

We are, IASO HEALTH.

Competition Entry Submitted by:

Frederica Stahl - Health Informatics

Rudolf Stahl - Data Analyst / Developer

Giles Holt - Product Designer / Developer

**Also provides
cost-comparison
and negotiation
power to
self-insured
employers and
union health and
welfare trusts.**

Saving money for both plan sponsors (employers) and participants (employees) by making the cost of health care clear.

Creating opportunities for insurance sponsors to offer better care at lower costs.

Increasing the efficiency of cost negotiations between insurance plan sponsors and medical service providers.

WHY -

Who decides how health care is purchased?

More often than not, **the employer.**

In 2010, employers were responsible for **77% of the health care expenditures** in the US.¹

These expenditures levy a high tax on corporations and their employees. In a recent conference on bending the healthcare curve, **7/10 CFOs** ranked health care as the **#1 concern** to their company.

How are employers making these decisions? **59% of the private sector** were in self-insured plans in 2011, up from 41% in 1998.²

This number is likely to increase, since self-insured plans are exempt from new regulations under the Affordable Care Act, which limits premium variation, risk-adjustment, and requires “health essential” plan inclusions.³

¹ Center of Medicare and Medicaid Services, ‘Healthcare expenditures in the US 1960-2010’

² Employee Benefit Research Institute.

³ As a result, some firms may have a stronger incentive to offer self-insured plans after the ACA takes full effect [HHS, Office of Assistant Secretary of Planning and Evaluation, March 2011] In 2012, 82% of employers survey saw self-insurance plans as a way to control costs [Munich Health North America-Reinsurance Division, April 2011], and 69% reported that they were increasingly interested in these plans. In 2012, 82.6% of establishments with more than 550 employees were self-insured (Agency of Healthcare research and quality, 2012).

WHY -

What happens when you self-insure?

Case Study -

Sundt Construction, a **750 employee enterprise** in Tempe, Arizona, has recently self-insured and is looking to keep health care costs to a minimum while providing the best care to their plan participants.

Today, Sundt needs to hire expensive consultants, e.g. Lovitt & Touche or Aon Hewitt, to optimize their offering.

Sundt has -

- Risk tolerance.
- A steady employee population.
- A stable claims experience.

They want -

- A comprehensive self-funded benefit plan.
- A cost-efficient solution to reduce health care costs that doesn't require an audit from an actuary or health consulting firm.

WHY -

Cost transparency

In the insurance industry, Medicare prices are used as the benchmark prices to assess hospital charge masters.¹ Without consultants, Sundt Construction could not identify optimal care choices.

But with cost transparency, self-insured companies can achieve the negotiation **power in the healthcare marketplace** that reflects their expert knowledge of their population's needs.

Sundt knows they are likely to experience:

- 15** *Carotid Artery Stent Implants.*
- 10** *Resections of right/left femur shaft.*
- 20** *Fusions of thoracic vertebral joint with internal fixation device.*

If Sundt seeks this care at their closest providers - St. Luke's, St. Josephs, and Good Banner Samaritan - the **45 procedures** listed will cost **\$6.1mn.**

A quick search on Iaso yields three regional centers where Sundt can expect higher-quality care for the same procedures at **\$2.62mn for a total savings of \$3.5mn**

That's before Sundt begins negotiations or sets fixed prices year over year to bring the cost of care down.

¹ Anna Wilde Mathews and Tom McGinty, October 26, 2010, <http://online.wsj.com/article/SB10001424052748704657304575540440173772102.html>

How -

How Iaso works -

We all know that price transparency alone will not decrease health care costs. The Iaso algorithm decreases costs by manipulating raw data to formulate indicators that **measure the qualities we value** - specialty, quality, experience - when searching for care.

Iaso is built on the understanding that **stronger specialization can lead to higher quality and lower costs** ($R=0.13$, $p<.05$) - a relationship that is already leveraged by most large self-insurers, such as WalMart or Lowes,¹ who have realized that the biggest costs come from a small number of employees with very complicated, expensive health problems.

¹ WalMart - <http://www.nationaljournal.com/next-economy/solutions-bank/wal-mart-s-super-counterintuitive-health-care-plan-20130523>

Lowes- <https://www.myloweslife.com/spd/Benefits/Group+Medical+Plan/Programs/Cleveland+Clinic+Heart+Surgery+Program>

The IASO health indicators are:

<i>affordability</i>	What will the care cost me? (data: CMS Inpatient Pricing)
<i>quality</i>	How often are patients re-admitted after receiving care at this provider? (data: Dartmouth Hospital-specific Post-discharge Events)
<i>specialty</i>	How much of its resources does the provider invest in this service? (data: CMS DRG weights 2011, CMS Clinical Mix Index 2011, rel. frequency of DRG at provider weighted by DRG weights)
<i>experience</i>	How often is the service provided? (data: CMS Inpatient Pricing)
<i>negotiability</i>	How flexible is the provider when negotiating prices? (data: CMS Inpatient Pricing, proportion of avg. payment to avg. charge)

How -

How is each factor weighted?

1 - Assign an Iaso Value Score:

For each provider *p* and DRG *d*, Iaso calculates a **value score** for receiving *d* at *p*. This score is a composite of Iaso's health indicators, where each indicator is assigned a weight.

Weights are assigned as follows:

affordability	30%
quality	20%
specialty	20%
experience	15%
negotiability	10%

2 - Select Providers with Constraints:

Choose the optimal combination of providers that maximizes the selection's total value and **limits the number of distinct providers** using a discrete optimization called the knapsack algorithm. This ensures that even with a large set of DRGs, plan sponsors can start negotiations with a manageable number of providers.

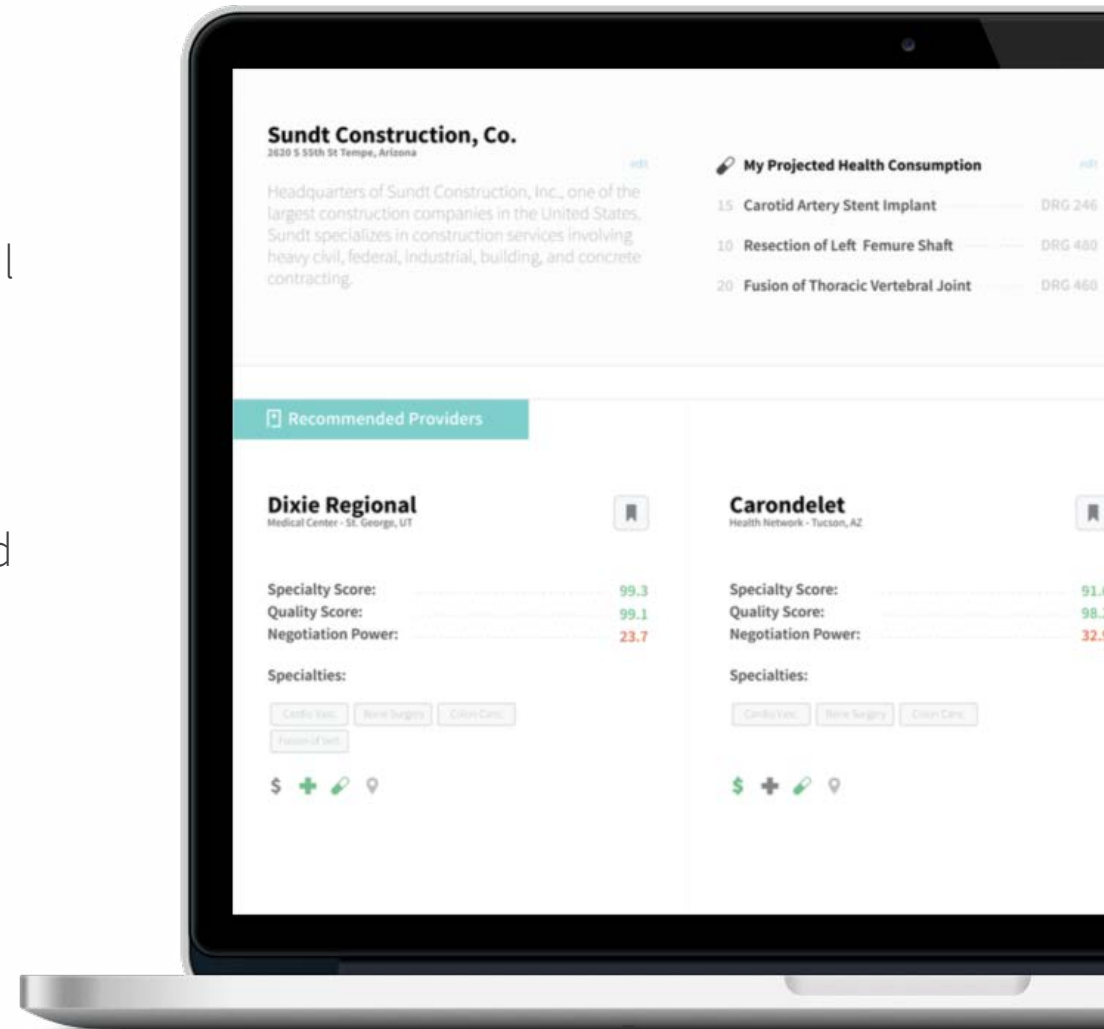
How -

Results -

On the basis of Iaso's health indicators each condition entered is matched to a 'best fit' provider. The mix of conditions entered under Sundt Construction's address - DRGs, 246, 480, and 460 - yields Dixie Regional, Flagstaff Medical Center, and Carondelet Health Network, three providers with high quality scores and multiple specialties matching Sundt's search.

Working with the three providers recommended by Iaso is likely to **halve Sundt's health care costs** even though this will necessitate light travel.

Each recommended provider is shown below.



OPERATIONS -

How do I sign up?

We recognize the case specific nature of health consumption and the financial risk self-insured companies are exposed to, thus Iaso provides the first year of service at a percentage of the total health costs saved.

This achieves two objectives:

1. not exposing plan sponsors to any risk upfront.
2. generating the highest annual payment to Iaso when savings are highest for the plan sponsor.

Each proceeding year is billed as a basic subscription service.

Using the Sundt case study:

Year #1 (percentage model):

At 2.5% of savings that equates to:

Savings	% of Savings	Iaso Revenue
\$3.5mn	2.5 %	\$87.5k

Years #2 + (SaaS model):

A low cost per participant of \$40 a year yields:

Sponsor Size	Cost per Participant	Iaso Revenue
750	\$40	\$30,000

Technology Stack:

IASO will run on Google App Engine (GAE). The GAE platform will take care of a large portion of the sys admin work making it ideal for a small team to build an application that can have a large impact. The database will run on a Google Cloud SQL instance and we'll make use of GAE's built-in user account management. Piggybacking on Google's infrastructure will ensure the scalability we need to expose IASO to the wider public.

DIFFERENTIATION -

Why is this new?

Market competition

Services for self-insured companies is a proven market, as evidenced by the numerous cost-containment and feasibility consultants, e.g. Consilium, Optum, & Aon Hewitt. Many of these consultancies offer costly full company audits that necessitate intensive transfers of claims documentation and health histories.

Transparency services, such as Castlight or Accolade Inc., have recently joined the market, but have chosen to integrate with existing private insurance plans and do not provide the independent cost and quality algorithm IASO does.

Iaso's Competitive Edge

1. One independent product **powered by multiple datasets**.
2. Low administrative costs.
3. Both **cost and quality** delivered to plan sponsor and participant.

Iaso is currently based on the CMS dataset released in March 2013. This is the first dataset of many that will power Iaso's recommendations. By 2014, every hospital will be legally obligated to provide chargemaster expanding Iaso's reach to private prices.

Additional datasets will be added from Jeanne Pinders Clear Health Costs API, corporate health-plans, and organisations such as Fair Health.

SUMMARY -

Let's see if we hit all the points -

Iaso is a fully-hosted, software-as-a-service solution specifically designed to provide cost and quality information to plan sponsors so that they can make better health care decisions before they seek complicated and costly inpatient care.

We provide this service by:

- Leveraging the insight that stronger specialization can lead to higher quality and lower costs.
- Exposing industry-setting price data to employers giving them the negotiation power that private insurance companies currently hold.
- Aligning employer and employee interests, by integrating quality and cost factors into the Iaso's algorithm.

Our goal is to:

- Decrease employer health spending, which is currently 77% of national health expenditures.
- Increase the quality and range of options plan sponsors offer their employees.
- Increase price transparency and negotiation power for self-insured companies.