HIDING
IN PLAIN SIGHT

Real data and
simple advice for
determining the
healthcare risks
inside your
employee
population

EXECUTIVE SUMMARY

With healthcare costs rising at alarming rates and little to no end in sight, business leaders today face an uncertain future.

Workplace wellness programs - always positioned as a solution - were originally engineered to change employee behavior and reduce claim risks, but their efforts have not met with consistent or predictable results. Indeed, the industry has generally failed to demonstrate statistical evidence of real cost savings to organizations or to provide predictive analysis regarding risk.

But there is an alternative.

For c-suite executives charged with balancing growth initiatives against risk mitigation strategies, a new model emerged recently that has effectively transformed the equation, and with it, the risks, and costs companies face.

An entirely new model, Wellnelytics™ – a hybrid of predictive analytics solutions paired with one-on-one personal health coaching with clinically advanced, multi-disciplinary teams – has emerged as the most potent method for driving down claim potentials within an employee population - and the data supports the difference.

Pioneered by Health Solutions Inc., Wellnelytics™ identifies those in the employee population who are most at risk for catastrophic claims, characterizes their specific chronic issues, and using a predictive analytics engine, determines the risk potential. Then clinical coaching teams address the high-risk population within the company with targeted solutions concerning diet, exercise, and intervention solutions.

This whitepaper provides a step-by-step model for how businesses are transforming their risk into opportunity with the Wellnelytics™ model.

How we got here.

National statistics demonstrate what business leaders have known for years - healthcare costs are rising annually. Add to that widespread increases in BMI, chronic disease, and drug costs (coupled with an aging population) and it's safe to say circumstances are conspiring to inflate those costs further.

> The data showed an increase of 25% in million-dollar claimants compared to last year's report (covering 2011–2014).
>
> —Sun Life Study, 2016

For financially responsible leaders, the rising tide of threats and the potential costs that attend them can lead to risk aversion that infects all levels of strategic decision-making. This is a decidedly risky situation when every indicator from the frontiers of technology, global economics, legislative change, and market volatility strongly and consistently suggest that future success will favor innovation, confident action, and prudent investment.

Competitive businesses are pushed to move forward, make investments and take calculated risks to remain vital, competitive and relevant - yet the dangers of unanticipated costs pull them back toward risk aversion.

Wellness was positioned as the solution - or so the marketplace was told. By intervening with the employee population and providing health screenings, biometric data, education and incentives, wellness programs were expected to drive down that risk and ensure confidence and predictability.

Since the Pullman Companies in the 1870's, then Hershey, Rockwell, and Xerox all following suit to provide workplace supports, then EAPs, then OSHA in the 1970's, employers have tried to drive down costs and risks to their productivity with wellness initiatives.

But the wellness revolution never arrived. The hard data never materialized because the results just weren't there.

Wellness programs are now widely viewed as only a moderately successful experiment. Companies feel compelled to offer these incentives as "feel good" programs but often can't correlate the expense to a predictable gain. Programs offer enthusiasm and opportunities for teams to enhance health and performance but the risks and costs to the employers kept climbing.

The gap was never filled. The efforts of "wellness" never solved the problem.

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The Wellnelytics™ Revolution

An important technological and procedural development has recently changed the calculus. An entirely new model emerged in the wellness space that strident and fiscally responsible companies started embracing in order to increase financial controls and risk transparency.

A model that blends sophisticated, predictive analytics paired with robust, clinically enhanced coaching to actively drive behavioral change emerged out of the confusion, complexity and well-intentioned clutter.

The early adopters of this new era of wellness reaped significant rewards represented in lowered claims frequency, lower claims amounts, and predictive forecasting for risk.

Dawn of the Data Age

In the last five years, predictive analytics has taken a quantum leap forward. The intersections between the enormous data we have access to today (about 2.5 quintillion bytes created each day), significant advances in natural language processing, and a hyper-connected world matched with an ever-increasing market for these technologies has led to a big boom in big data.

Today, predictive analytics is a $35b a year industry with growth projections that dwarf others in the technology fields. Data scientists have become glamorous jobs with a 15,000% increase in job posts for the role, creating a global market for skills that were so scarce just three to five years ago that they barely registered on the map.

Why? What is so powerful about predictive analytics that it has skyrocketed to the top of the tech leaderboard? It is because of its ability to forecast future outcomes and probabilities.

If you happened to read the book, _Moneyball_ by Michael Lewis or watched the mainstream movie, you know a lot about predictive analytics. In this true account of the rise of the Oakland A's; general manager Billy Beane (played by Brad Pitt) enlists the help of data scientist Peter Brand (played by Jonah Hill) to outthink the stats on baseball and completely reengineer the team's recruiting format. Their success is a testament to the power of data analytics. By employing algorithms and probabilistic models, instead of "eyeballing players", they turn a time-honored tradition of recruiting players on its head.

Predictive analytics is today even more powerful.

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Today's models employ massive datasets that allow for forecasting analysis that borders on psychic powers. Today's big data analytics can *and do* forecast our state and national elections, the weather, the financial markets, and anticipate the behaviors of millions of individuals using social media to collect their behavior. These self-learning engines are oriented to review, revise, and then re-calibrate as new data streams enter the engine, providing constant refinement of their abilities.

Matching predictive analytics with biometrics

Since the earliest civilizations, we've used biometric data to account for individuals. Today we use facial recognition, retinal scans, DNA analysis, and fingerprints to identify a single individual; data collected from just a single drop of blood can provide an extraordinary window in the health and vitality of that individual.

Biometric analysis has been improving along with other technologies but paired with predictive analytics engines, we have an extraordinary leap forward in capability: the ability to forecast chronic disease. By tracking biometric data over a single individual's lifespan and pairing it with global data benchmarks, we can now forecast the likelihood of continued or enhanced disease, remission, and for our purposes, catastrophic insurance claims.

Wellnelytics™ is a revolution in data-driven health forecasting

Pioneered by Health Solutions, LLC, Wellnelytics™ enables big data analytics engines to employ predictive assumptions for employers about the health and wellbeing of their employee population - not on a generalized statistical assumption - but rather on the exact biometric data of their employee population.

With approved access to a company's census data, industry-grade algorithms that cross-reference specific population variables with probabilistic logic, and nearly twenty years of proprietary historical data to draw upon, Wellnelytics™ engines consistently produce highly accurate risk models.

In the next section, we outline what employers are doing with the data and how it's been successful for driving down the risk of catastrophic claims and improving the overall health of their employees.

A Process to Drive ROI for Your Wellness Initiative

The main objective with Wellnelytics™ is to identify the riskiest member segment in your employee population and administer the most effective course of preventative care and data-driven analysis. Demonstrating a return on wellness then becomes both pragmatic and precise, as it also becomes increasingly more predictive over time - thereby delivering visibility and control into the hands of the decision-makers.

Risk Scoring

We use a proprietary suite of risk adjustment tools for population analysis that is perfectly suited for budgeting, pricing and underwriting, payment, stratifying risks, and many other predictive modeling applications for the health insurance industry. This **Claim Risk Score** is employed for overall predictions about future total claim cost, splitting total claim cost prediction into four main components: inpatient services, outpatient services, physician/other services, and prescription drug services.

The prospective inpatient (IP) risk score is a strong predictor of overall inpatient cost and does very well in predicting actual admissions. Our **Claim Risk Score** also utilizes longitudinal data assets that are geographically well represented, thereby offering more precise observations of chronic and costly conditions over time, as well as disease progression.

Data Aggregation

In order to lay the foundation for analysis and targeted change management, Health Solutions follows a regimented data aggregation process. This approach ensures we are employing each company's own data in the analysis, not merely industry benchmarks and assumptions.

SETP ONE
We begin by defining the actual cost per member by looking at medical and prescription costs per member.

STEP TWO
We then review the current year Claim Risk Score per member, reviewing utilization, conditions, and severity.

STEP THREE
We define the total & Average Cost for each Risk Score Category by calculating the aggregate Claim Risk Score, member costs, and average total costs for members in each of your Risk Score Categories.

STEP FOUR
A Potential Savings calculation is created by assuming movement by one Risk Category for every member, and by taking the average costs of the Risk Score by category.

STEP FIVE
We then create a Prospective Health Risk Score per member again by reviewing utilization, conditions, severity, and by taking into account the natural flow and risk without intervention.

STEP SIX
Finally, we are able to create a highly accurate Cost Prediction by factoring the prospective Claim Risk Score per member and the average cost by Risk Score category.

Prospective Analysis, Risk, Cost Savings

Risk Score	# of Members	Total Predicted 2016 cost	Potential Savings with Intervention*
0	4,028	$2,371,055	
1	4,707	$4,550,238	$2,209,763
2	990	$2,828,433	$1,186,689
3	324	$1,758,074	$536,884
4	175	$1,254,848	$279,400
5	84	$781,530	($890,527)
6	45	$429,439	$137,613
7	26	$292,047	$34,384
8	23	$414,408	$49,350
9	11	$282,658	$34,013
>10	41	$2,374,386	($223,092
TOTAL	10,481	$17,337,116	$3,354,477

Savings are estimated based on all members with one or more of the key chronic conditions engaging in health coaching and therefore decreasing the risk score per member by 1 step, using predicted cost. Values are based on active members.

Strategy

As the data can provide clear and indisputable evidence, targeted, and clinically astute coaching provides the most cost-effective reduction of risk. Once Health Solutions reviews the data, we develop an actionable strategy to reduce that risk; what we call Risk Stratification and Proactive Condition Management.

This strategy is then evaluated against suitability with the culture, budget and other coordinated organizational initiatives. Working together with internal stakeholders, Health Solutions provides guidance on best practices, technology, and messaging to ensure wellness initiatives are well received and popular.

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Coaching

Wellnelytics™ hinges on two factors: Data and Coaching. The data is aggregated, benchmarked and measured, tabulated and outlined for transparency beyond what companies can identify today. However, the data alone doesn't enact change.

Using our proprietary clinically based coaching model, Health Solutions engages participants and provides intervention to quickly reduce the highest risks and impact costs. Our three-part team is designed to ensure that communication with the participant and their physician, the clinical pharmacist assigned to them, and a health coach, is seamless and ongoing.

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Coaching continued

Change management is possible with participants and direct, customized interventions are the most effective paths when paired with biometric data and expert advice. Indeed, over 50% of Highest Risk Coaching participants move to a lower coaching stratification in the first year.

Measuring Cost Savings

Annual analysis of cost savings is calculated using Claim Risk Scores from the previous year against the current. Using your own data, we can calculate your trend, anticipated costs, and the overall impact of the program.

Step One
Define Costs using a member list and medical and prescription claims data

Step Two
Compare medical and prescription claims from the previous per member per year

Step Three
Assign a **Claim Risk Score** per member, by weighting utilization, conditions, and severity of claims as modifications to the previous year.

Step Four
Track **Claim Risk Score** movement per member by comparing last year's **Claim Risk Score** to the current year.

Step Five
Define savings over previous year's costs with three calculations: The previous year's **Health Risk Score,** the current year's **Health Risk Score** and the previous year's average cost by Health Risk Score Category.

# Members Coached	Previous Year Cost	Total Current Year Cost	Calculated Savings Over Previous Years Cost
407	$1,714,364	$1,375,440	$338,924

*Note: **Cut-off at Risk Score 5** was applied. See Below for overall Risk Distribution*

Risk Distribution of Members in Coaching

Risk Score	# of Members Coached Previous Year Risk Category	# of Members Coached Current Year Risk Category	Total 2015 Cost	Average 2015 Cost	Total Current Year Cost	Calculated Savings
0	84	224	$60,998	$726	$177,144	($116,146)
1	223	111	$294,369	$1,320	$146,520	$147,849
2	66	33	$293,225	$4,443	$146,619	$146,606
3	19	10	$164,611	$8,664	$86,640	$77,971
4	8	4	$85,763	$10,720	$42,880	$42,883
5	4	2	$79,521	$19,880	$39,760	$39,761
8	1	1	$47,798	$47,798	$47,798	$0
28	1	1	$164,024	$164,024	$164,024	$0
37	1	1	$524,055	$524,055	$524,055	$0
TOTAL	**407**	**407**	**$1,714,364**	**N/A**	**$1,375,440**	**$338,924**

Key Employer Decisions

Whether you are already self-funded or are considering making the switch, it's good to consider all the options with wellness to provide visibility and insight about your risk exposure. When it comes to wellness, there are three key decision points:

1. Determine High Risk Participants Before Making a Move

Getting a view of just how many high risk participants are in your specific population and what their chronic issues are will ensure that a wellness program can be customized to your unique needs. You'll want to work with a wellness account manager and your insurance professional to benchmark your key issues against national averages to make predictions about the cost of the claims and the likelihood of your company encountering one.

2. Drive Change with a Clinically Supported Model

Not all wellness programs are created equal. There exists a spectrum of wellness capability ranging from exclusively technological solutions to onsite programs to clinically supported models that incorporate a multi-specialty approach. The merits of a clinically supported model are abundant.

3. Measure Results Using Biometrics and Claims Data to Prove POI

Employing a predictive analytics engine that can do more than make rough calculations and benchmark assumptions. For measuring risk, and taking action, it is the difference between ambiguity and control, risk and confidence. The good news: you already have the data, you merely need to incorporate it into an engine that will provide the appropriate insight.

NEED A PLAN?
WE'RE HERE FOR YOU.

Get more guidance for migrating your fully-insured program or protecting your self-funded program with Health Solutions. You'll find resources for you and your employee benefits broker partner that you can use immediately. Leverage the information to gain a deeper understanding of how to contain costs and improve participant outcomes.

Health Solutions

YOUR HEALTH AND WELLNESS PARTNER

Health Solutions, LLC is a pioneer in the wellness industry and creator of the Wellnelytics™ movement.

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Key Takeaways

1. Learn why traditional wellness is failing to deliver a return on investment in hard dollars

2. Understand how companies are transforming their returns with Wellnelytics™

3. Learn how to implement Wellnelytics™ into your organization

4. Understand the critical indicators for measuring success