Eric Kretzer

Vice President, Product Management

Eric joined Strata Decision Technology in early 2006. Mr. Kretzer was responsible for the design of SDT’s Software as a Service platform, and now manages the product management team at Strata Decision. Mr. Kretzer also manages the product life cycle for StrataJazz Decision Support. Eric’s areas of expertise include high-performance computing, distributed systems, and resource scheduling. Prior to SDT, Eric was a systems engineer at the National Center for Supercomputing Applications (NCSA), where he designed and supported some of the world’s most powerful supercomputers.

Eric graduated from the University of Illinois at Urbana-Champaign in 2002 with a Bachelor of Science in Computer Engineering.

Aditya Govil

Business Development, Account Executive

Aditya joined Strata Decision Technology in 2010 as a consultant on the Strategic Planning team. He is currently a Business Development Account Executive. His focus is on both enhancing existing client relationships and building new ones with healthcare providers. He works closely with the internal Consulting Services and Product Management teams on understanding current healthcare trends in the marketplace and developing actionable solutions to meet the needs of hospitals and health systems. Prior to his role within Business Development, he worked closely with organizations like Dignity Health, Yale New Haven Health System, Norton Healthcare and Duke University on their short and long-term financial forecasting.

Aditya obtained a Bachelor’s degree in Computer Science and Financial Mathematics from the University of Michigan at Ann Arbor.
Agenda

• Learning Objectives

• Concepts

• Client Stories

• Lessons Learned and Key Takeaways

• Questions
Learning Objectives

After this session, you’ll be equipped with the necessary tools and strategies to answer questions like:

1. How can I determine the true cost of an episode across all care settings?

2. How can I determine profitability of the services I offer?

3. How can I drive value and innovation internally?

4. How can I bend the cost curve and embed value analytics?
The Cost Problem
Ballooning Costs...

$$2.5\times$$ more!

\$ spent on healthcare within the US as compared to other developed countries

1. In the Netherlands, it is not possible to clearly distinguish the public and private share related to investments.
2. Total expenditure excluding investments.
Information on data for Israel: [http://dx.doi.org/10.1787/888932315602](http://dx.doi.org/10.1787/888932315602).

Source: OECD Health Data 2012.
An Overall Perspective...

National health spending reached nearly $2.6 trillion in 2010 and is projected to reach $4.5 trillion in 2020.

1 of 5

~ 18% of U.S. GDP is spent on Healthcare

~ 30% is Wasted

Notes: Health spending refers to National Health Expenditures. Projections (P) include the impact of the Affordable Care Act.
The Anomaly...

"Americans living longer but getting sicker"

American Hospital Association

Healthcare comparisons
Life expectancy at birth

France
81 years

Singapore
79.7 years

UK
79.1 years

US
78.1 years

US – people without health insurance

45.7 million (15.3% of population)

10.4% Of Non-Hispanic whites

19.5% Of Blacks

32.1% Of Hispanics

16.8% Of Asians

SOURCE: OECD, WHO

A large chunk of the 45.7m will now enter this broken system
HOW DO WE FIX THIS?
Payment

- Fixed fees
- Bundled Payments
- Capitated Payments
- PM PM

Quality

- ACO Leadership
- Population Health Data Management
- Health Home
  - People
  - Pharmacy
  - Home Care
  - Ancillary Providers
  - Long-Term Care
  - Public Health Agencies
  - Hospice
  - Post-Acute Care
  - Hospitals
  - Insurers
  - CMS
  - Employers
  - Payer Partners
Healthcare Cost Has Become a “Consumer” Issue
Today in Michigan...

TO BEGIN, PLEASE CHOOSE THE TYPE OF PROCEDURE YOU'LL BE HAVING:

Surgical & Medical Procedures
- Inpatient Procedure Estimated Average Prices
- Outpatient Procedure Estimated Average Prices
- Childbirth Services Estimated Average Prices

Diagnostic Procedures
- CT Scan Prices
- Laboratory Prices
- Mammography Prices
- MRI Prices
- PET Scan Prices
- Ultrasound Prices
- X-ray Prices

If you do not see the procedure you are looking for, please contact our pricing specialist.

What IS INCLUDED in these prices?
Prices include Spectrum Health equipment fees, staff time and supplies.
The Strategy That Will Fix Health Care

Providers must lead the way in making value the overarching goal by Michael E. Porter and Thomas H. Lee
Measuring Healthcare Costs...

“For a field in which high cost is an overarching problem, the absence of accurate cost information in health care is nothing short of astounding”

Source: Harvard Business Review
“As health care providers come under increasing pressure to lower costs and report outcomes, the existing systems are wholly inadequate.”

Source: Harvard Business Review
Legacy Solutions are too static and cumbersome...

- Massive IT footprint
- Not user friendly
- Not easy to use
- Barrier to adoption
- Archaic methodologies leading to inaccurate cost results

Not sustainable in a world of advanced technology!!
Data Support vs. Decision Support

- Load Encounters: 6 hours
- Validate Data: 1 hour
- Run Costing: 3 days
- Validate Results: 2 hours
- Create Report: 1 hour

~1 Day, 4 Days, 4.25 Days, ~4.5 Days
Do you currently carry out Cost Accounting at your organization?

1) Yes
2) No
Common Costing Methodologies

Direct Method

Sequential/Step-Down Method

Simultaneous/Reciprocal Method

Increasing accuracy of costing results

Less Prevalent → Increasing accuracy of costing results → More Prevalent
## Compare and Contrast

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Method</td>
<td>Allocates overhead costs only to revenue generating cost centers</td>
<td>• Simplistic costing model</td>
<td>• Inaccurate costing results</td>
</tr>
<tr>
<td></td>
<td>No interaction between overhead cost centers prior to allocation</td>
<td>• Easy to use and maintain</td>
<td></td>
</tr>
<tr>
<td>Sequential/Step-Down Method</td>
<td>Allocates overhead costs one cost center at a time to remaining overhead and revenue generating cost centers in a cascading manner</td>
<td>• Simplistic costing model</td>
<td>• Costing results not very precise</td>
</tr>
<tr>
<td></td>
<td>One-way interaction between overhead cost centers prior to allocation</td>
<td>• Easy to validate</td>
<td></td>
</tr>
<tr>
<td>Simultaneous/Reciprocal Method</td>
<td>Allocates overhead costs to revenue generating cost centers by fully recognizing the mutual services provided among all overhead cost centers</td>
<td>• Precise costing results</td>
<td>• More complex to understand and validate</td>
</tr>
<tr>
<td></td>
<td>Full two-way interaction between overhead cost centers prior to allocation</td>
<td>• Easy to maintain</td>
<td></td>
</tr>
</tbody>
</table>
What costing methodology do you currently use?

1) RCC
2) RVU
3) Standard Cost
4) Percentage Markup
5) Supply-based (Acquisition Cost)
6) Costs as Cost to Charge Ratio
7) Activity Based Costing (ABC)
8) Time Driven Activity Based Costing (TDABC)
Costing Example

RCC vs. RVU methodology
Costing Example

Embedding Supply-based costs (Implants as an example) into the mix and use RVU
Case Studies
Case 1
A non-profit hospital system located in **Portland, Oregon** with six primary care hospitals and allied clinics and outpatient facilities.

- 5 Hospitals
- Multiple Physician Practices
- 1,523 Licensed Beds
- 56,000 IP Discharges
- 9,704 Employees
- $1.85B Total Assets
Legacy Health equipped themselves with a set of technological tools that saw them increase operational efficiency, organization wide buy-in and transparency, discover supply cost reduction initiatives and through daily patient loads into their costing system, conduct margin and profitability analysis more frequently.

<table>
<thead>
<tr>
<th>Operational Efficiency</th>
<th>Supply Cost Initiatives</th>
<th>Data Liquidity and Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 99.2% increase in costing process efficiency</td>
<td>• Uncovered a $10m discrepancy per year between expected cost of implants versus actual posted cost of implants</td>
<td>• Creation of specific dashboards by role and function</td>
</tr>
<tr>
<td>• Re-allocation of 3 FTEs to other strategic and operational initiatives</td>
<td>• Determined variance in practice patterns and cost per case by physician on similar procedures</td>
<td>• Fed cost information data from StrataJazz™ into Epic Cogito to facilitate further collaboration between finance and physicians in identifying areas for clinical improvement and reduction in costs while maintaining top quality care</td>
</tr>
<tr>
<td>• Creation of real-time dashboards for executive team members to monitor KPIs</td>
<td>• Currently working with a group of hospitalists to evaluate supply usage variances across physicians</td>
<td></td>
</tr>
</tbody>
</table>
Case 2
Based in **Asheville, North Carolina**, Mission Health is the state’s sixth largest health system and the tertiary care regional referral center for Western North Carolina and the adjoining region.

- 5 Hospitals (2 CAHs)
- Multiple Physician Practices
- 1,006 Licensed Beds
- 564,237 Encounters
- 9,500 Employees (largest west of Charlotte)
Case Study: Reporting Costs

• Behavioral Health capacity significantly increased in the Adolescent unit. Discussion within VSM team resulted in 3-month pilot program around closer relationship with floating BH clinician and physician in order to decrease LOS and reduce capacity constraints if possible
  – Pilot timeframe: 04/08/2013 – 06/30/2013
  – Direct interaction between BH clinician and physician that aligned with physician rounds
  – Implementing physician rounds at least 2x per day
Case Study: Reporting Costs

- Pilot program revealed reduction in LOS without negatively impacting readmission rates. Also, the pilot program conveyed a reduction in Direct Cost per case compared to months before and after the pilot program.

- Results gave evidentiary support of (1) having additional BH clinician support for the unit and (2) more effective and frequent interaction with the BH physician.

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>6.84</td>
<td>7.03</td>
<td>$3,322.70</td>
<td>$3,807.73</td>
</tr>
<tr>
<td>November</td>
<td>6.68</td>
<td>7.08</td>
<td>$3,330.56</td>
<td>$3,880.85</td>
</tr>
<tr>
<td>December</td>
<td>6.08</td>
<td>6.40</td>
<td>$3,042.78</td>
<td>$3,541.55</td>
</tr>
<tr>
<td>January</td>
<td>7.29</td>
<td>6.00</td>
<td>$3,819.32</td>
<td>$3,287.29</td>
</tr>
<tr>
<td>February</td>
<td>7.89</td>
<td>6.92</td>
<td>$3,795.08</td>
<td>$3,798.02</td>
</tr>
<tr>
<td>March</td>
<td>7.82</td>
<td>8.16</td>
<td>$3,899.05</td>
<td>$4,452.35</td>
</tr>
<tr>
<td>April</td>
<td>7.28</td>
<td>8.09</td>
<td>$3,536.66</td>
<td>$4,378.45</td>
</tr>
<tr>
<td>May</td>
<td>7.09</td>
<td>6.00</td>
<td>$3,499.00</td>
<td>$3,360.46</td>
</tr>
<tr>
<td>June</td>
<td>6.29</td>
<td>6.37</td>
<td>$3,118.08</td>
<td>$3,521.75</td>
</tr>
<tr>
<td>July</td>
<td>7.95</td>
<td>7.67</td>
<td>$3,840.84</td>
<td>$4,229.32</td>
</tr>
<tr>
<td>August</td>
<td>6.88</td>
<td>8.91</td>
<td>$3,319.13</td>
<td>$5,030.01</td>
</tr>
</tbody>
</table>
Case Study: Contract Analytics

- Managed Care Director asked for assistance in analyzing proposed Per Diem Rates for Psychiatric Inpatients.
- First step was to take a look at the Psychiatric Direct Costs per Day as well as the Total Costs per Day.
- After determining actual experience for the Psych patients then compare to the proposed rates.
- Proposed rates - $1,000 per diem
# Case Study: Contract Analytics

<table>
<thead>
<tr>
<th></th>
<th>Direct Cost per Day</th>
<th>Total Cost per Day</th>
<th>CMI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2013</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inpatient</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADULT MEDICINE - IP</td>
<td>1,193</td>
<td>2,120</td>
<td>1.2559</td>
</tr>
<tr>
<td>CARDIAC SERVICES - IP</td>
<td>2,151</td>
<td>3,585</td>
<td>2.1677</td>
</tr>
<tr>
<td>NEUROSCIENCES - IP</td>
<td>2,168</td>
<td>3,433</td>
<td>2.1215</td>
</tr>
<tr>
<td>ONCOLOGY - IP</td>
<td>1,353</td>
<td>2,285</td>
<td>1.5414</td>
</tr>
<tr>
<td>ORTHOPEDICS - IP</td>
<td>2,551</td>
<td>3,989</td>
<td>2.0992</td>
</tr>
<tr>
<td>PEDIATRICS - IP</td>
<td>1,016</td>
<td>1,792</td>
<td>1.6880</td>
</tr>
<tr>
<td>PSYCHIATRY - IP</td>
<td>727</td>
<td>1,376</td>
<td>0.9123</td>
</tr>
<tr>
<td>SURGERY - IP</td>
<td>1,727</td>
<td>3,012</td>
<td>2.9657</td>
</tr>
<tr>
<td>TRAUMA - IP</td>
<td>1,982</td>
<td>3,431</td>
<td>2.5950</td>
</tr>
<tr>
<td>UROLOGY - IP</td>
<td>1,749</td>
<td>3,072</td>
<td>1.7186</td>
</tr>
<tr>
<td>VASCULAR - IP</td>
<td>2,139</td>
<td>3,566</td>
<td>2.4498</td>
</tr>
<tr>
<td>WOMENS - IP</td>
<td>1,124</td>
<td>2,085</td>
<td>0.5978</td>
</tr>
<tr>
<td><strong>Total Inpatient</strong></td>
<td><strong>1,547</strong></td>
<td><strong>2,638</strong></td>
<td><strong>1.6241</strong></td>
</tr>
</tbody>
</table>
Case Study: Contract Analytics

• Findings:
  – Proposed Per Diem Rates would cover our Psychiatric Direct Costs per day
  – Proposed Per Diem Rates would not cover our Psychiatric Total Costs per day

  – Managed Care Director went back and negotiated a better per diem rate of $1,150
New Paradigm for Margin Management

Mission Health equipped themselves with a new set of tools that increased costing accuracy, led to the development of a BH pilot program and availability of cost & reimbursement analytics and knowledge transfer between finance and the front line.

<table>
<thead>
<tr>
<th>Increased Costing Accuracy</th>
<th>Pilot Programs and Reimbursement</th>
<th>Knowledge Transfer and Data Discovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Increased accuracy of costing through increased transparency and visibility of dollars from start to finish</td>
<td>- Behavioral Health pilot reduced LOS by 1.09 and $138.54 in Direct Cost per Case</td>
<td>- Financial analysts disseminate cost reports and educate department and clinical managers</td>
</tr>
<tr>
<td>- Re-evaluated relationships between cost centers for truer direct and indirect allocations</td>
<td>- Managed Care Director was better able to cover costs for Psych Inpatients and negotiated an increase in $150.00 in Per Diem Rate</td>
<td>- Displaced time to decision support versus data support</td>
</tr>
<tr>
<td>- Able to cost for 3 Hospitals now and use RVU-based costing methodology</td>
<td></td>
<td>- Spend a lot of time discovering root cause analyses for furthering service line and physician profitability</td>
</tr>
</tbody>
</table>
Cost Accounting sounds good in theory. But in reality, implementing it is painful and the efficacy of the results are questionable.
3 Essential Questions

How do we build the business case?
- Will status quo work?
- Define new process goals
- Quantify core benefits
- Outline quick wins and long term value
- Build executive & operational buy-in
- Focused use of resources

How do we implement?
- Define key stakeholders, timelines and scope of undertaking
- Build and validate technical model / architecture
- Allow future flexibility
- Outline desired outputs

How do we act on the results?
- Plan a roadmap of “first use”
- Build into existing managerial frameworks
- Continue seeking opportunities to refine with each cycle
- Quantification is essential
In sum then...
The Mix is Shifting...

- **Revenue Cycle Management**

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Insured Covered by Payment Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>High</td>
</tr>
<tr>
<td>2014</td>
<td>High</td>
</tr>
<tr>
<td>2015</td>
<td>High</td>
</tr>
<tr>
<td>2016</td>
<td>High</td>
</tr>
<tr>
<td>2017</td>
<td>Low</td>
</tr>
</tbody>
</table>
The Mix is Shifting...

<table>
<thead>
<tr>
<th>Year</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

% of Insured Covered by Payment Approach

Value-Based Payment

Margin & Outcomes Management

Revenue Cycle Management
“Costs are cool again”

-CFO, Major Health System
Why Change?

“In healthcare, the days of business as usual are over.”

DO MORE WITH LESS:
Invest in processes & tools that provide more value with less resources
Lessons Learned

1. Understand cost and margins across episodes, service lines, physicians, disease states and populations

2. Determining and supporting major cost reduction initiatives

3. Driving value and change through ease of accessibility and liquidity of cost data
CONTACT INFO:

E-mail:
ekretzer@stratadecision.com
agovil@stratadecision.com

Company:
www.stratadecision.com