

# Sophisticated analytical tools help fuel successful disease management

Actionable data offered by business intelligence software can help physicians, patients engage in these maturing programs

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IN THE 1980s and early 1990s, case management for patients with complex illnesses began evolving into the more specialized discipline of disease management. By the late 1990s, disease management was in widespread use, viewed as an effective way to help control swelling healthcare budgets while improving medical outcomes.

As disease management has matured, organizations have begun to realize that thorough, reliable information is a critical success factor to induce physician and patient involvement in disease management programs as well as securing positive outcomes. Therefore, business intelligence (BI) software—an array of tools that gather, store, analyze and report on patient data—is becoming a technology in disease management to improve decision making at every step.

## DETERMINING COST DRIVERS

Most organizations start using BI tools to identify the areas of concern; for example, conditions with escalating emergency room visits and hospital readmissions. The greater the sophistication of the tools, the more assistance an organization has at its disposal to identify the areas of opportunity.

BI tools enable organizations to uncover the real issues at hand. For example, a high intensity of emergency room visits for a given group of patients may have more to do with access issues to primary care providers in an area than underlying disease or condition issues. With this information, an organization

can appropriately focus on network management initiatives rather than blindly intervening with disease management programs.

## TARGETING PATIENTS AND PHYSICIANS

When disease management is the answer, three types of BI tools help with identifying and reaching patients:

- Rules-based tools applied to patients with high historical costs can locate those who are not being managed according to accepted clinical guidelines;
- Predictive modeling tools, such as regression models or neural networks, are helpful in identifying the “movers,” individuals who are currently healthy but present a significant risk for becoming ill in the near future; and
- Population monitoring.

When it comes to physicians, BI tools can also play a role in identifying providers that have high concentrations of medically needy patients and, within this group, which have the most trouble managing patients with chronic diseases. Using metrics such as per-member per-month costs (adjusted for severity level) and compliance with quality measures, organizations can accurately pinpoint providers needing disease management support.

## INFORMING INTERVENTIONS

Disease management nurses traditionally have depended on patient self-reported information to gauge how patients are doing, even though this information may not be entirely reliable. With BI tools, gaps in care can be

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identified with little or no input from patients, enabling nurses to focus their attention on coaching and motivating patients around areas of concern.

Beginning a discussion with a patient from an informed position goes a long way toward reinforcing the important bond between care manager and patient.

Sometimes the best intervention is matching patients with the right physicians. If patients have not established relationships with specific physicians, then accurate information on the patient's medical needs, plus physician profiles, including outcomes and cost information, help payers play a critical match-making function. For example, patients in chronic heart failure programs can be steered toward local cardiologists who have proven track records managing heart failure patients effectively.

#### ENGAGING PROVIDERS IN INTERVENTION

Physicians must have up-to-date, actionable data to effectively participate in the disease management process. At a minimum, health plans need to share the intel-

ligence they have obtained on their disease management patients with treating physicians. Information sharing should include pharmaceutical profiles, which are valuable patient management tools.

Physicians need more than just good data, however: They need data they can act on. Office-based workflow tools, such as disease registries, can help practices process collected patient data through rules-based analytic engines to obtain simple lists of the services that individual patients need.

Incentives can promote physician engagement in the disease management process. Some innovative organizations are experimenting with programs that reward physician involvement from the outset. In these models, physicians begin to receive payments as soon as they endorse the program to high-risk patients, and payments continue as critical milestones are achieved.

Physicians also can be paid for identifying high-risk patients based on clinical knowledge, regardless of what the claims data indicates, or for contribut-

ing to the disease management care plan. Other payments might stem from performance on patient-reported quality measures, such as adherence to medication regimens.

#### MEASURING IMPACT

BI tools must inform specific stakeholders whether disease management programs are having the desired effects or not. Ideally, organizations should be able to drill down into the data so that specific interventions can be evaluated for their impact on key metrics, including cost, quality (using HEDIS measures, at a minimum), patient behavior changes and staff performance. A multidimensional view of the data, for example, by region, physician or group, or by condition or risk-stratification level, also is essential.

Disease management programs will only grow in complexity. Therefore, BI tools will only become more relevant and crucial to the development and maintenance of successful programs as we continue to move forward. MHE

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