IntegerHealth

High Value Healthcare... Lower Costs & Better Care

White Paper:
HIGH VALUE HEALTHCARE

Advanced Data Analytics to:

Decrease Healthcare Costs

Improve Care

Get Employees Back to Work Faster

IntegerHealth

WHO WE ARE

IntegerHealth is a healthcare technology company. We apply advanced data analytics to the health plans and workers' compensation programs of self-insured employers–Driving down the costs, while improving the care.

The problem in healthcare is the inability to quantify a good outcome, when the patient gets better–sooner, rather than later, and at the lowest overall cost. We've figured out how to do that and have patents pending on it.

We work at the confluence of two disparate data sets: medical and pharmacy claims, on the one hand, and employer HR records on the other–where the outcomes of the claims live. We define a "good outcome" as the employee returning to work from their illness or injury.

Having marked that point in time, we measure all the costs to get the employee there, and those costs are not only the claims paid to the doctors and hospitals over the entire continuum of care, but the absence costs to the employer while the employee was out, which can be even more.

In addition to being a real cost to the employer, the employee or both, the absence costs double as an indication of the effectiveness of the care. The quicker a doctor got the employee better, the more effective the doctor was.

We then rank all the doctors and hospitals in the network by root diagnosis based on their average risk-adjusted cost (claims plus absence costs) to return an employee with that condition to work–From the best with the lowest average cost, to the worst with the highest.

We don't stop there, however, but use these provider rankings derived from the employee data to move everyone in the plan–the employees and their dependents–to the best providers.

We do so through two internet portals: a PCP Portal where the primary care physicians in the network can look up the best specialists and surgeons when making patient referrals, and an Employee Portal where the plan's members can look up the best providers, including PCPs, for what they need.

Our analytics are powerful! We drive down both claims and absence costs, while getting everyone better care.

High Value Healthcare… Lower Costs & Better Care

LAKE WOBEGON

We all think that our doctor is the best–or at least above average–but we don't live in Lake Wobegon where all the children are above average. Exactly half of all children are above average, and exactly half are below.

It's the same with our doctors–and the specialists and surgeons that they refer us to, and the hospitals that they put us in.

Our analytics identify the best doctors, hospitals and other providers in the network for each condition, and then we steer the plan members to them. To highlight the magnitude of the savings opportunities available, we analyzed one employer's medical and pharmacy claims of $114 million and calculated that if its employees and their spouses going to below average doctors had gone to average ones–not the best, just the average–the employer would have saved $19.7 million.

		Savings Opportunities		
	Allowed Claims	Claims	Absence Costs	Total
Employees	$ 65,628,947	$ 6,636,301	$9,089,445	$15,725,746
Spouses	24,221,925	3,994,994	–	3,994,994
Others	24,389,500	–	–	–
Total	$114,240,372	$10,631,295	$9,089,445	$19,720,740
% of Total Claims		9.3%	8.0%	17.3%

You won't get everyone going to a below average doctor to switch, but you don't have to–the savings opportunities are so great that if just a fraction switch the employer will reap a windfall! And those members who do switch won't go to an average provider, but the best.

OUR SOLUTION

Our "base package" is the Employer Portal, with optional "add-ons" for the PCP Portal and the Employee Portal. The Employer Portal delivers unmatched outcome-based analytics on cost containment, absence management, and population health.

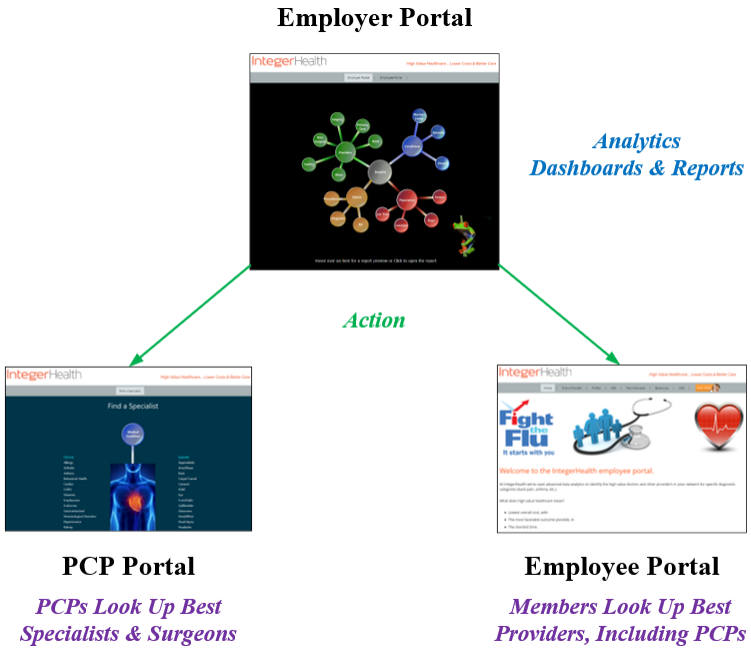
An employer can stop with the Employer Portal, or advance from analytics to action–Driving down the costs, while getting the employees better care.

We use the employee data to rank the providers. We then use those rankings to steer everyone in the plan to the best doctors and hospitals. We get them there two ways:

- ***PCP Portal***–We give the primary care physicians ("PCPs") treating the plan members access to our PCP Portal. This portal identifies the high value specialists and surgeons in the network that the PCPs can use when making referrals–and specialists and surgeons are where high costs flourish.

- ***Employee Portal***–We give the employees and their dependents access to an internet portal on which they can look up the best doctors and hospitals in the network for what they need (including PCPs, specialists and surgeons); and we augment this portal with an 800#, online chat, email and text.

    - When an employee wants the best PCP for treating diabetes, they go on the Employee Portal and look up the best network PCPs for diabetes located close by (we only steer within the network, never outside it).
    - If a retiree needs an orthopedic surgeon, but isn't internet savvy, they can call or email us and we'll look up the best one for them.



Our Result = Employers pay less, their employees get better care, and they get back to work faster.

CONNECTING

No one uses traditional price transparency tools. Why? *Because if you have a heart condition or a sick child, you don't want to go to the cheapest doctor, but the best.* And price transparency = cheap.

That's why we educate everyone in the plan that we're not sending them to the cheapest doctors, but the best ones for what they need. And–wait for it–the better doctors actually cost less

overall. 30% of claims are unnecessary, the result of poor or ineffective care, and the best providers root out those excess costs.

At IntegerHealth, we're not concerned with what a doctor charges for a visit or procedure. We only care about the total costs to get the employee better. After all, which is the better choice? A doctor that charges $100 per visit and takes three visits to get you better, or a doctor that charges $200 per visit and gets you better after one?

We hold town meetings, record YouTube videos, distribute brochures and do whatever else it takes to get the word out that we're sending the employees and their dependents to the best doctors for what they need. Once they know that, you won't be able to stop them from using us.

PILOT & PRICING

We don't ask employers to believe us. We show them with their own data. We ask an employer for three to five years of its medical and pharmacy claims and HR records. We load this data into our algorithm platform and model it to show the employer how much it could save, and then give the employer access to an Employer Portal loaded with its data for two to three months.

If an employer wants to engage us after the pilot, we already have several years of data loaded so that we can deliver robust results on "Day One." Our pricing model is incremental, based on whether we provide only our base package of the Employer Portal, or the Employer Portal with the optional "add-ons" of the PCP Portal or the Employee Portal too. Pricing is on a PEPM (Per Employee Per Month) basis with a one-time implementation fee.

	PEPM	Implementation Fee per Employee
Employer Portal	75¢ – $1.50	$0 – $2.00
+ PCP Portal	25¢ – 50¢	33¢ – 67¢
+ Employee Portal	50¢ – $1.00	75¢ – $1.25

DECREASED COSTS + BETTER CARE

By sending employees and their dependents to high value doctors and hospitals:

- Claims go down–Good healthcare costs less than bad healthcare
  - 30% of claims costs are due to poor or ineffective care, and
  - High value doctors squeeze out those excess costs
- Absence costs go down–High value doctors return their patients to work faster
- Everyone receives better care

Integer Health Technologies, LLC ("IntegerHealth" or the "Company") has prepared this white paper (this "White Paper"), which is organized as follows (with each heading bookmarked to permit navigation throughout the .pdf version of this document):

GENERAL

IntegerHealth was founded by Dr. Jack McCallum, Scott Roloff, and Bill McCallum. As well as being a retired neurosurgeon, Jack founded four other healthcare companies prior to IntegerHealth.

In addition to this White Paper, you can learn more about us by visiting our website at www.integerhealth.com or our YouTube channel. We have posted this White Paper on our website, and on both our website and YouTube channel we have posted several videos, including a three-minute profile on the Company, both a short and full-length presentation on IntegerHealth, and an educational presentation that we give at employee benefit and risk management conferences entitled *"Decreasing Healthcare Costs While Improving Care with Data Analytics."*

We also recently gave a presentation to the State of Texas–550,000 State of Texas employees, retirees and dependents get their health insurance through the Texas ERS (Employee Retirement System). The State of Texas published our one-hour "Solution Session" on the Texas ERS website if you want to watch it.

Please direct any questions or comments concerning this White Paper to our President, Scott Roloff. Scott's contact information is:

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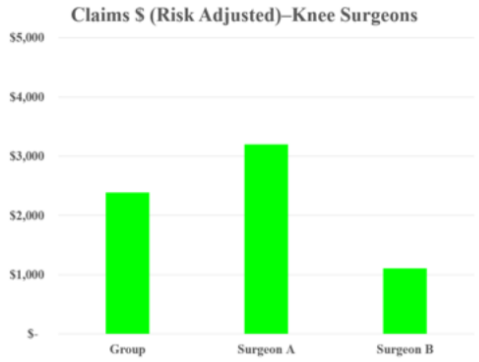
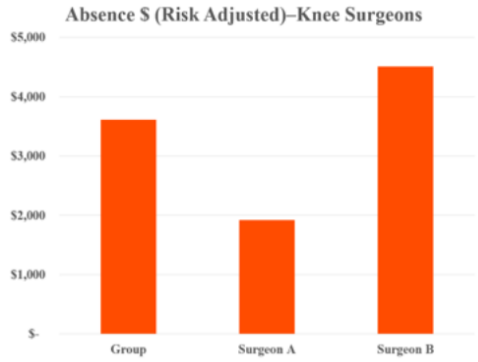
INSIGHTS WITH AN IMPACT

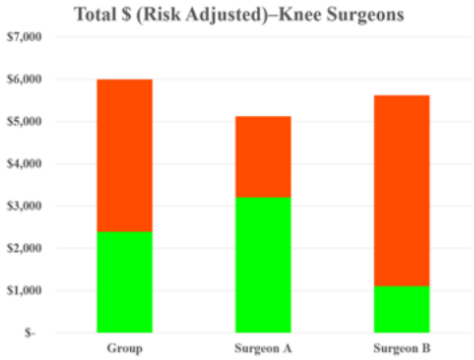
The details of our outcome-based analytics are important. Before discussing those details, however, let us give you a sample of some of the extraordinary insights that we have deduced from our work. All of these examples are from "live" data that we have blinded.

Claims vs. Absence Costs

These charts compare two knee surgeons against each other and the group of knee surgeons in the network. The chart on the top left compares the average claims costs. Surgeon A is above the group average, while Surgeon B is below. Stopping here–and everyone else does– Surgeon B is the best choice.







Now moving to the right, we see their absence costs–the average amounts that the employer paid to each surgeon's patients while they were out sick. These are not only real costs to the employer, but double as an indication of the effectiveness of the care. The quicker the surgeon got the employee better and back to work, the more effective the surgeon was. Here Surgeon A is much better than average, while Surgeon B is worse.

The bottom chart combines the two. Both Surgeon A and Surgeon B are better than average, but Surgeon A is the best. Something you would never have seen by just looking at the claims.

Branding vs. Reality

These charts compare two out-patient knee surgery facilities against each other and the group of such facilities in the network. The chart on the top left compares the average claims costs. Facility A is above the group average, while Facility B is below. Not surprising when you know that Facility A brands itself as costing more because it provides better care.

Now moving to the right, we see if that's true. This chart shows their absence costs–the average amounts that the employer paid to each facility's patients while they were out sick. And remember that these absence costs double as an indication of the effectiveness of the care. Does Facility A provide better care for more money? No. Facility A's absence costs are still above average, while Facility B's are still below.

The bottom chart combines the two. For higher claims Facility A provides worse care, while for lower claims Facility B provides better care.

Absence $ vs. Absence Days

These charts compare high volume back surgeons. The chart on the top left compares their average claims costs. Surgeons A & G are the best. Moving to the right we see their average absence costs. Surgeon A is about average, while Surgeon G is by far the worst.

The chart on the bottom left combines the two. Based on their total average risk-adjusted costs, Surgeon A is the best in the group, while Surgeon G is in the middle. These costs, however, don't always tell the whole story.

Absence days, not dollars, are a truer measure of the effectiveness of the care. When ranking the surgeons, however, we can't combine claims dollars with absence days, so we convert the days to dollars at each employee's compensation rate. A surgeon who took five days to get a CEO better and back to work, however, was just as effective as the surgeon who took five days to get the CEO's assistant better and back to work. Penalizing the CEO's surgeon because the CEO makes so much more might not be appropriate. On the other hand, having the CEO absent for five days costs the organization much more than having the CEO's assistant absent.

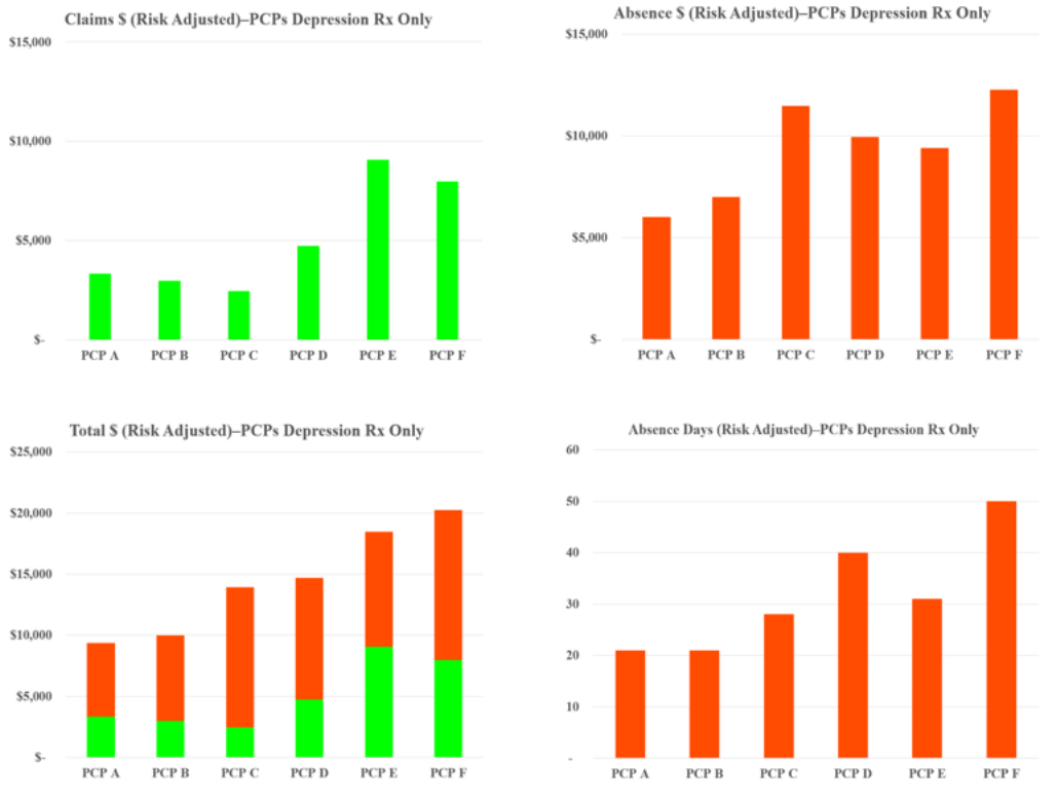
The chart on the bottom right shows the absence days. Surgeon G is no longer the worst, but about average. When we do our analytics, we convert everything to dollars to compare "apples to apples," but we are mindful of the limitations of doing so and make adjustments when appropriate. In the case of Surgeon G, we would look behind the numbers and might decide to convert some or all of Surgeon G's absence days using a standard compensation rate, rather than the actual rates for this surgeon's high-salary patients.

Depression Rx Only

Sometimes what you don't see is more important than what you do. These charts compare primary care physicians that prescribed depression drugs for their patients, but didn't diagnose them with depression.

Why? Maybe the PCPs recognized that these patients had problems, but didn't want to diagnosis them with depression for social reasons.

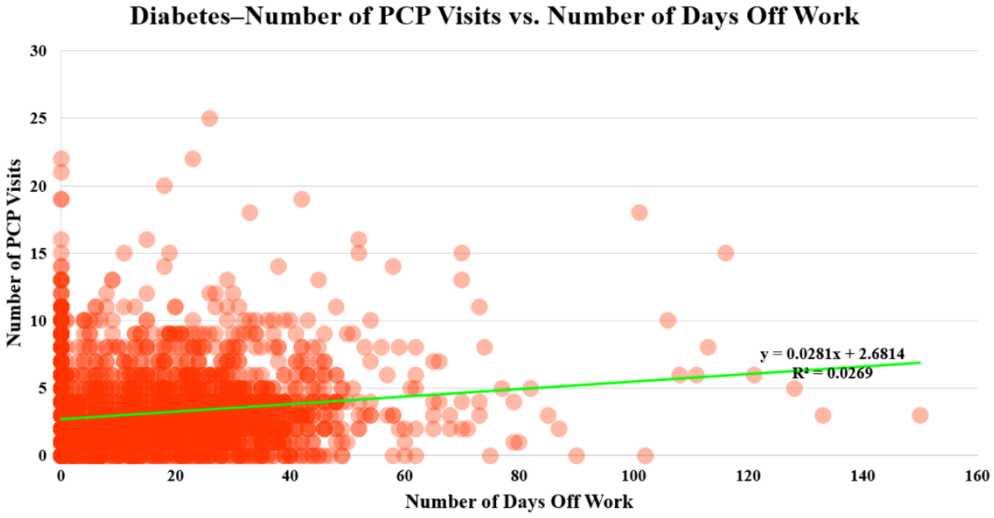
In any event, they are getting only half of what they need–the drugs, but not the therapy to go with them.



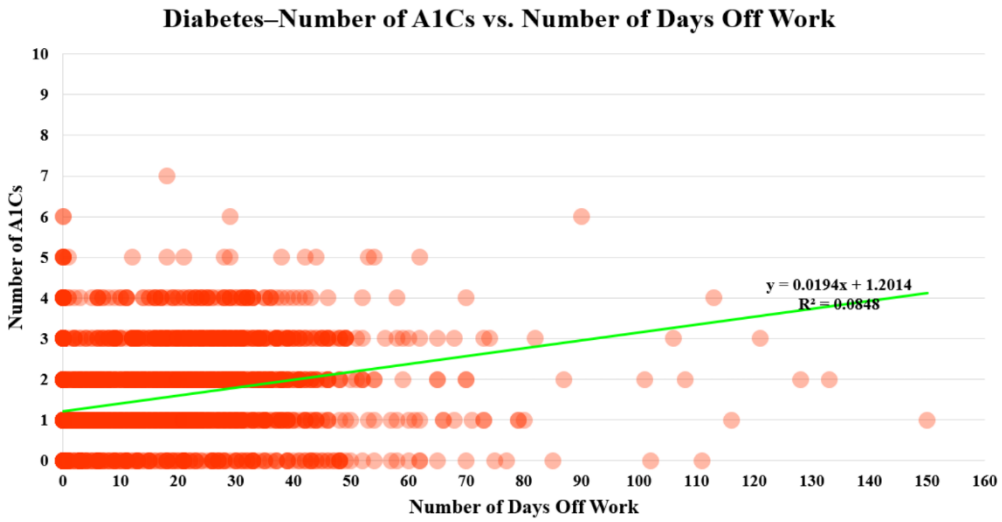
Diabetes Myths

Sometimes you don't find what you think you'll find. Common sense would infer that, within reason, the more often a diabetic employee visited their PCP the more they would keep their diabetes in check–and the less work that they would miss. That's not the case.

This chart shows the lack of correlation between the number of PCP visits by diabetic employees during a year and the days they missed from work. The "R^2" is 0.0269. In regression analysis, the R^2 measures how closely two data sets "fit" together on a scale from 0 to 1. In other words, the percentage that changes in one variable explain changes in the other. With an R^2 of 0.0269 the number of PCP visits explain only 3% of the days missed from work.



Taking this a step further, we compared the number of A1C tests during a year against the days missed. An A1C test measures a person's blood sugar. Still no correlation. In this case the R^2 was 0.0848, so the number of A1C tests explain only 8% of the days missed.



Risk Scores Matter

One thing that does correlate to the number of days that employees miss from work are their risk scores. In our analytics we assign a risk score to each employee. We use the CDPS system (Chronic Illness and Payment Disability System), an open source system designed by the University of California, San Diego and employed by many Medicaid programs around the country.

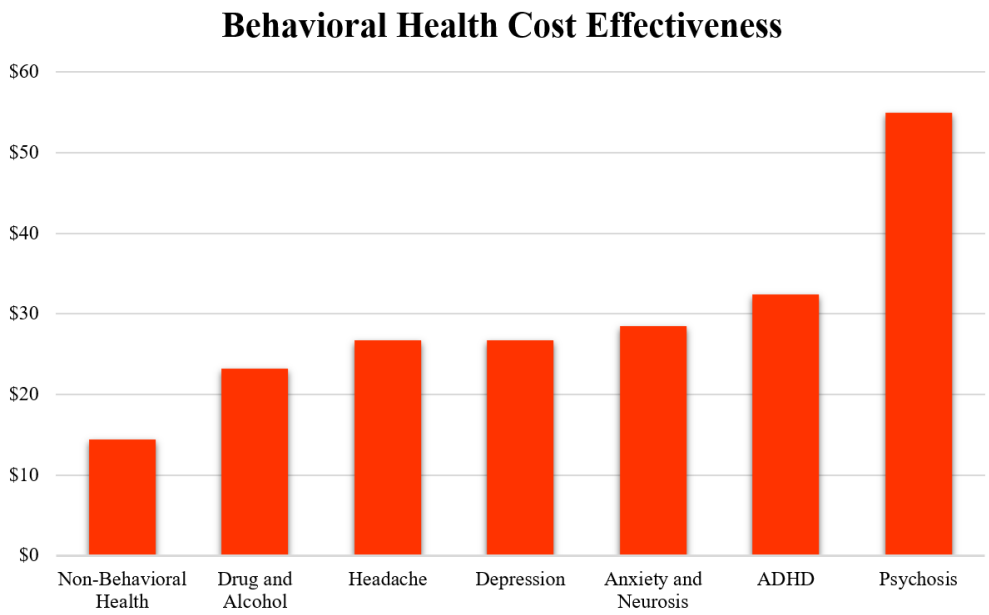
The CDPS system looks at various demographic and clinical data, including age, gender, and the prescription drugs that an employee is taking, and assigns the employee a score: 1.000 being an individual of average health, below 1.000 healthier than normal, and above 1.000 sicker.

From Another Angle

We tend to focus on what it costs when employees are sick. What does it cost to keep them well?

The Robert Wood Johnson Foundation has worked on a “cost effectiveness” ratio. We took that concept and calculated what an employer pays to have employees at work by dividing their risk-adjusted claims by the days worked in a year. The result is how much it costs in claims to have employees at work each day, rather than out sick.

The chart below compares the average cost per day to have employees at work who don’t have any behavioral health issues with those that do.



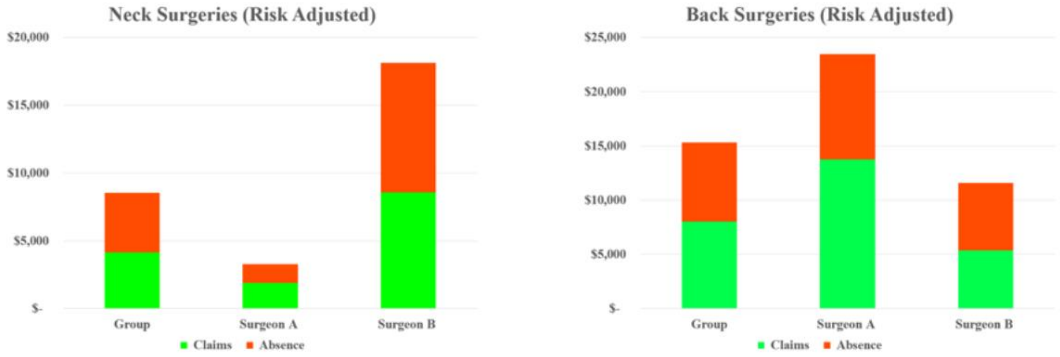
Tale of Two Surgeons

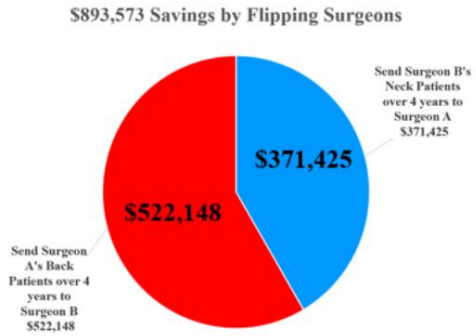
One of the more interesting insights we've come across involved one employer's network of orthopedic surgeons, which included Surgeon A and Surgeon B. Both surgeons did neck surgeries and back surgeries. The chart on the left compares their neck patients over four years (Surgeon A had 17 and Surgeon B had 25). Surgeon A was very good at neck surgery, and Surgeon B was very bad.

The chart on the right compares their back patients over this same four years (Surgeon A had 44, and Surgeon B had 32). Here it was reversed. Surgeon A was very bad at back surgery, while Surgeon B was very good.

The chart on the bottom shows that this employer could have saved $893,573 over these four years by flipping each surgeon's patients to what that surgeon was good at–Surgeon A did Surgeon B's neck surgeries, and Surgeon B did Surgeon A's back surgeries.

Doctors aren't all good or all bad. They're good at some things, and not so good at others. Our analytics find out what they're good at and exploit it to everyone's advantage.





SNAPSHOT

Let us give you a "snapshot" of how we combine cost containment, absence management, and improving care–all in one.

Lake Wobegon

We all think that our doctor is the best–or at least above average–but we don't live in Lake Wobegon where all the children are above average. Exactly half of all children are above average, and exactly half are below.

It's the same with doctors–and the specialists and surgeons that they refer us to, and the hospitals that they put us in.

It seems counter-intuitive, but going to a good doctor costs less overall than going to a bad one. 30% of healthcare costs are unnecessary, the result of poor or ineffective care and good doctors wring out those excess costs. Good doctors:

- Make fewer errors;
- Perform fewer unnecessary procedures;
- Experience fewer patient complications; and
- Get their patients better faster.

But how do we find the best doctors?

Quality

The best doctors have the best outcomes. We don't know how to quantify the quality of healthcare, however, so we revert to process measures that change the question from: "Did the patient get better?" to a question with an easy answer: "What procedures did their doctor perform?"

The most popular process measure is the HEDIS checklist (Healthcare Effectiveness Data and Information Set), which is a checklist of tests and procedures easy to harvest from the claims data. The flawed assumption is that if a doctor follows the checklist, then he or she is a good doctor and will get you better. Whether a doctor ordered a test off a checklist, however, has little bearing on the quality of the doctor, or the outcome of the care.

Consumers gravitate to "Do you like your doctor?" surveys like Yelp and the government's version CAHPS (Consumer Assessment of Healthcare Providers & Systems). Whether a patient likes his or her doctor has no correlation to the quality of the care received. Patients like or dislike their doctors based on how long they sit in the waiting room. A recent study even reported that patients who liked their doctors more than average ended up dying sooner than other patients.

Other fallbacks are price transparency tools and narrow networks. Transparency tools tell us what a doctor charges for a procedure or visit, without considering whether the doctor will get us better. At IntegerHealth we calculate the high value providers by condition over the entire continuum of care. We're not concerned with their fees for individual procedures.

Narrow networks are the "best" providers within the overall network that every insurance company touts–But how do they know? Insurance companies only know the claims costs, not the outcomes of the care, except in the most extreme cases, like when the patient dies in the hospital. The insurance companies build these narrow networks on doctors taking discounted fees. A study by the Urban Institute and the Robert Wood Johnson Foundation in September 2014 found that:

> "Insurers generally did not report any efforts to design a network built on providers' performance on quality metrics or patient outcomes; price was the determining factor for whether a provider was included or excluded from most networks."

And What Are the Real Costs?

Everyone focuses on the claims, what the doctor or hospital gets paid. The claims, however, are only half the equation to an employer. The lost productivity costs of employee medical absences and presenteeism (when an employee comes to work but can't fully perform their job) are often more than the claims.

On January 20, 2016, Dr. Richard Ilka wrote in the Wall Street Journal that:

> "If health-care costs to a corporation are imagined as an iceberg, the proportion representing medical care by doctors and hospitals is only the tip of the iceberg; the major portion is out of sight…[t]he impact of absenteeism and presenteeism on productivity is enormous…"

And the absence costs double as an indication of the effectiveness of the care. The faster the doctor got the employee better, the more effective the doctor was.

Back @ Work = Good Outcome

The best outcome for an employer is having the employee back at work at the lowest overall cost–claims plus absence costs. And if the employee is well enough to be back at work, then they've probably had a good personal outcome too.

Value

Having defined a good outcome as the employee being back at work, we can measure all the costs to get them there, and thereby calculate value. Value is what you got compared to what you paid. What the employer got is the employee back at work. What the employer paid are the claims plus the absence costs.

Confluence of Data Sets

At IntegerHealth we exploit the confluence of two disparate data sets.

Insurance companies and government funded healthcare, like Medicare and Medicaid, have only one data set–the claims.

Similarly, employers that pay premiums and purchase traditional insurance have only one data set–the HR records.

Employers and multi-employer plans that self-insure, however, have both, because they own the claims that they pay. So they direct their TPAs and PBMs to send us their claims data, while they send us the HR records, where the outcomes of those claims live.

For multi-employer plans, we don't need the HR records from all the constituent employers. Under the 80/20 rule, 80% of the employees will work for 20% of the employers, and getting the job description, payroll and time/attendance records from these larger employers will be enough.

Ranking Doctors

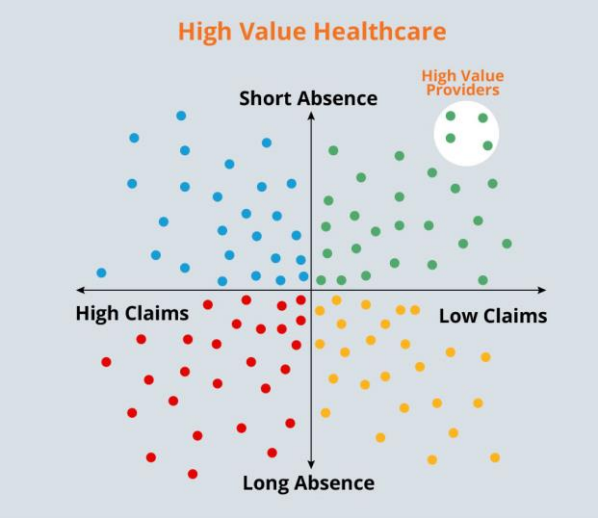
For each root diagnosis (e.g. back pain, asthma, etc.) we use this data to rank the doctors and hospitals in the network over the entire continuum of care:

- Average risk-adjusted cost to return an employee to work
- Claims + absence costs (e.g. the payroll costs of medical absences, in our calculations we don't include presenteeism costs)

The high value providers for each condition are those that return employees to work at the lowest average cost.

High & Low Value Providers

We can show high and low value healthcare on a graph. Along the horizontal axis are the providers' average claims costs, running from high on the left to low on the right. Along the vertical axis are their average absence costs, the number of days that their patients miss work, running from high on the bottom to low at the top. The high value doctors are in the upper right quadrant–low claims cost and low days off–and the low value doctors are in the lower left quadrant–high claims cost and high days off.



Steering to High Value

After using the employee data to rank the doctors and hospitals, we steer everyone in the plan–the employees, retirees and their dependents–to the high value providers for what they need. We steer two ways.

We make an internet portal (the "PCP Portal") available to all the primary care physicians in the network to look up the high value specialists and surgeons when making patient referrals.

We also give the employees and other plan members an online portal (the "Employee Portal") where they can look up the high value doctors and hospitals for each root diagnosis, and we augment that portal with an 800#, online chat, email and text. *Because if you have a heart condition or a sick child, who wouldn't want to go to the top ranked doctor?*

For maximum savings, an employer would roll out both portals. An employer, however, may choose to roll out only the PCP Portal. Most of the savings will be with the specialists and surgeons, and as the PCP Portal doesn't touch the employees the effort and expense of rolling out something new to them is avoided. And with the PCP Portal an employer doesn't have to wait until the start of its next benefits year to begin.

$lice of $avings

An employer won't get every employee to switch to a high value doctor, but it doesn't have to. The opportunity for savings is so great that if just a fraction switch the employer will reap a windfall!

Decreased Costs + Better Care

By sending employees and their dependents to the high value doctors and hospitals:

- Claims go down–Good healthcare costs less than bad healthcare
  - 30% of claims costs are due to poor or ineffective care, and
  - High value doctors squeeze out those excess costs
- Absence costs go down–High value doctors return their patients to work faster
- Everyone receives better care

EMPLOYER PORTAL

We have three internet portals. The PCP Portal for the primary care physicians, the Employee Portal for the employees, and the Employer Portal for the employer. Each portal is mobile enabled so it's easy to use on a smart phone or tablet.

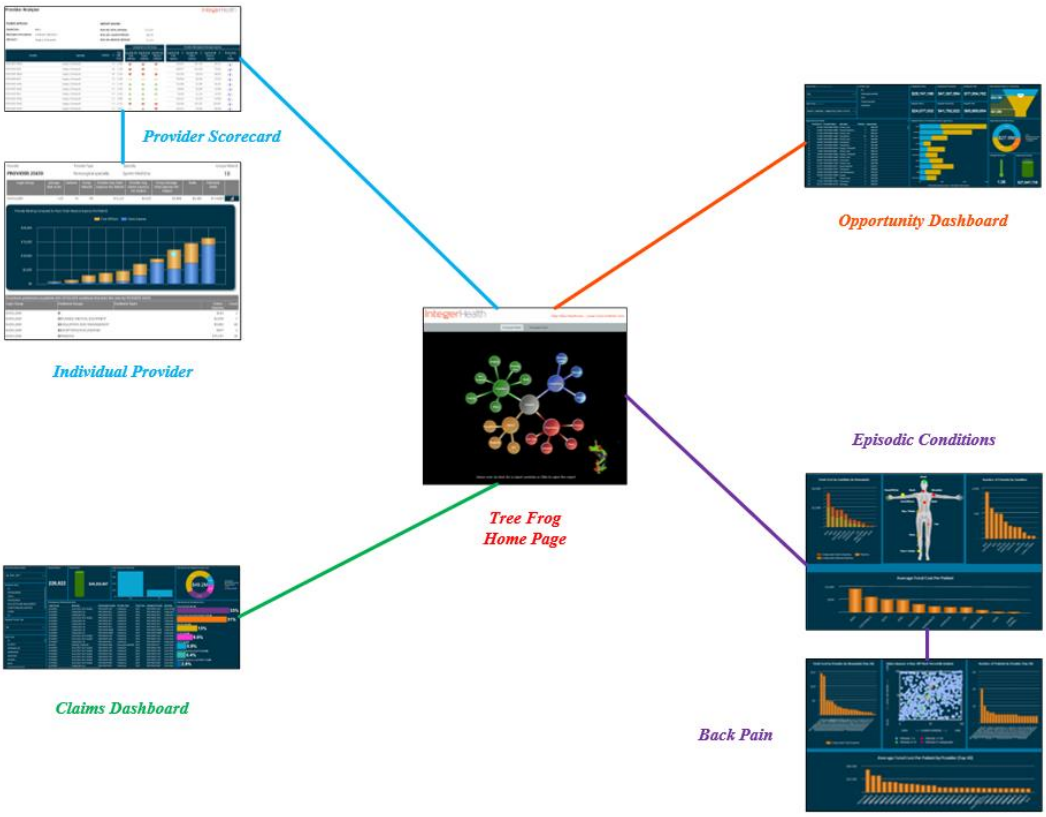
The "Employer Portal" delivers unmatched outcome-based analytics on cost containment, absence management, and population health, through our melding of claims and HR data. The dashboards and reports are intuitive and user friendly.

To fully appreciate the Employer Portal's power, you need to see it in action–and we'd be happy to demo it for you. If you want to explore on your own first, below is the login information for our demo site. This demo portal contains live data that we have blinded.

- Go to the IntegerHealth website at www.integerhealth.com
- Click on the orange "Portal Login" rectangle at the top right corner of the page
- When the login page comes up:
  - User: employer@demo.com

- Password: IH_DemoEmployer_201!
- Click “Enter Portal”

- The first page that appears is the easy to use “tree frog” navigation page
  - Hover your mouse over any sphere and it shows you thumbnails of some of the dashboards and reports in that section
  - Click on any sphere and it takes you to that section of the portal
  - Once in a section you can drill down as far as you want to go (e.g. individual claim lines)
  - To return to the navigation page, click on “Return to the Report Terminal” on the top left corner of the page (sometimes you have to go to the top of the page and “scroll down” a little for it to show)



“Tree Frog” Home Page

Below is a screenshot of the opening screen of the portal, with its easy to use “tree frog” navigation system. Clicking on a sphere directs you to the indicated section, while hovering your mouse over a sphere gives you thumbnails of the dashboards and reports available under it.

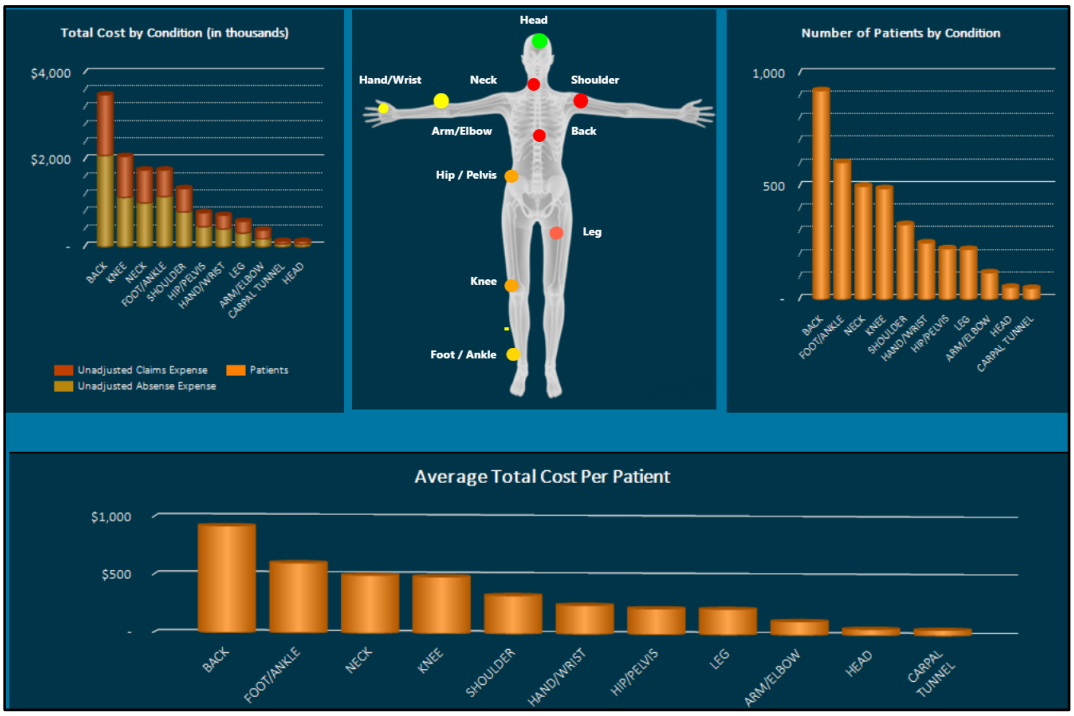
Creative attribution for the picture of the tree frog on the Employer Portal is given to the Wikimedia Commons website, see https://commons.wikimedia.org, File:Red-eyed Tree Frog (Agalychnis callidryas) 1.png.

Opportunity Dashboard

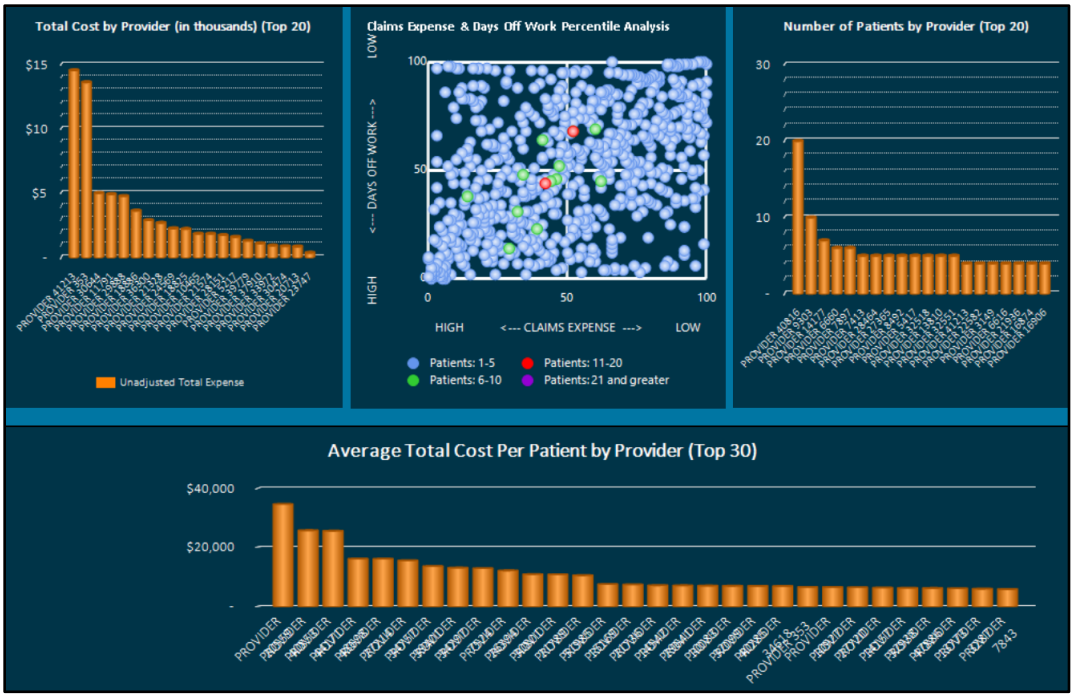
The anchor of the Employer Portal is the "Opportunity" section, which summarizes the claims, absence costs, and opportunities for savings.

Conditions

The Employer Portal permits analysis of the claims and absence costs in multiple ways, including by type of condition. The dashboard below is the gateway into the detailed analytics on various episodic conditions.

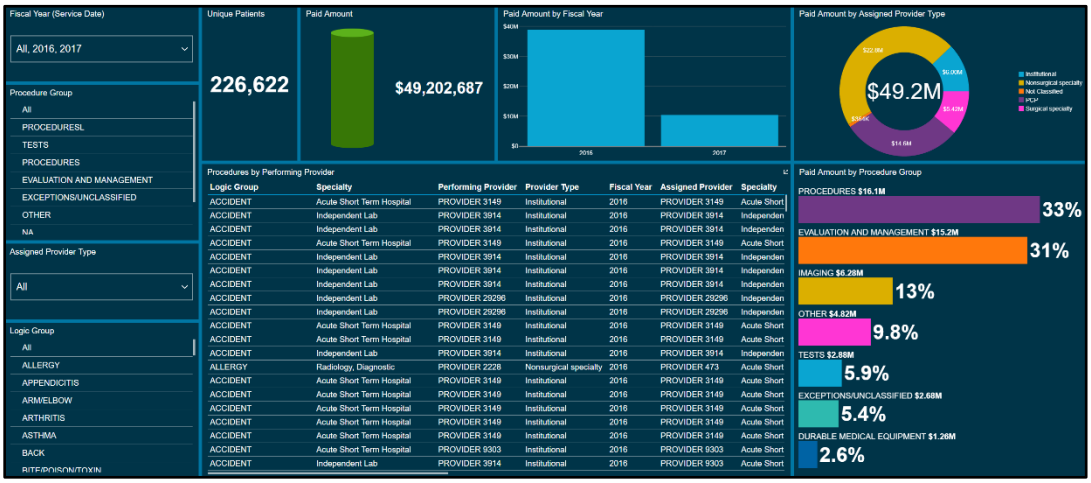


Clicking on the "Back" in the human image above brings up this dashboard. The provider quadrant graph in the middle of the screen shows all the providers in the network handling back patients. Each provider has a bubble. The color of the bubble tells you how many back patients the provider treated. Hovering your mouse over a bubble gives the provider's identity, while clicking on the bubble brings up a report of all the provider's patients with their claims and absence costs. Patient identities, however, are blinded (except with respect to workers' compensation claims).



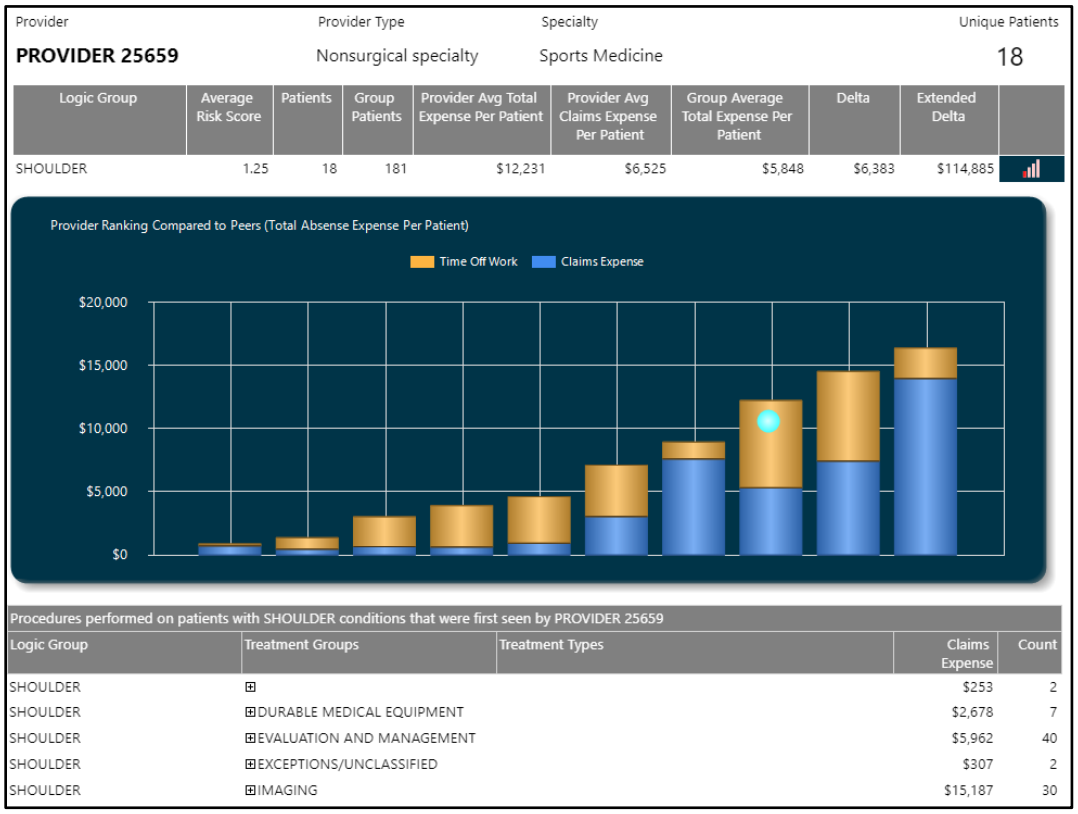
Claims

This dashboard breaks down the claims by procedure. Companion dashboards do so by diagnosis and drug prescriptions. These dashboards and related reports group all the claims by root diagnosis, not just the claims of the employees.



Providers

Each provider within the network has a dashboard summarizing that provider's performance and rankings. As we saw with the two orthopedic surgeons that both did neck and back surgeries, doctors are good, and bad, at different things.



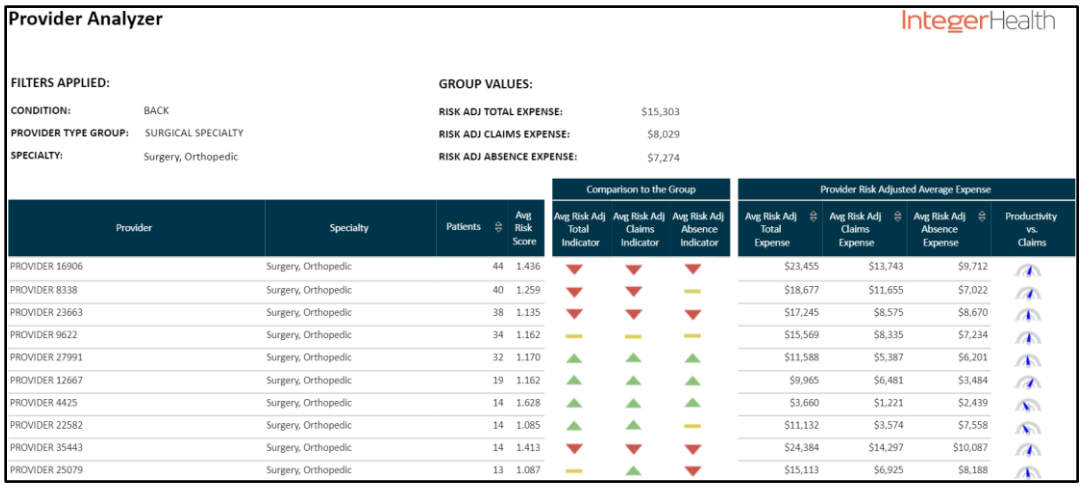
Provider	Provider Type	Specialty	Unique Patients
PROVIDER 25659	Nonsurgical specialty	Sports Medicine	18

Logic Group	Average Risk Score	Patients	Group Patients	Provider Avg Total Expense Per Patient	Provider Avg Claims Expense Per Patient	Group Average Total Expense Per Patient	Delta	Extended Delta	
SHOULDER	1.25	18	181	$12,231	$6,525	$5,848	$6,383	$114,885	

Procedures performed on patients with SHOULDER conditions that were first seen by PROVIDER 25659

Logic Group	Treatment Groups	Treatment Types	Claims Expense	Count
SHOULDER	⊞		$253	2
SHOULDER	⊞DURABLE MEDICAL EQUIPMENT		$2,678	7
SHOULDER	⊞EVALUATION AND MANAGEMENT		$5,962	40
SHOULDER	⊞EXCEPTIONS/UNCLASSIFIED		$307	2
SHOULDER	⊞IMAGING		$15,187	30

The "Provider Analyzer" compares provider performances across a peer group, including the opportunities for claims and absence cost savings.



Provider Analyzer IntegerHealth

FILTERS APPLIED:

CONDITION: BACK
PROVIDER TYPE GROUP: SURGICAL SPECIALTY
SPECIALTY: Surgery, Orthopedic

GROUP VALUES:

RISK ADJ TOTAL EXPENSE: $15,303
RISK ADJ CLAIMS EXPENSE: $8,029
RISK ADJ ABSENCE EXPENSE: $7,274

Provider	Specialty	Patients	Avg Risk Score	Comparison to the Group: Avg Risk Adj Total Indicator	Comparison to the Group: Avg Risk Adj Claims Indicator	Comparison to the Group: Avg Risk Adj Absence Indicator	Provider Risk Adjusted Average Expense: Avg Risk Adj Total Expense	Provider Risk Adjusted Average Expense: Avg Risk Adj Claims Expense	Provider Risk Adjusted Average Expense: Avg Risk Adj Absence Expense	Productivity vs. Claims
PROVIDER 16906	Surgery, Orthopedic	44	1.436	▼	▼	▼	$23,455	$13,743	$9,712	
PROVIDER 8338	Surgery, Orthopedic	40	1.259	▼	▼	—	$18,677	$11,655	$7,022	
PROVIDER 23663	Surgery, Orthopedic	38	1.135	▼	▼	▼	$17,245	$8,575	$8,670	
PROVIDER 9622	Surgery, Orthopedic	34	1.162	—	—	—	$15,569	$8,335	$7,234	
PROVIDER 27991	Surgery, Orthopedic	32	1.170	▲	▲	▲	$11,588	$5,387	$6,201	
PROVIDER 12667	Surgery, Orthopedic	19	1.162	▲	▲	▲	$9,965	$6,481	$3,484	
PROVIDER 4425	Surgery, Orthopedic	14	1.628	▲	▲	▲	$3,660	$1,221	$2,439	
PROVIDER 22582	Surgery, Orthopedic	14	1.085	▲	▲	—	$11,132	$3,574	$7,558	
PROVIDER 35443	Surgery, Orthopedic	14	1.413	▼	▼	▼	$24,384	$14,297	$10,087	
PROVIDER 25079	Surgery, Orthopedic	13	1.087	—	▲	▼	$15,113	$6,925	$8,188	

PCP & EMPLOYEE PORTALS

Identifying the high and low value doctors and hospitals in the network, however, doesn't decrease the costs or improve the care. To do that, we must steer the employees and their dependents away from the low value doctors and to the high value ones. *Fortunately, you only need to move a small number to make a big difference.*

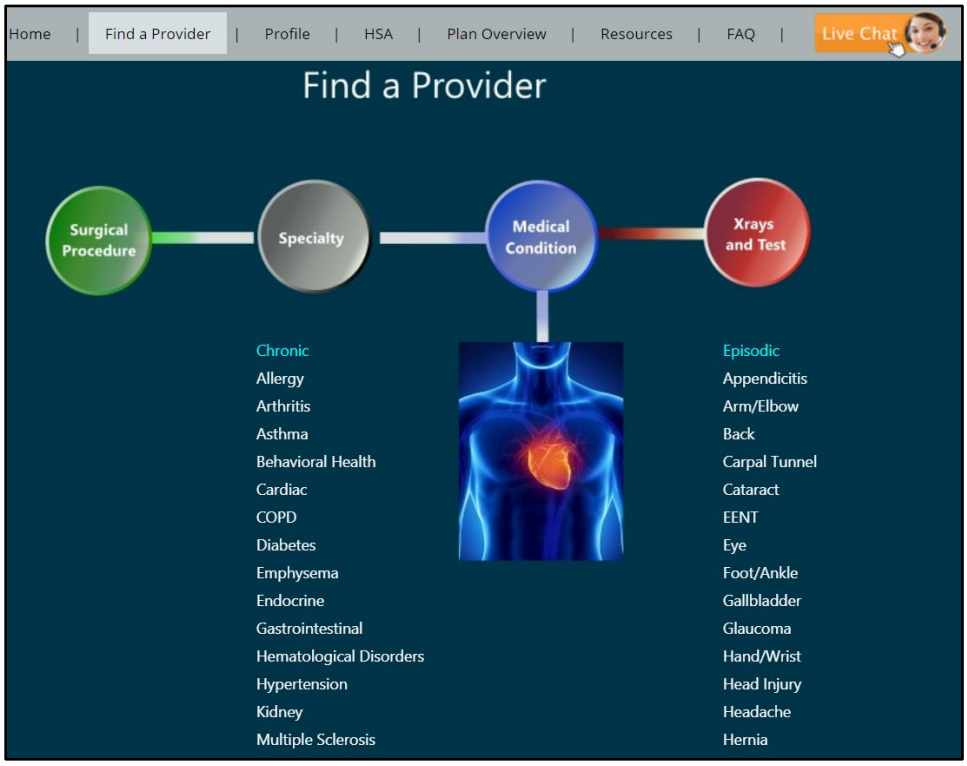
There are two ways to steer:

- PCP Portal–Indirectly through the primary care physicians when they refer their patients to specialists and surgeons, so we give the PCPs access to our PCP Portal, which ranks the specialists and surgeons in the network by root diagnosis based on their average risk-adjusted cost (claims + absence costs) to return an employee with that condition to work; and

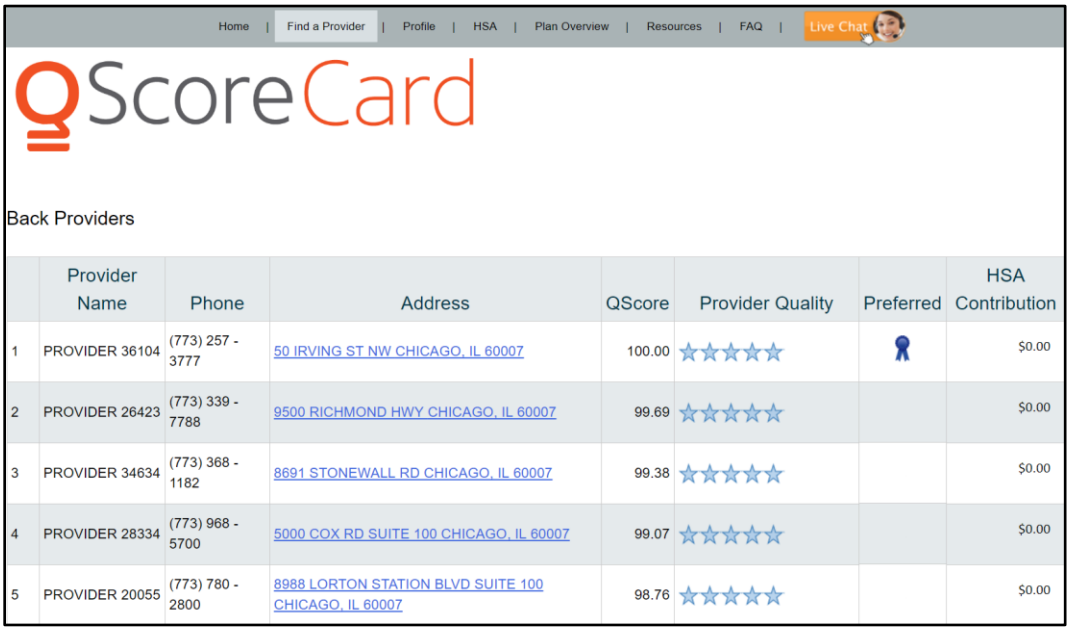
- Employee Portal–Directly by giving the employees and their dependents the rankings of the top doctors and hospitals in the network, including the PCPs, specialists and surgeons, so that they can look up the best doctors for what they need; and we augment this portal with an 800#, online chat, email and text.

Steering to High Value Healthcare

Below is a screenshot of the Find a Provider Tool on the Employee Portal. The Find a Specialist Tool on the PCP Portal looks the same. You simply log on and select your illness or injury from a drop-down menu (including services, such as MRIs, etc.).



The Employee Portal then produces a *QScoreCard* of the high value providers in the network, within your geographic area, that handle that problem. We call it a *QScoreCard* because it gives each provider's *QScore*–the higher the *QScore*, the higher the value of that provider when treating that condition. We only list the best providers on the *QScoreCard* who have treated more than a minimum number of patients. We don't list the worst providers, and we don't list providers who have treated only a few patients, even if they've done very well with them.


Home | Find a Provider | Profile | HSA | Plan Overview | Resources | FAQ | Live Chat

QScoreCard

Back Providers

	Provider Name	Phone	Address	QScore	Provider Quality	Preferred	HSA Contribution
1	PROVIDER 36104	(773) 257 - 3777	50 IRVING ST NW CHICAGO, IL 60007	100.00	☆☆☆☆☆		$0.00
2	PROVIDER 26423	(773) 339 - 7788	9500 RICHMOND HWY CHICAGO, IL 60007	99.69	☆☆☆☆☆		$0.00
3	PROVIDER 34634	(773) 368 - 1182	8691 STONEWALL RD CHICAGO, IL 60007	99.38	☆☆☆☆☆		$0.00
4	PROVIDER 28334	(773) 968 - 5700	5000 COX RD SUITE 100 CHICAGO, IL 60007	99.07	☆☆☆☆☆		$0.00
5	PROVIDER 20055	(773) 780 - 2800	8988 LORTON STATION BLVD SUITE 100 CHICAGO, IL 60007	98.76	☆☆☆☆☆		$0.00

We can customize the *QScoreCard* for each employee's particular circumstances. In the screenshot of the *QScoreCard* above the employer could make contributions to an employee's HSA if the employee went to certain high value doctors. Alternatively, the *QScoreCard* could give each doctor's office visit co-pay if the employee was covered under a PPO.

The PCP Portal produces a report similar to a *QScoreCard*, but with more detail. Instead of giving a *QScore* for a specialist or surgeon that summarizes their ranking, the report gives the number of employees seen with that condition, along with the average risk-adjusted claims and absence costs when treating them. As part of our standard offering we don't provide this detail to the employees in the *QScoreCards* because it would be too much information, and unlike a PCP they don't possess the medical background to put this additional information into context.

Primary care physicians can be especially motivated to use the PCP Portal when making referrals because when ranking the PCPs we attribute all their downstream specialist costs back to them. If a PCP refers to high value specialists and surgeons, their own *QScore* will be higher.

Back - Surgical Specialist

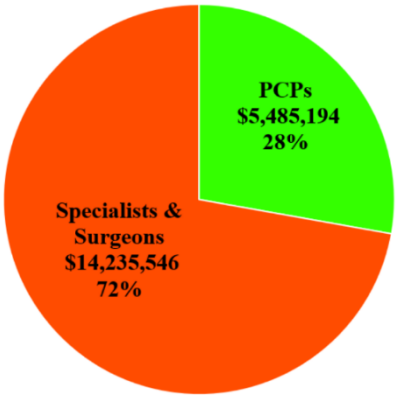
Non-Surgical Specialist | Surgical Specialist

	Specialty	Provider Name	Phone	Location	Patients	Average Risk Adjusted Total Expense	Average Risk Adjusted Claims Expense	Average Risk Adjusted Absence Expense
1	Surgery, Orthopedic	PROVIDER 40039	(773) 444 - 5000	CHICAGO, IL	5	$2,226	$927	$1,299
2	Surgery, Orthopedic	PROVIDER 1315	(773) 476 - 1100	CHICAGO, IL	5	$2,990	$1,400	$1,590
3	Surgery, Orthopedic	PROVIDER 3245	(773) 490 - 1112	CHICAGO, IL	11	$3,605	$1,288	$2,317
4	Surgery, Orthopedic	PROVIDER 4425	(773) 560 - 9495	CHICAGO, IL	14	$3,914	$1,470	$2,444
5	Surgery, Orthopedic	PROVIDER 23836	(773) 442 - 8301	CHICAGO, IL	7	$4,991	$783	$4,208
6	Surgery, Orthopedic	PROVIDER 13754	(773) 560 - 9495	CHICAGO, IL	7	$5,280	$1,009	$4,271
7	Surgery, Neurological	PROVIDER 27415	(773) 748 - 1000	CHICAGO, IL	5	$5,591	$1,716	$3,875
8	Surgery, Orthopedic	PROVIDER 19358	(773) 435 - 6604	CHICAGO, IL	11	$7,361	$3,398	$3,963
9	Surgery, Orthopedic	PROVIDER 8000	(773) 366 - 4332	CHICAGO, IL	5	$7,816	$1,939	$5,877
10	Surgery, Neurological	PROVIDER 13034	(773) 641 - 4877	CHICAGO, IL	6	$9,687	$3,736	$5,951

PCP Portal

For maximum savings, an employer would roll-out the Employee Portal to the employees and the PCP Portal to the PCPs. An employer, however, may choose to roll out only the PCP Portal.

High claims and absence costs flourish with specialists and surgeons. Accordingly, an employer can capture a significant portion of the savings opportunity through the PCP Portal. For example, on one employer with $114 million in claims we identified $19.7 million in savings by sending its employees and their spouses seeing below average providers to average ones–not the best, just the average. Of this $19.7 million, $14.2 million–72%–was attributable to specialists and surgeons.



In addition to capturing most of the savings opportunity, a big advantage of the PCP Portal only option is that there is no employee education or roll-out. Any time an employer rolls out a new benefit to its employees there is significant effort and expense. That's all avoided with the PCP Portal only option because we never touch the employees, and IntegerHealth takes care of educating the PCPs on this great new way to identify high value specialists and surgeons. As

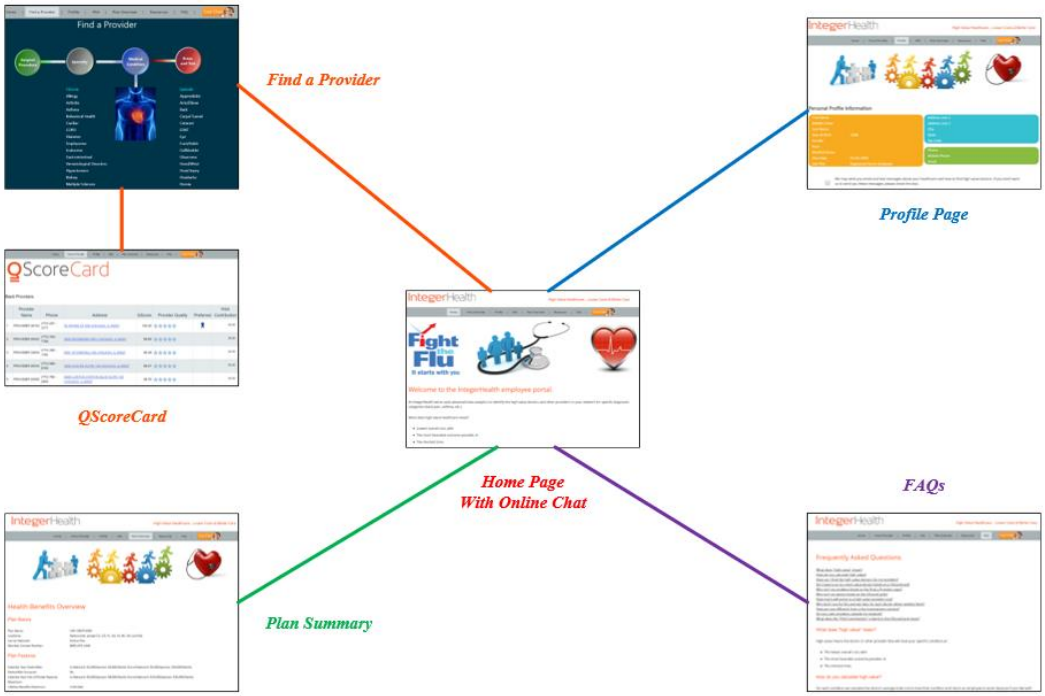
we don't touch the employees, an employer can also introduce the PCP Portal at any time, rather than wait until the start of its next benefits year.

Employee Portal

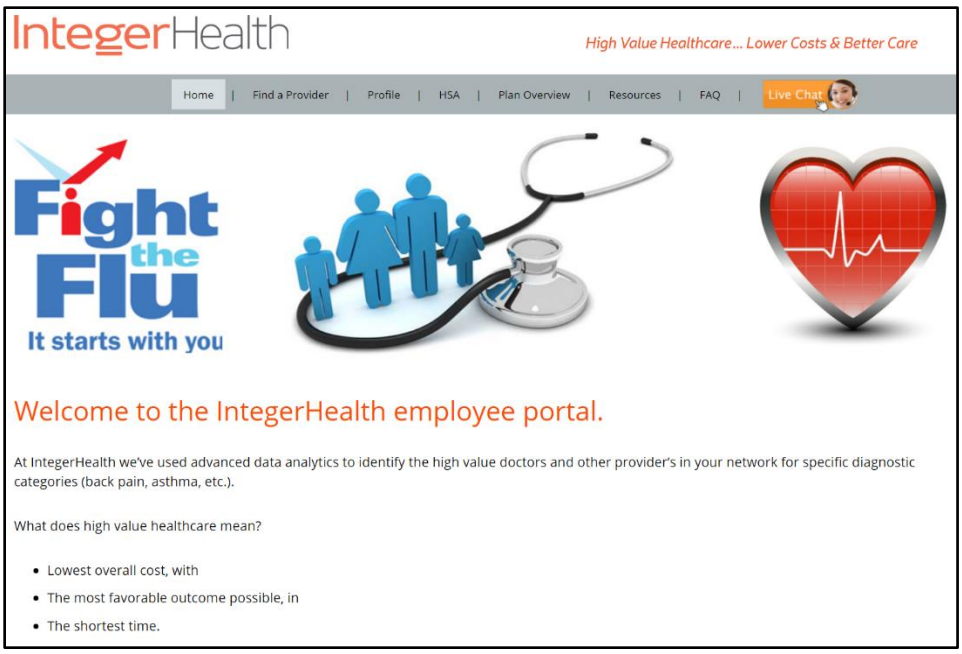
In addition to the Find a Provider Tool and *QScoreCards*, the Employee Portal contains various pages and features. The portal is mobile enabled so it's easy to use on a smart phone or tablet.

As with the Employer Portal, to appreciate the Employee Portal you have to see it. Below is the log in information for our demo site:

- Go to the IntegerHealth website at www.integerhealth.com
- Click on the orange "Portal Login" rectangle at the top right corner of the page
- When the login page comes up:
  - User: employee@demo.com
  - Password: IH_DemoEmployee_201!
  - Click "Enter Portal"



Below is a screenshot of the home page, which includes a message section through which we communicate with the employee. In addition, the portal has an online chat feature so that a member can chat with one of our healthcare counselors.



Each employee has a profile page, with an "opt out" election from emails and texts that IntegerHealth may send concerning personalized healthcare information. Other pages include an HSA page if the member is covered under an HDHP, a plan overview page summarizing their benefits, a resources page with videos on how to use the Employee Portal and other helpful information, and a FAQ page answering frequently asked questions, such as "What does 'high value' mean?" and "How do you calculate high value?"

In addition to using the Employee Portal, a member can call our 800#, chat online with one of our healthcare counselors, or email or text us. We're happy to get them to high value healthcare in whatever way is easiest–and we'll give them wallet cards with all our contact information so that they'll always know how to get in touch with us. During a call or chat we can even book a doctor's appointment.

Our usual configuration is to provide each employee with a personalized Employee Portal that they access via a user name and password, with the understanding that they may use the portal to find high value providers for themselves and their dependents too. As we do not include any PHI (Protected Health Information) on the portal, there is no issue of someone using the Employee Portal and seeing PHI on themselves or anyone else.

HDHP with HSAs

When an employee has an HDHP with an HSA (High Deductible Health Plan with a Health Savings Account) the employer can even pay the employee to go to a high value doctor. When an employee goes to a better doctor the employer will save money. Now the employer shares some of that savings with the employee by contributing to their HSA as a reward for getting better care.

Each month we match up high value provider selections through the PCP and Employee Portals with the subsequent claims from those providers as validation that the employees went to them. We then send the employer a list of the HSA contributions to make.

Savings & ROI

The most frequent questions with any healthcare tool are:

- How many employees are using it?
- How much money is it saving?

When an employer adds on either the PCP Portal or the Employee Portal, we'll track the PCP and employee usage in the Employer Portal. And the more PCPs and employees that use us, the more the employer will save.

We will also calculate the employer's annual claims, absence and total savings on the conditions on which we publish rankings. We will report that savings in the Employer Portal, and then calculate the employer's ROI (Return on Investment) from our services.

(Savings – Cost) ÷ Cost = ROI

We can calculate the savings on either an encounter or overall basis. Appendix I contains examples of such savings calculations.

Connecting

The key to getting employees to use our services is education. Once they understand that we identify the best doctors and hospitals, not the cheapest ones, you won't be able to stop them from using us. We will do whatever it takes to get the word out:

- Town hall meetings
- Online presentations
- YouTube videos
- Brochures
- Emails

We'll even give employees wallet cards with all of our contact information so that they'll always know how to get in touch with us.

And one more thing. Many employers provide financial incentives around their health plans, such as a decrease in the employee's monthly premium or a contribution to the employee's HSA for filling out a health assessment or tobacco affidavit. As free money is involved, the participation rates are very high. Now just add one more requirement to get that premium break or HSA contribution–Go to the IntegerHealth Employee Portal, login, complete your profile, and watch a short video on this extraordinary new benefit that will enable you to find not the cheapest doctors, but best ones!

CALCULATING HIGH VALUE HEALTHCARE

The problem in healthcare is the inability to quantify a good outcome, when the patient gets better–sooner, rather than later, and at the lowest overall cost. We've figured out how to do that at the intersection of two disparate data sets: medical and pharmacy claims, on the one hand, and employer HR records on the other–where the outcomes of the claims live.

If you're an employer paying for your employee's healthcare, a good outcome is when the employee returns to work. And if you're an employee and you feel well enough to return to work, then chances are that you've had a good personal outcome too.

Accordingly, we define a "good outcome" as the employee returning to work from their illness or injury. Having marked that point in time, we measure all the costs to get the employee there, and those costs are not only the claims paid to the doctors and hospitals over the entire continuum of care, but the absence costs to the employer while the employee was out because of their illness or injury, which are often more.

In addition to being a real cost to the employer, the employee or both, the absence costs double as an indication of the effectiveness of the care. The quicker a doctor got the employee better, the more effective the doctor was.

We then rank all the doctors and hospitals in the network by root diagnosis based on their average risk-adjusted cost (claims plus absence costs) to return an employee with that condition to work–From the best with the lowest average cost, to the worst with the highest.

Two important points to note. First, our service works for both benefit plans and workers' compensation programs. Second, we only rank the doctors and other providers in the employer's network against each other. We don't compare them against external standards and we don't steer the members to providers outside the employer's network.

We just help the employer and its employees get the most out of the provider network that they already have.

Algorithm Logic

Let's get into the details. Before we begin, where will we end?

For each root diagnosis (e.g. back pain, asthma, etc.) we will rank the doctors, hospitals and other providers in the network over the entire continuum of care based on their average risk-adjusted cost to return an employee with that condition to work. And those costs will not only be the claims, but the cost of the medical absences too.

Identify Root Diagnoses. First, our algorithms identify the root diagnoses for each employee's medical claims. There are two main diagnosis categories, chronic conditions such as cardiac problems and diabetes, and episodic conditions, such as back pain and carpal tunnel syndrome.

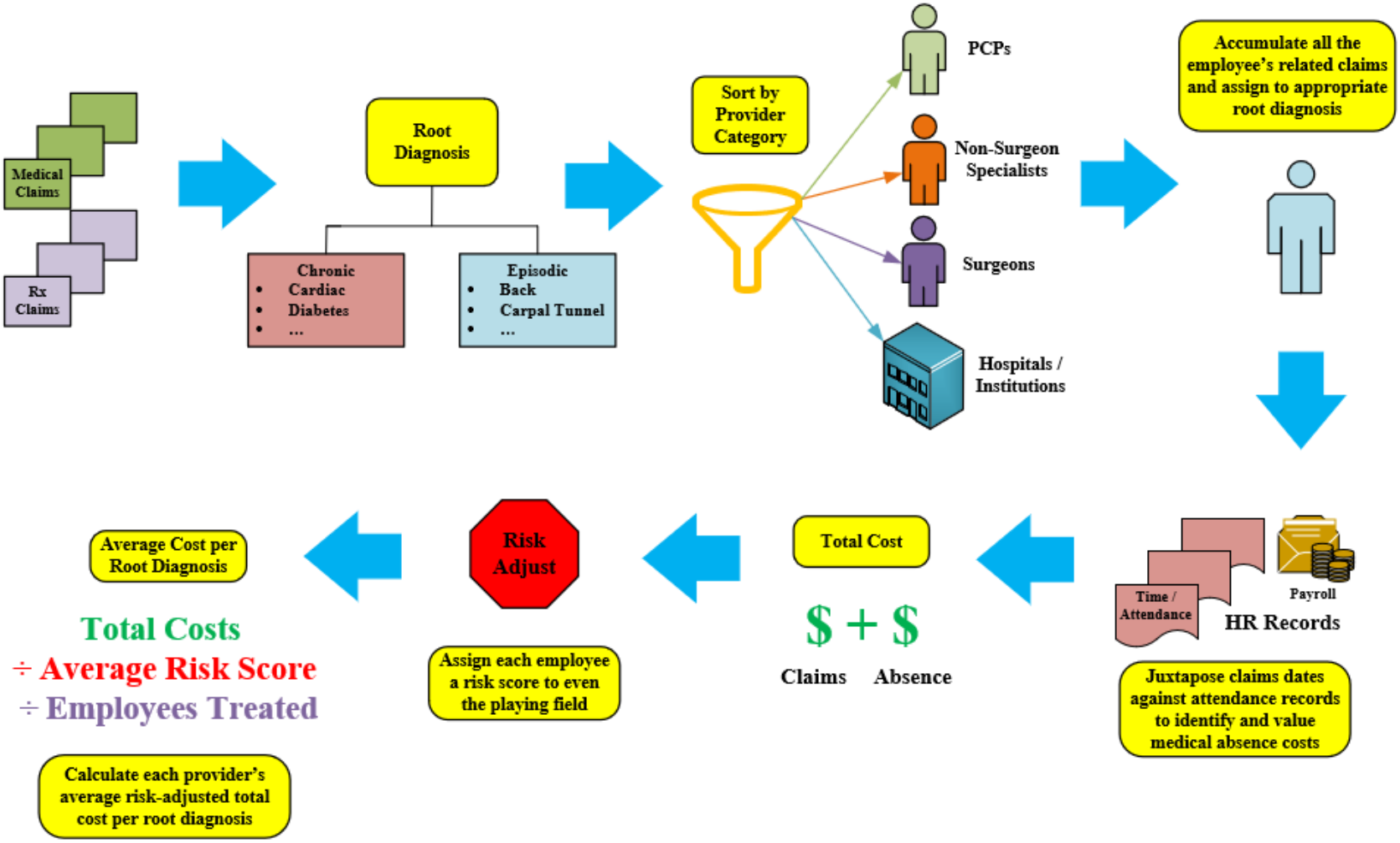
Sort by Provider. We then sort the claims by provider type. You can't compare a primary care physician to a surgeon. We sort by four provider types: PCPs, non-surgeon specialists, surgeons, and institutions, such as hospitals.

Accumulate Claims. Next we accumulate all the related medical and pharmacy claims for the employee over the entire continuum of care and assign those claims to the appropriate root diagnosis. The continuum of care for chronic conditions is an annual period; while the continuum of care for an episodic one is from the first claim in the episode to the last.

Absence Costs. After that we identify the absence costs related to the root diagnosis by juxtaposing the claims dates against the HR attendance records and valuing that time off based on the employee's pay rate (or a normalized rate if the provider treats highly paid executives). In many cases the costs of the medical absences will be more than the claims.

Total Costs. We then add the claims and absence costs to obtain the total costs for the care.

ALGORITHM LOGIC



Risk Adjustment. We can't stop, however, with the total costs. If you ask any doctor why his or her costs are more than another doctor's, they'll always say the same thing, "Because my patients are sicker." And sometimes they're right.

We therefore assign a risk adjustment score to each employee to level the playing field. As discussed above, we use the CDPS risk adjustment system under which an employee is assigned a risk score of 1.000 if they are of average health, below 1.000 if healthier than normal, and above 1.000 if sicker. For calculation purposes, if an employee's score is 1.000 or below we assign them a score of 1.000, and if an employee's score is above 1.000 we use their actual score.

Average Cost per Root Diagnosis. Finally, we calculate each provider's average cost for treating each root diagnosis by: (1) taking the provider's total costs for treating that root diagnosis (claims plus absence costs), (2) dividing those costs by the average risk score for the employees that the provider treated with that root diagnosis, and (3) dividing that resulting quotient by the number of employees treated.

And today's complex healthcare environment involves an analysis of referral patterns too. Long gone are the days when a family doctor made a house call and treated you for almost everything. We therefore *attribute a provider's downstream referral costs back to that provider when determining the provider's average cost to return an employee to work*. You will note that if all the costs of all the providers were added together that this would result in double, triple counting, etc., although for ranking purposes it doesn't matter.

We then rank all the providers by category (PCPs, etc.) for each root diagnosis based on their average cost to return an employee to work, and encapsulate those rankings in an easy to understand numerical value between 0 and 100, which we call the *QScore*. The higher the *QScore,* the higher the value of that provider when treating that diagnosis. When making these calculations, we eliminate outliers three or more standard deviations from the mean.

When calculating the *QScores* we pool data so that all the employers in a given geography benefit from each other's experience. Each employer, however, only sees its own data on its Employer Portal.

That brings up the issue of how much data we need in an area for our algorithms to work. Generally, we need 5,000 data points in a given geography to begin ranking common conditions. A data point is one employee's claims and HR records for one year. And the geography that we're talking about is the distance that you would be willing to travel to go to a doctor or hospital.

For example, assume an employer with 2,000 employees, or two employers in the same area with 1,000 employees each. Typically, 15% of the employees won't have any medical claims in a year, leaving us with 1,700 employees that do. If at the beginning of the engagement we take three years of past data, that gives us 5,100 data points (1,700 x 3 = 5,100), enough to begin ranking the providers.

Real $avings

These analytics are powerful!

To demonstrate the magnitude of the savings opportunities available, we compare each doctor's average cost per employee for each root diagnosis to the doctor's group average (i.e. all PCPs, etc.). If a doctor's average cost is less than the group average, we assume for calculation purposes that there is no opportunity for savings. If the doctor's average cost is more than the group average, we assume for calculation purposes that an opportunity for savings exists by moving the employees from this below average doctor to an average doctor.

Our provider ranking analytics–and the provider ranking dashboards and reports in the Employer Portal–only cover the employees, not the retirees and dependents, because we don't have any absence costs to match against the non-employees' claims. We use the employee-derived rankings, however, to move everyone in the plan–employees, spouses, children, and retirees–to the best providers for what they need; and the employer will realize claims savings on the non-employees when we do so. Accordingly, as the pools of pre-Medicare retirees and spouses will be similar to the employee pool, when evaluating the overall savings opportunity we assume the same proportion of claims savings for each condition on those pools as we identified for the employees.

We analyzed one employer's medical and pharmacy claims of $114 million and calculated that if its employees and their spouses going to below average doctors had gone to average ones–not the best, just the average–the employer would have saved $19.7 million.

		Savings Opportunities		
	Allowed Claims	Claims	Absence Costs	Total
Employees	$ 65,628,947	$ 6,636,301	$9,089,445	$15,725,746
Spouses	24,221,925	3,994,994	–	3,994,994
Others	24,389,500	–	–	–
Total	$114,240,372	$10,631,295	$9,089,445	$19,720,740
% of Total Claims		9.3%	8.0%	17.3%

You won't get everyone going to a below average doctor to switch, but you don't have to–the savings opportunities are so great that if just a fraction switch the employer will reap a windfall! And those employees and dependents who do switch won't go to an average provider, but the best.

When an employer uses a PTO system, sometimes the question arises whether the absence costs are real costs to the employer. The argument goes that if the employee hadn't used

their PTO days for their illness or injury, they would have used them for a vacation. There is a three-part answer.

First, vacations are necessary to maintain employees at their peak performance, and so replacing vacations with time off recuperating from an illness or injury has a real cost to the organization–and to the employees. As J.P. Morgan said, he "could do a year's work in nine months–but not in twelve months." In other words, he could get more done in a year if he worked for nine months and then took a vacation–in his case a three-month vacation–than if he didn't take any vacation at all and worked the entire year straight through.

Second, and this is a corollary to the first, there is still a savings. Now the savings has shifted from the employer to the employee–who doesn't have to use his or her vacation days as sick days.

And third, and most importantly for purposes of our calculations, when ranking doctors it doesn't matter how the employer accounts for the time off. The doctor still took that time to treat the employee and get them better and back to work. Because remember that the length of time that a doctor takes to get an employee better doubles an indication of how effective the doctor was.

The absence costs also understate the employer's true costs. Although a real cost to an employer, we don't include the costs of presenteeism because it's too elusive to measure. In addition, the costs of an absence can be much more than just the payroll costs as the effects of the absence ripple throughout the organization causing myriad delays and inefficiencies. Sometimes an absence means lost revenue far in excess of the payroll costs, like when a lawyer or CPA can't bill an hour to a client.

With respect to school districts, absence costs could cause much larger losses of funding. When a school district hires a substitute teacher the incremental cost isn't just the substitute teacher's pay. Even the best substitute teacher can't do much more than babysit the students, so they aren't learning. And when the students aren't learning their standardized test scores go down–and the district loses funding.

Conditions Analyzed

We analyze all conditions. Currently, we only publish provider rankings on our portals for those conditions where we think we can make a difference. For example, if an employee gets in a car accident, they're going to the nearest emergency room–period. No one is going to stop and look up the highest value doctor for multiple traumas, so we don't publish rankings on it. Similarly, we don't publish rankings on cancer because a "good outcome" for an employee with cancer might not be returning to work, but surviving.

Chronic Conditions. We currently publish rankings on the following chronic conditions.

- Allergy
- Amputation
- Arthritis
- Asthma
- Behavioral Health
- Bladder
- Cardiac
- COPD
- Diabetes
- Emphysema
- Endocrine
- Gastrointestinal
- Hematological Disorders
- Hypertension
- Kidney
- Multiple Sclerosis
- Nutrition
- Obesity
- Pain
- Pulmonary
- Rheumatoid Arthritis
- Sleep Disorders
- Urology
- Vascular
- Vein

Episodic Conditions. We currently publish rankings on the following episodic conditions.

- Appendicitis
- Arm / Elbow
- Back
- Bite / Poison / Toxin
- Blood
- Burns
- Carpal Tunnel
- Cataract
- Dislocations
- EENT
- Eye
- Foot / Ankle
- Gallbladder
- Glaucoma
- Hand / Wrist
- Head
- Headache
- Hernia
- Hip / Pelvis
- Infections / Diseases
- Injury
- Kidney Stone
- Knee
- Leg
- Liver
- Neck
- Neurological
- Pancreas
- Shoulder
- Skin
- Sprain
- Stroke
- Transplant
- Ulcers–Skin & Pressure

Expanding Our Rankings. As we go on, we may expand the conditions on which we publish rankings; and in any particular engagement we would be happy to publish rankings on whatever additional conditions the employer requested. To put things in context, take the employer with $114 million of claims that could have saved $19.7 million by sending its employees and their spouses going to below average doctors to average ones. This savings was based on the $28 million of employee claims on which we currently publish rankings out of the total employee claims of $66 million–42% of the employee claims–*making the savings opportunities steering to high value healthcare even more astounding!*

The Math

The data in the report below is "live" data that we have blinded. This report shows a real employer's opportunity for savings with respect to Non-Surgeon Specialists who treated employees during 2013-2016 for back pain.

The top of the report highlighted in gold shows that during this period 1,942 employees at this employer saw non-surgeon specialists, such as chiropractors, for back pain. The average

claims cost for each employee was $3,206 ($6,225,194 ÷ 1,942 = $3,206), and the average absence cost was 1.6x the claims cost, or $5,114 ($9,932,042 ÷ 1,942 = $5,114). The average total cost per employee was therefore $8,320 ($3,206 + $5,114 = $8,320).

The total cost per employee must then be risk adjusted to normalize it across providers. The average risk score for the 1,942 employees was 1.218, sicker than the normal score of 1.000. The risk adjusted cost per employee is therefore $6,831 ($8,320 ÷ 1.218 = $6,831).

Client: Blinded
Episodic Condition: Back Pain
Time Frame: 2013 - 2016
Provider Type Group: Non-Surgeon Specialists

	Patients	Claims Cost	Absence Cost	Total Cost	Group Average Risk	Risk Adjusted Total Cost	Average Risk Adjusted
Overall Group	1,942	$6,225,194	$9,932,042	$16,157,236	1.218	$13,265,383	$ 6,831
Average per Patient		$ 3,206	$ 5,114	$ 8,320	1.218	$ 6,831	

								Savings Opportunity		
Provider	Patients	Claims Cost	Absence Cost	Total Cost	Provider's Average	Risk Adjusted Total Cost	Average Risk Adjusted	Claims Cost	Absence Cost	Total
Doctor A	11	$ 84,358	$ 117,721	$ 202,079	1.163	$ 173,757	$ 15,796	$ 43,581	$ 55,034	$ 98,615
Doctor B	3	$ 23,569	$ 92,722	$ 116,291	1.040	$ 111,818	$ 37,273	$ 14,766	$ 76,560	$ 91,326
Doctor C	17	$ 128,972	$ 164,026	$ 292,998	1.418	$ 206,628	$ 12,155	$ 46,206	$ 44,302	$ 90,508
Doctor D	7	$ 18,189	$ 128,567	$ 146,756	1.070	$ 137,155	$ 19,594	$ (1,426)	$ 90,767	$ 89,341
Doctor E	4	$ 34,803	$ 83,726	$ 118,529	1.019	$ 116,319	$ 29,080	$ 23,625	$ 65,371	$ 88,996
Doctor F	11	$ 76,483	$ 103,811	$ 180,294	1.175	$ 153,442	$ 13,949	$ 36,138	$ 42,160	$ 78,298
Doctor G	2	$ 29,651	$ 53,946	$ 83,597	1.000	$ 83,597	$ 41,799	$ 24,387	$ 45,549	$ 69,936
Doctor H	8	$ 24,838	$ 98,603	$ 123,441	1.000	$ 123,441	$ 15,430	$ 3,781	$ 65,011	$ 68,792
Doctor I	1	$ 31,424	$ 44,313	$ 75,737	1.086	$ 69,739	$ 69,739	$ 26,303	$ 36,605	$ 62,908
Doctor J	3	$ 11,054	$ 73,315	$ 84,369	1.013	$ 83,286	$ 27,762	$ 3,016	$ 59,777	$ 62,793
Doctor K	1	$ 18,033	$ 49,529	$ 67,562	1.000	$ 67,562	$ 67,562	$ 15,401	$ 45,330	$ 60,731
Doctor L	8	$ 58,516	$ 72,344	$ 130,860	1.203	$ 108,778	$ 13,597	$ 27,584	$ 26,544	$ 54,128
Doctor M	2	$ 3,622	$ 62,692	$ 66,314	1.000	$ 66,314	$ 33,157	$ (1,642)	$ 54,294	$ 52,652
Doctor N	4	$ 12,206	$ 67,572	$ 79,778	1.000	$ 79,778	$ 19,945	$ 1,677	$ 50,779	$ 52,456
Doctor O	1	$ 3,069	$ 54,935	$ 58,004	1.000	$ 58,004	$ 58,004	$ 437	$ 50,736	$ 51,173
Total–15 Doctors Shown	83	$ 558,787	$1,267,822	$ 1,826,609	1.114	$ 1,639,618	$ 19,754	$ 263,834	$808,819	$1,072,653

The balance of the report highlighted in blue and green shows the doctors on which there is the greatest opportunity for savings. For example, Doctor A saw 11 employees. The total claims cost for those employees was $84,358. The average claims cost per employee for the group was $3,206, so if Doctor A was average the claims cost would have been $35,266 ($3,206 x 11 = $35,266). If you just stopped there–and everyone else does–you would think that Doctor A is doing a terrible job. But it gets worse.

Doctor A doesn't get these 11 employees better and back to work. The absence costs for the 11 employees is $117,721. The average absence cost per employee for the group was $5,114, so if Doctor A was average the absence costs would have been only $56,254 ($5,114 x 11 = $56,254).

Was there a reason that Doctor A's costs are so high? Were these 11 employees sicker than the average employee in the group? No, the average risk score for Doctor A's 11 patients was 1.163, sicker than a person of average health, whose risk score would be 1.000, but not quite as sick as the average risk score for the overall group of 1.218. So to "even the playing field," we risk adjust Doctor A's total costs by dividing them by the average risk adjustment score. After

the risk adjustment, Doctor A's average cost per employee was $15,796 (($202,079 ÷ 1.163) ÷ 11 = $15,796)–More than double the group average of $6,831.

If this employer steers these 11 employees away from Doctor A to an average doctor in this group–not the best, just the average–the employer would save $8,965 per employee ($15,796 - $6,831 = $8,965), or a total of $98,615 ($8,965 x 11 = $98,615). This $98,615 of savings breaks down to $43,581 in lower claims and $55,034 in lower absence costs.

Sometimes moving employees to better doctors will result in higher, not lower, claims, like in the cases of Doctors D & M, but the overall costs will always be lower. Similarly, moving employees to better doctors could increase the absence costs.

The above report shows only the 15 doctors on whom the employer had the greatest opportunities for savings during this four-year period. You will notice that in this group of the 15 worst doctors, three of them–Doctors I, K & O–saw only one employee. This could be the "10,000-hour rule" in practice–Malcolm Gladwell's hypothesis that you must practice something for 10,000 hours to become an expert at it. If a doctor sees only one back patient over four years, that doctor probably won't be very good at treating back patients. In any event, the takeaway is that you don't have to move many employees away from low value doctors to make a big difference!

Multi-Employer Plans

We work with multi-employer self-insured plans too. When working with a self-insured employer, the employer sends us both the claims and the HR records. When working with a multi-employer plan there is an added wrinkle. The plan sends us the claims, and the constituent employers send us the HR records.

Make no mistake, these constituent employers are vital stakeholders in the enterprise. They directly or indirectly fund the plan, and therefore the claims. And these employers incur the absence costs of their employees being off work because of their illness or injury.

When a plan has many constituent employers, we'd love to receive the HR records from all of them, but that is unrealistic. Some of the smaller employers won't have the systems or resources to do so. We can work with that.

Under the Pareto principle, 80% of the effects will come from 20% of the causes–in other words, the HR records of 80% of the employees covered under the plan will come from 20% of its constituent employers. As long as we get the HR records from the larger employers our algorithms can use them to identify the high value providers in the plan's network for the benefit of all the employees in the plan, and all their dependents too.

Stop-Loss Insurance Premiums

Most self-insured employers purchase stop-loss insurance to insure against catastrophic losses. Such insurance could cover any claim to the extent that the claim exceeded a designated

threshold (i.e. the stop-loss amount), or that covered all of the employer's claims to the extent that the aggregate of those claims exceeded such a threshold. As our advanced analytics should decrease the claims, a side-benefit of our service is that the stop-loss insurance carrier should also decrease the premiums for this coverage because the likelihood of breaching the stop-loss threshold decreases.

WORKERS' COMPENSATION

An important point to note is the difference between health plans and workers' compensation programs.

When working with health plans, we use all the above tools to encourage the employees and their dependents to go to the high value doctors. However, they don't have to. They can go to whoever they want (with the possible exception of a gatekeeper plan where the PCP can direct them to a specific specialist or surgeon).

Not so with workers' compensation.

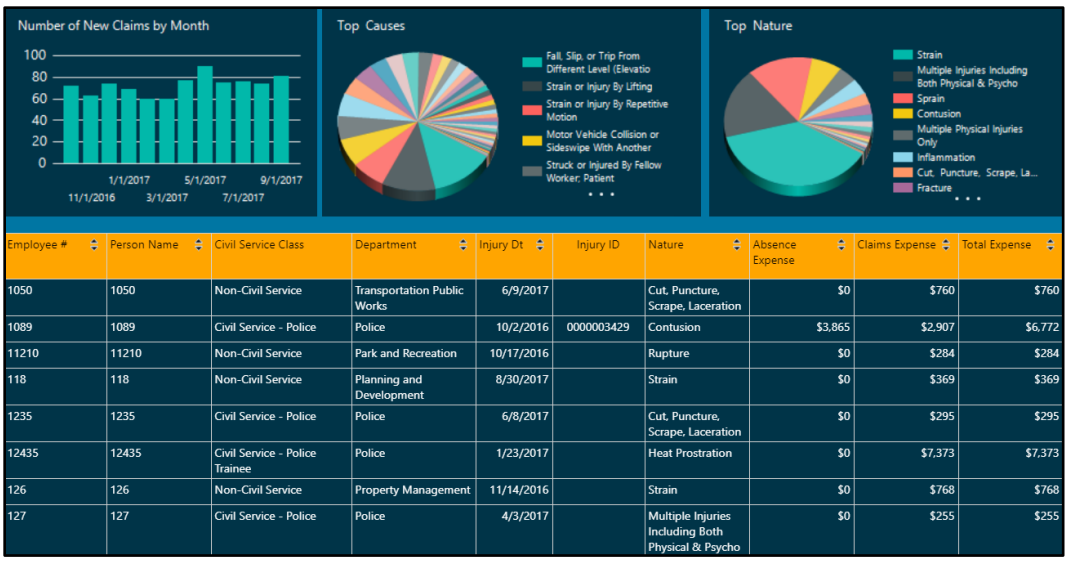
In many states, an employer that self-insures its workers' compensation can establish a panel of the doctors that injured employees with workers' comp claims are required to see (as can an employer in Texas that opts out of the workers' compensation system).

An employer can analyze its health plan, workers' comp and HR data to identify the best providers for each condition to place on that panel. And maybe more importantly, remove the low value doctors from it. One employer that did this saw its workers' compensation costs fall from $10 million to $8.2 million in just the first year.

If the employer hasn't established such a panel (or even when it has), the case managers for the employer's workers' compensation program can use the PCP Portal to administer their cases and direct the injured employees to the best providers for what they need.

One of the "spheres" on the Employer Portal's tree frog navigation page is dedicated to workers' compensation. Under this section we slice and dice the employer's workers' compensation claims and absence costs, and compare them against publicly available workers' compensation statistics.

Below is a screen shot from the workers' compensation section of the portal summarizing a year's injuries.



Employee #	Person Name	Civil Service Class	Department	Injury Dt	Injury ID	Nature	Absence Expense	Claims Expense	Total Expense
1050	1050	Non-Civil Service	Transportation Public Works	6/9/2017		Cut, Puncture, Scrape, Laceration	$0	$760	$760
1089	1089	Civil Service - Police	Police	10/2/2016	0000003429	Contusion	$3,865	$2,907	$6,772
11210	11210	Non-Civil Service	Park and Recreation	10/17/2016		Rupture	$0	$284	$284
118	118	Non-Civil Service	Planning and Development	8/30/2017		Strain	$0	$369	$369
1235	1235	Civil Service - Police	Police	6/8/2017		Cut, Puncture, Scrape, Laceration	$0	$295	$295
12435	12435	Civil Service - Police Trainee	Police	1/23/2017		Heat Prostration	$0	$7,373	$7,373
126	126	Non-Civil Service	Property Management	11/14/2016		Strain	$0	$768	$768
127	127	Civil Service - Police	Police	4/3/2017		Multiple Injuries Including Both Physical & Psycho	$0	$255	$255

DATA SECURITY

To give you a sense of our process, we take the claims data feeds from the employer's TPA and PBM, and the HR data feeds directly from the employer. We don't need all the HR records, just certain job description, payroll and time/attendance fields. The data specifications for the medical and pharmacy claims and HR records are attached as Appendix II.

These data feeds are encrypted and sent over our secure FTP site, and everything is fully HIPAA and SOC compliant. We perform our initial analytics and de-identify the data on a server isolated from the internet so that no personal information can be compromised. Only after the data is de-identified do we move it to the Employer Portal.

When doing a pilot or otherwise beginning an engagement, we take three to five years of data, which enables us to deliver robust results on "Day One." After that, we take monthly updates.

Along with the claims data and HR records, the employer sends us a summary of the plan benefits and the network provider and benefit eligibility lists (the names of the employees, retirees and dependents covered under each plan option). The employer sends us any changes to these lists with the monthly data feeds.

PILOT

We don't ask employers to believe us. We show them with their own data.

We ask an employer for three to five years of its medical and pharmacy claims and HR records. We load this data into our algorithm platform and model it to show the employer its

savings opportunities, and then give the employer access to an Employer Portal loaded with its data for two to three months.

Pilot pricing is minimal, $5,000 for most employers. If we move forward to an ongoing relationship, we then begin with a three to five year head start on "Day One."

PRICING

We defer any pricing discussions for an ongoing relationship until after an employer's pilot. Only at that time will both the employer and IntegerHealth know the results of the pilot, and the value that IntegerHealth will bring–both in terms of decreased claims and absence costs, and better healthcare for the employees and their dependents.

With that caveat, our pricing model is incremental, based on whether we provide only our base package of the Employer Portal, or the Employer Portal with the optional "add-ons" of the PCP and Employee Portals too. Pricing is on a PEPM basis (Per Employee Per Month) with a one-time implementation fee. Our pricing usually falls within the following ranges:

	PEPM	Implementation Fee per Employee
Employer Portal	75¢ – $1.50	$0 – $2.00
+ PCP Portal	25¢ – 50¢	33¢ – 67¢
+ Employee Portal	50¢ – $1.00	75¢ – $1.25

In addition to whether we serve the health plan, the workers' compensation program, or both, factors affecting the pricing for a particular employer include the number of employees (larger employers pay lower rates, smaller employers more), the degree of data cleansing required, the desired customization and support, and the opportunities for claims savings, absence management and care improvement.

Employees

For the Employer Portal we apply the above rates on only the employees whose data we load into the portal. For the PCP and Employee Portals we apply the rates on the employees (including former employees on COBRA) and any pre-Medicare retirees using those portals. We do not charge for spouses, children and other dependents, or retirees on Medicare Advantage plans.

For the PEPM payments, we take a "snap shot" of the number of employees and pre-Medicare retirees as of the beginning of each contract year to determine the monthly PEPM payment for each month during that year, rather than varying the monthly PEPM payment for additions and deletions during the year.

If an employer desired the payments to be fixed amounts, rather than fluctuating with the number of employees and pre-Medicare retirees, we could do so at slightly more than the amounts based upon the rates above. In such a case, we would ask the employer for assurances that during the contract term the number of employees and pre-Medicare retirees would not significantly increase.

Inflation

The rates increase each year by the inflation rate measured by the Medical Care component of the CPI-U (Consumer Price Index for All Urban Consumers) published by the Bureau of Labor Statistics of the Department of Labor. To put this in context, this inflation rate increased 4.1% in 2016, and 1.8% in 2017, compared to increases in the overall CPI-U of 2.1% and 2.1%, respectively. If an employer desired to fix the rate for the annual increase rather than let it float, we assume a 5.0% annual increase.

Miscellaneous

Percentage of Claims Savings. If an employer adds on the PCP and/or Employee Portals, we are willing to discount our PEPM rates in exchange for part of the annual claims savings that we generate. We wouldn't ask for a percentage of the savings on the absence costs, and when calculating the claims savings we would deduct the year's PEPM payments before applying our percentage. As mentioned above, Appendix I shows examples of savings calculations.

Sole Source. We are a "sole source" for contracting purposes.

Standard Term. Our standard contract term is three years with an evergreen annual rollover period thereafter. We can begin at any time. We're not tied to rolling out at the beginning of the employer's benefits year.

Workers' Compensation. When an employer only purchases our workers' compensation services, we charge PEPM on all the employer's employees, not just those employees who have workers' compensation claims.

LEADERSHIP

IntegerHealth's leadership consists of its founders: Dr. Jack McCallum, Scott Roloff, and Bill McCallum. Another key team member is Kenny Grifno.

Dr. Jack McCallum, CEO

Dr. Jack McCallum is IntegerHealth's CEO, and he also serves as the Chairman of its Board. Jack worked as a practicing adult and pediatric neurosurgeon for over twenty-five years, building the premier specialty practice in his area. Prior to founding IntegerHealth, he was a founder of Integration Health Management Associates, one of the earliest firms using data driven

evaluation of physician performance, and North Texas Specialty Physicians, an independent practice association with its own health plan that markets its data driven quality programs nationally. In 2005, Jack was a founding member of Leprechaun, a company that used claims data to assure proper reimbursement for Medicare Advantage plans. In 2009, Jack founded CenseoHealth, a company that provides in-home health risk assessments for Medicare Advantage plans, performing 500,000 exams annually throughout the United States. Jack is also an author and educator, holding a doctorate in history and a teaching appointment at Texas Christian University (TCU), and he has spoken at numerous events and authored several articles and books. He holds a Bachelor of Science from Georgia Tech, an M.D. from Emory University, and a Ph.D. in History from TCU.

Scott Roloff, President

Scott Roloff is IntegerHealth's President, and he also serves on its Board. Scott uniquely blends financial, legal and operational experience. He is both a CPA and a lawyer, as well as a Certified Management Accountant (CMA), Certified Internal Auditor (CIA), and Chartered Global Management Accountant (CGMA). Before joining IntegerHealth as one of its co-founders, he was the CFO or the General Counsel for companies in the healthcare, software and telecom industries. During this time, he also led a wireless technology start-up in the Caribbean for tourists who were otherwise unable to use their cell phones while on vacation. Prior to going into industry, Scott was a Corporate Partner at the international law firm of Akin Gump Strauss Hauer & Feld where he focused on M&A, SEC and general corporate matters. He holds a BBA in Accounting from the University of Wisconsin–Whitewater, an MBA from the University of Texas at Arlington, and a J.D. from Southern Methodist University (SMU), where he was the valedictorian of his law school class.

William McCallum, Chief Information Officer

William ("Bill") McCallum is IntegerHealth's Chief Information Officer, and he also serves on its Board. Bill has over twenty years of experience in healthcare, focusing primarily on the development and manipulation of clinical and operational data. Bill's skill set bridges information technology with clinical understanding. He has developed a number of healthcare business intelligence capabilities where discrete data from practice management and electronic medical record systems download into a proprietary "Data Model" and "Data Cube," supporting operations and clinical improvement with ongoing monitoring across multiple data feeds. Prior to joining IntegerHealth as one of its co-founders, Bill was the CEO of Integration Concepts, a founding member of Leprechaun, and the CEO of Accountable Analytics. He holds a BSEE from Texas Tech University, and a patent on merging disparate data in healthcare.

Ken Grifno, Chief Analytics Officer

Ken ("Kenny") Grifno is IntegerHealth's Chief Analytics Officer. Kenny has experience in advanced analytics, business intelligence, data warehousing, application development, and big data. He has an extensive understanding of the healthcare industry from working with insurance companies, state and federal governments, academic medical centers, hospitals, physician groups, and consulting firms. Kenny combines his skills in programming, mathematics, and

healthcare to create solutions for complex problems that improve patient and provider outcomes. He possesses an in-depth knowledge of all the value and risk based quality and reimbursement methodologies and has created his own models for predictive analytics for both disease management and population health. Prior to joining IntegerHealth, Kenny led the advanced and performance analytics department at UT Southwestern Medical Center. He holds a BS in Management Science and a Master of Science in Management Science (Management Information Systems) from The University of Texas at Dallas.

PATENTS PENDING

Our algorithms are trade secrets. On August 1, 2016, we filed a patent application on our proprietary analytics platform with the United States Patent and Trademark Office (Application No. 15/225,503), currently titled "Machine Learning System for Creating and Utilizing an Assessment Metric Based on Outcomes," but with a proposed change to *"Computer Search Engine Employing Artificial Intelligence, Machine Learning and Neural Networks for Optimal Healthcare Outcomes."* We are currently in the review process with the patent examiner. Even after the granting of a patent, however, our algorithms and application software will remain trade secrets.

On April 11, 2018, we filed a patent application on our "tree frog" computer navigation system with the United States Patent and Trademark Office (Application No. 15/950,681), entitled *"Tree Frog Computer Navigation System for the Hierarchical Visualization of Data."*

May 2018

SAVINGS EXAMPLES

This appendix shows two ways to calculate the annual savings from our services, by encounters or overall. In each case, we compare the current year's costs to the adjusted costs in the year immediately before the employer began using us, which we call the "Base Year."

There are two adjustments to the Base Year costs to walk them forward: (1) increase them for any inflation since the Base Year (or decrease them for any deflation), and (2) increase them for any increase in the average risk score (or decrease them for any decrease in that score).

Encounters

Each time a plan member goes to a high value provider for a condition on which we publish rankings we calculate the savings as the excess of: (1) an average provider's adjusted costs for that condition in the Base Year, over (2) that high value provider's average costs for that condition in the current year. For these purposes, a high value provider for a condition is a provider who we list on the *QScoreCards*.

Assume the following:

- Condition: Back Pain
- Provider Group: Non-Surgeon Specialists
- Base Year:
  - Average Claims–$3,200
  - Average Absence Costs–$5,100
  - Total Average Costs–$8,300
  - Average Risk Score–1.225
  - Average Risk-Adjusted Cost–$6,775 ($8,300 ÷ 1.225 = $6,775)
- Adjusted Base Year Costs in 3rd Year of Contract:
  - Inflation
    - 1st Year–3.8%
    - 2nd Year–2.6%
    - 3rd Year–4.0% (2.0% being the average for the year)
  - Average Risk Score for Back Pain Patients seeing Non-Surgeon Specialists in 3rd Year –1.250
  - Adjusted Base Year Costs: $7,500 ($6,775 x 103.8% x 102.6% x 102.0% x (1.250 ÷ 1.225) = $7,500, rounded)

If during the 3rd Year an employee went to a high value provider whose average risk-adjusted cost for back pain patients for that year was $6,000, we would calculate $1,500 of savings on that encounter ($7,500 - $6,000 = $1,500). For non-employees we would do a similar calculation, but just on the claims. To calculate the total savings for the 3rd Year, we add the savings on all such encounters over all the conditions on which we publish rankings.

Overall

For each condition on which we published rankings, we calculate the savings as the excess of: (1) the employer's total adjusted costs for that condition in the Base Year, over (2) the employer's actual costs for that condition in the current year.

Assume the following:

- Condition: Cardiac
- Provider Group: Specialists
- Base Year:
  - Claims–$3,750,000
  - Absence Costs–$1,500,000
  - Total Costs–$5,250,000
  - Average Risk Score–1.200
- Adjusted Base Year Costs in 3rd Year of Contract:
  - Inflation
    - 1st Year–3.8%
    - 2nd Year–2.6%
    - 3rd Year–4.0% (2.0% being the average for the year)
  - Average Risk Score for Cardiac Patients seeing Specialists in 3rd Year – 1.175
    - Perhaps the employer introduced a wellness program targeting employees with cardiac problems, which made them healthier
    - This decrease in the risk score will decrease the adjusted Base Year costs, and therefore decrease the savings attributed to our services
      - As this savings would be attributable to the wellness program
      - We wouldn't claim credit for it
  - Adjusted Base Year Costs: $5,585,000 (($5,250,000 x 103.8% x 102.6% x 102.0% x (1.175 ÷ 1.200) = $5,585,000, rounded)

If during the 3rd Year the employer's total costs for plan members seeing specialists for cardiac problems was $5,000,000, the savings would be $585,000 ($5,585,000 - $5,000,000 = $585,000). To calculate the total savings for the 3rd Year, we add the savings for all the provider groups over all the conditions on which we publish rankings.

General

Accrual Basis. The claims for a year are determined using the accrual basis (i.e. claims are placed in the year during which the provider performed the services). Accordingly, the savings for a year cannot be calculated until several months after year-end so that IBNR claims (Incurred But Not Reported) can be placed in the year when they occurred.

Allowed Claims. The claims are the "allowed claims," the total medical and pharmacy claims paid by the employer, the employees (through premiums, co-insurance, co-pays, deductibles, etc.), and any stop-loss insurance carrier. How much, or little, of the claims costs that the employer shifts to its employees or a stop-loss carrier in any year does not affect the savings calculation because both numbers–the actual claims for the current year and the adjusted Base Year claims–use the allowed claims.

Other Methods. An employer may suggest other methods of calculating the savings from our services or iterations on the above. For example, in the encounter method we could use the actual costs for each encounter with a high value provider instead of that high value provider's average costs. We are open to any reasonable method.

MEDICAL CLAIMS DATA SPECIFICATIONS REQUEST

	Value	Description
Employer	Employer ID	Employer / location identification number that links to claims
	Employer Name	Employer name
Patient Dictionary	Patient ID	Patient identification number that links to claims
	Patient DOB	Patient date of birth
	Patient ZIP	Patient ZIP code
	Patient Gender	Patient sex
	Patient SSN	Patient social security number
	Patient First Name	Patient first name
	Patient Middle Name	Patient middle name
	Patient Last Name	Patient last name
	Employee Number	Employee number or ID matching time and attendance data
Provider Dictionary	Provider ID	Provider identification number
	Provider Suffix	Provider suffix (MD, DO, NO, …)
	Provider First Name	Provider first name
	Provider Last Name	Provider last name
	Provider Specialty	Provider specialty
	Provider Taxonomy	Provider taxonomy
	Provider NPI	National Provider Identification number
Payer Dictionary	Payer ID	Payer identification number
	Payer Name	Payer name
	Payer Address	Payer address
	Payer City	Payer city
	Payer State	Payer state
	Payer ZIP	Payer ZIP code
	Payer Class	Payer class (Commercial, Medicare, Medicaid, Self-Pay)
Claims	Patient ID	Patient identification number
	Referring Provider ID	Referring provider identification number (links to provider dictionary)
	Billing Provider ID	Billing provider identification number (links to provider dictionary)

MEDICAL CLAIMS DATA SPECIFICATIONS REQUEST (continued)

	Value	Description
Claims	Servicing Provider ID	Servicing provider identification number (links to provider dictionary)
	Claim Number	Claim number
	Claim Line Number	Claim line number
	Date of Service	Date service was rendered
	Place of Service	Place of service (in-patient, out-patient, ER, …) or Code (10, 11, 21, 22, 23, …)
	Primary Diagnosis	Primary ICD 9 / ICD 10
	Diagnosis Coding Type	ICD 9 or ICD 10
	Diagnosis 2	Second ICD 9 / ICD 10 Code
	Diagnosis 3	Third ICD 9 / ICD 10 Code
	Diagnosis 4	Fourth ICD 9 / ICD 10 Code
	Diagnosis 5	Fifth ICD 9 / ICD 10 Code
	Diagnosis 6	Sixth ICD 9 / ICD 10 Code
	Diagnosis 7	Seventh ICD 9 / ICD 10 Code
	Diagnosis 8	Eighth ICD 9 / ICD 10 Code
	CPT Code	CPT procedure code or HCPCs code when available
	Modifier 1	Procedure code modifier 1 (when available)
	Modifier 2	Procedure code modifier 2 (when available
	NDC Code	National Drug Code (pharmacy claims)
	Rev Code	Revenue code (facility claims)
	DRG	Diagnosis Related Group (facility claims)
	Billed Amount	Billed amount for this line
	Paid Amount	Paid amount for this line
	Units	Units for this procedure
	WRVUs	Work Relative Value Units (when available)
	Insurance ID	Insurance identification number of primary insurance
	Encounter Number	Encounter / visit number
	Date of Entry	Date claim was created / entered
	Date Voided	Date claim was voided (if applicable)

PHARMACY CLAIMS DATA SPECIFICATIONS REQUEST

	Value	Description
Employer	Employer ID	Employer / location identification number that links to claims
	Employer Name	Employer name
Patient Dictionary	Patient ID	Patient identification number that links to claims
	Patient DOB	Patient date of birth
	Patient ZIP	Patient ZIP code
	Patient Gender	Patient sex
	Patient SSN	Patient social security number
	Patient First Name	Patient first name
	Patient Middle Name	Patient middle name
	Patient Last Name	Patient last name
	Employee Number	Employee number or ID matching time and attendance data
Provider Dictionary	Provider ID	Provider identification number
	Provider Suffix	Provider suffix (MD, DO, NO, …)
	Provider First Name	Provider first name
	Provider Last Name	Provider last name
	Provider Specialty	Provider specialty
	Provider Taxonomy	Provider taxonomy
	Provider DEA Number	Provider Drug Enforcement Administration number
	Provider NPI	National Provider Identification number
Payer Dictionary	Payer ID	Payer identification number
	Payer Name	Payer name
	Payer Address	Payer address
	Payer City	Payer city
	Payer State	Payer state
	Payer ZIP	Payer ZIP code
	Payer Class	Payer class (Commercial, Medicare, Medicaid, Self-Pay)
Claims	Patient ID	Patient identification number
	Prescribing Provider ID	Prescribing provider identification number (links to provider dictionary)

PHARMACY CLAIMS DATA SPECIFICATIONS REQUEST (continued)

	Value	Description
Claims	Pharmacy ID	Billing provider identification number (links to provider dictionary)
	Claim Number	Claim number
	Claim Line Number	Claim line number
	Date of Service	Date service was rendered
	Primary Diagnosis	Primary ICD 9 / ICD 10
	NDC Code	National Drug Code (pharmacy claims)
	Billed Amount	Billed amount for this line
	Paid Amount	Paid amount for this line
	Units	Units for this procedure
	Payer ID	Insurance identification number of primary insurance
	Encounter Number	Encounter / visit number
	Date of Entry	Date claim was created / entered
	Date Voided	Date claim was voided (if applicable)

HUMAN RESOURCES DATA SPECIFICATIONS REQUEST

	Description	Data Type
Employee Information	Employee Identification Number	Text
	First Name	Text
	Middle Name	Text
	Last Name	Text
	Social Security Number	Text
	Date of Birth	Date Time
	Current Job Description	Text
	Hourly / Salary	Currency
	Employment Status (full-time or part-time)	Text
	Civil Service Employee (Yes or No)	Text
Attendance Information (by Day)	Employee Identification Number	Text
	Date	Date Time
	Hours	Decimal
	Hours Type (Regular, PTO, Holiday, Limited Duty, …)	Text
	Compensation Rate	Currency
	Return to Work Date	Date Time

IntegerHealth

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