



LINKING WORKFORCE HEALTH TO BUSINESS PERFORMANCE METRICS

STRATEGIES, CHALLENGES AND OPPORTUNITIES

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EXECUTIVE SUMMARY

Background

Employee benefits and human resources (HR) professionals have made a convincing business case for the competitive advantages of a healthy workforce. This is clear from the studies showing that a majority of large U.S. employers now offer programs to help workers improve their health, manage chronic illnesses, or return to work from a disability episode.

Despite the overwhelming research evidence that healthy workers provide a competitive advantage, benefits and HR professionals cannot afford to rest on their laurels. Many employers still make decisions about workforce health investments primarily on the basis of healthcare costs. This focus on the costs of illness neglects the ways in which healthy employees contribute to a company's value production process. As a result, continually rising healthcare costs may jeopardize employers' efforts to "bend the curve" through investments in workforce health promotion, lifestyle management and care management programs.

Comparing objective job performance outcomes for relatively healthy and unhealthy employees represents an obvious approach to making the business case for workforce health investments. Nonetheless, only a small number of occupations and tasks - call center operations and insurance claims processors, for example - have objectively measurable performance outcomes. Measuring sick day and disability absences and using validated metrics of self-reported job performance measures present viable alternatives but have their own drawbacks.

A more complete approach would incorporate health into top leaders' strategic vision of how human capital creates value for the company. Viewed as an important component of a high performing workforce, health becomes a leading indicator of future business performance rather than simply a cost driver. Linking available health metrics to business performance metrics top leaders already use provides the foundation for an evidence-based, business rationale for workforce health investments.

Practical steps that benefits and HR professionals can take to incorporate workforce health into their company's strategic plan are:

- Identifying their company's corporate strategy
- Mapping the strategy
- Compiling available health and business outcomes metrics, and preparing to fill gaps with new data
- Testing the framework
- Refining the framework as necessary
- Initiating action based on findings

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About IBI

Founded in 1995, the Integrated Benefits Institute (IBI) is a national, non-profit research and educational organization committed to helping business leaders and policymakers understand the business value of workforce health and recognize the competitive advantages of helping employees get and stay healthy. IBI is supported by over 1,100 member companies representing over 20 million workers.

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Background

There is no mistake about it: the business case for investing in workforce health is strong. The research literature on the competitive advantages of healthier employees – in terms of costs, absence and job performance – bears this out consistently,¹⁻¹⁹ as does the high percentage of firms that make efforts to promote good health in the workplace.²⁰⁻²²

Yet despite the overwhelming evidence that healthy workers and healthy bottom lines go together, many employers still make decisions about workforce health investments primarily on the basis of healthcare costs. This poses a challenge for workforce health advocates – typically employee benefits and human resources (HR) professionals – because healthcare costs continue to rise,²³ while the evidence for positive returns on investment (ROI) from wellness programs is inconclusive.^{22,24-29} Over time, these dynamics could put pressure on employers' efforts to "bend the healthcare cost curve" by investing in workforce health promotion, lifestyle management and care management programs.

Existing approaches are limited

However, the intensive focus on costs in the ROI equation (with program costs in the denominator and healthcare cost margins in the numerator) only partly captures the value of a healthy workforce. The competitive advantage provided by healthy employees who are on the job consistently and contributing at a high level to the firm's overall business strategy is missing entirely from the numerator.

Directly measuring and comparing the job performance of relatively healthy and unhealthy employees represents an obvious approach to making the business case for workforce health investments. However, studies that implement this approach successfully^{2,30-32} tend to focus on workers with job functions designed specifically to facilitate measurement³³ – usually workers performing routine customer service or data entry tasks that can be computer-monitored for time and accuracy. While these studies make important contributions to the general understanding of how health impacts productivity – the output of workers that contributes to a company's ability to create value – organizations with different business models or employ workers with less measurable tasks often overlook these lessons.

The plan of this paper

This paper strengthens the business case for a healthy workforce by advocating a more strategic approach to health and business performance measurement. It recognizes the persuasive power of correlating employees' health status to objective measures of job performance – but also addresses the limitations of that approach for most jobs and many employers.^{34,35} It also points to some pitfalls of "objective" job performance measurement that the field of health and productivity rarely considers.

As IBI has argued,³⁶ companies that can link individuals' health indicators to objectively measured job performance should do just that. Most companies will require a different approach, one that is unique to their own business model and circumstances and incorporates their currently favored business performance metrics. We therefore advise emphasizing healthy employees as strategic assets in a company's value production process. This approach compels benefits and HR professionals to understand their top leaders' overall goals and corporate strategy, to identify the relevant drivers of success, and to situate health among all the human capital factors that enable workers to contribute to those drivers.³⁷ Linking health to the bottom line becomes less about trying to shock corporate leaders with how much illness costs their benefits programs, and more about communicating the importance of health to existing measures of business success.

To help benefits and HR professionals and their supplier partners make the case that health enhances employees' strategic value, we draw on the scientific and management literature on performance measurement for practical

guidance on adapting conventional workforce health indicators (such as health risks, absences and validated assessments of self-reported job performance)³⁸ to strategic mapping approaches to management systems.

The case for measuring job performance directly

THE DIRECT APPROACH TO MEASUREMENT

In principle, measuring the impact of a healthy workforce on business performance is straightforward. Extending Adam Smith's famous 1776 description of pin factory workers³⁹ illustrates a simple case. In "The Wealth of Nations," a foundational work in economics, Smith described how ten workers each perform the different tasks of making pins (measuring, cutting, and sharpening wire, attaching the head, and so on) to make twelve pounds of pins per day.

While Smith did not point it out, if the pin measurer stayed home from work one day with a bout of imbalanced humours (a common diagnosis in 1776), and the factory produced only 10 pounds of pins, then illness resulted in a 17% output loss. The output loss might have been different if a different worker in the process had been absent, and the resultant financial loss to the factory owner would depend on the market price for pins and whether the ill employee drew wages during the absence (probably not). But measuring the performance outcome is simple: put the pins on the scale, and compare today's weight to yesterday's weight. Perform this measurement every day and note whether any workers were absent, and before long you will know average output loss (in pin poundage) for each absence.

Clearly, measuring business output in 1776 was not as simple as the pin factory example implies. Nor would the effects of illness be limited to absences. For example, a worker suffering from scurvy or consumption on the job might not measure wire as quickly or accurately as a healthier worker, resulting in sub-optimal pin production.

Nonetheless, Smith's pin factory is the archetype for many economists' subsequent ideas about how workers create value. The pathway from the workers' routine tasks to an objectively measured outcome is so straightforward, and the hypothetical role of health is so clear that the research literature on workforce health and business performance *should be* replete with similar studies from actual workplaces.

Yet, it is not. Very few scientific studies link workforce health to business performance beyond the costs of treatments, benefits or the productivity and wage replacement value of absences and underperformance. Of the 156 most cited peer-reviewed health and productivity studies in the last two decades,⁴⁰ only four linked individual employees' health to objective job performance metrics used for routine management purposes. The relevant findings of these studies – as well as similar peer-reviewed or quality-reviewed studies (such as Ph.D. dissertations) – are summarized in an Appendix at the end of this report.^{2,9,30-32,41-45} Generally, studies that include objectively measured performance tend to focus on jobs with tasks that are designed to be measured (such as telephone customer service representatives) or that have outputs that are quantifiable in nature (such as collected sales taxes or number of insurance claims processed). With a few exceptions, the studies typically support the conclusion that healthier employees perform better on the job by objective standards.

While peer-reviewed studies represent the most credible evidence for the relationship between health and directly-measured job performance, they exclude corporate measurement efforts conducted primarily for management purposes. Some examples of such internal studies are available publicly. For example, IBI's recent case study of the Metro Nashville Public Schools district describes how a composite measure of teaching quality – taking into account indicators such as classroom evaluations by teaching experts, students' standardized test scores, students at grade-level, and improvements among students who are below grade-level – improved after the introduction of on-site clinics and value-based healthcare benefits for teachers and administrative staff.⁴⁶

Issues surrounding direct measurement

Although they focus on a small number of jobs and tasks, the studies cited above support the general premise that a healthier workforce not only costs less, but also provides more value by way of greater (or higher quality) output. Nor do these few studies represent the entire evidence base. Several studies⁴⁷⁻⁵⁰ that use the Human Capital Management Services Research Reference Database (HCMS RRDb) report objective productivity in terms of “units processed per hour worked by using real, day-to-day, person-level work output data” (Kleinman et al., 2005, page 1118). However, because such studies provide only minimal detail on the occupations or tasks studied or on the objective outcome measures, they are not discussed here. Likewise, the many peer-reviewed studies that examine directly measured job performance without incorporating a workforce health component are not discussed in this report (for example, the use of patient satisfaction, clinical quality, research grants, publications, and teaching to evaluate medical school faculty productivity⁵¹). Future studies could be adapted to examine the role of employee health.

That said, the evidence base from existing studies with directly measured job performance has several drawbacks for employers and for the health and productivity field at large. Generally, these drawbacks stem from the limited research goals of the individual studies rather than from the quality of the analyses.

Narrowly defined employees and tasks could lead to narrow interpretations of findings

First, the existing studies frequently omit any context for why the observed employees are important to the overall organizational strategy. When context is provided, it typically addresses departmental goals (e.g., customer service). The importance may have been self-evident to the employers or researchers – or in some cases they may have simply focused on job functions specifically designed to facilitate measurement³³.

However, omitting the explanation of how specific employees and their departments relate to the organization’s value production process can leave the impression that the findings are relevant only to employers with similar kinds of workers or business functions. Given the diversity of the modern workforce – the Bureau of Labor Statistics classifies workers into 840 detailed occupations and 461 broad occupational groupings,⁵² with innumerable combinations of tasks performed in different ways at different firms – the potential to overlook the general lessons afforded by a small number of jobs with objectively measurable tasks is high.

Studies that do not explain why the measured outcome was selected and why the measured task is important to how an employee brings value to the company can compound this narrow interpretation of findings. The connection between employees, tasks and organizational goals will seem obvious in some cases (e.g., teaching quality). For other cases, the measured task may appear secondary to the job (e.g., paperwork completed in a clinical setting). Unless they explain why performance of “secondary” tasks serves as a good indicator of primary task performance – and by extension the tasks of other kinds of workers in other settings – many studies can leave the impression that health is an issue for marginal tasks performed by a subset of employees.

Timing is everything

Second, even companies that correlate employees’ health with directly measured outcomes often fail to appreciate the mismatch between the timing of health improvements, improvements in measurable job performance, and ultimately better business performance.⁵³ In principle, business performance metrics are used to assess the quality of an organization’s management. Thus top-level metrics – usually financial outcomes such as revenues, profits or share price – reflect the performance of the top leaders responsible for an organization’s

overall strategy⁵⁴ – which is to say, the most important significant business performance metrics are always lagging indicators.⁵⁴⁻⁵⁷ The challenge for corporate leaders (and others who want to assess how well an organization is run) is identifying which of the investments and strategies implemented in the past are most responsible for today's organizational performance.

The same challenge exists for lower-level strategies and investments – including strategies to improve job performance by improving health. Given the immense number of physical, mental and behavioral health risks that can take a toll on job performance, research does not always provide a clear guide for how long it takes for improvements in health to translate into productivity improvements or medical cost-savings.⁵⁸ However, even when periods of illness-related underperformance have clearly-defined beginnings and endings – during allergy season, for example – tightly coupling the changes in health status and job performance potentially overemphasizes health improvement as a “one-time fix” at the expense of viewing health as an enduring component of high performing human capital. Just as focusing on jobs with easily measurable outcomes can leave the impression that health is important only to certain functions, focusing on improvements among at-risk workers ignores the importance of “keeping healthy employees healthy.”⁵⁹

Unintended consequences

Third, measuring any aspect of social life carries with it the risk of unintended consequences. Some of these consequences relate to numeric properties of repeated measurements. Others result from behavior changes that occur when people know they are being assessed. Both types of consequences complicate efforts to link health and job performance.

As Meyer and Gupta (1994) point out, any performance measure – including objectively measurable outcomes such as batting averages in baseball – will lose variance with repeated uses over time.⁶⁰ This “running down” process makes established measures less useful for differentiating good and bad performance, and occurs in part because people (or organizations) learn to become better at doing what is being measured. In the context of job functions such as processing insurance claims, it may not be a bad thing for employees to become uniformly effective – provided that the improvements are attributed to the learning process and not associated spuriously with other factors that may be changing over time (such as health).

The *act of measuring* performance is known to have its own impact on performance – in both positive and negative ways. It has been known since at least the 1930s that employees who know they are being studied will work harder and perform better – at least for a short period of time.⁶¹ For employees participating in a health promotion or disease management program, this makes it difficult to differentiate “real” job performance improvements from experimental effects.

It also is well known that managers, supervisors and employees alike frequently game the system of measurement – for example, devoting time and attention to non-financial outcomes that determine their compensation levels at the neglect of bottom-line performance^{56,62,63} or “smoothing” output to regulate management's expectations.⁶⁴ In the worst case scenario, leaders, supervisors and employees break the law to meet stringent measurement goals – as occurred recently when teachers and principals in Atlanta schools were convicted of racketeering charges after changing students' answers on standardized tests in order to meet school score targets.⁶⁵

Finally, rigorous intensive, performance measurement that imposes high levels of stress or appears unfair from the perspective of workers can lead to counterproductive employee behaviors.⁶⁶ As numerous absence management experts informed IBI in its study of Family and Medical Leave Act (FMLA) use among call-center workers,⁶⁷ stress also can have detrimental effects on employees' health and their willingness to coordinate time off from work in minimally disruptive ways.

Working around the limitations of objective performance measurement

To reiterate, companies that can link employee health to directly-measured job performance should do so, both for managing specific jobs and for making the internal case for workforce health investments. Nonetheless, employers also should recognize that opportunities for meaningful objective performance measurement are limited and present challenges for generalizing the importance of health to the workforce as a whole.³⁴

There are at least three viable alternatives to objective performance measurement: self-reported job performance, using absence as a general indicator of productivity loss, and incorporating workforce health into indicators of human capital as a strategic asset.

SELF-REPORTED JOB PERFORMANCE

Given the diversity of the modern workforce, researchers have developed a variety of survey instruments to address employers' needs for general performance assessment. The most widely used by employers are the Work Limitations Questionnaire (WLQ),⁶⁸ the Health and Work Performance Questionnaire (also known as the Health and Productivity Questionnaire, or HPQ),⁶⁹ the Stanford Presenteeism Scale⁷⁰ and the Work Productivity and Activity Impairment Questionnaire (WPAI).⁷¹

Although they differ in their question wordings and in some subject areas, the survey instruments share a focus on measuring productivity and performance in ways that can be related to chronic illnesses, health risks, or symptoms of physical or mental health conditions. They also typically measure productivity and performance in such a way that "presenteeism" – underperformance on the job due to illness – can be expressed in units of time (e.g., hours or proportions of time spent at work). This in turn permits an assessment of the economic value of lost productivity due to illness (typically using wages and benefits as the unit costs of labor).

Self-reported job performance measures have several other advantages besides the ability to assess the economic value of lost productivity. First, they can be administered to employees of any occupation, which permits assessment of employees who contribute as part of a team or who do knowledge-work with intangible outputs. Second, some self-report questionnaires include items about abilities to perform specific kinds of activities (such as concentrate on work, work carefully, or complete tasks on time) or about specific kinds of symptoms (such as pain, fatigue or headaches) that can give insights into why job performance suffers – explanatory mechanisms that are missing from objectively measured outcomes. Third, the most common instruments have undergone extensive testing to ensure that the responses measure performance reliably and validly (such as comparisons of survey results to entries in work limitation diaries or to supervisors' performance ratings).

ILLNESS-RELATED ABSENCES

One advantage of self-reported job performance is that presenteeism can be expressed in units of time. The reverse also is true: an absence from work can be thought of as a 100% decrement in performance or conversely, as 0% performance. Thus, while not analogous to objectively measured job performance, absences provide an intuitive measure of employees' diminished contribution to the company's value production process.

Illness-related absence – including disability leaves – have an additional advantage in that they do not necessarily need to be correlated with other health status measures to understand the impact of illness on the bottom line. They measure aspects of health and productivity simultaneously (although in practice, some combination of absences and presenteeism would give the most complete view of health and productivity).

The impact of absences also permits a broader view of how diminished employee contributions impact business performance. An employee's absence impacts the performance of other workers to the extent that they function as part of an interdependent team.⁷² As with presenteeism, wages and benefits can be applied to assess the economic value of lost productivity due to illness (although this may undercount the total productivity loss to the

extent that an absent employee's lost output cannot be made up or if similarly productive, temporary substitutes are difficult to find⁷²).

Absences have a further advantage over directly-measured job performance in that they can be measured using administrative data (from payroll or disability leave systems) or from self-reported questions contained in many survey instruments. For this reason, they may be less liable to the "running down" process described by Meyer and Gupta – unless absences are used to determine compensation for employees or business units, which may encourage employees and supervisors to game the metrics.

SOME LIMITATIONS OF ABSENCES AND SELF-REPORTED PERFORMANCE METRICS

While illness-related absences and presenteeism provide several practical advantages over objective job performance measures, they also have some drawbacks. Most glaringly, many businesspeople remain skeptical of self-reported job performance⁷³⁻⁷⁶ in spite of many validation studies. Administrative sick day absence data may be of questionable quality because records are kept poorly, or include non-illness related information (for example, days taken off to take a child to the doctor but deducted from allowed sick days in the payroll or HR system), while self-reported absences are subject to recall error.⁷⁷ However, these are only drawbacks insofar as presenteeism and absence are collected for their precision, rather than for their capacity to validly measure illness-related lost productivity for analytic purposes.

This underscores what may be the main drawback of the existing approaches to linking workforce health and productivity – and perhaps greatest shortcoming in the existing field of health and productivity research and practice. For all the attention given to productivity – which has worker output at its core – the competitive advantage of a healthy, well-functioning workforce is almost always expressed in costs (in wage replacements or equivalents) rather than productive capacity. The numerator showing what employers get in return for their efforts to keep employees healthy, on the job, and well-functioning remains undervalued. It is true that economic theory and common sense – which overlap only occasionally – dictate that employees are paid for the value of their contributions to the business enterprise. The firm always will be better off if employees' health permits them to contribute more of their best efforts.¹ What's more, while some studies attempt to incorporate business outcomes ("lost revenues") among the losses attributable to absences and presenteeism^{72,78} they do not differentiate these losses from other costs such as overtime to replace absent workers' output.

A stronger case for the value of workforce health likely will require stepping back from the finer details of health and productivity measurement, re-establishing the case for why high-performing human capital matters to a company's overall business strategy and then integrating health into the strategic picture.

The Way Forward – Linking Health to the Larger Business Strategy

Many business functions with intangible outputs face pressure to demonstrate their value to the enterprise. These include marketing,⁷⁹ supply chain⁸⁰ and human resources management.^{55,57} While the function's core purpose is not in question – no business would seriously consider trying to operate without marketing its services or managing its human capital – evaluating the efficiency and effectiveness of management efforts presents

¹ Some might argue that this is true only if productivity gains – including the market value of increased output – exceed or equal the costs of efforts to keep employees healthy. This common perspective ignores that health benefits – whether in the form of insurance premiums or payments for any treatment or therapeutic interventions – are part of a company's compensation costs. If employers could replace all their unhealthy workers with healthier substitutes, they likely would realize increased worker output. In the long run, however, they would also have to pay these more productive workers more in wages or risk losing them to labor market competition.

challenges. Thus, different functions or disciplines develop and refine their own specific metrics to assess how well each contributes to the larger organizational goal. Reviewing different functions' performance metrics is not central to this paper. What matters is that each function's contributions can be incorporated into the organizations' own narrative of its success – that is, into its strategic business plan.

A STRATEGIC VIEW OF ORGANIZATIONAL SUCCESS

Almost every organization of considerable scale employs a strategic business plan to help manage its operations. In its simplest form, a strategic business plan tells the story of an organization's goals and how it plans to achieve them. It describes the translation of its different capabilities and resources into activities that are valued – and therefore rewarded – by various stakeholders. Assessing the plan has given rise to different performance measurement frameworks that have gone by different names over the years (e.g. performance measurement matrix, business scorecard, results-determinants models, etc.).⁸¹

Regardless of the framework employed, strategic business plans share some common characteristics.⁸¹

- A succinct overview of business performance is offered.
- The emphases on financial and non-financial measures, internal and external stakeholders' priorities, and efficiency and effectiveness considerations are balanced.
- All dimensions of performance that are important to success are measured.
- They demonstrate how performance measures are integrated across an organization's functions and hierarchy, showing the interconnectivity between goals and actions.
- They explain how results are a function of determinants as well as the need to correlate results with drivers throughout the plan.

Figure 1 (adapted from Ittner and Larcker (2003)⁶²) illustrates these principles for the human capital function of a retail organization. By identifying a relatively small number of measureable attributes, Figure 1 tells a story of how well-selected, trained, and experienced employees – through their interactions with human capital management policies – influence customer behaviors and ultimately, shareholder values.

Figure 1: A strategic view of how human capital drives shareholder value in a retail organization



Note that Figure 1 is not a comprehensive business plan for an entire retail organization. Other key functions – such as marketing, physical plant, investments and supply chain management – are excluded for simplicity. In principle, however, a similar framework could be developed for each separate function. It also is important to recognize that the human capital function will overlap with other functions to the extent that selection and staffing, employee satisfaction, and human capital management policies contribute to important outputs and outcomes.

The framework also provides a guide for using data to test the correctness of assumptions about how the parts fit together. For example, assume that contrary to Figure 1, analyses find *no correlation* between employee satisfaction with supervision and support and customers' satisfaction with quality and the shopping experience – or analyses find a strong correlation regardless of employees' levels of empowerment or accountability. With this information, leaders understand better what they need to focus on improving and (importantly) what they need to continue measuring. This can help them achieve better overall business performance – as indicated by Ittner and Larcker's (2003) findings that companies that correlated non-financial measures to financial outcomes had better five-year returns on assets and equity than companies that did not.⁶²

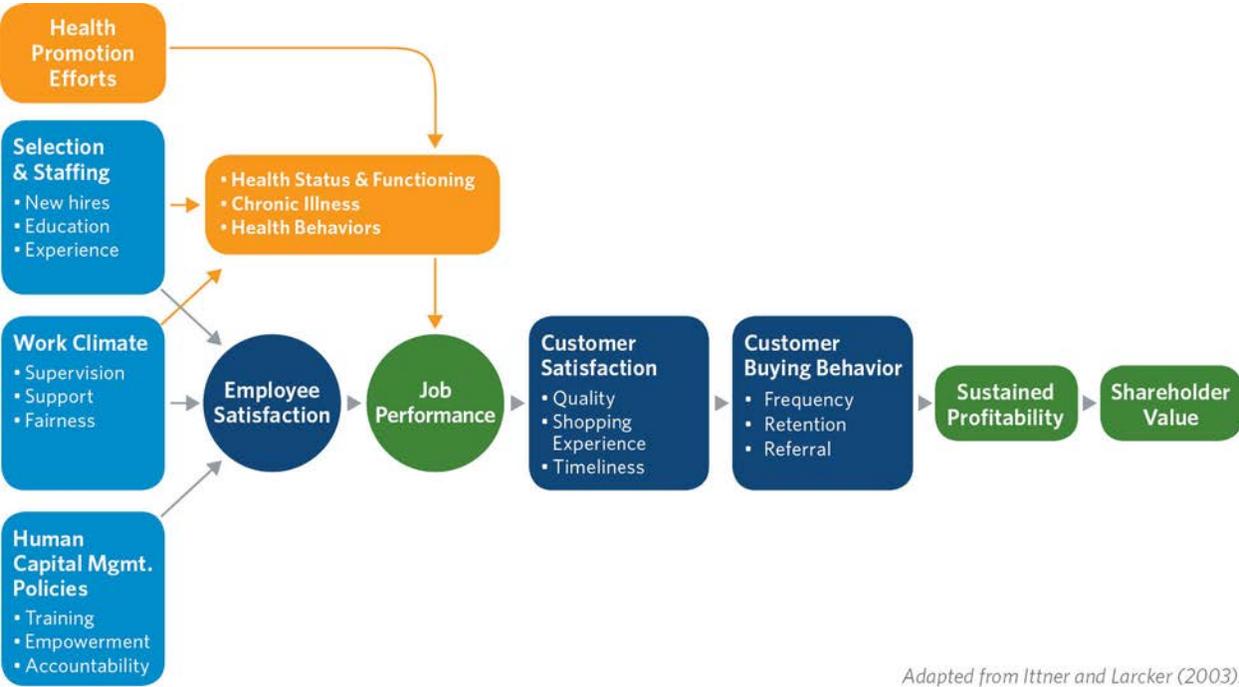
HOW DOES WORKFORCE HEALTH FIT IN?

Existing research shows clearly that health is an important component of human capital. It therefore is not difficult to adapt a framework such as the one shown in Figure 1 to represent the impact of health on the value production process.

As illustrated by Figure 2, health plays a role in who participates in the labor force, but selection and staffing also influences the kinds of health issues employees bring to the workforce as a consequence of their age, sex and socioeconomic background.⁸² While for legal and practical reasons employers cannot hire based on health-related attributes, they nonetheless bear productivity losses if illness-related absences or underperformance is linked to customers' satisfaction with service or quality. This is testable by measuring the workforce's health status – for example, through health risk assessment (HRA) surveys, disability and medical claims reviews or administrative records or sick day absences – and correlating with customer satisfaction surveys. Now the case for health promotion initiatives has an evidence-based business rationale.

Research also documents that the work environment influences physical and mental health, as indicated by sick day absences.⁸³ Health therefore can be considered as contributor to employees' abilities to add value by putting in their best efforts, similarly to greater empowerment and accountability. If analyses confirm this, it points to a different set of organizational priorities to improve outcomes such as customer satisfaction with product or service quality and ultimately, better shareholder value.

Figure 2: Incorporating health in a strategic view of how human capital drives shareholder value in a retail organization



If linking health and business performance is so obvious, why don't more companies do it?

If health is such a demonstrably important component of human capital, why don't more companies incorporate the value of a healthy workforce into their strategic planning? There are at least three potential explanations.

First, the connections between healthy workers, better productivity, and business performance may seem so intuitive that businesses are not motivated to document the intermediate mechanisms.⁷⁶ For example, when IBI in 2010⁸⁴ or Fabius, et al. in 2013⁸⁵ correlated well-developed health and productivity management efforts with corporate financial success, neither study intended to say that workforce health investments *caused* higher profits or share prices. Rather, they recognized implicitly that high-performing human capital provides a competitive advantage,⁸⁶ and that good health facilitates such high-performance. No strong causal statement is provided, because none is needed – the point is that effective human capital managers always look for ways to strengthen their company's competitive advantage. They rightly invest in workforce health with the same attitude that they attend to workforce skills development. The obvious risk of this perspective is that it could be misunderstood to suggest that a company which manages all other aspects of human capital superbly can afford to ignore managing workforce health. The fallacy is trying to disentangle the quality of a company's leadership from the things they do to execute their vision.

Second, workforce health is not uniquely conspicuous in its absence from strategic plans. Many companies generally do not measure or analyze non-financial information that contributes to the value production process.^{62,86} This can occur because their strategic planning focuses only on financial information or because the strategic plan does not get communicated down to lower organizational levels. Related to this, sub-units of a company may collect extensive non-financial data for limited purposes – correlating health improvements with medical spending, for example – that never get communicated upwards except in terms of costs. As IBI discovered in conversations with benefits and HR professionals, many companies collect good health and productivity data, but their benefits and HR departments don't know their corporate strategy, how benefits fit in or the business metrics their leaders value.³⁶ Worse still, collecting and analyzing data haphazardly – for example, trying to correlate an individual's health status with the group-level performance metrics or assuming that health and performance improvements should occur during the same time period – may lead some companies to decide prematurely that workforce health has no bearing on their business performance.

Finally, strategic planning focuses on what employers can control. Fatalism – the belief among some companies that employees can't or won't change their health behaviors regardless of an employer's efforts, or that an employee will likely leave the company before health improvements begin to impact productivity – likely explains why some employers neglect health in their strategic planning, even in the face of the strong evidence that healthier workers are more productive. Some of this fatalism may also stem from a simple status quo mentality – “we have never included workforce health as part of our strategic plan, so why start now?” The challenge for benefits and HR professionals is to help top-leaders overcome fatalism and status quo thinking in order to realize the competitive advantage of a healthy, high-performing workforce.

Practical steps to help employers move forward

In the face of these obstacles to incorporating health into the larger business strategy, benefits and HR professionals who want to demonstrate the full impact of a healthy workforce likely will have to do what they have done in the past: become strong advocates for their own value. This means they must not only continue to demonstrate costs savings for their health and productivity efforts, but also must become more engaged with their leaders' strategic thinking. Detailed approaches to strategic planning and measurement can (and have) filled many books. Some practical guidance from the scientific and management literature on performance measurement can help orient benefits and HR professionals to some basic starting points.^{55,62,63,81,86}

I. IDENTIFY YOUR CORPORATE STRATEGY

Learning how top-leadership approaches the connection between its human capital, internal business processes and financial outcomes is the obvious first step. However, for companies that do not have a formal strategy or do not communicate their strategy below the top level of management, benefits and HR professionals may have to take the lead. It may be helpful to develop such a strategy for the HR and benefits function itself since that is the business unit benefits and HR professionals know best. Alternately, it may be more effective initially to collaborate with a business unit that has its own business performance metrics – particularly if that unit generates revenues for the organization or is critical to its primary service or customer fulfillment function.

The catch of course, is that identifying such units is difficult without knowledge of a strategic plan. Benefits and HR professionals may have to take the direct approach of asking senior leaders (or operations personnel who routinely report results to top management) for explicit guidance on what kinds of metrics and results they would find compelling. This approach was taken successfully by MGM Mirage,⁸⁷ where the benefits and finance functions collaborated to adopt a multi-year, integrated population health and productivity plan to improve service in its resorts by helping its workers manage their own health.² Some knowledge of what measures are

² A video of highlights from IBI's conversation with MGM Mirage's VP of Benefits Education and Health Promotion and the Executive VP of Operations & CFO can be viewed on [IBI's YouTube channel](#).

germane within a company's industry also can help orient HR professionals (Carnish provides several examples of both individual and aggregate-level metrics⁸⁸).

II. MAP THE STRATEGY

Once the overall strategy is understood, it is time to create a strategy map similar to Figure 2 that links the performance drivers (leading indicators) through their final outcomes (lagging indicators). Again, companies with a well-articulated strategic plan will have an advantage. They simply have to identify human capital as a performance driver, making reasonable assertions that good health enables a workforce's capabilities to produce value. The good news for benefits and HR professionals who are starting from scratch is that they are already working from a strategic perspective focused on human capital. The map simply articulates the role of health alongside other enablers such as selection training, experience, supervisory quality or job satisfaction.

III. COMPILE AVAILABLE HEALTH AND BUSINESS METRICS – AND PREPARE TO FILL IN THE GAPS

The existing research literature indicates clearly that good health enhances a workforce's capabilities to produce value. The accuracy of this assertion for any specific company however, must be tested. For that, benefits and HR professionals will need to compile the health and business outcomes metrics that correspond best to their strategic plan. These may come from regular HRA surveys or by analyzing medical and disability leave claims. IBI and other organizations provide guidance on different types of health and productivity metrics – such as the percentage of employees with health risks known to contribute to disease or to impact absences and job performance, or the total number of workdays lost to preventable illnesses and injuries.^{38,89}

While the metrics utilized should address several dimensions of health (such as chronic illnesses, health risks, utilization of services, work outcomes), it is not practical to provide top-leaders with the all the metrics used to manage employee health and productivity efforts. One rule of thumb is that senior executives should not try to digest more than 20 aggregate metrics for their entire organization.⁶³ The strategic plan itself should dictate the priority of health metrics. For example, if the value production process emphasizes cognitive skills, mental health and stress measures may be critical. By the same token, the strategic plan will provide guidance on the appropriate unit of measurement for health data. Clearly, health begins with the individual employee and can be measured at that level. However, if the performance outcome that drives organizational value is measured only at a larger level (e.g., if customer satisfaction is measured across stores or shifts), then health data must be aggregated to that same level. This means that any health metric utilized must be measured consistently (i.e., reliably) throughout the company, and over time.

The process of creating the strategic plan and compiling the appropriate data also will help identify gaps in health and outcomes data. Filling these gaps means collecting not only reliable data, but data that measure what is intended validly. For example, Many HRA survey questions have undergone validity testing (for example, comparing question responses to objective measures or to existing validated questions), but in many cases “face validity” will have to suffice. For example, a measure of total medical treatment spending likely will combine routine office visits, screenings and preventive care with effective and ineffective treatments for illnesses and injuries of varying severity. It is difficult to say with precision how much modifiable health or illness is being measured – but we can be reasonably sure that treatment spending measures *something* within the domain of health.

IV. TEST THE FRAMEWORK

A primary advantage of a strategic plan is that it maps out how employees contribute to the value production process. Put another way, a strategic map lays out a series of questions that health and business performance metrics can answer. The variety of approaches to framework testing cannot be addressed adequately in this

<https://www.youtube.com/watch?v=_YSowFw008I> The full DVD of the conversation is available from IBI. <ibiweb.org>

paper, but at their core they all measure associations between health and performance across units of analysis (e.g., employees, locations, shifts, departments) or within the same units over time.

In this sense, one question in Figure 2 asks whether healthier retail employees provide better quality service to customers. To answer this specific question in a retail environment, aggregate health status and customer satisfaction metrics (e.g., quarterly sick day absences and service quality ratings) or sales figures would be collected for each store. If, on average, customers gave better service quality ratings to stores where employees missed work due to illness less often – that is, if there is evidence for a positive relationship between the health and customer satisfaction – the inclusion of health in the strategic map is supported.

The analysis would be stronger still if multivariate modeling approaches are used to control for other factors that might be associated with health and satisfaction – such as each store’s demographics, average employee tenure, management quality or the demographic and socioeconomic characteristics of the communities in which particular stores are embedded. The same analysis could be completed for stores over time. A correlation between the year-over-year changes in quarterly illness absences and service quality ratings would not only support the hypothesis between health and customer service but would also provide evidence that improving health could lead to improved business performance (or conversely, that worsening health could lead to worse performance).

V. REFINE THE FRAMEWORK AS NECESSARY

Answering the questions posed by the framework can help make the case for why health matters to business performance and why promoting workforce health should be a leadership priority – but only if the answers are supported by analyses. If not, it will be necessary to rethink some of the assumptions about the framework and how data are collected and measured, and to refine and reevaluate the framework accordingly. Has the appropriate statistical method been applied? Is the timing between the health and performance variables properly aligned? Are there other unmeasured factors that might impact both health and business performance? The impact of illness on performance might not be immediately apparent, just as the impact of investments in technology or training on revenues not occur during the same time period.⁵⁴ Are the measures of health the right ones for the types of physical or cognitive performance being emphasized? In some cases, benefits and HR professionals may discover that for some organizational functions, workforce health has little impact on performance (for example, if people or business units have no meaningful variation in measured performance).

The framework should be evaluated on an ongoing basis even if the links between health and business performance are supported. Any strategic plan will require refinement as competitive environments change and as organizations adopt new processes and technologies that that require different skills and attributes.

VI. INITIATE ACTION BASED ON FINDINGS

A strategic plan simply is a tool that helps top organizational leaders manage their business processes according to a clear understanding of what drives value. Benefits and HR professionals that successfully incorporate health into the strategic vision of how human capital creates value must follow through by presenting leadership with realistic plans for investing in workforce health over the long term. Employers that are just beginning to implement workforce health and productivity programs can find examples of best practices from IBI^{90,91} as well as from other organizations such as Health Enhancement Research Organization.⁹² In many cases, developing partnerships with organizations that specialize in health promotion, lifestyle management and care management and have strong track records of linking health to productivity will be indispensable.

Final Thoughts for Employers

Employers have long viewed workforce health primarily through the lens of managing healthcare costs. When they have thought more broadly about health and productivity, typically it has been through a siloed view of minimizing major productivity disruptions (and claims costs) that accompany disability leaves of absence. As

this report points out, a narrow focus on costs obscures the business value created by a healthy workforce. The siloed approach to managing healthcare and disability claims means reacting to lagging indicators of illness, rather than cultivating health as a leading indicator of business performance. By treating healthy human capital as a strategic asset in a company's value production process and including health as a critical component of a high performing workforce, benefits and HR professionals can make a credible and durable business case for investments in workforce health and productivity.

Appendix – Peer-reviewed journal articles, working papers and dissertations that include objective measures of job performance

Authors	Study year	Employees studied	Work setting	Job performance measure	Health and performance findings
Burton, et al. ²	1999	Telephone customer service representatives (CSRs)	Large financial services firm	Supervisors subjectively rated the correctness of information provided to customers by CSRs, as well as CSRs' interpersonal skills. A computer-based system tracked the time taken for routine customer service functions, such as the amount of time spent on a call with a customer, customers' time on hold and time away from a work station.	Employees with high levels of psychological distress, diabetes, or high body mass index (BMI) scores were more likely to perform below established productivity standards.
Cockburn et al. ⁴²	1999	Insurance claims processors who had filled prescriptions for antihistamines	Large insurance company	Number of claims processed Processed claims were tracked by computer on a daily basis	Employees processed more insurance claims in the three days following a prescription for a non-sedating version of antihistamines (H1-antagonists), than in the three days before the prescription was filled. Employees processed more insurance claims in the three days before a prescription for a sedating version of antihistamines than in the three days after the prescription was filled. Differences persisted when the observed time period was extended up to two weeks.

Authors	Study year	Employees studied	Work setting	Job performance measure	Health and performance findings
Berndt et al. ⁴³	2000	Insurance claims processors with medical claims for one or more anxiety, depressive adjustment or other mental disorders	Large insurance company	Number of claims processed Processed claims were tracked by computer on a daily basis	Mental disorders had no significant effect on the number of claims processed
Burton, et al. ³⁰	2001	CSRs who suffered from hay fever, allergies or asthma	Large financial services firm	Supervisors subjectively rated the correctness of information provided to customers by CSRs, as well as CSRs' interpersonal skills. A computer-based system tracked the time taken for routine customer service functions, such as the amount of time spent on a call with a customer, customers' time on hold and time away from a work station.	Allergic employees were more likely to perform below established productivity standards during weeks when pollen counts were higher (particularly during ragweed pollen season). Productivity was lower for employees who reported more severe allergic symptoms. Allergic employees who reported using no antihistamines were less likely to meet the productivity standard during ragweed season.
Bond, et al. ³¹	2003	CSRs	UK financial institution	Number of computer input errors made when working on client accounts (in accordance with UK financial regulations and company policies on establishing audit trails) per hour worked.	CSRs who were better able to accept and manage the responses to negative aspects of their jobs had both better mental health and made fewer computer input errors.
DeRango et al. ⁴⁴	2003	Office employees	Governmental agency that collected state sales taxes	Volume of sales taxes collected per workday per month	Office employees randomly assigned to receive ergonomic training and supplied with a highly adjustable chair had reduced pain levels and significantly increased tax collections compared to a control group of office employees.

Authors	Study year	Employees studied	Work setting	Job performance measure	Health and performance findings
Lerner, et al. ³²	2003	CSRs and returns department (RD) employees	Large durable goods distributor with a retail mail-order operations	CSRs: number of phone calls answered per employee per payroll hour. RD: rate of merchandise units processed per hour over the course of a week.	On average, the more time an employee spent on the job with physical or emotional work limitations, the lower their measured productivity.
Meerding et al. ⁹	2005	19 teams of floor layers (two to three workers per team) 12 teams of road pavers (two to four workers per team)	Construction	Square meters of road or floor made in a day (normalized for factors such as the thickness of floor materials and mechanization of road work)	Floor layers: square meters of floor made were significantly correlated with physical and mental health problems in general and with musculoskeletal problems in particular. Road pavers: health was not correlated with square meters of road made.
Trotter ⁴⁵	2008	Employees in nursing, occupational therapy, psychology, recreational therapy, and social work departments	Hospital	Specific to each department; generally performance measures assessed the timeliness and quality of paperwork required for routine tasks.	Health was not correlated with timeliness or quality of documentation.
Allred ⁴¹	2012	CSRs	Small market research firm	Weekly number of completed telephone surveys (pre-scripted, to obtain information for purposes such as advertising, political campaigns or public commentary)	Self-reported measures of impaired work functioning were not significantly related to the number of completed surveys

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