

# MANAGING HEALTH AND PRODUCTIVITY THROUGH DATA INTEGRATION

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**F**orward-thinking employers are constantly challenged to find ways to control costs and improve the health and productivity of their employee population. Typical approaches to addressing these issues can prove to be very time-consuming and costly. A focused solution based on the integration of data can provide a more comprehensive perspective on employee health issues and absence-cost drivers. This solution can drive cost-effective and efficient strategies targeted at specific health and productivity issues. Using appropriate data integration software and tools is the key to managing this process.

Organizations must be cautious, however, not to lose the benefits of

integrating the data. Without an action-oriented approach to managing employee health and productivity on an employee-centric basis, employers can find themselves with too much data and not enough meaningful information. Leading-edge companies not only integrate data but use the resulting information to manage their employee health and productivity continually. According to Katherine Durso, Ph.D., "...data-based management information is only as good as the operational improvement it spurs and supports."<sup>1</sup> This discussion addresses the fundamentals of data integration and how organizations can create actionable information from integrated data.

### **HEALTH AND PRODUCTIVITY DEFINED**

There are many operational definitions of health and productivity. For our purposes, health and productivity focuses on managing the relationship between employees' health and well-being and their work-related performance and productivity. The relationship between health and productivity is based on the underlying premise that healthy employees are more productive employees. Research conducted by Debra Lerner, Ph.D., using the Work Loss Questionnaire (WLQ) showed that for each 10 percent increase in self-reported limitations due to health conditions, production declined 4 percent to 5 percent.<sup>2</sup>

Typical components of health and productivity programs include:

- group health benefits;
- group pharmacy benefits;
- behavioral health and other carve-out health-related benefit programs;
- health promotion (condition management and prevention);
- short-term disability benefits;
- salary continuation benefits;
- long-term disability benefits;
- family leave programs (generally associated with federal and state family medical leave acts);
- incidental absence/sick leave, etc., benefits;
- workers compensation insurance; and
- safety and prevention programs.

### **HOW DOES WORKERS COMPENSATION FIT INTO THE HEALTH AND PRODUCTIVITY FRAMEWORK?**

Because many organizations believe that group health is the most

important cost to manage, most health and productivity programs focus on managing health costs, addressing chronic disease, and reducing disability durations by managing health conditions. Organizational silos also contribute to the focus on managing health-care costs. Health, pharmacy, nonoccupational disability, and related programs are still commonly managed by the benefits department, while workers compensation is still typically managed by risk management or finance. As a result, responsibility for managing health and productivity strategies does not always cross organizational boundaries.

Workers compensation is typically the last program to be integrated into health and productivity strategies because it is often managed through a different part of the organization. Therefore, workers compensation is often considered unimportant or not significant in terms of cost and health impact.

Integrating workers compensation data into a data warehouse with employee-centric analytic and reporting features will help to change this perception. This data warehouse shows the impact of work-related injuries and health issues as a part of a more comprehensive picture of employee health and absence.

Management of medical care and costs under workers compensation is handled differently than it is under group health. Under workers compensation, the employer's right to direct care varies by state. The use of state fee schedules, preferred provider organization networks, and medical case management play a significant role in managing medical costs. Emphasis is placed on managing costs for the most common injuries that drive the majority of the overall claim costs.

Employers in right-to-direct states have significant control over where injured employees are treated. Even in states where employers do not have the right to direct medical care, they can exert influence to channel employees to doctors who have good outcomes and who understand the workers compensation process.

Despite these medical management techniques, workers compensation medical costs have continued to rise as a portion of total claim costs. A recent study by National Council on Compensation Insurance (NCCI) showed that workers compensation medical benefits in NCCI states have increased 9 percent to 12 percent per year, nearly double the increase for lost-wage compensation.<sup>3</sup> Market and legislative trends are driving a more consistent approach to managing medical care, with an increased emphasis on provider access, quality, and outcomes.

Program management strategies also typically differ with respect to the

management of time away from work. Employers often have strategies to return employees to work if they are injured on the job; however, it is less common to have similar strategies that apply to non-work-related absences. Strategies for work-related injuries are still often anecdotal rather than defined processes that are administered evenly to all employees.

Employers sometimes believe that they have no authority over non-work-related absences. This belief is often based on the assumption that employees do not want to return to work. Often, employees who are absent due to non-work-related events feel that they do not get the same attention and care as those who may have the same medical condition resulting from a work-related injury. This can create morale issues, promote cost shifting, and result in increased costs and lost productivity.

### **WHY DOES INTEGRATING WORKERS COMPENSATION DATA MATTER?**

Integration of workers compensation data and management strategies into the health and productivity strategy provides the total picture of the employee population's health and productivity. This allows for the capture and analysis of all employee health issues and related lost time from work. Part-time employees are common in many industries, such as retail and food service. Data on health and productivity issues surrounding part-time employees who do not qualify for health and short-term disability benefits are not captured under traditional benefit plans.

For example, a large national retail chain may have more than 50 percent of its employee population working part-time. While it may offer benefits to employees who work part-time, there are typically a minimum number of hours that employees need to work on a regular basis (generally 25 to 30) to qualify for these benefits.

In addition, part-time employees may be required to pay a large portion of the cost for benefits, making them cost-prohibitive. This results in low enrollment if such benefits are offered, and health and productivity data about these employees will not be included in the total picture of employee population health. Integrating workers compensation data can provide information about work-related injuries and associated lost time for all employees.

Often, workers compensation data provides valuable information about co-morbid medical conditions that complicate recovery and return to work.

Integration of workers compensation data also minimizes cost shifting. Most health plans have deductibles and co-pays, but first dollar coverage for medical care is provided under workers compensation statutes. This provides

an incentive for employees to shift costs to the program that provides the best benefits regardless of the cause of the absence.

Although there are various waiting periods for the indemnification of lost wages under the workers compensation statutes, injured employees can still recoup tax-free wage replacement at some reduced level from their full salary. Many jurisdictions allow for settlements for injuries, a further incentive for cost shifting.

By comparison, typical short-term disability or salary continuation plans may have waiting periods (benefit elimination periods) between 3 and 30 days before benefits can be paid with no provision for coverage from day one no matter how long the disability lasts. Depending on the availability of related benefits (such as sick leave or paid time off), the employee may not have wage replacement coverage during this benefit elimination period.

As previously noted, return-to-work programs are often in place for workers suffering injuries covered by workers compensation, but generally not for other types of absence. Depending on the employee's motivation, he or she might file the injury under the program that best suits his or her needs. If the employee wants to return to work quickly, he or she might file the claim as a work-related injury. If the employee is not interested in returning to work, he or she might file the claim under a short-term disability (STD) plan that is not set up to accommodate the return of injured employees to less than full duty.

Although it is not considered a best practice, some employer STD plans may be written so that the plan allows the injured employee to collect both workers compensation and STD benefits. If the employer's STD plan excludes work-related injuries, integrating data can identify potential duplicate claims as well as high users under both programs.

Some employers allow injured employees to continue to accrue seniority, earn vacation, or enjoy other employment-related benefits (such as travel benefits and access to employee programs and discounts) while off work for an employment-related injury. However, these benefits may not be available under other absence programs. This provides further incentive for employees to use the workers compensation program and to stay off work longer than medically necessary.

## **WHY INTEGRATE DATA?**

Traditional program management without data integration focuses on program-specific issues. It will typically include:

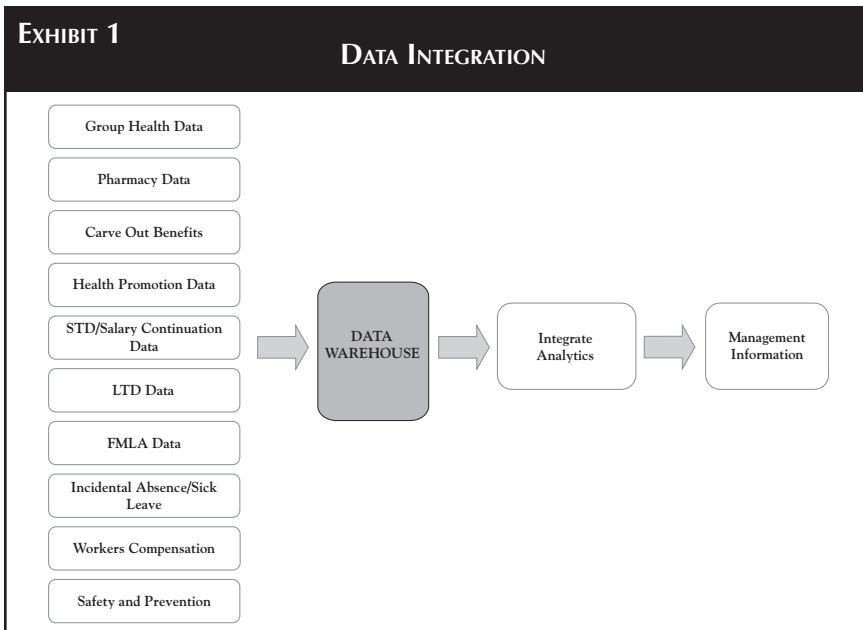
- program-specific data review;

- process review;
- program-specific metrics;
- program-specific evaluation; and
- program-specific continuous improvement.

There is no analysis of data and development or implementation of management strategies across programs.

Integrating data to manage programs provides a different and more complete picture of population health issues. As a result, the information derived from integrated data drives different management strategies across programs. It can speed decisions because more detailed and comprehensive information is available. It promotes alignment of program goals, allowing employers to manage total health and productivity costs more effectively.

The integration of data also drives better service for employees by improving the quality of medical care to employees under both workers compensation and group health plans while providing a consistent injury- and absence-management message to employees. This helps to put a focus on the employee's improvement and not just the bottom line of the company.

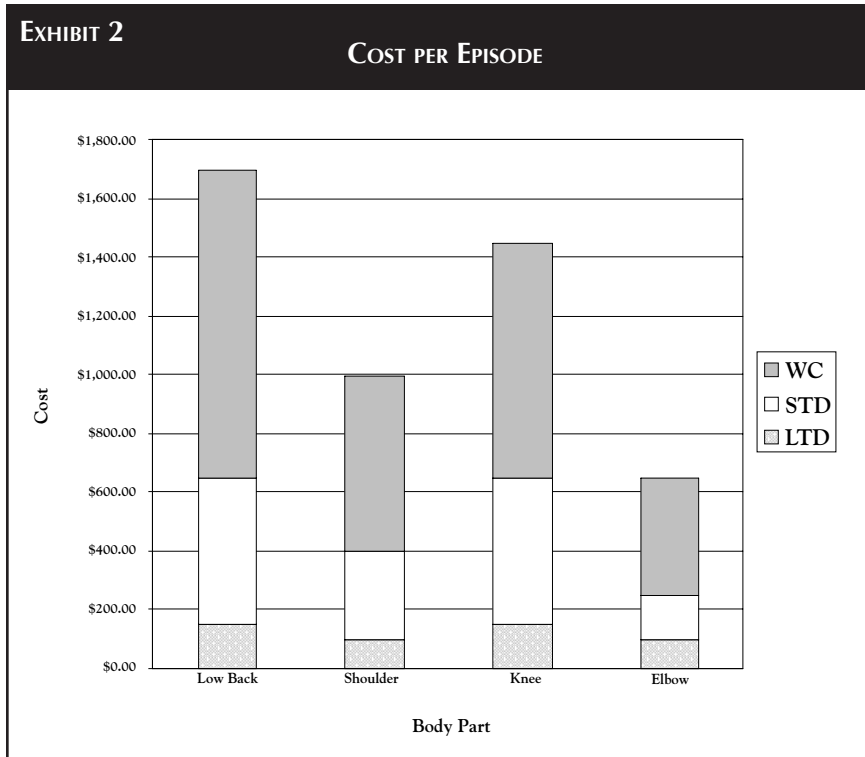


## WHAT DOES DATA INTEGRATION LOOK LIKE?

A fundamental component of data integration is a robust data warehouse that can enable integration of data across programs. The data warehouse should be supplemented by analytic tools and reports that allow linking of data from different sources based on individual identifiers, demographics, and other key variables such as work location, business unit, etc. This allows for driving data down to the lowest possible denominator and therefore permits the rapid identification of areas of improvement.

If the data warehouse volume is sufficient, employer-specific data can be compared to like industries with similar job classifications, population characteristics, benefit plan structures, and regulatory environments. Analytic tools can be used to show how different management strategies and plan changes can affect results.

Data integration produces management integration that drives process integration and alignment of goals across programs. Integrated information should help those managing the health and productivity initiatives determine



where to start, concentrate, focus efforts, and prioritize specific strategies. For example, condition-management efforts often focus on cardiovascular disease, diabetes, and asthma, when the number-one health issue may actually be a musculoskeletal condition such as low back pain.

As noted in Exhibit 1, data should be incorporated from all benefits programs previously discussed. The tools surrounding the data warehouse should provide user-friendly access across departments. All key stakeholders should be able to access the information they need to do their jobs. Program managers should be able to access detailed information specific to their programs, but the information should be framed within the context of the integrated picture. For example, the workers compensation manager may be able to see the top cost drivers by injury type for work-related injuries, but this information will be presented within the context of the top cost drivers for all types of absence.

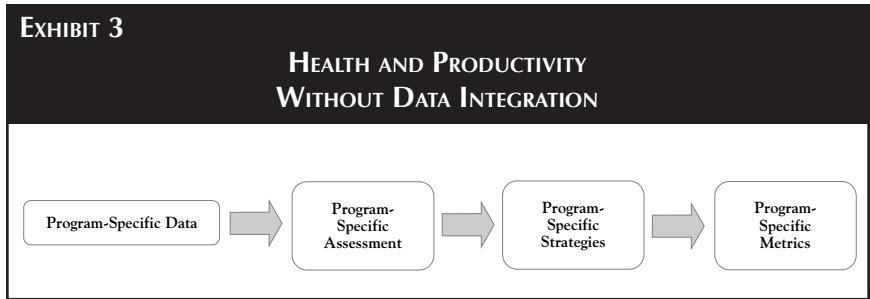
Data integration can help the health and productivity team identify cost drivers across programs and population segments. For example, cost drivers can be identified for employees versus total population that includes dependants.

Therefore, some programs can be tailored to specific employee issues and others to dependants. Information may also drive different programs for full-time and part-time or salaried and hourly employees. This also allows for working with different bargaining units or locations with a variety of union and nonunion employees. Health promotion, safety, wellness, and absence-management programs can be developed and implemented to address population health needs and cost drivers specifically.

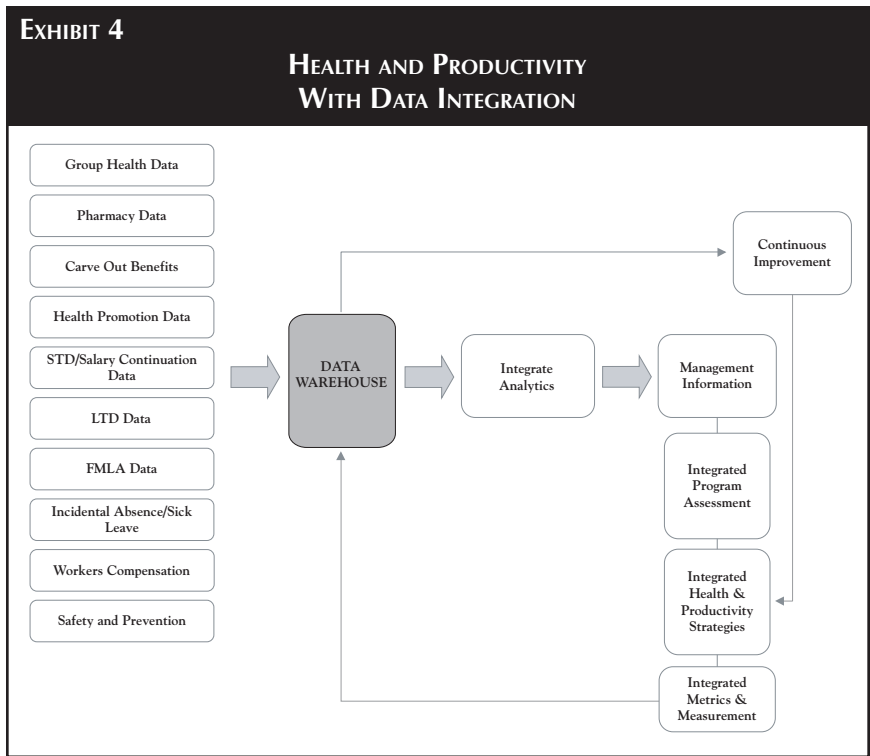
The most sophisticated form of data integration links health and productivity data to key organizational metrics such as production standards, manufacturing output, or service standards. In 1999, Dr. Wayne Burton demonstrated the impact of self-reported employee health risks on a calculated productivity index based on “handle time” per call and “auxiliary” time not available for call center employees to respond to calls.<sup>4</sup> While it is easier to document impact on key business performance in some industries than in others, this link is critical to understanding the impact of health-related issues on productivity and, ultimately, on the bottom line.

### **HOW DOES DATA INTEGRATION AFFECT THE HEALTH AND PRODUCTIVITY MANAGEMENT PROCESS?**

Map the process without data integration. (See exhibit 3.)



Map the process with data integration. (See Exhibit 4.)



Using a data warehouse and integrated analytic software to generate management information has an impact on many of the fundamental components of the process.

**PROGRAM ASSESSMENT**

In a typical assessment situation, key cost drivers are evaluated in the

context of how they affect a particular program. Program-specific data is reviewed prior to on-site interviews and used to develop interview and focus-group questionnaires. Essentially, this data provides the direction or theme for the assessment.

In-depth analysis of all absence and productivity data alters the focus of the assessment by changing what are considered key cost drivers. Interviews and focus groups can be framed to explore issues that emerge for the employee population (or specific segments of the employee population) rather than for a specific program.

Digging deep into the data allows the employer to identify not only what trends are costing medical and lost-time dollars, but which part of the spend is truly significant and controllable. Take, for example, the manufacturer in a state where the employee has the choice of a physician. From the data, it is evident that one doctor treats most of the injured employees from one particular shift. They all have similar diagnoses and treatment patterns, which are driving significant medical and lost-time costs.

The employer can't require the employees to change doctors but can educate them on successful treatments by other physicians that allowed other employees to attain their preinjured status. The employer can also strengthen its return-to-work program to aid the employees in a safe and healthy transition back to work. The employer may not have control over where the employees treat but can influence the outcome in a positive fashion.

## **STRATEGY DESIGN AND PROGRAM IMPLEMENTATION**

Typically, intervention strategies are designed and implemented based on the results of a program-specific assessment. The strategies are targeted to address cost drivers and health issues affecting one particular program, with no consideration of the potential impact on other programs. Some simple examples are the development of a safe-lifting program targeted at reducing back injuries or the development of a transitional duty return-to-work program for work-related injuries only.

While these examples are both effective strategies proven to reduce the cost of work-related injuries, a more comprehensive back safety and care program could potentially reduce nonoccupational absences and related health costs as well. Similarly, a transitional duty return-to-work program structured for all absences can reduce potential cost shifting and ensure equal treatment of all employees with an injury or illness resulting in time away from work.

Information drawn from integrated data can provide a comprehensive

picture that could lead to expansion of fundamental strategies, as described above. The use of a robust data warehouse and integrated analytic software allows quick and effective development of this comprehensive picture of employee health issues.

As more information is gathered, the focus of interventions can change based on information derived from the data. As the strategy design is developed, immediate access to data allows refinement of the strategy and implementation plan to respond to emerging health issues. This capability therefore influences program measurement, evaluation, and continuous improvement strategies.

## **MEASUREMENT AND PROGRAM EVALUATION**

Traditional program metrics are developed based on data and information available for only one program. For example, lost workdays may be tracked for work-related injuries but not for other types of absences. While reduction in lost workdays is a common metric for programs related to work-related injuries, there may be no consideration of whether or not lost workdays increase or decrease for other absence programs. If this metric exists for other programs, it will be evaluated in isolation.

Medical costs may be tracked for “episodes of care” under group health plans and analyzed on a per-claim basis for workers compensation. There is typically no comparison of costs for the same condition under occupational and nonoccupational health programs. As demonstrated by NCCI, this type of comparison may encourage a different focus with respect to reducing medical costs under workers compensation programs.<sup>5</sup>

As suggested by Durso, a more meaningful analysis is to group costs related to lost time into “episodes.”<sup>6</sup> These can be episodes grouping all lost workdays for an employee associated with a specific health condition across programs. Episodes can also be grouped and compared for all costs associated with an episode of lost time, regardless of the cause.

For example, if an employee injures his or her back at work, all costs associated with that absence (both medical and lost time) are grouped together as an episode. This episode can then be compared with other episodes for the same medical condition that might occur for employees who have nonoccupational absences. Controlling for age, gender, and other potentially relevant variables, the total cost of an episode can be analyzed and compared across programs.

The episode-based approach promotes the creation of consistent metrics across programs or same metrics for programs that are tied together. In this situation, the goal could be to reduce the total cost of an episode associated

with a particular medical condition, whether the injury occurs at work or not. Integrating data analysis in this way can facilitate development of complementary metrics and ensure that metrics do not drive programs toward competing goals. These metrics also allow for comparison of providers across programs. For example, a specific diagnosis may commonly be seen from a provider in workers compensation, but that same provider may not use that same diagnosis in group health.

### **CONTINUOUS IMPROVEMENT**

Continuous improvement represents the ongoing process to use data to drive program improvement and results. Typically, program-specific metrics are reviewed monthly, quarterly, or annually. Changes in interventions and program-management strategies are made based on the information obtained from the metrics. Without data integration, these program improvements are made to a single program, without consideration of the impact on complementary or related programs.

By using integrated data to drive continuous improvement strategies, organizations will be able to address overall health and productivity issues more effectively. As one issue is resolved, others will emerge, and the data will provide information with which to identify and address new issues. This will result in a sustainable process to ensure that the health and productivity program effectively addresses the changing needs of the employee population and has a positive impact on the bottom line.

### **SUMMARY**

As previously noted, data-based management information is only as good as the operational improvements it drives.<sup>7</sup> A comprehensive data warehouse and a powerful analytic tool can help employers improve their business results by developing strategies that address health and productivity issues on an employee-centric rather than program-specific basis.

Data integration should also provide the ability to link the impact of employee health to key business metrics. Data integration can produce meaningful, actionable management information. If this information is used to develop targeted and effective strategies, and the business impact is established, promoting employee health and productivity will become a key business objective, not just an effort to contain costs.

### **ENDNOTES**

1. Durso, Katherine A., Ph.D., "Ask the Analyst — Disciplining Disparate Data and

- Tracking Absences,” *EmployeeBenefit News* (September 15, 2005).
2. Lerner, Debra, Ph.D., et al., “Relationship of Employee-Reported Work Limitations to Work Productivity,” *Medical Care* 41, No. 5 (May 2003): 649-659.
  3. Robertson, John, and Dan Corro, “Workers Compensation vs. Group Health: A Comparison of Utilization,” *NCCI Research Brief* (November 2006).
  4. Burton, Wayne, MD, et al., “The Role of Health Risk Factors and Disease on Worker Productivity,” *Journal of Occupational and Environmental Medicine* 41, no. 10 (October 1999): 863-877.
  5. Lerner, *ibid.*
  6. Durso, *ibid.*
  7. Durso, *ibid.*

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