



Connected

The mind's tie to the body's healing — Mental health comorbidities

Disability insurance white paper

Eighth in a series

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The wild card in the disability deck: mental health comorbidities

In this series of white papers on disability issues, we explore some of the factors that help people bounce back from adversity. While some of these factors are individual, others are subject to outside influences, notably by employers and their disability insurance carriers.

In this paper, we focus on the importance of mental/behavioral health comorbidities for disability claims and present some recent Aetna data on how these comorbidities impact the duration of musculoskeletal claims. We provide suggestions for better management of comorbidities both before and after the onset of a disability claim.

Connecting all the dots

Put yourself in their shoes

Imagine that you have a worker, Diego, who has developed a strain/sprain in his back muscles as a result of repeated heavy lifting. He's a good worker, in good overall health, reasonably fit and in his late twenties. But he tends to overload on carbs, so he's overweight for his height, carrying about 50 extra pounds — mostly in his midsection. Would you be surprised if his doctor told him that he would recover a lot faster if he lost some weight? Probably not.

Most of us understand that the extra weight can exacerbate his overall health, and in particular, his back pains. The extra weight pulls his lower back forward, adding to the work being done by his back muscles. In this case, we'd say that his obesity is a comorbidity of his back injury. The two interact in such a way that both combined will negatively impact Diego's recovery. However, the magnitude of the impact isn't always as predictable as other factors. For example, motivation may also play a role.

Another one of your workers, Arnold, has also strained his back muscles as a result of repeated heavy lifting. He's also a good worker, in good overall health, reasonably fit and in his late twenties. Unlike Diego, he's not into carbs and isn't considered overweight. But Arnold has struggled with depression on and off. Recently he's been feeling depressed because of a recent separation from his spouse. Would you be surprised if his doctor considered his depression a comorbidity that would likely impact his recovery?

The research on this topic suggests that you *should not* be surprised, because behavioral and mental conditions impact recovery from physical injuries, sometimes even more than other physical conditions. What may surprise you is that his doctor may not be aware of the importance of mental health comorbidities and may miss the impact of depression altogether.

Why comorbidities?

We know that we are all different. Each one of us is made up of about 37.2 trillion cells (give or take a few).¹ Each cell nucleus contains about 24,000 genes (approximate figure), which are stored on our 23 chromosome pairs in our DNA.² Change a few genes here and there and you might be taller, have darker skin or poorer vision. Change a few more and you might not recognize yourself at all.

So genes are obviously important and predispose us to be different from one another. But the basis for your individuality extends beyond your genes. While the vast majority of us have the same fundamental constituent parts, those parts interact in such a way that the functioning person will always be greater than the sum of the parts. This is what makes each of us different from every other person on the planet. Give someone a slightly different brain from the rest of the population, put them in the right environment and you can get an Einstein.³ Take a very tall human specimen, give him a different history with a drive to achieve in a different realm and you get a LeBron James. In the same way, give Diego an extra 50 pounds and it will put some extra stress on his back muscles, making his recovery more complicated than Arnold's.

When it comes to disability, however, we often miss the concept of interaction. Whether the disability is occupational or nonoccupational, the first question that disability insurers and employers usually ask relates to the primary diagnosis. And on the basis of that diagnosis, insurers set an expectation of how long the member will be away from work. This could be a number of days, weeks, months or even years.

But people are more than the sum of their constituent parts. And by the time an individual gets to a certain age (Aetna's short-term disability [STD] members average in their mid-forties), there are usually other things wrong with that person besides their disability diagnosis. Most people come to a disability claim with one or more comorbidities. And these matter.

¹Bianconi E et al. An estimation of the number of cells in the human body. *Ann Hum Biol.* 2013 Nov-Dec;40(6):463-71. doi: 10.3109/03014460.2013.807878. Epub July 5, 2013.

²The Science Museum. How many genes do you have? Available at: sciencemuseum.org.uk/whoami/findoutmore/yourgenes/whatwasthehumangenomeproject/whatdidthehumangenomeprojectfind/howmanygenesdoyouhave.aspx. Accessed August 4, 2017.

³Schenkein, J on Quora. What made Einstein's brain different from everyone else's? *Forbes*, March 4, 2016. Available at: forbes.com/sites/quora/2016/03/04/what-made-einsteins-brain-different-from-everyone-elses/#4bd315df39a4. Accessed August 4, 2017.

The impact is certain, but why?

When it comes to whether one health condition can have an impact on another, the question has long been settled. Now the discussions focus on which ones have an impact on which other ones, and in what ways. A Google Scholar search of scientific articles on the subject of “Impact of comorbidities on medical recovery” yielded over 110,000 hits, including 20,000 in the last year alone.⁴

⁴Search completed January 3, 2017.

⁵Schofield DJ et al. Associations between co-morbidities and labour force participation amongst persons with back problems. *Pain*, 2012, 153(10), 2068-2072.

⁶Boot CR et al. Differences in predictors for return to work following musculoskeletal injury between workers with and without somatic comorbidities. *Int. Arch. Occup. Environ. Health*, 2014, Nov.; 87 (8), 871-879.

⁷Korniloff K et al. Musculoskeletal pain in melancholic and atypical depression. *Physiotherapy*, 2015, 101, 789-790.

⁸Gore, M et al. The burden of chronic low back pain: Clinical comorbidities, treatment patterns, and health care costs in usual care settings. *Spine*, 2012, 37, 668-677.

⁹Pagoto, S. (Ed.) *Psychological co-morbidities of physical illness*. Springer: New York, 2011.

¹⁰Druss BG and Walker ER. Mental disorders and medical comorbidity. Robert Wood Johnson Foundation Research Synthesis Report # 21, February 11, 2011. Available at: integration.samhsa.gov/workforce/mental_disorders_and_medical_comorbidity.pdf. Accessed January 5, 2017.

¹¹Sarasohn-Kahn, Jane. January 1, 2017. How Consumers’ Health Economics Will Drive Personal Health-Tech Spending. *Healthpopuli.com*, January 1, 2017. Available at: healthpopuli.com/#/2017/01/01/consumers-health-economics-will-drive-health-tech-spending-lens-digital-health-ces-2017/. Accessed January 3, 2017.

¹²Melek S and Norris D. Chronic conditions and comorbid psychological disorders. Milliman research report, July 2008.

A great deal of the medical information has made its way to the popular press. Although not all of us will abide by this knowledge, we all know that things such as smoking, excessive drinking, opioid use, obesity and lack of exercise may cause a whole range of medical problems. And these medical problems have an impact on disability. For example, one analysis reported that patients with back problems who also suffered from heart disease were ten times more likely to be off work.⁵

Let's go back to Diego and Arnold: same job, same injury, same general health profiles and same primary diagnosis. However, they have different disability durations and outcomes. Of course, the employee's personality and motivation will impact that outcome, as will the employer's willingness to make accommodations. But a key factor simmering in the disability broth will be the presence of any other comorbid conditions, including some unrelated to the primary diagnosis, such as depression.

There are now quite a number of peer-reviewed studies that have looked at the impact of mental health on recovery from physical injuries. A recent study of 1,566 workers with lost-time claims resulting from musculoskeletal injuries found that mental health status was a significant predictor of return to work (RTW) when comorbidity was present.⁶ Those authors went so far as to suggest that "injured workers with and without comorbidity should be considered as *two distinct groups* when focusing on mental health." Another recent study reported a direct relationship between the level of chronic pain and the level of depression.⁷ A retrospective study of over 100,000 cases comparing claimants with chronic low back pain and matched controls found that the pain patients were twice as likely to also be suffering from depression, and more than twice as likely to be suffering from anxiety.⁸

The most comprehensive systematic review to date of the interrelationships between mental/behavioral factors and physical illness was carried out by Dr. Sherry Pagoto and colleagues.⁹ They demonstrated an impact of behavioral health factors, not only on some of the more obvious physical diagnoses, such as obesity and pain, but also on:

- Cardiovascular disease
- Irritable bowel syndrome
- Type 2 diabetes
- Chronic obstructive pulmonary disease (COPD)
- Cancer
- Dementia
- HIV/AIDS
- Multiple sclerosis

Of course, there is a chicken-and-egg aspect to this data. While individuals with physical disabilities are impacted negatively by the presence of comorbid mental/behavioral difficulties, it is also the case that individuals with mental/behavioral problems are at greater risk for a number of physical conditions.^{7,9} Although we think and speak as though physical and mental conditions are qualitatively different, there is no arbitrary line at the level of the neck that separates the mental from the physical.

Adding further complexity to the comorbid interactions is that some of the treatments prescribed for a primary diagnosis may exacerbate the secondary condition. Some medications targeting the mental/behavioral symptoms cause weight gain, obesity and type 2 diabetes. In addition, some medications prescribed to alleviate physical symptoms may exacerbate the psychological conditions.¹⁰ Moreover, treatment for many physical conditions requires behavioral interventions (i.e., exercise, weight loss, smoking cessation), which may be more difficult because of the comorbid depression or anxiety.

The impact of comorbid mental/behavioral conditions is of more than theoretical interest. It is not only the patients/employees who are impacted, but the employers are also affected by absenteeism and decreased productivity. In addition, the treatment costs for the primary physical condition are much higher when there is a secondary mental/behavioral condition. It's been calculated that the presence of comorbid anxiety adds up to \$615 more per patient per month, and depression adds \$560 per patient per month to the cost of diabetes treatment.¹¹ That's an additional \$7,000 per year for employees with diabetes. Significantly, the bulk of the additional cost is for the medical, not the mental/behavioral treatments.¹² In fact, many people with mental/behavioral conditions are never diagnosed for these conditions, so the financial impact is underestimated as it is essentially rolled (and hidden) in the medical costs.

These numbers tell the story

Now let's get back to Diego and Arnold and consider the impact of mental/behavioral comorbidities on recovery from musculoskeletal (MSK) conditions. MSK claims are important because they are the biggest drivers of disability, with typically 30 – 40 percent or more of an employer's disability claims stemming from MSK conditions (depending on the type of employment).

We recently completed an internal analysis of about 75,000 STD claims based on MSK diagnoses. This included all of Aetna STD MSK claims closed in 2015, and separately, all those closed in the first three quarters of 2016. There was an expectation that the significant variables would replicate from one year to the next. As it turned out, the outcomes were indeed very robust.

The major results of these analyses are presented in the next two graphs. The results may be summarized briefly as follows:

- The absence of **any** secondary diagnosis/comorbidity is associated with significantly reduced claims durations. (No ICD2 represents no secondary diagnosis. All MSK is the average for all MSK claims.)
- The presence of any secondary diagnosis/comorbidity is associated with significantly longer claims durations, regardless of whether the additional diagnosis is physical (ICD2 Phys) or psychological/mental/behavioral (ICD2 Psych).
- Psychological diagnoses are associated with notably longer claims durations than physical comorbidities, and depression diagnoses (ICD2 Depr) are associated with even longer durations.

In sum, adding a secondary physical diagnosis to a MSK claim increased claims durations by 35 percent, but adding a mental health diagnosis increased claims durations by 57 percent. If that mental health diagnosis was clinical depression, claims durations increased by 69 percent.

We see a very similar pattern with the impact of a secondary diagnosis in the 2016 claims. A secondary psychological condition increased claims durations more than a physical secondary diagnosis, and a depression diagnosis increased claim duration the most of all.

With respect to both the 2015 and 2016 data sets, age was not a differentiating factor. However, gender turned out to play an interesting role. The table at the bottom right presents the data with respect to gender. Unlike secondary physical diagnoses, the mental/behavioral conditions are disproportionately represented in women, and even more so with depression. This is generally consistent with the psychological literature at large.

The bottom line

The presence of secondary comorbidities negatively affects MSK claims durations (not a surprise), but secondary psychological diagnoses have a greater impact than secondary physical diagnoses, and the presence of depression has the greatest impact. (This might surprise some, but is consistent with many peer-reviewed studies on the impact of depression.)

Figure 1. Impact of a second diagnosis on average STD durations, as a percentage of overall MSK duration (all 2015 STD MSK claims)

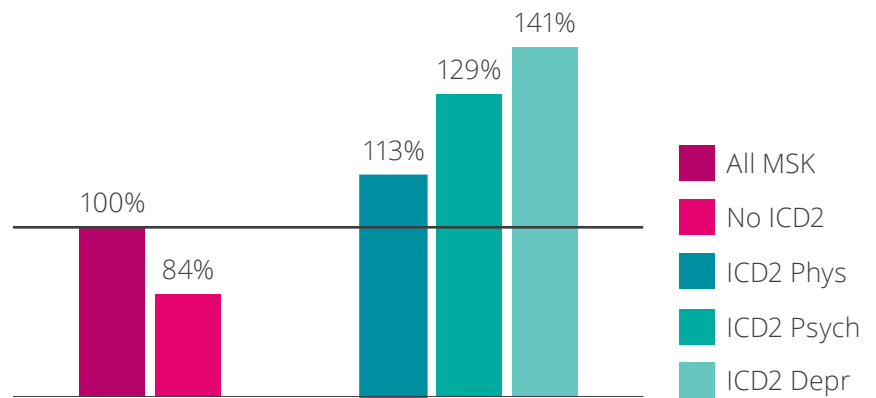
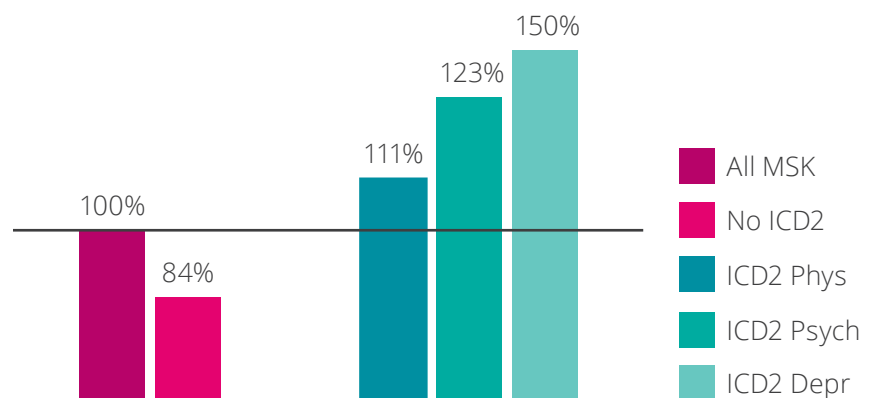
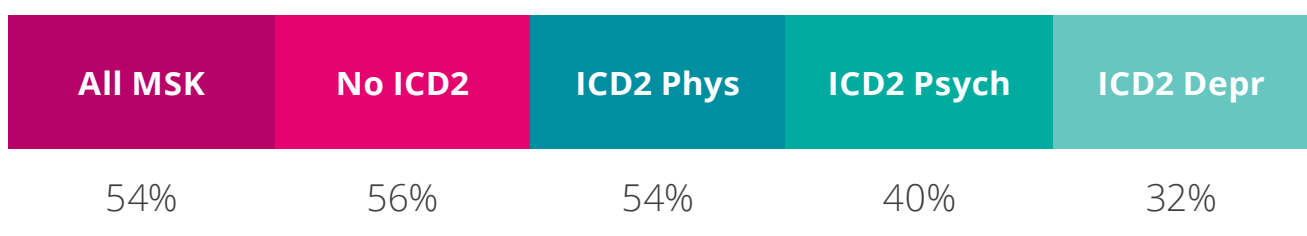


Figure 2. Impact of a second diagnosis on average STD durations, as a percentage of overall MSK duration (2016 STD MSK claims)



Note: The horizontal bar on each graph represents the expected number of disability days based on commonly used disability guidelines (does not take comorbidities into the equations).

Male to female ratio for the various MSK groups, 2016 data set



What does all this mean to you?

Unlike standardized widgets coming off an assembly line, the constituent parts of human beings are intricately interconnected. When finely tuned, that interconnection can produce breathtaking results, as with Einstein and LeBron James. But when things start going wrong, that interconnection can complicate and amplify the ensuing problems.

¹³Lacroix, M. Accommodating psychological conditions under the ADA. DMEC @Work, November 2016.

¹⁴Dashiell, S. Aetna's Behavioral Health Unit targets complex cases in the workplace. Case In Point, 2013, 11:6, P.9.

¹⁵Harford Business. Aetna: Behavioral health management reduces disability claims. April 9, 2013. Available at: hartfordbusiness.com/article/20130409/NEWS/130409819?utm_source=enews&utm_medium=Healthcare%2BNews&utm_campaign=Tuesday. Accessed August 4, 2017.

¹⁶Miller K, Serra S and Lacroix JM. An Integrated Incentivized Approach to Musculoskeletal Claims Really Does Work. Presented at the annual meetings of the Disability Management Employer Coalition, San Francisco, August 3, 2015.

¹⁷Spallone A and Lacroix JM. Behavioral health interactions with FMLA, ADA, presenteeism and disability. Presented at the DMEC Employer Compliance Conference, Pittsburgh, PA, April 26, 2016.

Suggestions for success:

- When dealing with your employees, don't forget that prevention is almost always your best friend. This means not only preventing injury in the workplace, but also identifying employees who are having some difficulties while still working. The Americans with Disabilities Act, which is often perceived as a pain point for line managers and supervisors, can actually be a valuable instrument for keeping your best assets, your employees, at work and working productively.¹³ Remember that every human being is unique. Don't expect widget-like outcomes — variability is cooked in the broth and should be expected.
- When it comes to mental health comorbidities, don't forget the Employee Assistance Program — that's what it's there for.
- Your approach to RTW for disabled employees should acknowledge that they are all different, and likely will differ with respect to comorbidities. A holistic approach will usually serve you best.
- When an employee goes off work, ask open-ended questions that give them permission to share with you some of their difficulties. This gives you an opportunity to assist. Do not pry; rather, try to help. For example: "How are you doing, Joe? I know a knee injury is no picnic. I have seen people who get down on themselves from being at home all day, who worry that their job might not be there when they come back. So I do understand, and please know that you're on my mind and in my thoughts. We're looking forward to having you back at work as soon as you're healthy. Please don't hesitate to ask me for help. I'll do what I can to help."
- Don't get hung up on whether the workers' compensation or the disability insurer will pay for the mental health treatment. If the employee has a health plan, mental health parity laws are employee-friendly. (Health insurers may not discriminate between physical and mental conditions with respect to coverage.) Moreover, there are plenty of free or reduced-fee options for getting treatment, through medical and graduate schools, church-based organizations and some not-for-profit community groups. If they need help with the mental/behavioral comorbidity, case managers can assist with finding appropriate assistance.
- Not every case requires a full-blown psychological or psychiatric independent medical examination (IME). In many cases, what's needed is simply a better understanding of the dynamics of the case. Is the person depressed because the knee injury keeps them housebound? Did the depression predate the injury and relate to a marital separation? What's the treatment approach that would be optimal for that person? (Remember, we're all different.) There is a deep bench of knowledge about mental health that is available from many professionals in addition to psychologists and psychiatrists. These include: licensed clinical social workers, licensed mental health counselors, psychiatric nurses, etc. When in doubt, ask your case manager for a consult with someone knowledgeable about both mental health and disability who can give you an informed, professional opinion.
- If an IME is needed, there is no need to be afraid of the dreaded "psych" word. People recover from depression just as they recover from knee injuries. Our experience has been that adding mental health specialists to mental health disability claims early in the process actually *decreases* disability durations.^{14,15} That's a win-win for all: employee, employer and insurer. The vast majority of employees want to get back to work — people get tired of "Oprah" reruns pretty quickly!
- Ask your insurer or third-party administrator to include some comorbidities, including major mental/behavioral comorbidities, in their initial assessment of your files. This way, the reserves can be set more appropriately. However, factoring this information into the equations can be a very difficult thing to do. (This is why the majority of disability guidelines do so only informally, if at all.) But our view is that some information about comorbidities is better than none.
- Last but by no means least, since comorbidities impact disability claims, the management of employee health care and disability benefits would be more effective if these programs were more integrated. This is a different approach from the "silos" that are the norm today. A "collaborative care" approach in which health conditions (including mental/behavioral health) are screened, tracked and addressed before employees even stop working and file a disability claim has been shown effective in many studies, including randomized control trials.¹⁶ There is a need for an integrated approach to managing health care, absence and disability. Too often nowadays, employers use different vendors in a belief that competition results in lower costs. Our experience has been that the short-term cost savings are far outweighed by the longer-term benefits of an integrated approach.^{16,17}

Finding connections that count. To learn more, speak with your Aetna rep. Or visit **whyaetnadisability.com**.

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