other areas that might impact research and updates our database accordingly. We also maintain detailed information related to tier placement over time and any formulary requirements (e.g., quantity limits or step edits) for pharmaceutical products.

Leverage unparalleled data to demonstrate your product's real-world value and succeed in the market.

Benefit from experience that encompasses:

- More than 180 peer-reviewed publications based on analysis of our administrative claims asset
- Economic data (burden of illness, cost effectiveness, patient and plan amount paid)
- Comparative effectiveness research
- Patient-reported outcomes (quality of life, satisfaction, functional status, adherence)
- Utilization data (treatment pattern switching, adherence/compliance)
- Productivity outcomes, absenteeism/presenteeism
- Advanced econometric analysis
- Health risk assessment data (BMI, blood pressure, health behaviors)

Our core data asset includes:

- Enrollment information
- Medical (facility, physician) and pharmacy claims
- Laboratory results data
- Commercially insured and managed Medicare lives with Part D only or medical + Part D coverage
- Mental health care claims
- Access to a single large closed-system health plan and multi-plan data

Data linkages that enhance the power of the data

Because of our unique relationship with our parent organization, we have extensive experience linking claims data with existing additional secondary data sources, such as lab results data, socioeconomic (e.g., race, income) data, mortality (e.g., date and cause-of-death) data, inpatient hospital detail records and health risk assessment data.

Moreover, the primary data collection and prospective research services provided by our team allow us to link claims data to important primary data from patient surveys, physician surveys and medical records. Appropriate institutional review board approval is obtained before linking our core data to other data sources.

Data assets to which we can link our core data asset include:

- Socioeconomic status data (race, income, education, net worth)
- Death data (from the Social Security Administration or National Death Index)
- Medical chart data (customized per project)
- Patient and physician survey responses (including quality of life, reasons for treatment choices, patient preferences, presenteeism/absenteeism, indirect costs and other patient-reported outcomes)
- Medical device information
- Inpatient detail-level data
- Benefit design information (copay amount and structure, out-of-pocket risk, tier information)
- Long-term and short-term disability records
- Clinical data
- Disease-specific registries
- Oncology management database
- Health risk assessment data (BMI, blood pressure, health behaviors)
- Other data sources where sufficient linking elements are available

The extent of our capability to link our claims data to assets which add clinical depth and breadth to research data sets is unique in the HEOR field. These linkages allow for examination of heterogeneity of treatment response to pharmaceutical products, education programs and other treatments.

Take advantage of a capability that is unique in the HEOR field — link claims data to assets that add clinical breadth and depth to research data sets.

Correlate health care outcomes with patients' socioeconomic characteristics by linking claims data at the individual level to an external data source — and produce HEOR of greater sophistication and understanding.

Unique socioeconomic capability

Many aspects of health care, including treatment selection, therapy patterns, health care utilization and costs, are known to differ based on patient demographics. To allow for more powerful insight into health care outcomes, Optum has the unique ability to correlate these outcomes with the socioeconomic characteristics of patients — such as educational attainment, occupation, household income and net worth, race/ethnicity, language preference and family structure — by linking claims data at the individual level to an external data source.

Because records are linked at the individual level rather than just the prescription or regional level, these linked data provide opportunities to advance research in health economics and outcomes to increasing degrees of sophistication and understanding.

Medicare medical and Part D capabilities

Optum also has access to one of the largest enrolled populations of Part D participants, including participants by enrollee type (e.g., dual eligibles, low-income subsidy members, Medicare Advantage members, and other Part D enrollees). Medical claims and lab results are also available for a significant portion of this population; a subset of these subjects can be included in medical chart abstraction and studies including patient-reported outcomes.

With the ability to track members through the cost-sharing structure, we can examine drug switching and economic and quality outcomes as enrollees encounter the Part D drug spend experience (the so-called "doughnut hole"), and again as they emerge into the catastrophic phase of the benefit. This enables us to provide our clients with the most comprehensive analysis of beneficiary data on this important patient demographic.

Remember, too, that Optum data is national in scope; Unlike smaller databases and databases from closed health plan systems, our proprietary research database represents patients enrolled in one of the largest commercial and Medicare Part D health plans in the United States. Because the database is constructed from a variety of geographic regions and employer groups, it maintains a level of diversity while representing the overall trend in commercial health plan coverage.

Oncology Management Database

Optum has access to a proprietary database containing stage and other select characteristics specific to patients with breast, lung or colorectal cancer. Patients are identified from administrative claims data as being treated for cancer from 2008 to present. The treating physician is then asked to submit selected clinical information by fax, with telephone follow-up for incomplete submissions. Data are refreshed at six-month intervals. These data are only populated for a subset of the population receiving treatment for one of the three cancer types (lung, breast and colorectal), and data collected include:

- Month/year of initial diagnosis
- Histology
- Stage at initial diagnosis

The Oncology Management Database is linkable to the Optum research claims database.

Get the most comprehensive analysis of beneficiary data available on the important Medicare Part D patient demographic.

Demonstrate your products' value and succeed in the market.

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