Data Analytics
Adding Value and Expanding Capacity Through Rigorous, Innovative Data Analysis

To respond to a wide range of pressing research needs, Abt- Associates provides **state-of-the-art programming and data analysis capabilities.** Our talented team can create complex customized database files and analyses, construct quality indicators, build surveillance techniques, develop payment monitoring systems, and more. We work closely with federal and state agencies and provider associations to help inform policy and program decisions and chart new directions.

Complete In-House Capabilities

Abt Associates provides convenient, effective solutions to organizations that do not have extensive programming or data analysis capabilities. We expand an organization's capacity by supplying all of the elements necessary for accurate, complete data analysis—from powerful in-house computing capacity to experienced programmers and skilled analysts.

A Collaborative Approach

As we design projects, we identify appropriate data sources, define the scope of the study (the target population/ sample, and the ideal time frame), construct the data file, and prepare data documentation. Working in close collaboration with our client organizations, we can prepare detailed specifications at the beginning of the study that ensure accurate, relevant results at the end.

Our Expert Staff

Our programmers have years of experience applying state-of-the-art programming skills to the challenges of accessing, manipulating and extracting data. They are comfortable working with very large and complex healthcare claims and administrative data files and addressing specific queries. We provide the extensive testing, quality assurance and documentation that help ensure the success of our clients' studies. Talented analysts and staff clinicians bring their experience, insights and invaluable perspective to our clients' questions, as do our technical staff economists, statisticians and payment system design experts.

Expertise With Large, Complex Datasets

We apply our extensive experience and data analysis capabilities to large Medicare and Medicaid data files, population-specific clinical data, and national surveys. The following exemplify the complex files with which we work:

- Medicare, Medicaid, and Social Security claims including Medicare Part A and inpatient hospital and skilled nursing facilities; Part B, such as emergency department visits; and Part D prescription medications
- Enrollment files such as the Medicare beneficiary enrollment database
- Clinical data files such as the Nursing Home Minimum data set and the Home Health OASIS tool
- National survey data such as the Behavioral Risk Factor Surveillance System data and Medicare Current Beneficiary Survey
- Population-based data systems such as Vital Statistics (Births and Deaths), Cancer Registries, and the Census

Abt Associates' Work in Data Analytics

Supporting the Creation of Customized Database Files and Analyses of Medicare/Medicaid Enrollment and Utilization Data

Abt supports CMS's data processing efforts by fulfilling special-purpose requests for data files and reports to aid epidemiological research, program integrity studies and other investigative activities. In addition, we have received programming support requests from private carriers, the Census Bureau, the White House, various members of Congress, the Department of Justice, academic researchers, the General Accountability Office, MedPAC, and the Social Security Administration (SSA). Programming requests completed for these clients include:

- Selection of Medicare beneficiary samples for use in surveys and other research using the Medicare Enrollment Database, generating finder files from these samples, cross-referencing Health Insurance Claim Numbers, equating Beneficiary Identification Codes and retrieving Standard Analytical Files via the Data Extract System.
- Identification and selection of matching records from SSA data to determine Supplemental Security Income (SSI) eligibility and linking Medicare data with SSI eligibility data.
- Selection of matching Parts A and B data based on a list of Provider IDs and UPINs, and creation of an extract of data items from both the header and trailer portions for each claim type.
- Selection of a sample of outpatient claims, based on provider/service date requirements. For selected beneficiaries, retrieval of Vital Statistics data and creation of extracts of data items.

Developing Surveillance Techniques

Abt provided special analysis services to the Blue Cross and Blue Shield of South Carolina Medical Administration using extensive claims history databases and sophisticated analytic techniques to support continuous surveillance efforts to control the Medicare Durable Medical Equipment (DME) benefit. The special analysis services supported the direct operational needs of CMS and its regional carriers responsible for processing claims for DME, prosthetics, orthotics, and supplies.

Development of a Home Health Casemix Payment and Monitoring System

Abt developed the home health resource groups now used by Medicare to reimburse home health agencies for care and services, as well as the data quality monitoring software used by fiscal intermediaries to audit the payment system. This project required linking multiple national-level data sources into a large analytic database for casemix modeling: OASIS clinical assessment data; Medicare home health, inpatient, and outpatient claims data; provider characteristics data; and primary data collected by more than 85 home health agencies.

Other data processing tasks included developing the "grouper" software program now in use nationally to assign home health patients into casemix categories, and ongoing refinements to the casemix system.

Measuring Injurious Falls Among Nursing Home Residents

Under contract to the Agency for Healthcare Research and Quality (AHRQ), Abt constructed a new quality measure that reflects the incidence of physical injuries related to falls among U.S. nursing home residents. The measure combined nursing home clinical assessment data from the Minimum Data Set with hospital and emergency room claims, and employed risk adjustment as well as hierarchical modeling to determine the falls incidence rate among nursing homes nationwide.

Contact

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Abt Associates is a mission-driven, global leader in research and program implementation in the fields of health, social and environmental policy, and international development. Known for its rigorous approach to solving complex challenges, Abt Associates is regularly ranked as one of the top 20 global research firms and one of the top 40 international development innovators. The company has multiple offices in the U.S. and program offices in more than 40 countries.