IntegerHealth
Quantifying Healthcare Outcomes

IntegerHealth combines advanced analytics with medical expertise to quantify healthcare outcomes–something that no one else does. We combine cost and quality into a single $ value, bridging the gap between what is and what could be.

Today's Problem. You know what you're paying for healthcare, but you don't know what you're getting.

Today we measure the return for our healthcare dollars in terms of "quality," but that's a qualitative measure, not a quantitative one, that focuses on what a doctor did, or didn't do, or whether the patient "liked" the provider. The input into the healthcare equation are the claims dollars that we pay. What's needed is a way to quantify the output in dollars too so that we can compare the two and calculate our return; and we need to measure what really matters–the outcome to the patient.

IntegerHealth quantifies healthcare outcomes, combining cost and quality into a single $ value. By measuring outcomes, we calculate ROIs and generate actionable analytics–***Driving down healthcare costs while improving the quality of care.***

See the chart below comparing the current landscape to IntegerHealth's approach.

How? Our unique approach originates with our founder, Dr. Jack McCallum, who was a neurosurgeon for 30 years; so we're medically-based as well as and patient and provider-centric. After retiring as a surgeon, Jack began founding healthcare technology companies. IntegerHealth is his fifth. The one before us was CenseoHealth, which is now called Signify Health and was recently acquired by CVS for $8 billion.

Claims + Absence Costs. We have two ways of quantifying outcomes depending on the data available to us. When working with self-insured employers on their health plans and workers' compensation programs, and workers' compensation insurance companies and TPAs, we define the employee being at work as a good outcome. Our proprietary groupers and algorithms then combine all the medical and pharmacy claims over the entire continuum of care with the absence costs to get and keep the employee at work. Those absence costs do double duty. Not only are they a real cost, but they're also an indication of the effectiveness of the care because the quicker the employee returned to work the more effective the care was.

Two things about our solutions. First, we always risk-adjust the data. When analyzing a working age population we use either the HHS-HCC or CDPS risk scoring systems because they are demographically appropriate for that age group. When working with a retired population, such as a Medicare Advantage plan, we use the HCC risk scoring system used by CMS. Second, we allocate to providers all the costs that they're responsible for, both their direct costs and the costs of their downstream referrals. This allows us to analyze referral patterns.

Claims per Healthy Day. When working with health insurance companies and TPAs, or analyzing the outcomes for the dependents under an employer's health plan, we won't have absence costs to match against the claims. In this case we use just the claims to calculate the claims per day to keep a patient healthy. To arrive at the number of healthy days, our algorithms sift through the claims and identify the patient's non-functional days related to the diagnosis, risk-adjust them, and then subtract them from the 365 days in a year.

Target Markets. The potential clients for these cutting-edge analytics are organizations paying for healthcare or providing it, whether in the health plan or workers' compensation setting:

- Large self-insured employers
- Insurance companies & TPAs, including Medicare Advantage plans
- ACOs & provider groups taking on risk
- Health systems (see below)

In addition, insurtech companies are potential channel partners. They already have the data from their insurance company and TPA clients on which they provide their analytics packages. We can embed our outcome analytics into their offerings and give their clients something that they can't get anywhere else.

Evaluation & Rankings. Once we calculate the healthcare outcomes, we can evaluate and rank physicians, facilities, plans, programs, treatment patterns and anything else based on their outcomes at the diagnosis level (e.g., PCPs treating diabetes, surgeons for backs, etc.). Armed with these insights, clients can:

- Optimize and/or narrow provider networks, including ACOs in value-based care environments
- Optimize plan design, including by stratifying the provider network

- Direct or steer care through case managers, workers' comp adjusters, and when making referrals to specialists and surgeons, employer clinics and the PCPs in the network
- Evaluate disease management and wellness programs based on the outcomes that they achieve
- Calculate ROIs on all their healthcare expenditures; clients already know what they're spending, now they'll know what they're getting

Who you are will determine which of the above actions you can take. For example, an employer won't be able to remove bad doctors from its TPA's network; but the TPA itself could do that if its contracts with health systems don't prohibit it.

Health systems are unique clients for our outcome analytics because they can do all the above. They are large employers so they can use these analytics in their own employee health plans and workers' compensation programs. Many health systems also sponsor commercial health plans and are insurance companies too. In both cases the health systems use their own provider networks so there are no restrictions on who they can include and exclude from those networks.

Wellness Programs. Every employer has wellness programs. They know to the penny what they pay for these programs. They have no idea what they get in return. Using our outcome analytics we developed a "Wellness Program Calculator" that measures that return and calculates a program's ROI. Now employers will know if their wellness programs are working, and if not, what to do about it. The calculator is a "gateway product," an easy and inexpensive way for employers to experience the power of our analytics, after which we can expand our services to their health plans and workers' compensation programs too.

Artificial Intelligence & Machine Learning. After identifying the best providers by diagnosis based on the outcomes that they achieve (e.g., the best surgeons for knees or the best PCPs for diabetes), we can use artificial intelligence and machine learning to go further and determine what makes them the best; and then feed that treatment information back to all the providers as a best practice. We can also use these methods in predictive analytics. Knowing the average outcome for a diagnosis, we can predict a particular patient's outcome based on that patient's unique attributes (e.g., risk score, physical requirements of their job, etc.). We can then compare the predicted outcome to the actual one and modify our algorithms in a cycle of continuous learning.

Current Landscape vs. IntegerHealth

	Data	Level of Analysis	Costs		Healthcare Outcomes	
Current Landscape: Insurance & Healthcare System Focused	**Data Sources:**	**Attributes:**	**Fragmented Costs:**		**Current Limited Landscape for Outcomes:**	
	Medical Claims	Plan	Hospitalizations	Emergency Room	Efficient Use of Medical Imaging	HEDIS Process Measures
	Pharmacy Claims	Diagnosis	Procedures	Clinic Visits	Safety of Care	Timeliness of Care
	Eligibility/Plan	Provider	Imaging	DMEs		Readmissions
		Procedures	Pharmacy	Tests	Patient Satisfaction	Mortality
IntegerHealth: Employer & Employee Focused	**Added Data Sources:**	**Added Attributes:**	**Grouped Episodic Costs:**		**Employer Focused Overall Outcomes:**	
	HR Demographics	Department	**Total Cost of the Episode including:**		Lost Productivity Employee Sick Time	Claims per Healthy Day
	Payroll	Salary Groups	- Hospitalizations			
	Time & Attendance	Job Groups	- Procedures - Imaging			
	Program Vendors	Treatment Groups	- Pharmacy - Emergency Room		Injury Lost Time	Worksite Health Program Efficiency
	Workers' Comp	Programs & Campaigns	- Clinic Visits - Tests			