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Delivering Business Value

The role of medical second opinions in disability management

How can we better manage our disability claims?

This question is perpetually on the minds of insurance business leaders, claims professionals and Human Resource practitioners. Smart organizations are always looking for ways to improve the experience of disability claimants, while simultaneously controlling claim costs.

It was for precisely this reason that WorldCare developed this white paper, in collaboration with Physical Medicine and Rehabilitation (PMR) Department at Spaulding Rehabilitation Hospital and incorporating disability insurance industry research by Milliman, Inc. Collectively, we seek to help organizations better understand the role of Medical Second Opinions (MSOs) in the optimization of disability claims management.

Below is a summary of the key points and observations described in this white paper:

- **MSOs provide organizations and their employees with unprecedented access to highly-specialized medical experts.** MSOs help people make more informed medical decisions by soliciting case-specific advice from multiple world-class medical centers.

- **Multi-disciplinary MSOs can potentially lead to more accurate diagnoses and more appropriate treatment plans.** By leveraging the wisdom of renowned medical facilities, organizations can foster better patient outcomes, while also compressing claim durations.

- **Certain types of disability claims are particularly good candidates for MSOs.** Diagnoses, which have long claim tails and higher reserves (due to lower recovery or mortality rates) represent an especially-interesting opportunity for MSO-supported disability claim management.

- **Early-state case management is a critical success factor.** Early intervention with a MSO is important for realizing disability claim management efficiencies. However, accomplishing this requires a sophisticated understanding and analysis of claim data.

MSO-supported disability claim management is a relatively new discipline, but one that can potentially impact this field in very significant and meaningful ways. We hope you find this white paper educational and eye-opening, as you work to continuously advance your organization's claims management competency.

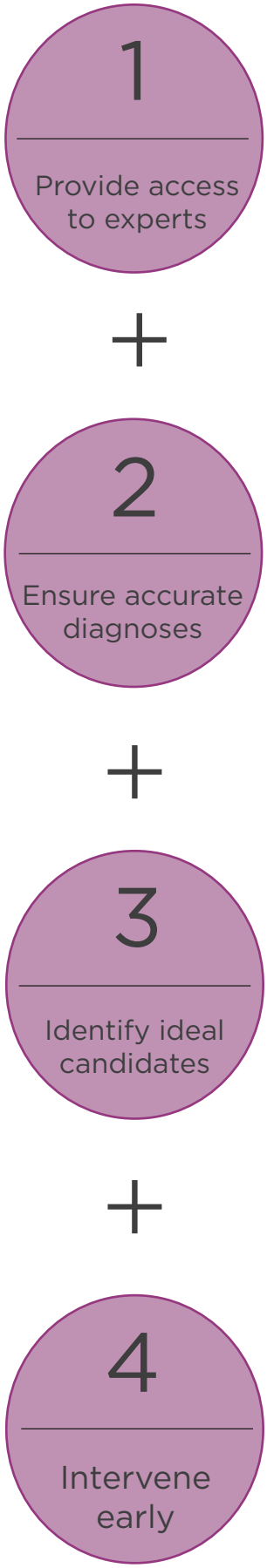


Table of Contents

- MSO-supported disability claim management is a relatively new discipline and can be a critical element for the more complex, higher-value claims.
- WorldCare, the global MSO provider, offers integrated solutions together with the PMR Department at Spaulding Rehabilitation Hospital. Milliman, an independent, worldwide leader in consulting, actuarial and analytics provides research to WorldCare.
- This unique combination of three recognized industry experts - WorldCare, Spaulding and Milliman - enables a more strategic use of MSOs that may result in cost savings and shortened disability claims durations.

Overview

Short-term disability (STD) policies

Cover 3-12 months lost income

- There is a new opportunity for cost-containment, improving patient care and reducing claims durations by using disability-focused MSOs.
- The focus is individual and group disability insurance programs that provide income protection for insureds to help rebuild their lives after an unexpected event (accident and sickness).
- Typically, disability insurance helps address an employee's need for a secure income with a business' need for the best return-to-work opportunity.

Short-term disability (STD) policies

Payments begin after 7-30 days

- Disability products often provide a broad array of absence management and claims support services designed to streamline administration, ease the claims process and get employees back to work as soon as is reasonably possible.
- Disability income policies are generally separated into long-term (LTD) and short-term (STD) in the United States. STD policies are designed to cover 3-12 months of lost income after a 7-30 day elimination period. The elimination period (EP) is the number of days the claimant must be disabled and out of work before benefits will begin being paid.

Long-term disability (LTD) policies

Cover >6 months lost income up to retirement

- LTD policies generally pick up when the STD policy stops paying benefits by having an elimination period generally equal to the STD benefit period plus elimination period, often 90 or 180 days. The LTD policy will then replace a portion of income as long as the claimant is still disabled, but usually not payable beyond the Social Security normal retirement age. The LTD claim examiner may not see these claims until the person has completed the elimination period, which may limit some early intervention abilities.
- LTD programs (income benefits payable longer than six months up to retirement age) especially emphasize rehabilitation programs such as emotional, medical, legal and financial guidance that make it easier for insureds to focus on their recovery.

Long-term disability (LTD) policies

Payments begin after 90-180 days

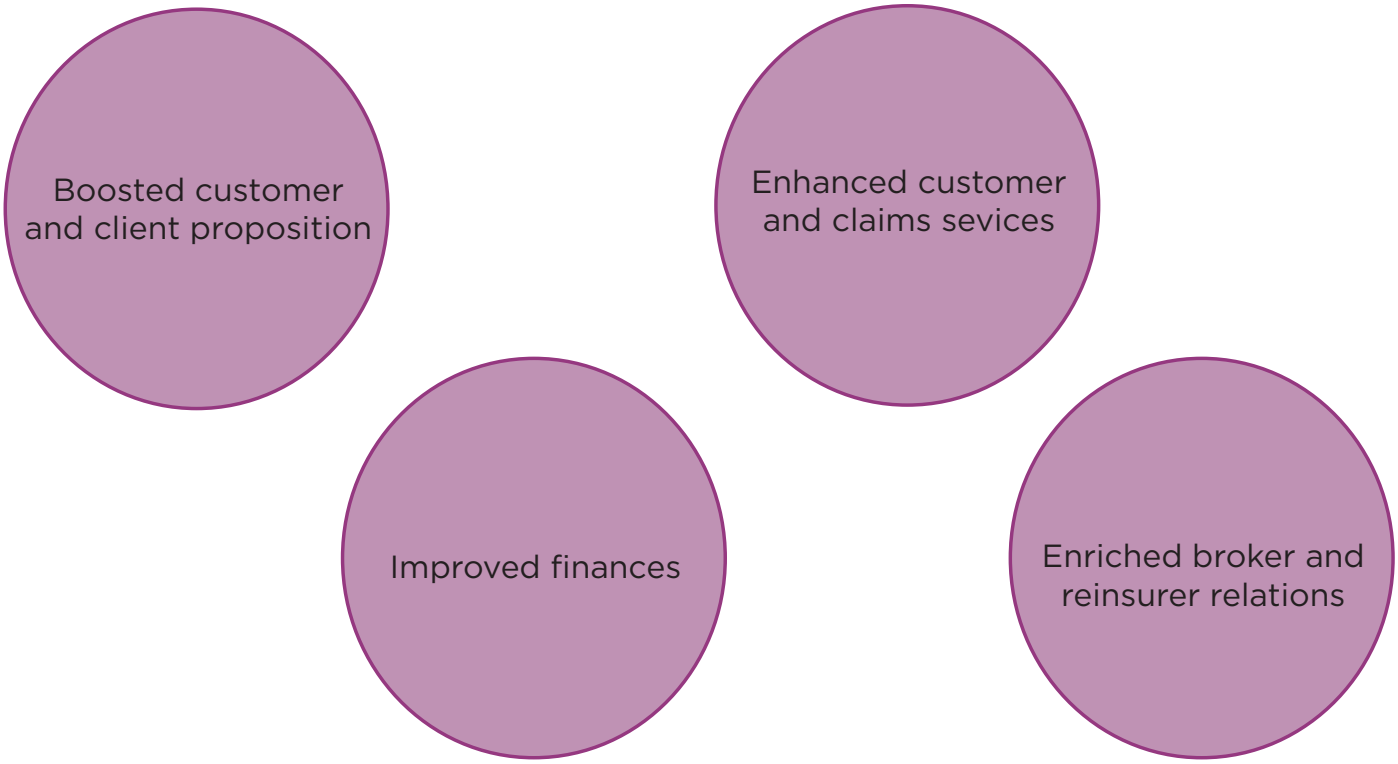
- Generally speaking, the three most prevalent causes of disability are back pain (and other musculoskeletal injury), cancer and mental health. The most severe (i.e. long lasting) conditions are diseases of the nervous system, diabetes and diseases of the circulatory system.
- For all situations, identifying co-morbidities that concurrently impact the physical and mental health of the (disabled) patient is very important.

Claims effectiveness

A serious illness MSO is an important aspect of the disability claims management process and can be a critical element that fosters claims effectiveness. By claims effectiveness we mean:

- Proper, accurate diagnosis. With a misdiagnosis of an employee's condition, it extends their recovery times unnecessarily (and obviously dampens their morale).
- Complementary advice, expertise, intervention and support to in-house claims team, particularly for the more complex, higher valued claims.
- Improved decision-making, fairer evidenced-based claims adjudications and a reduction in claims costs, over time. With a more thorough, objective analysis of clinical information, with our Disability MSO service, the insurer/reinsurer is/are better able to define claimant medical restrictions, actual functional loss vs. specific job requirements, degree of disability (say, using a scale or scorecard approach) and relative readiness/unreadiness for an employee/claimant returning to work.
- More accurate reserving, which improves capital management.
- Average reduction in claim duration = Earlier employee return-to-work rates.
- Improved claimant experience which leads to higher claimant/employer satisfaction levels.
- Improved client/broker relations and higher retention rates.

Impact areas include:



Claims reserves

The amount of reserve an insurance company sets up will vary based on the diagnosis of the claimant, as well as other factors. The reserve is the present value of the expected claim payments. Claims usually end in one of three ways:

1. claimant recovers and returns to work
2. claimant dies
3. the maximum amount of benefit payments is reached.

Claims for different diagnoses have very different patterns of recovery and mortality rates. Hence, the make-up of an insurer's claim block will shift over time. For example, cancer claims are a common cause of new disabilities, but the combination of high mortality rates and successful treatment protocols means that they are a low proportion of those claims that persist for 10 or more years.

Table 1 shows the distribution of claims by diagnosis at selected durations.[1]

Table 1
Distribution of Claims by Diagnosis over Time

	Year 1	Year 3	Year 5	Year 10+
Back	15.1%	**16.7%**	15.8%	16.5%
Cancer	14.5%	7.5%	5.5%	2.4%
Circulatory	11.8%	16.8%	19.1%	16.0%
Diabetes	**1.3%**	2.1%	2.5%	1.8%
Digestive	2.4%	**2.1%**	2.2%	2.3%
Ill-defined and Misc.	2.1%	2.4%	2.6%	2.0%
Injury other than Back	8.9%	6.6%	6.1%	8.3%
Maternity	3.7%	0.1%	0.1%	0.0%
Mental and Nervous	9.0%	6.5%	3.2%	6.1%
Nervous System	6.8%	10.1%	11.8%	13.9%
Other	8.3%	10.3%	12.1%	15.4%
Other Musculoskeletal	13.1%	14.7%	15.0%	12.9%
Respiratory	2.8%	4.0%	4.2%	2.4%

If a claimant recovers more quickly than expected, there is a real financial benefit to the insurer. This can benefit the employer as well, since future premium rates are determined by past claim experience for larger groups.

Disability claims classifications by ICD9 and ICD10 codes plus demographic data - while informative - is not sufficiently compelling since it lacks needed data sub-sets and granularity for determining medical protocols.

Recent industry studies using the diagnosis groupings that were used in the tables in this white paper indicate the diagnoses within each group tend to have similar termination patterns and make sense for the purpose of setting reserves, since it is necessary to have a sufficient volume of data to produce a credible result.

[1]2008 Group Long Term Disability Experience Report of the Society of Actuaries: https://www.soa.org/experience-studies/2011/2008-ltd-experience-report/

Table 2 shows the mapping of ICD-9 codes to diagnosis categories.[2]

Table 2
Diagnosis Category by ICD-9 Codes

Diagnosis Category	ICD-9 Codes
Back	720-724, 737, 847
Cancer	140-209, 230-239
Circulatory System	280-289, 390-459
Diabetes	250
Digestive	520-579
Ill-Defined and Misc. Conditions	780-799
Injury other than Back	800-846, 848-979, E800-E999
Maternity	630-679, 760-779, V20-V39
Mental and Nervous	290-319, V40
Nervous System	320-359
Other Musculoskeletal	710-719, 725-736, 738-739
Respiratory	460-519
Other	001-139, 210-229, 240-249, 251-279, 360-389, 580-629, 680-709, 740-759, 980-999, V1-V19, V41-V86

As an example of an average claim, consider a 42-year-old female employee.

According to the Bureau of Labor Statistics, the median annual salary in 2016 was approximately $50,000. In the example, the average reserve amount is $117,194, but that amount would vary based on the claimant's diagnosis.[3]

Table 3 shows the average reserve amount based on the diagnosis category.[4]

Table 3
Average Reserve by Diagnosis

Diagnosis	Average Reserve
Back	$126,677
Cancer	$55,271
Circulatory	$147,647
Diabetes	$157,243
Digestive	$117,108
Ill-defined and Misc. Conditions	$136,920
Injury Other Than Back	$90,599
Maternity	$12,016
Mental and Nervous	$120,759
Nervous System	$168,080
Other	$126,116
Other Musculoskeletal	$147,486
Respiratory	$144,729
Weighted Average	**$117,194**

[2]2008 Group Long Term Disability Experience Report of the Society of Actuaries: https://www.soa.org/experience-studies/2011/2008-ltd-experience-report/
[3]Milliman research using 2012 Group Long Term Disability Valuation Mortality Table, 3% interest, and $2500 monthly benefit reduced by offsets based on the 2012 GLTD Benefit Offset Study of the Society of Actuaries
[4]Milliman research using 2012 Group Long Term Disability Valuation Mortality Table, 3% interest, and $2500 monthly benefit reduced by offsets based on the 2012 GLTD Benefit Offset Study of the Society of Actuaries

Reserves are higher for diagnoses that have lower recovery or mortality rates. The diagnoses with higher recovery or mortality rates have the lower reserves. For example, while cancer seems like a severe diagnosis, reserves tend to be on the lower end due to the higher mortality rates. Diseases of the nervous system are some of the highest reserves due to the low chance of returning to work (recovery).

Claim recoveries are highly-skewed to the early months of the claim. The chart below shows the monthly recovery rates expected for each month on a LTD claim. It illustrates the significant differences in recovery rates for different diagnoses in the early durations, but the rates converge after about 3 years.

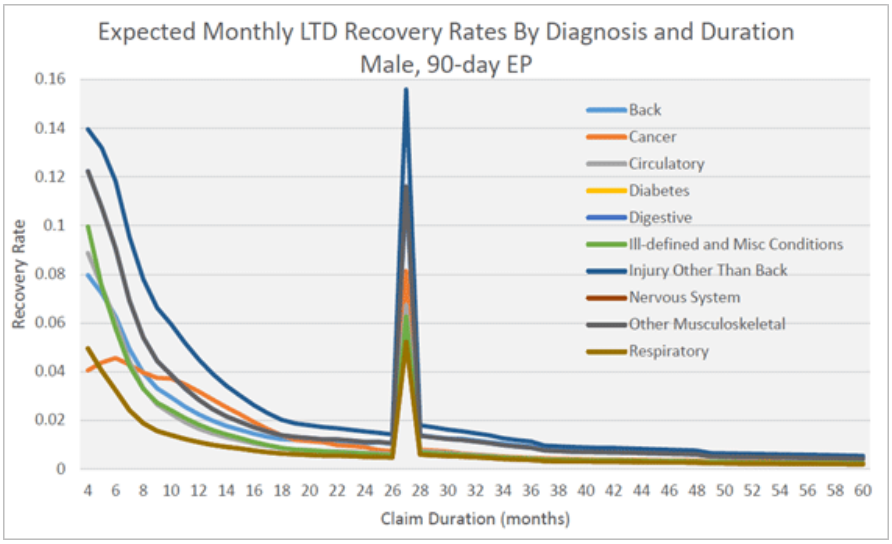


Figure 1: Milliman research using 2012 Group Long Term Disability Valuation Mortality Table

The large spike in recoveries, that can be seen after the claimants have received 24 months of payments, is based on the plan design. Generally, in the first 24 months of a claim, disability is defined as the inability to perform the duties of the claimant's own occupation. After 24 months, disability is redefined as the inability to do any gainful occupation for which the claimant is reasonably suited by education and experience.

Another plan design feature to be aware of is the limitation on benefits for mental and nervous claims or substance abuse claims. These are generally limited to only 24 months of payments. These claims were left off the graph above because the recovery rates at 24 months are significantly higher than shown for all other claims. Usually 70-90% of claims with mental and nervous limits will terminate at the limit. The remaining claims will continue on claim with a modified diagnosis.

Rehabilitation and return to work

- Multi-disciplinary MSOs may determine correct diagnosis and treatment plans leading to better patient outcomes and reductions in claim durations

- Medical research with evidence-based protocols is helpful to assess unique characteristics of sub-population groups - both for catastrophic and areas of higher incidence

- Early-stage case management is typically applied based on available incidence data on catastrophic and chronic conditions, evidence-based protocols and the latest available medical research. The challenge is there are lots of data sets – and so it is important to drill down to sub-groups and assess non-defined variables, which Spaulding does regularly.

- New improvements in disability care include: advances in precision medicine; emerging technologies; evidenced-based approaches; cutting-edge research and experimental treatments

- The PMR Department at Spaulding Rehabilitation Hospital has developed dynamic learning algorithms and a substantial track record of treating patients, which help inform new approaches - quite literally, there are weekly updates on articles from research and actual clinical practice

- Catastrophic injuries are a good example of where a MSO supported by early intervention can have a material impact: in one grouping of approximately 700 patients, almost one-third (28 – 33%) of disabled individuals returned back to some form of tax-paying work. This was a really bad cohort, perhaps the 'worst of the worst' in terms of serious catastrophe and in fact lists can be done to support and improve their condition and situation.

What WorldCare can deliver

- Access to renowned physical medicine, rehabilitation and pain medicine specialists and sub-specialty psychiatry and neuroscience expertise.

- WorldCare has a 25-year contractual relationship with The WorldCare Consortium® comprised of top-ten U.S.-based academic and research hospitals with 20,000+ leading specialists and sub-specialists.

- WorldCare MSO service ensures the diagnosis and treatment plan are accurate making sure healthcare dollars are spent more effectively.

- Virtual medicine allows rapid access to a multi-disciplinary approach with teams of sub-specialized physicians reviewing a member's case.

- Strategic partnerships with the PMR Department at Spaulding Rehabilitation Hospital, Harvard Center for Pain Management and Massachusetts General Hospital Department of Psychiatry: all with long-term experience in guiding disability cases and disabled people to higher levels of functioning and possible cure.

- Strategic use of MSO: Analytic focus allows MSOs to be strategically directed and applied to medical issues that have greatest potential for cost savings.

- Cost savings from short and long-term disability, permanent and total disability focus on identification of high risk/high cost outliers and developing interventions to enhance early function return.

- Measurement allows for quantification of cost-containment success with development of a high-yield universal set of metrics for a usable minimum data set.

Thank you for reviewing this study on the role of medical second opinions in disability management. If you are interested in learning more or dicussing how WorldCare can help you manage your claims, please email connect@worldcare.com.

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About WorldCare International, Inc.

With 25 years' experience and a solid track record of delivering superior levels of clinical rigor and impact, WorldCare is the leading provider of serious illness medical second opinions globally. WorldCare fulfills its mission by connecting our clients to teams of the foremost medical experts at top-ranked US hospitals of The WorldCare Consortium®. WorldCare works with employers, brokers, insurers, re-insurers, third-party administrators and other strategic partners to embed our medical second opinion solutions as a value-added service and key differentiator.

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