Analysis Paralysis – Don't Become a Victim!

5 Major Mistakes People Make with Analytics

Will Israel, MPH, CSBI

Director, Product Management

SSI

hfma™ south texas chapter
healthcare financial management association

SSI: At A Glance

Founded in 1988

Based in Mobile, AL

400 employees and growing

Serving leading healthcare providers and payers

Providing a complete revenue cycle solution

SSI: By the Numbers

2,400
Healthcare providers rely on SSI

$1.5T
Total claim charges processed in 2017

50%
Percentage of client partnerships at 10+ years

Key SSI Partnerships

Logos: Adventist Health, CHS Community Health Systems, Dignity Health, Duke University, Unity Health System, North Mississippi Medical Center, Kindred Healthcare, Mercy, HEALTHSOUTH, Novant Health Prince William Medical Center, Providence Health & Services, Renown Health, SavaSeniorCare, Seton Healthcare Family, SSM Health, UF Health University of Florida Health, UNC Health Care, Carilion Clinic, Valley Health System, Vanderbilt University Medical Center

Speaker

Will Israel, MPH, CSBI
Director, Product Management
SSI

Will plays a pivotal role at SSI where he champions the adoption of Performance Management solutions to drive organization and revenue growth for our clients. He has over 10 years experience in healthcare and, more importantly, analytics. Prior to joining SSI, Will worked for CareFusion.

Agenda

So What Is Analytics?

Analytics V Business Intelligence

The Five Major Mistakes

Bridging the Gap between the Front End and the Back End

Summary

So What Is Analytics?

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What is Analytics?

"The extensive use of data, statistical and quantitative analysis, explanatory and predictive models and fact-based management to drive decisions and actions." *

Nota Bene: **Data visualization alone is not analytics.**

If you can contextualize data, you make it actionable.

* Competing on Analytics. Tom Davenport, Jeanne Harris, 2007 Harvard Business School Press.

So What is Analytics?

Analytics

Competitive Advantage →

Decision Optimization	What's the best that can happen?
Predictive Analytics	What will happen next?
Forecasting	What if these trends continue?
Statistical models	Why is this happening?
Alerts	What actions are needed?
Query/drill down	Where exactly is the problem?
Ad hoc reports	How many, how often, where?
Standard reports	What happened?

Reporting

Degree of Intelligence →

Source: Competing on Analytics: The New Science of Winning (Davenport /Harris)

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A Little Easier to See Here

Analytic Value Escalator — a diagram showing the progression from Descriptive Analytics ("What happened?" / Hindsight / Information), to Diagnostic Analytics ("Why did it happen?" / Insight), to Predictive Analytics ("What will happen?" / Foresight), to Prescriptive Analytics ("How can we make it happen?" / Optimization), plotted against VALUE (vertical axis) and DIFFICULTY (horizontal axis). Source: Gartner.
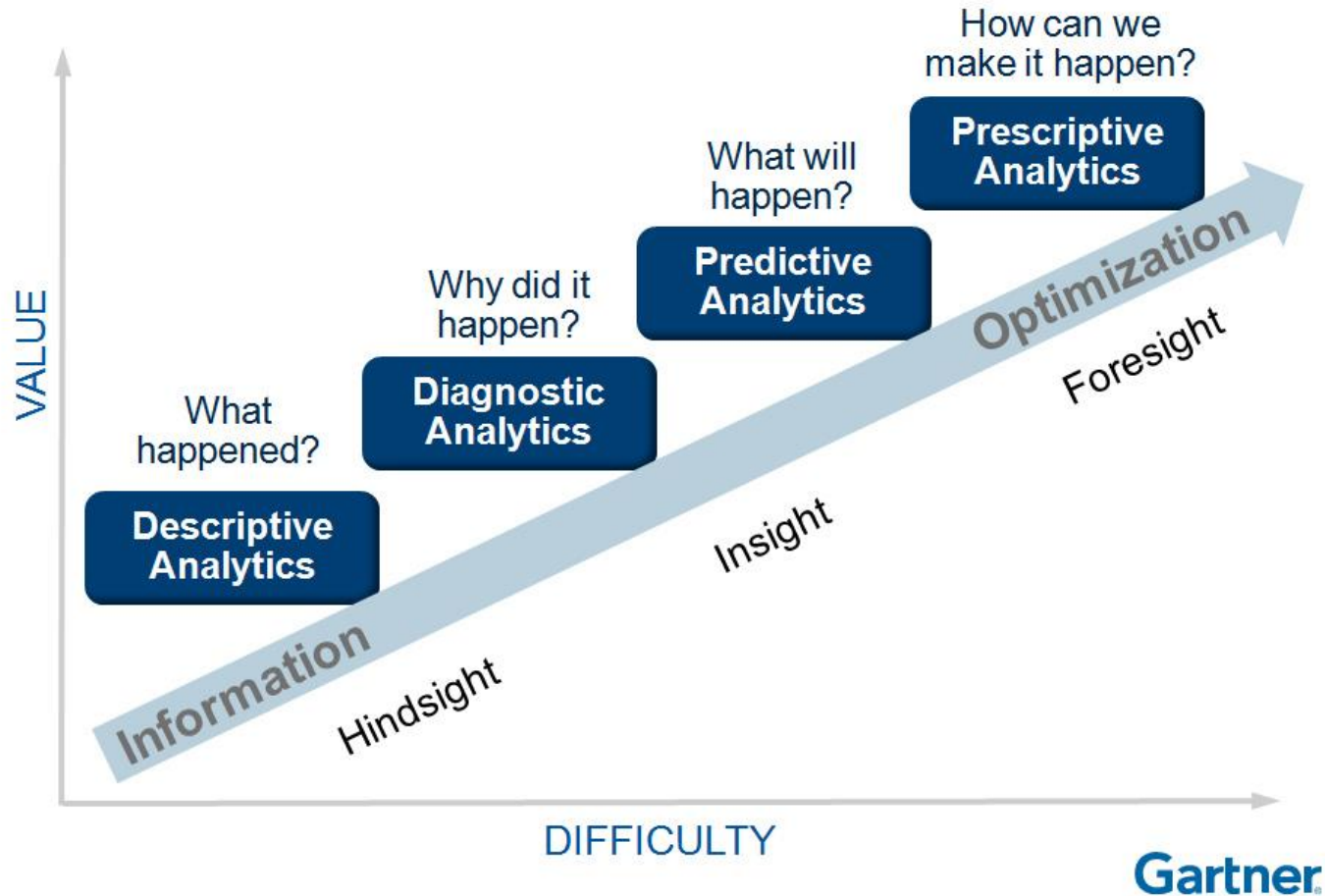
Using Analytics Practically: The DMAIC Model

- The DMAIC model is designed to use data to improve process and operations.

- It is cyclical because it is continuous and allows for constant process improvement based on data acquisition and results.
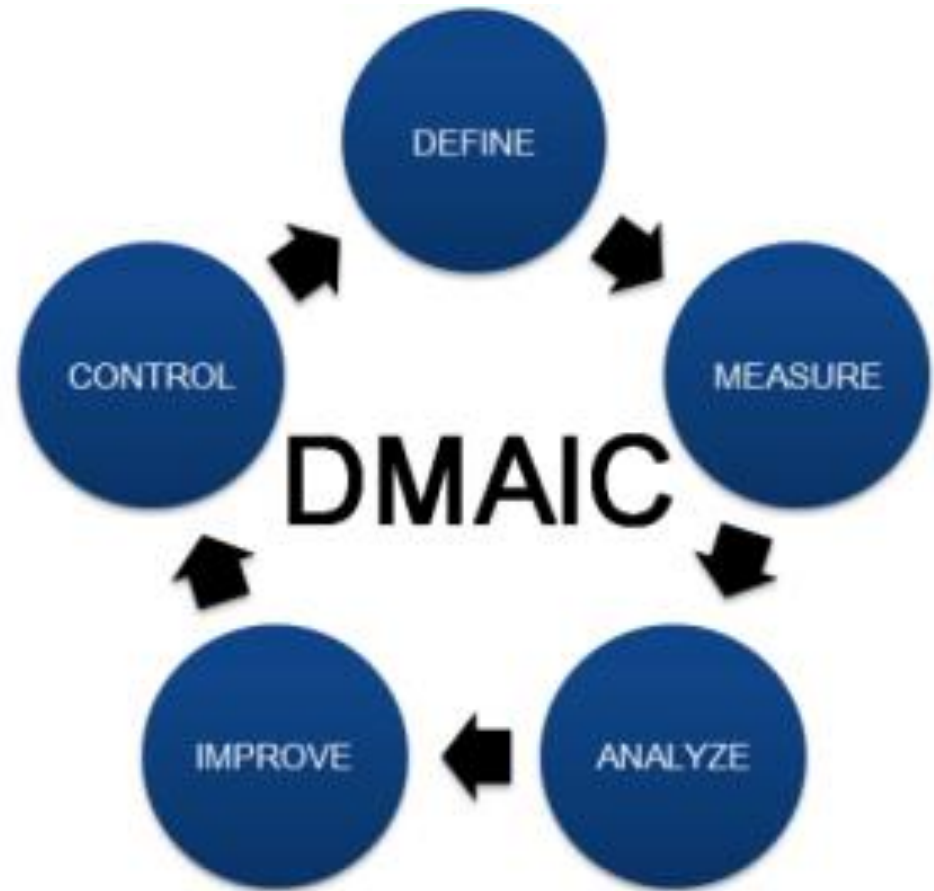
Analytics V. Business Intelligence (BI)

- Analytics and BI
  - Are they the same thing?
  - In a word, no, but they are very intimately related.
    - Data Analytics is the path to Business Intelligence.

    - BI Tools help you consume the Analytics Data.

"You set up a Business Intelligence initiative,
***but you do* Data Analytics."**
– Timothy King, Best Practices

Five Major Mistakes People Make with Analytics

1:

- **Trying to manage processes you aren't measuring.**

  - "If we have data, let's look at data. If all we have are our opinions, let's go with mine." – Jim Barksdale, former CEO of Netscape

  - "…[I]f you don't know where you're going[,] [a]ny road will take you there" – George Harrison, Any Road

How do you keep score?

- Key Performance Indicators
  - Ultimately, they boil down to two components
    - Time and Treasure
      - How to evaluate success
        - How much do you get of each for those processes you're currently working on?
        - How do you track that?
          - Time studies
          - Dollars Spend Avoided
          - Dollars Recovered

Information Radiators

- BVCs (Big Visible Charts) are a great use of data to create an analytic disposed to action.

Two Management Styles

- How to best use KPIs
  - Manage by Exception (MBE)
    - MBE is a practice where only significant deviations from a budget or plan are brought to the attention of management. The idea behind it is that management's attention will be focused only on those areas in need of action.
  - Manage by Objective (MBO)
    - The principle of MBO is for employees to have a clear understanding of their roles and the responsibilities expected of them, so they can understand how their activities relate to the achievement of the organization's goals. Common goal for whole organization means it is a unifying, directive principle of management.

2:

- **Not understanding how KPIs translate to process.**

  - Work Backwards. Have a question related to a business goal and build out the data required to answer the question.

Process focused questions

- How are you tracking your denials today?

- Who are your best payers / worst payers and how do you evaluate them?

- What do you see as the biggest areas of opportunity for you to accelerate your cash in hand?

- What performance initiatives are you targeting on the revenue cycle side this quarter / year? How are you tracking?

Working backwards using the 5 Whys…

PROBLEM

Jefferson Memorial is deteriorating

WHY?

Working backwards using the 5 Whys…

PROBLEM

Jefferson Memorial is deteriorating

WHY? ↓

Overuse of Industrial Cleaners

WHY?

Working backwards using the 5 Whys…

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Excess of bird droppings

WHY?

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WHY? ↓

Lots of spiders to eat

WHY?

Working backwards using the 5 Whys…

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WHY? ⬇

Overuse of Industrial Cleaners

WHY? ⬇

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WHY? ⬇

Lots of spiders to eat

WHY? ⬇

Lots of gnats to eat

WHY?

Working backwards using the 5 Whys…

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WHY? ↓

Gnats drawn to lights at dusk

Working backwards using the 5 Whys…

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Gnats drawn to lights at dusk
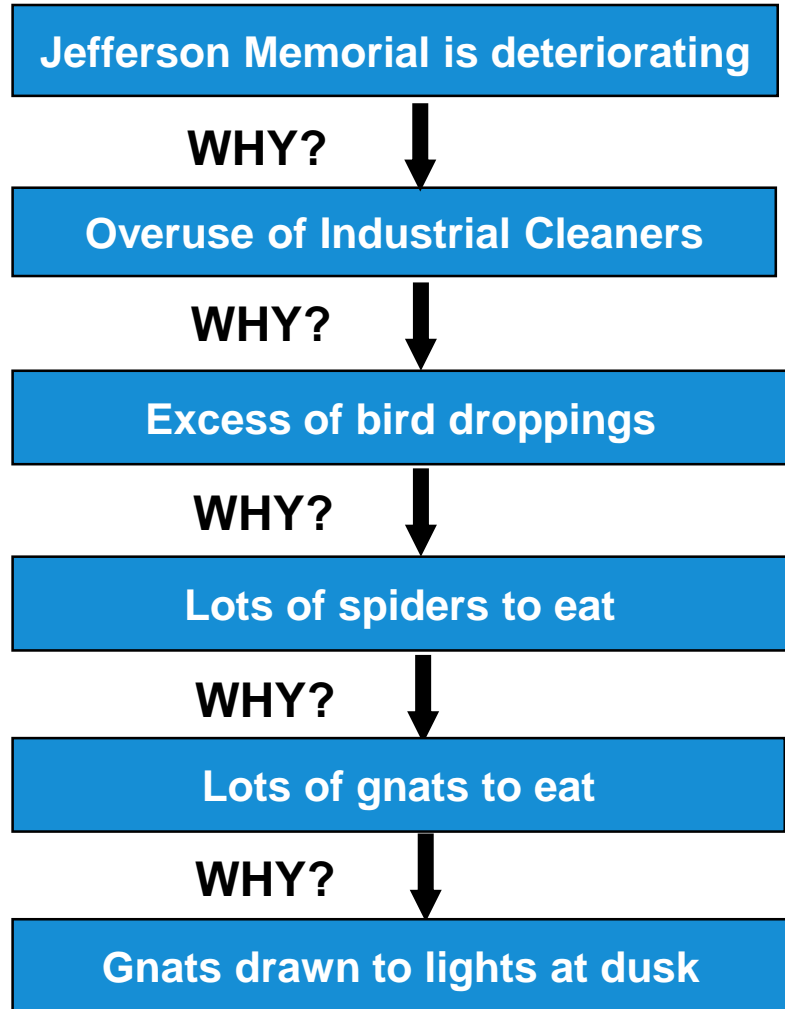
Solution
Turn the lights on 1 hour later nightly.

Result
90% reduction in the number of gnats within 2 weeks.
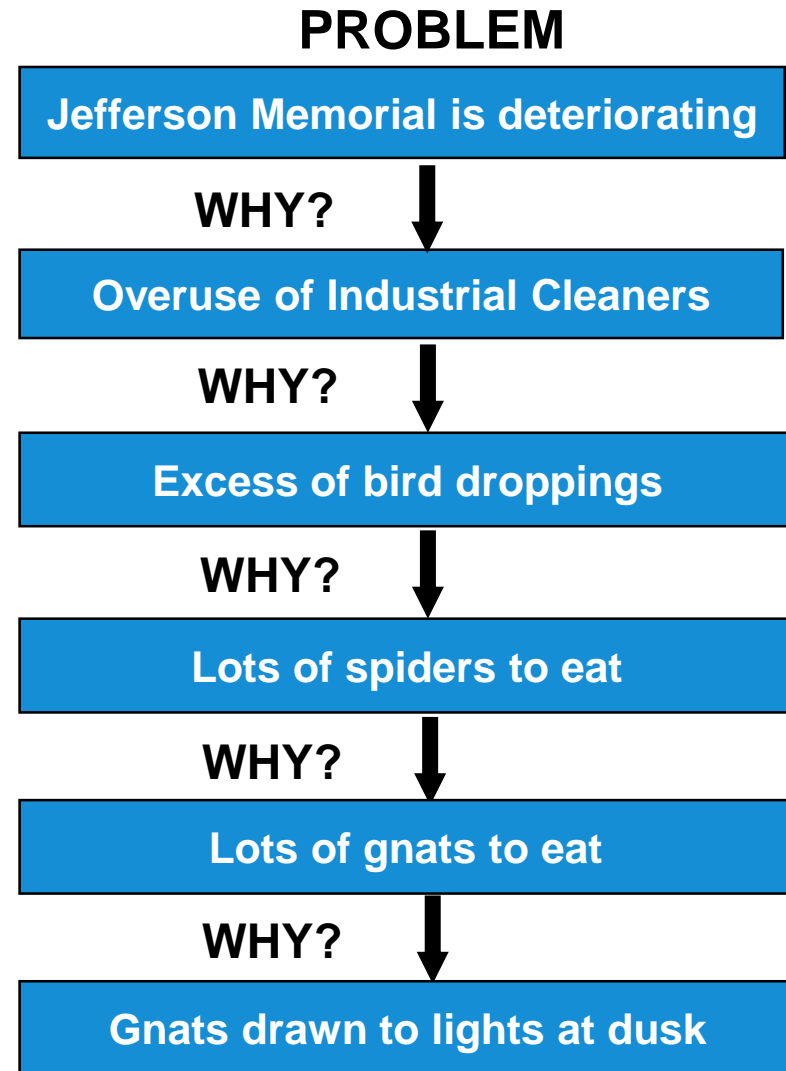
4:

- **Not having the most granular data available making Root Cause Analysis impossible.**

  - You have to be able to slice and dice to truly understand root cause so that the complex relationships become visible.
  - Payer, Revenue Code, Bill Type, Physician, Remark Code, and Date has been a unique, important relationship.

The Ultimate Venn Diagram
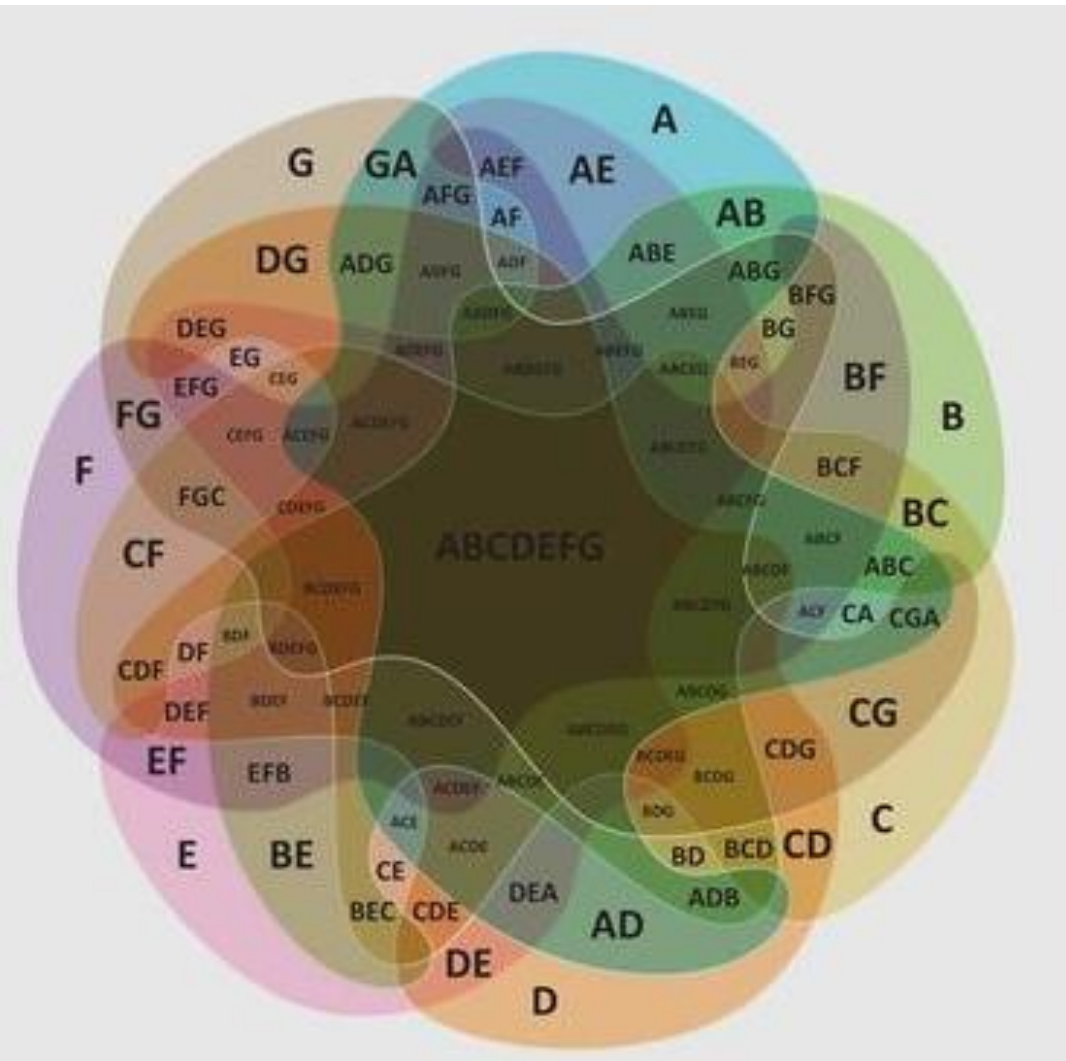
- Think of every question you ask bringing you closer to your solution.

- It's literally how GPS works:
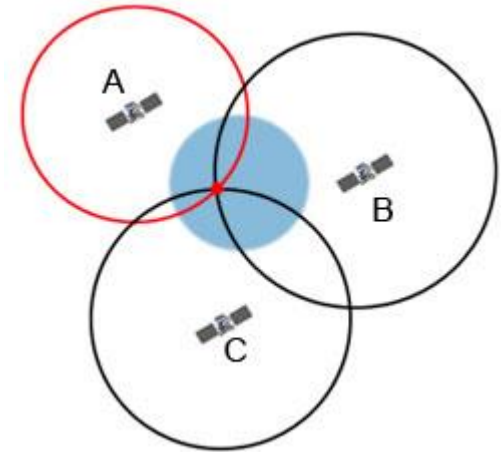
5:

- **KPIs not lining up to business goals.**

  - Key Performance Indicators (KPIs) can be built for just about anything you want to measure. That doesn't mean that they're relevant to YOUR business or your objectives.

  - Start top down.

  - Think about what is your organizational mission, then what are your leadership groups goals, build your KPIs to align with how you're assessed.

KPIs: Revenue Cycle v. Healthcare

- Not Relevant
  - ER Wait Times
  - Lab Turnaround Time
  - # of Patients in the ER
  - Patient Satisfaction

- Relevant
  - A/R days
    - Days to Drop
    - Days to Bill
    - Days to Pay
  - Clean Claim Rate
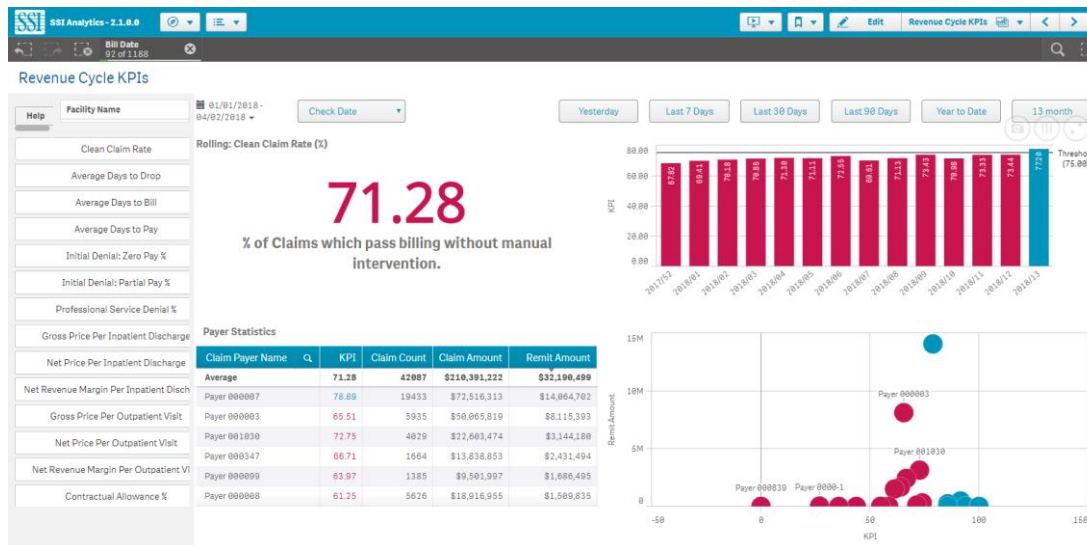
SMART Initiatives

- *Specific* – target a specific area for improvement.
- *Measurable* – quantify or at least suggest an indicator of progress.
- *Agreed upon* – specify who will do it.
- *Realistic* – state what results can realistically be achieved, given available resources.
- *Time-related* – specify when the result(s) can be achieved.

4:

- **Not making objective comparisons when looking at visualizations.**

    - sig·nal-to-noise ra·tio

        noun

        the ratio of the strength of an electrical or other signal carrying information to that of interference, generally expressed in decibels.

        - *informal*
          a measure of how much useful information there is in a system, such as the Internet, as a proportion of the entire contents.

    - The worst thing you can do is making the wrong "leap" when consuming the data

        - Do you understand the question that the data is answering?

Making the Right Comparison
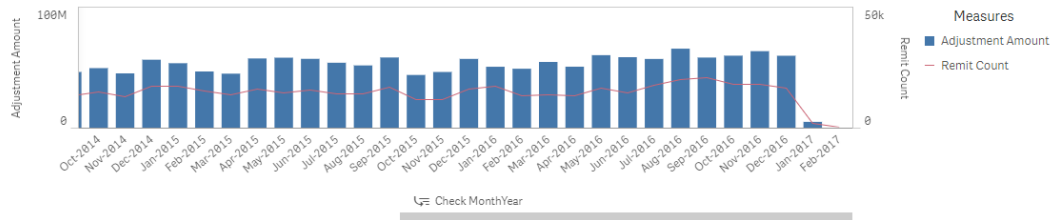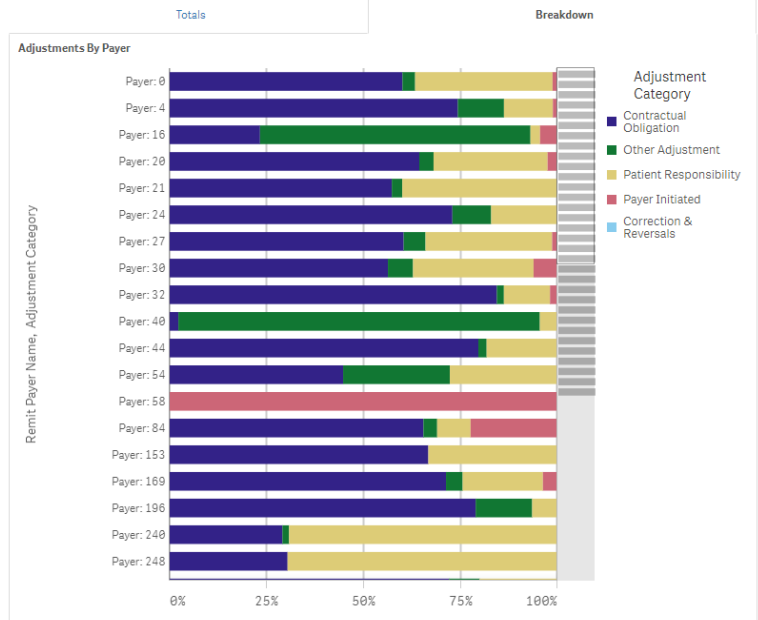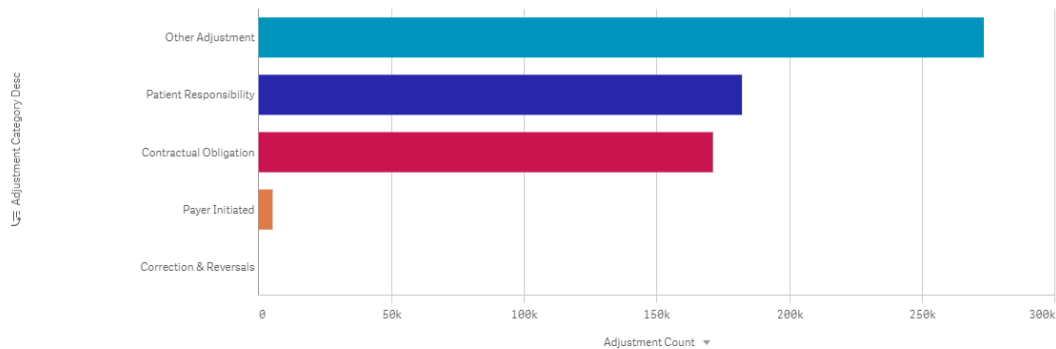
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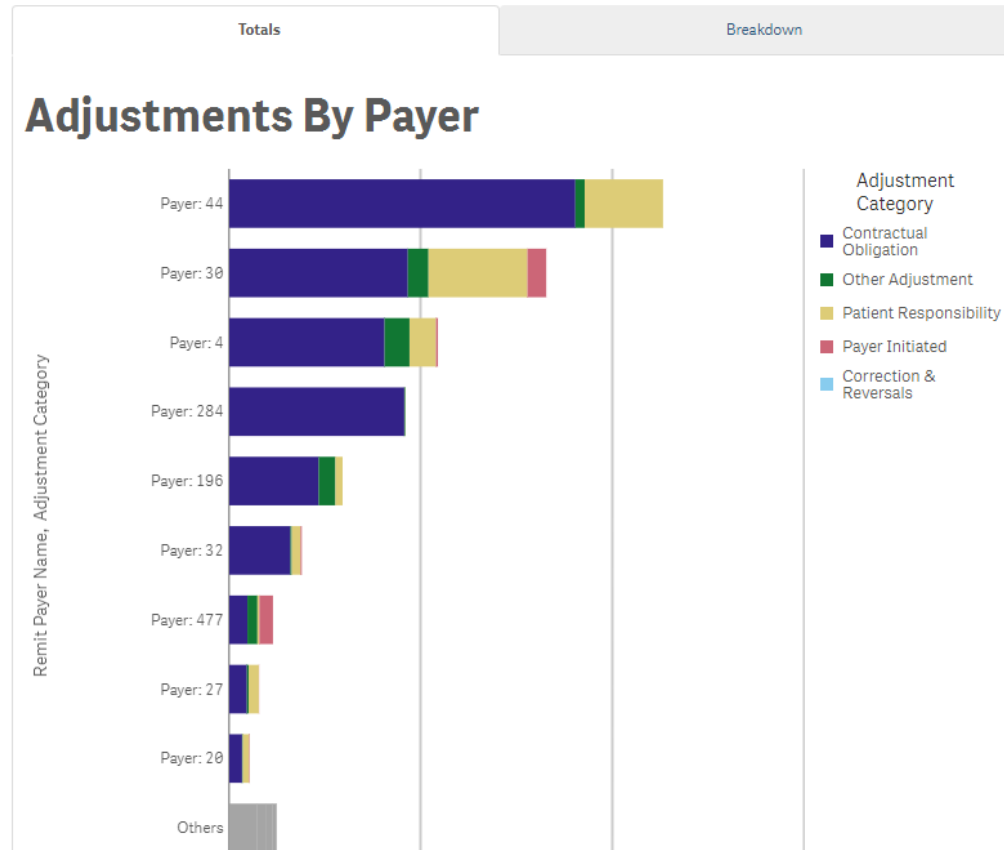
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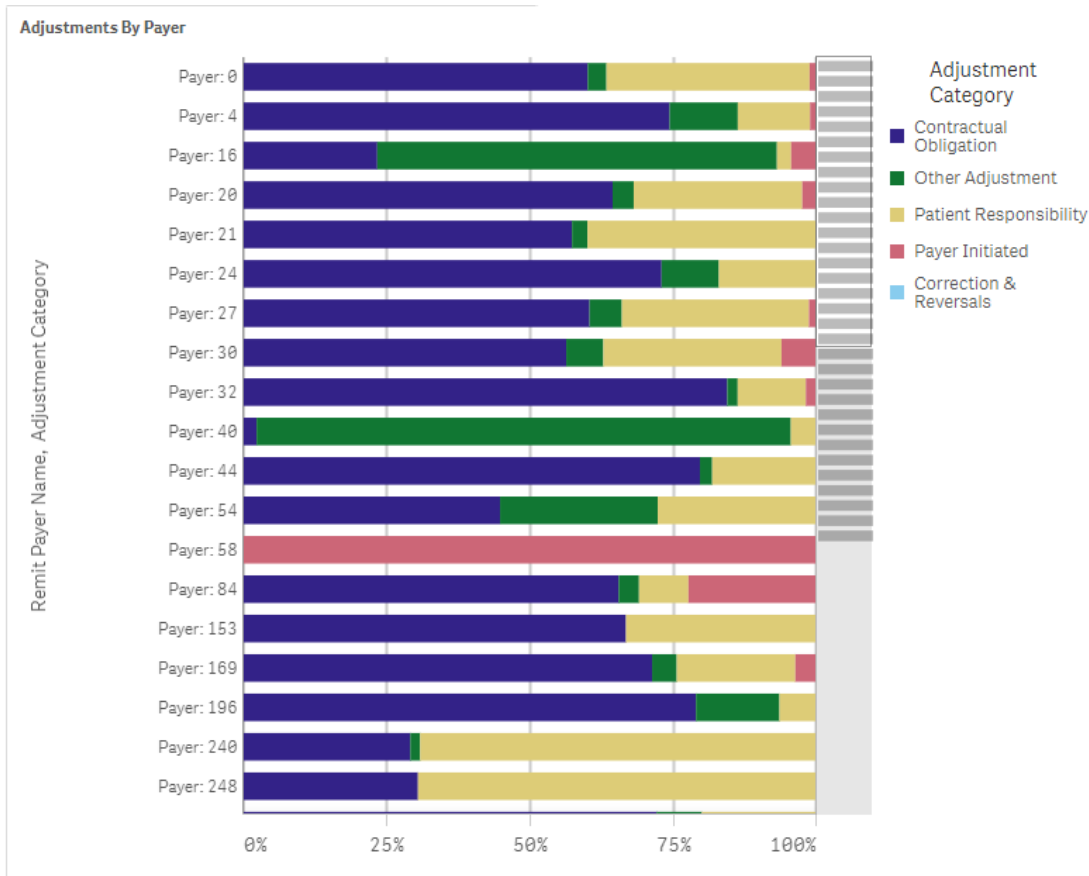
Bridging the Gap between the Front End and the Back End

Thinking about KPIs

- So how do we understand in practice how KPIs are affected by business practices?

- Before we do that, let's look at something analogous in our daily lives.
  - This KPI affects us in major ways and it's something that many of us "know about" but don't really understand end to end…

- Credit Scores

Credit Score View

YOUR FREE CREDIT SCORE FOR MAY 2017
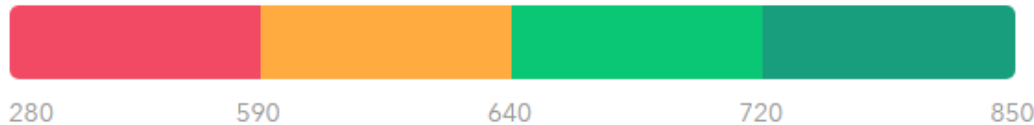
803

Your credit score is Excellent.

Powered by **EQUIFAX**

280   590   640   720   850

About your score

Lenders love you! Based on your score, lenders may see you as a very low risk. This can qualify you for financial products with the best interest rates.

< ● ● ● >

Courtesy: Mint

FICO score
/ˈfīkō ˌskôr/

noun FINANCE

a person's credit score calculated with software from Fair Isaac Corporation (FICO).

- What can my credit score impact?

- Prospective Lenders
   - And Rates!
- Landlords
- Jobs
- Security Clearance
- (Maybe) Relationships

Credit Score: The "Guts"

YOUR FREE CREDIT SCORE FOR MAY 2017
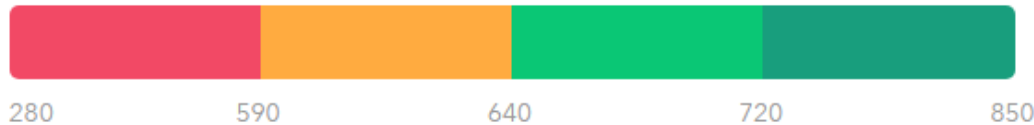
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Courtesy: Mint

USA SNAPSHOTS©

Credit score analysis

Factors making up FiCO score:

35% Payment history

30% Amount owed

15% Length of credit history

10% Credit mix

10% New credit

SOURCE Experian

JAE YANG AND JANET LOEHRKE, USA TODAY

Courtesy: USA Today

Drilling down

KPIs at a Glance

Focus on Denials

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But wait, how is it built?

Adjustment Reason Code	Adjustment Reason Description	Timing	WPC Notes	Active?	Modified?	Area for Focus*	Extra Notes	Lack of Coverage/No Ins Eligibilit	Adjustement Reason Code Category in Analytics
109	Claim/service not covered by this payer/contractor. You must send the claim/service to the correct payer/contractor.	Start: 01/01/1995 | Last Modified: 01/29/2012		Y	Y	A			Payer / COB
110	Billing date predates service date.	Start: 01/01/1995		Y	N	A			Coding Issue / Medical Necessity
116	The advance indemnification notice signed by the patient did not comply with requirements.	Start: 01/01/1995 | Last Modified: 09/30/2007		Y	Y	A			Coding Issue / Medical Necessity
119	Benefit maximum for this time period or occurrence has been reached.	Start: 01/01/1995 | Last Modified: 02/29/2004		Y	Y	A			Patient Eligibility or Coverage
140	Patient/Insured health identification number and name do not match.	Start: 06/30/1999		Y	N	A		Yes	Patient Eligibility or Coverage
151	Payment adjusted because the payer deems the information submitted does not support this many/frequency of services.	Start: 10/31/2002 | Last Modified: 01/27/2008		Y	Y	A			Coding Issue / Medical Necessity
165	Referral absent or exceeded.	Last Modified: 09/30/2007		Y	Y	A	Typically physician		Coding Issue / Medical Necessity
166	These services were submitted after this payers responsibility for processing claims under this plan ended.	Start: 02/28/2005		Y	N	A		Yes	Claim or Payment Timing
167	This (these) diagnosis(es) is (are) not covered. Note: Refer to the 835 Healthcare Policy Identification Segment (loop 2110 Service Payment Information REF), if present.	Start: 06/30/2005 | Last Modified: 09/20/2009		Y	Y	A			Non-covered Charges

*Legend: I=Informational , B=Business or PFS, A=Access Management, H=HIM or Med Rec, CM=Case Management or UR
Note: PFS sees and reacts to all. They are not giving up control but the list gives a denial team a starting point to research and reduce future denials
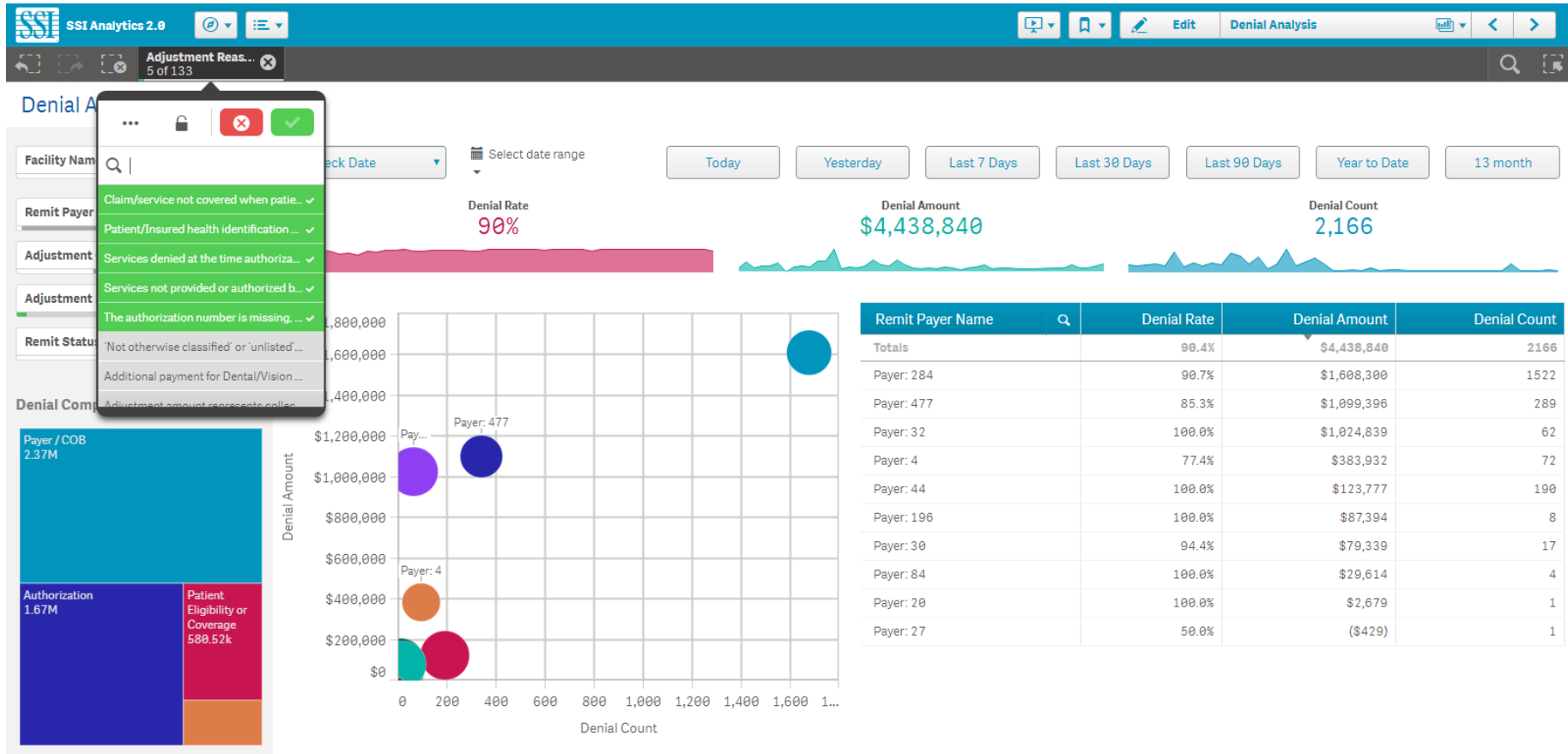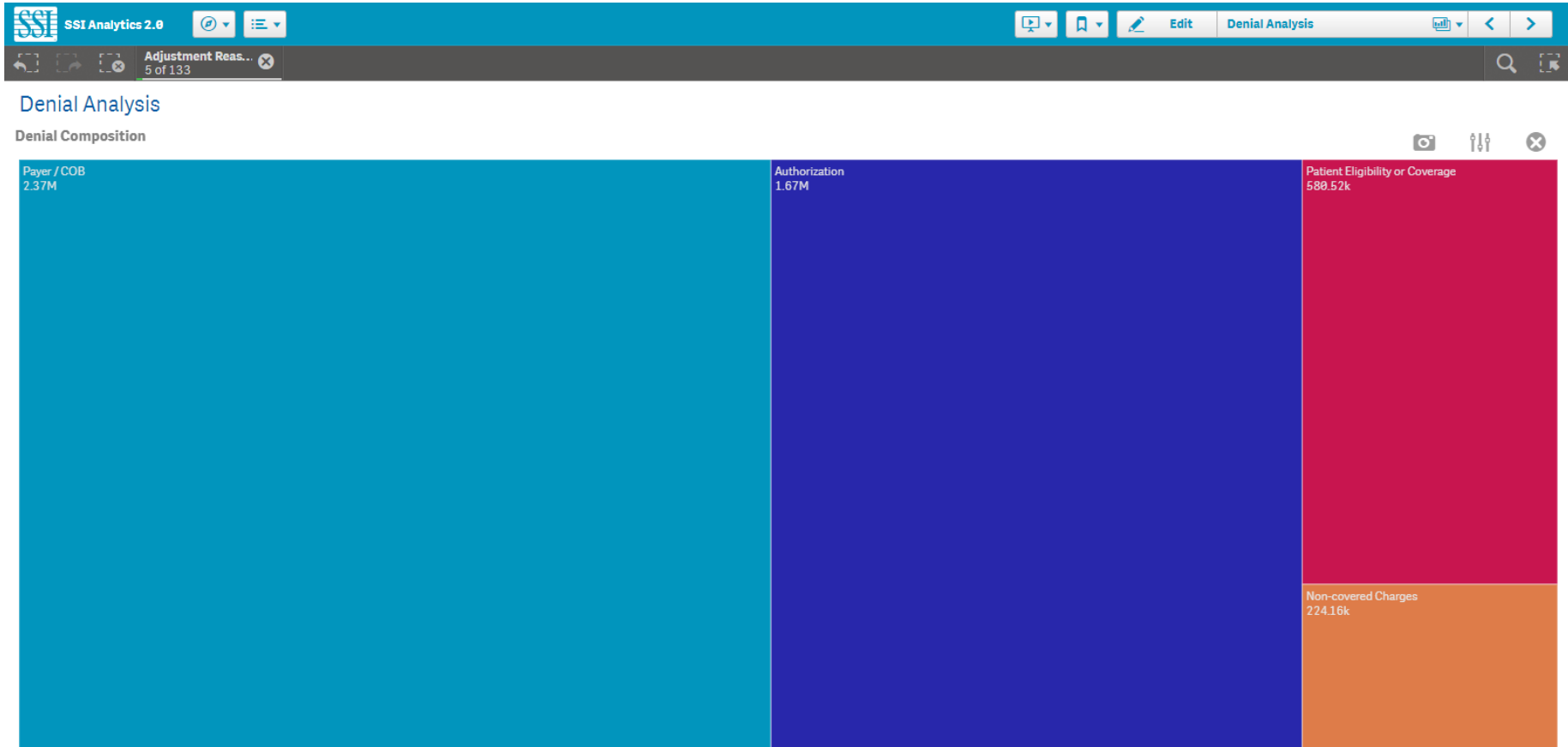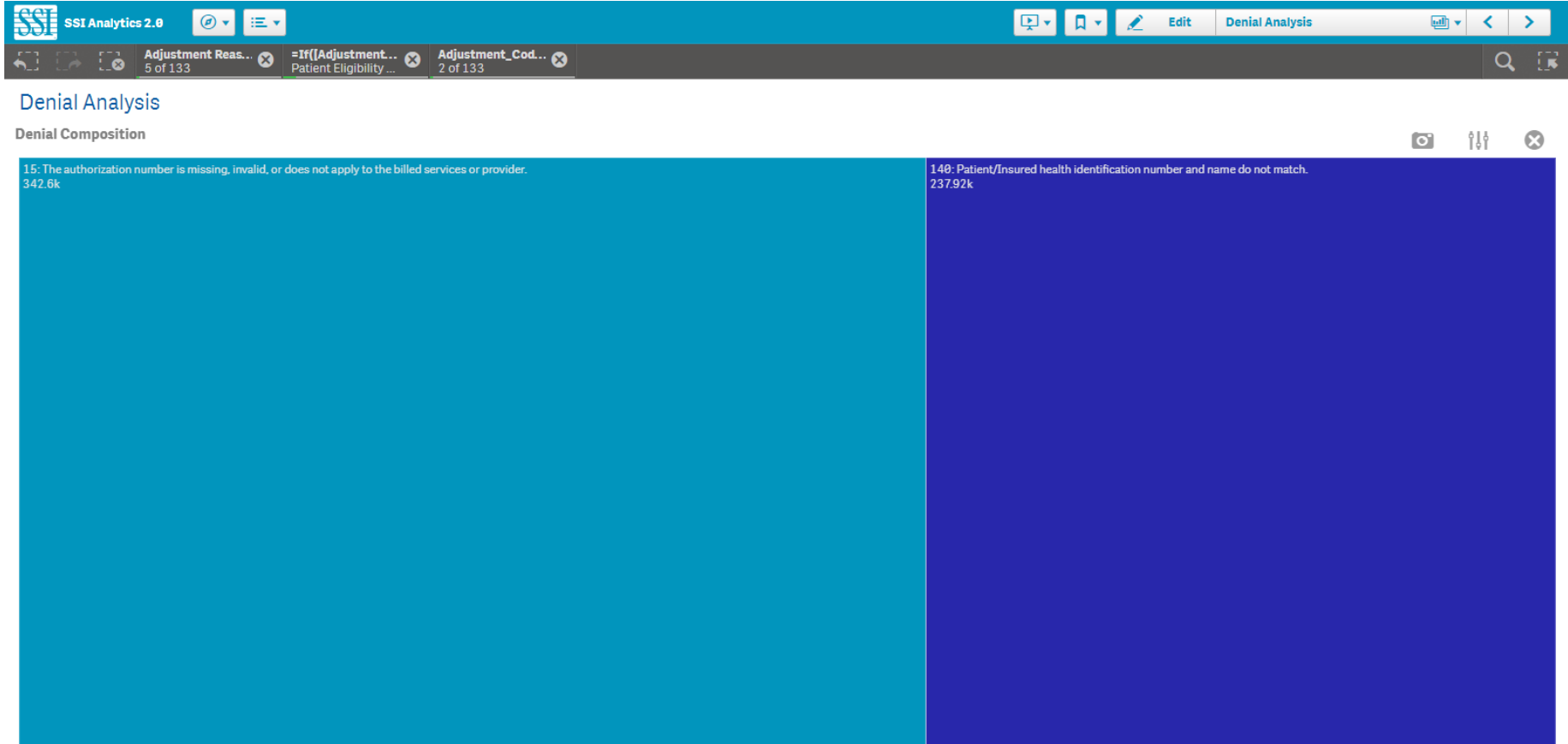
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Denial Review

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Denial Area Graph

Denial Drill Down

Drilldown into the Denials

Back to the DMAIC Model again…
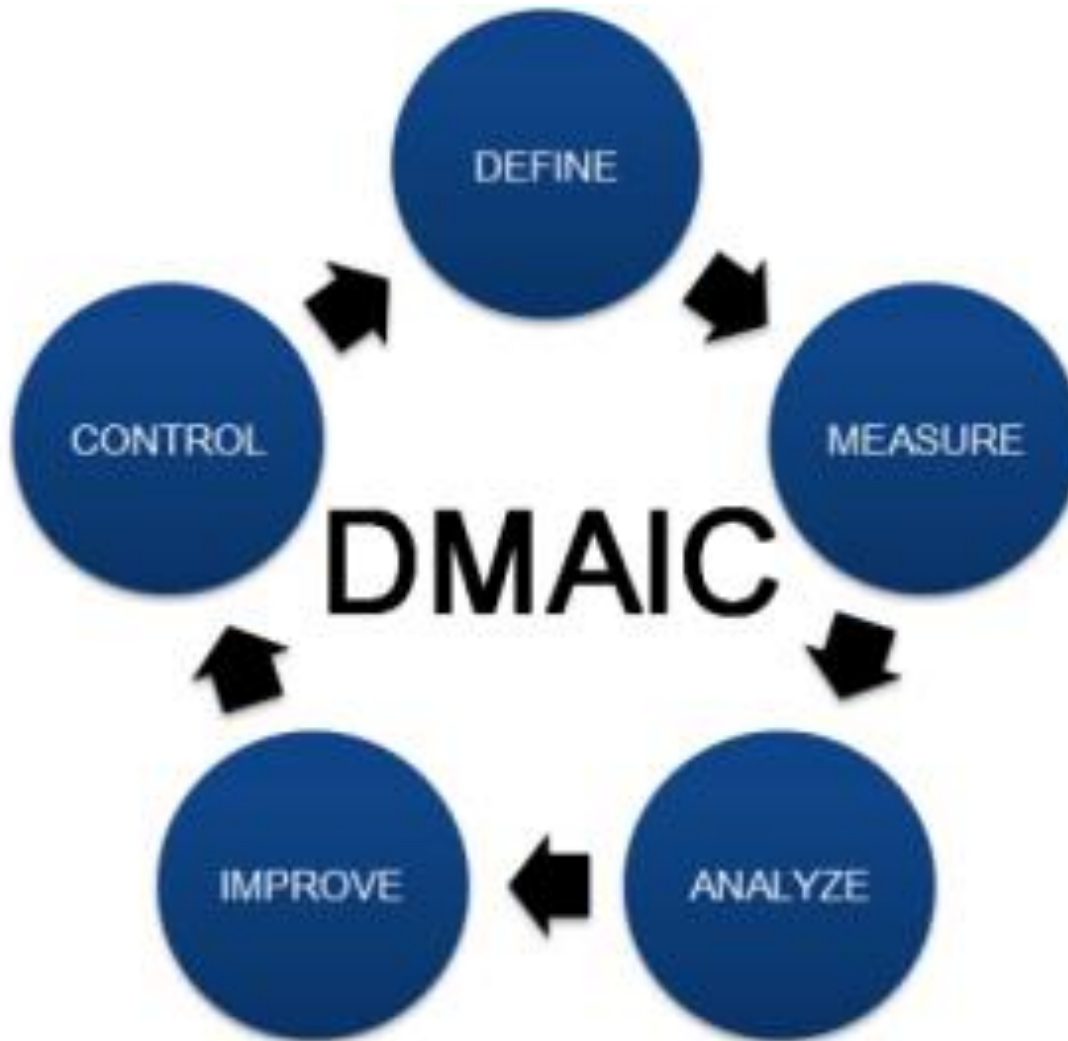
- We know what we want to review
- We have the data
- We can measure the ROI
- We can improve process on the front end
- And we can measure our impact
- And we can continue to monitor to make sure our new practices stay in place

Summary

- "Analytics" can feel like drinking from a firehose, focus on specific aspects of the business that you want to impact.

- Choose your specific areas carefully. Make sure:
  - They align with business interests
  - You have the ability to measure your impact
  - You can make an impact in the area

- If you understand what drives a KPI, you can improve it and deliver organizational value.

Questions?

Will Israel

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Thank you for your time and interest.