

Beyond Original Intent – The Use of a Corporation's Administrative Databases for Academic Research

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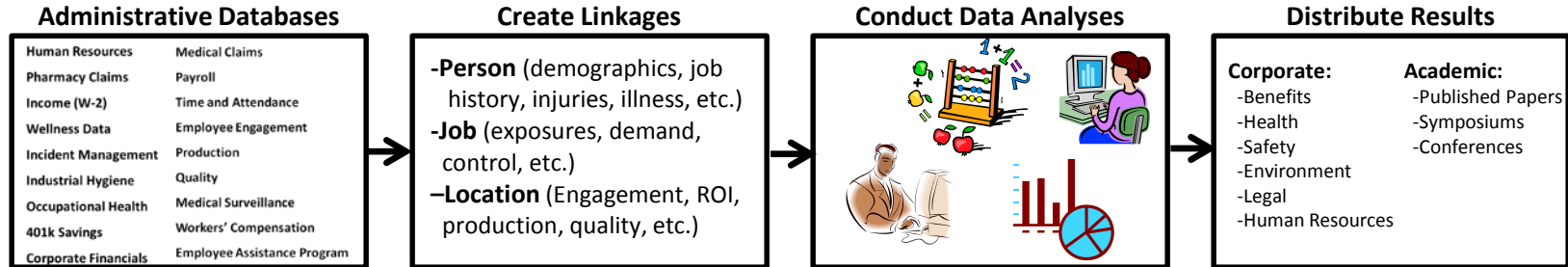
Beyond Original Intent – The Use of a Corporation’s Administrative Databases for Academic Research

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ABSTRACT:

Large corporations maintain a variety of administrative databases as part of their normal operations. These databases, created for distinct functions by separate organizational entities, are generally independent. For instance, a company’s Human Resources organization typically maintains a database containing information such as demographics, job and salary history, and employee status for all employees. The environmental, health and safety department maintains information regarding work-place exposures and exposure levels for various agents within each job as well as injury and illness surveillance records. The medical department maintains occupational health information including audiometric and pulmonary function test results. As many large corporations are self-insured, they also have medical claims data available by employee that includes diagnosis codes, procedure codes, and prescription drug codes. Additional data maintained by corporations may include production output and quality information, employee contributions to retirement plans and health savings accounts, as well as workers compensation information.

A synergistic partnership between industry and academia allows for linkage between company maintained databases to enable the conduct of research to examine associations between demographic, occupational and social factors not otherwise available to researchers, and the ability to define and test interventions to promote health and safety in the workplace. An almost 20 year relationship between Alcoa, Inc. and Yale University School of Medicine continues to facilitate investigation of root causes of disease and injury risk in a large manufacturing cohort. To date, over 50 peer-reviewed publications have resulted from this joint venture.



EXAMPLES OF COMPLETED RESEARCH:

- Occupational Health: Linking of Human Resources, Medical Claims, Medical Surveillance, and Industrial Hygiene databases allowed researchers to show elevated incidence of asthma in aluminum potroom workers (IR=1.40, adjusted for smoking) and identify an association between asthma incidence and occupational exposure to Hydrogen Fluoride gas.
- Benefit Design: Linking of Pharmacy Claims, Medical Claims and Human Resources databases enabled analyses which showed that a moderate increase in employee out-of-pocket expenses resulted in a 1.3% decline in overall medication adherence among previously adherent employees with chronic disease.
- Injury Prevention: Linking of Payroll, Incident Management, and Human Resource databases enabled researchers to determine that workers in the aluminum industry who worked more than 64 hours in the seven days prior to a work shift had an 88% excess injury risk compared to those who worked 40 hours or fewer.

CONCLUSIONS:

- Industry/Academic partnerships are feasible and mutually beneficial
- Corporations maintain a large number of administrative databases for specific purposes
- Linking of administrative databases creates a breadth and depth of useful information to study a broad array of research and service-related questions
- Both academic and service related questions can be answered using epidemiologic methods
- Utilization of existing administrative data facilitates the conduct of more efficient and lower cost research

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