Usefulness of Database Studies as Applied to Managed Care

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ABSTRACT

SUMMARY: Benchmarking, an industry comparison tool and a well-known business technology, offers health care a method of establishing standards for health care use with clinical governance. Benchmarking can lead to practice innovations necessary for survival in a managed care environment that has a need for decreasing cost and increasing quality. Information gleaned from the benchmarking dataset can be used to determine where limited resources for disease management programs should be directed. It can also be used to help decision makers manage a drug formulary by providing a basic knowledge about the environment in which a drug will be used and prescribed. This article describes the relationship of database studies and benchmarking and the usefulness as applied to managed care.

KEYWORDS: Benchmarking, Managed care, Retrospective study, Pharmacoeconomics, Formularies, Disease management, Health benefit plan

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Managed care has come a long way from the days of simple cost consolidation and cooperative patient care. Whereas traditional managed care business activities, such as provider contracting and provider networking, continue to be core elements in managed care design, the entire business environment has expanded. Coverage now commonly includes diagnostic screening, chiropractic services, and disease management initiatives, while some measures, such as multi-tiered copayment structures and prior authorization, are implemented to deter all-encompassing use of health care. Taken together, these activities form the current state of managed care's efforts to control costs while maintaining or improving the health of its members.

Evidence-based disease management programs have played an important role in efforts to improve the health of patients who have chronic diseases. Efforts have been directed toward both patients and physicians, and the methods used to reach these audiences have ranged from sponsorship of Internet sites to targeted mailings. Intensive case management of high-risk and high-cost patient groups may be contracted with outside vendors to streamline care and reduce costs.¹ The development and execution of these and other clinical programs allows health plans to work toward the goal of optimizing members' health while controlling total health care costs.

Managed Care and Benchmarking

Measurement of the outcomes associated with implementation of evidence-based practice programs is becoming increasingly emphasized by multiple health care disciplines.² As previously stated, the comparison of outcomes to internal and external measures is known as benchmarking.² Benchmarking reaches beyond typical retrospective analyses to include fields such as physician specialties, comprehensive medication usage, and concomitant diseases. The entire dataset is systematically organized so that it can focus on and compare various measures such as treatment patterns, age groups, patient groups, physician specialty, and regional differences. The list of analyses is endless, as there are no consistent measures.

Managed Care and Database Management

In the early days of disease management, many programs were implemented based on the knowledge that poor health leads to more expensive care. Unfortunately, there was scant evidence to support the idea that a particular program would improve health and decrease costs. Additionally, pharmacoeconomic studies proving a cost benefit after program implementation were lacking, and there was an ever-present inverse relationship—and conflict—between the medical and pharmacy sides of the cost equation. Since then, evidence-based medicine has become more accepted and, in some areas, required; pharmacoeconomic data are somewhat easier to come by; and disease management

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programs have forged ahead to include areas such as seizure disorders, rheumatoid arthritis, and multiple sclerosis.¹

Concurrently, managed care has realized multifactorial value to investing in clinical care-management programs. Besides benefits of improved member health, the member's participation in the clinical program generates data, which are captured and stored for subsequent analysis. The data that a health plan collects may be used for internal retrospective data analyses to facilitate drug use reviews, targeted patient or physician mailings, internal benchmarking, and client benchmarking at a regional or national level. With a truly integrated medical and pharmacy database, benchmarking could become a valuable tool on many fronts.

■ Usefulness of Benchmarking to Managed Care Pharmacy

Benchmarking data offer several advantages to managed care and managed care pharmacy. Primarily, the information gleaned from the benchmarking dataset contributes to enhanced medical knowledge and can be used to improve patient care or implement cost-savings programs. Depending on how the data are analyzed, the benchmarking dataset can provide a current market analysis, show where there are gaps in disease management offerings, or provide insights into the need to optimize therapy or how a formulary decision may impact the cost of care or types of care given.

As medication formularies have undergone significant transformation in the past 8 to 10 years, the impact of benchmarking on formulary decisions demonstrates the usefulness of this type of analysis to managed care. Whereas, in the past, open formularies covered most prescription medications, within the last few years, resource constraints have necessitated tightened coverage for prescription medications as well as implementation of tiered copayments, quantity-level limits, mandatory generics, or exclusion of certain classes all together (i.e., medications for allergies). Decision makers have had to consider coverage issues ranging from topics such as recent prescription to over-the-counter switches (loratadine [Claritin], omeprazole [Prilosec]) to the expanding use of expensive biologics, antitumor medications, and other injectables.

Benchmarking helps decision makers make formulary management decisions based on knowledge about the environment in which the medication will be used and prescribed. Benchmarking offers insights into how a disease is treated in a real-world setting and therefore allows some assumptions to be made regarding use or misuse of a medication within a defined patient population. For example, if the benchmarking data show that patients who are treated with medication XYZ have reduced visits to other physician specialties, then the decision for formulary inclusion of that medication can be based on some knowledge of the cost benefit of that medication. Conversely, if the data show that patients who have asthma are optimally controlled when they are compliant with medications already on the market, then it could be justified to exclude from coverage a new, yet highly

*"What could possibly be more intriguing for health care professionals than access to comparative data of all types for use at any time? The only fantasy more engaging would be having the information and actually being able to use it constructively."*³

priced, asthma medication, where limited or no benefit is realized from the increased expenditure.

Benchmarking data may also be used as tools that help to determine where limited resources for disease management programs should be directed. Analyses of the patient populations and the costs related to their respective disease states give a managed care organization the ability to invest in disease areas where clinical and cost benefits are more certain. Health care expenditures are a classic application of the 80/20 rule (i.e., 80% of the total cost is generated by 20% of the population.). By understanding which types of patients consume the most resources as well as using evidence-based guidelines as a clinical basis for improved patient care, efforts can be focused on areas that will have the most impact. How the impact is measured, of course, is another topic, and is determined by the health plan.

Benchmarking may also be used to perform regional comparisons that help a health plan determine internal performance versus the competition or against national trends. Similar populations within different regions of the state or nation may be compared with respect to medication-cost trends, chronic disease management, procedures, or types of therapy for certain diseases. For example, Krumholz and colleagues performed an evaluation of patients in New England who were hospitalized with myocardial infarction (MI) (1994-1996) to assess regional variations in quality of care.⁴ Their results showed that compared with patients in other U.S. regions, post-myocardial infarction patients in New England had higher rates of indicated pharmacotherapy use, a lower use of reperfusion therapy, and the lowest risk-standardized 30-day mortality rate (all measures were significant). In a retrospective study of only pharmacy claims, Cox and colleagues demonstrated that there are geographic variations in the prevalence of stimulant use among patients aged 5 to 14 years.⁵ Although the results of these types of studies raise questions for future research, they also raise awareness within managed care or other health care organizations to the need for frequent internal analysis of the optimal use of the health care services available.

Comparing value across programs may provide more accurate assessments of performance, enhance quality improvement efforts, and contribute generalizable knowledge.⁶ While benchmarking can lead to practice innovations necessary for survival in an environment that has a need for decreasing cost and increasing quality, it can be used in other areas.⁷ For instance, if the data show that an organization is meeting national care guidelines or leading

the industry in a certain area, it allows marketing claims based on fact, which is a very strong factor in advertising.

Benchmarking also helps to answer several questions. Some examples include:

1. What is occurring in clinical practice?
2. How is a medication or medical product being used?
3. What type of population is using it?
4. What other medications are these patients using?
5. How often are these patients in a physician's office? Hospital?
6. What type of physician is prescribing it?
7. Where does the organization stand in relationship to its competitors?
8. Are there areas where the organization should invest in efforts to continue to control costs (e.g., injectables, biologics, home infusion therapy)?
9. What is the financial impact of an untreated versus treated disorder?
10. What are a patient's concomitant disorders, and what impact do these have on overall patient health?

Types of Benchmarking Methodologies

- Randomized clinical trial
- Matched control group
- Matched cohort analysis
- Preanalysis and postanalysis. Compare preintervention to postintervention.
- Time-trend analysis. Monitor change over multiple measurement periods (typically years)
- Multiple baseline data. This evaluation design can be used if the disease management program is rolled out sequentially to distinct subgroups in the enrolled population. The groups that have not yet received the program serve as the comparison group.
- Regression-discontinuation design. This evaluation design can be used when a program or some of its components are delivered to high-risk persons with an index condition. The data analysis takes advantage of the correlation of preintervention and postintervention metric scores among intervened and nonintervened persons.

Summary

Health plans, once simply thought of as "the payer" or "the insurance company," are now more involved in maintaining or improving the health of their patient populations. The focus of their business has changed to include not only the responsibility of making ill people well but also of trying to keep people healthy. Managed care organizations have realized multiple benefits from investing in clinical program efforts, mainly improved patient health, and the availability of large amounts of health care data.

Health plans are able to collect, analyze, and distribute information on a variety of chronic conditions, acute illnesses, and treatments. Data management is an integral part of health plan

information technology. Data that a health plan collects usually are kept proprietary and may be used for internal retrospective data analyses to facilitate drug utilization reviews, targeted patient or physician mailings, internal benchmarking, or client benchmarking at a regional or national level. Benchmarking offers a method of establishing standards for use with clinical governance. Benchmarking data are a powerful tool for health plan decision makers because they offer insights into how decisions about medication selection, formulary management, quality improvement initiatives, and other health plan activities may affect future operations of the company.

DISCLOSURES

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