



HDMS Introduction for Segal Consultants (Internal)

November 2021



Market Landscape

Solutions for Health data analytics



Health Data & Management Solutions



Fully managed data environments to guide data-driven insights and personalized actions
for those who design the paths to better health.

Do more with data

Improve member / employee health
Evolve benefits strategically

Predict or prevent illness

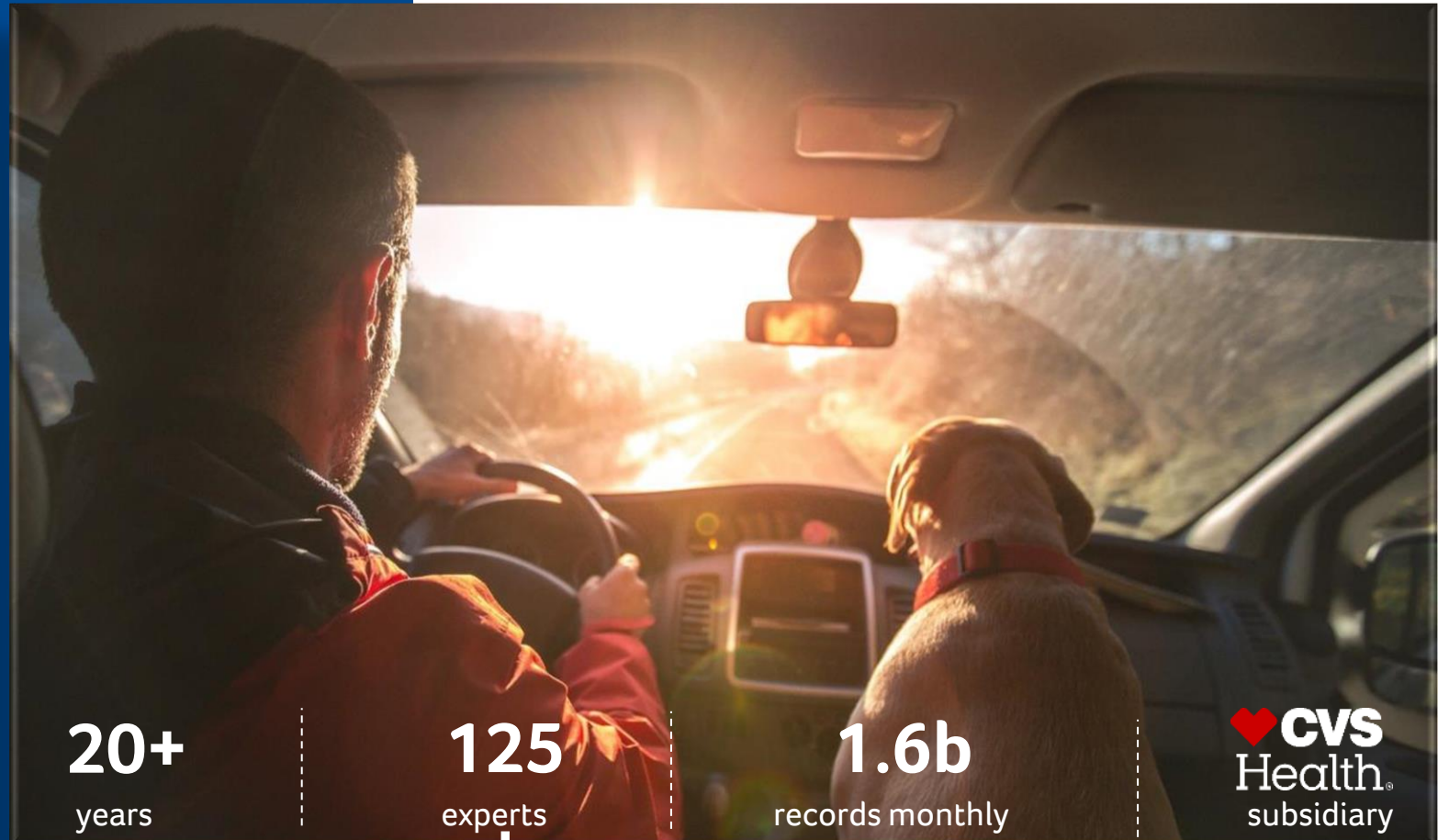
Manage costs and performance

Transform healthcare

Affordable | Convenient

Equitable | Engaging

for client's population



20+
years

125
experts

1.6b
records monthly

 **CVS**
Health[®]
subsidiary

HDMS Clients



Market dynamics

What's happening now?

- Health data is proliferating
- Health happens between medical appointments
- Mental health needs are accelerating
- Transformational shift to virtual care (e.g. telehealth) and digital engagement platforms
- Forecasting on changing trends
- Social determinants of health influence important

HDMS helps YOU help your clients:



Be data-driven



Do more with data



Predict and disrupt



Health Data Analytics Vendor Landscape

Most healthcare analytics vendors fall into these categories

Proven powerhouses – 20+ years

- ✓ Excellent analytics
- ✓ World-class security
- ✓ Experts in the space
- × Competing agendas
- × Questionable service
- × Complicated UI
- × How do you already meet my future needs?

New challengers – Less than five years

- ✓ Impressive UI
- ✓ Intuitive use
- ? Venture backed
- × Service Model, charge by hour
- × Lack of experience in the space
- × Difficulty with complex implementations
- × How do you already meet my future needs?

HDMS brings the best of both options to partners like Segal for your clients

- ✓ Excellent analytics
- ✓ World-class security
- ✓ Experts the space
Serving clients across the healthcare continuum for 20+ years

✓+ Financially stable as CVS subsidiary

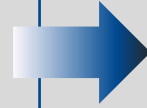
- ✓ Impressive UI for non-technical analysts
- ✓ Intuitive use
- ✓ Holistic service model

✓+ Adaptive technology built for customization and future evolution

Your clients want you to...

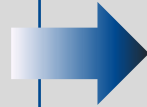
So HDMS technology is built to...

Make it easy to be
data-driven



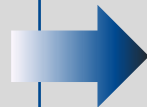
Respond to client health data
questions, usually in minutes
not days or weeks; ability to
dig deeper

Do more with data



Quickly bring in more
sources, create new analytic
content, easily manipulate
data for new value

Predict and disrupt



Anticipate benefit needs for
each client's employee
population; adapt quicker,
more strategically

**HDMS and
Segal working
together**

Ideal clients – who's ready?

Which clients value taking health analytics to the next level?

We have multiple health plans or partners



Guide clients on point solution performance and associated impacts

Do Members in this wellness | mental health | care management program have lower Rx costs than others with this condition?

We manage a Total Rewards strategy
(that includes health, financial, and well-being benefits)



Understand and manage population patterns

Which treatment approaches minimize worker's comp and disability impacts? Does 401K matching influence medical plan choices?

Healthcare is a top 3 spend for us



Help clients quantify bold changes

Should we move to value-based care models? How did the on-site clinic pilot program perform?

We are a data-driven culture



Provide clients context and transparency

Let's look at local benchmarks and member-level details. Let's compare risk scores with predictive analytics. We checked and SDOH does not appear to be a factor in this trend.

HDMS Support for Segal Consulting

Your HDMS team works behind the scenes



Data is ready – jump in!

Clients get your best work

- We bring you hot new ideas and analytic content from our market-leading clients, to share with yours
- We handle data issues so you can be strategic with clients

Sourcing new data – no headaches

- We handle data acquisition, processing and loading across multiple employer clients
- With experiences across 100s of data sources and 1000s data formats, we usually already solved the big problems

Smart and flexible data strategies

- Run individual client analytics AND look across your entire book of business.
- Our data engineering team accommodates new complex business requirements

Focus on data trust

- Our data stewards pre-check production data; avoid surprises
- Automated tests PLUS human quality checkpoints ensure a “Single source of truth”

When insights are the *beginning* of your work

You'll have *time* to use them

Design perceptively

- Affordable
- Convenient
- Engaging
- Equitable

Manage confidently

- Program optimization
- Total cost of care
- Comparative costs & outcomes

Anticipate correctly

- Predictive models
- Productivity impacts
- Diversity & Inclusion

Engage personally

- Gaps in care
- Rising risks
- Healthy lifestyles



Insights
drive better
health

— How HDMS helps *your* clients

Why do plan sponsors care?

- Bring your best self, everyday

Employees are an asset that require good care.

Wellness impacts job performance, retention, presenteeism. Employee physical, mental, financial well being need to be understood in harmony.

- Health care costs

Reducing unhealthy behaviors impacts a company's bottom line and improves employee productivity.

Analytics identify high risk populations and members. Employers track the performance and associated impacts of wellness and disease management programs and consumer-device usage.

- Responsible evolution

Value-based contracting? New benefits offerings?

Plan Sponsors need control and visibility over utilization and costs across health partners to effectively manage vendor and provider relationships.



Plan Sponsor Value

▶ Data-Driven Decisions

Informs actions to drive healthy behavior and outcomes that impact employee productivity and retention.

▶ Cost transparency and control

Dig down deeper to understand costs in value-based contracts and population health arrangements with payers and providers.

▶ Manage the future now

Provides insights into at-risk populations and patterns of care. Anticipate rising risk for future planning.

▶ Everything in one place

Visualizes costs drivers and trends, including network leakage and pharmacy utilization, across a connected health perspective.

▶ Champion for Members

Improve healthcare affordability and maximize the return on healthcare investment.

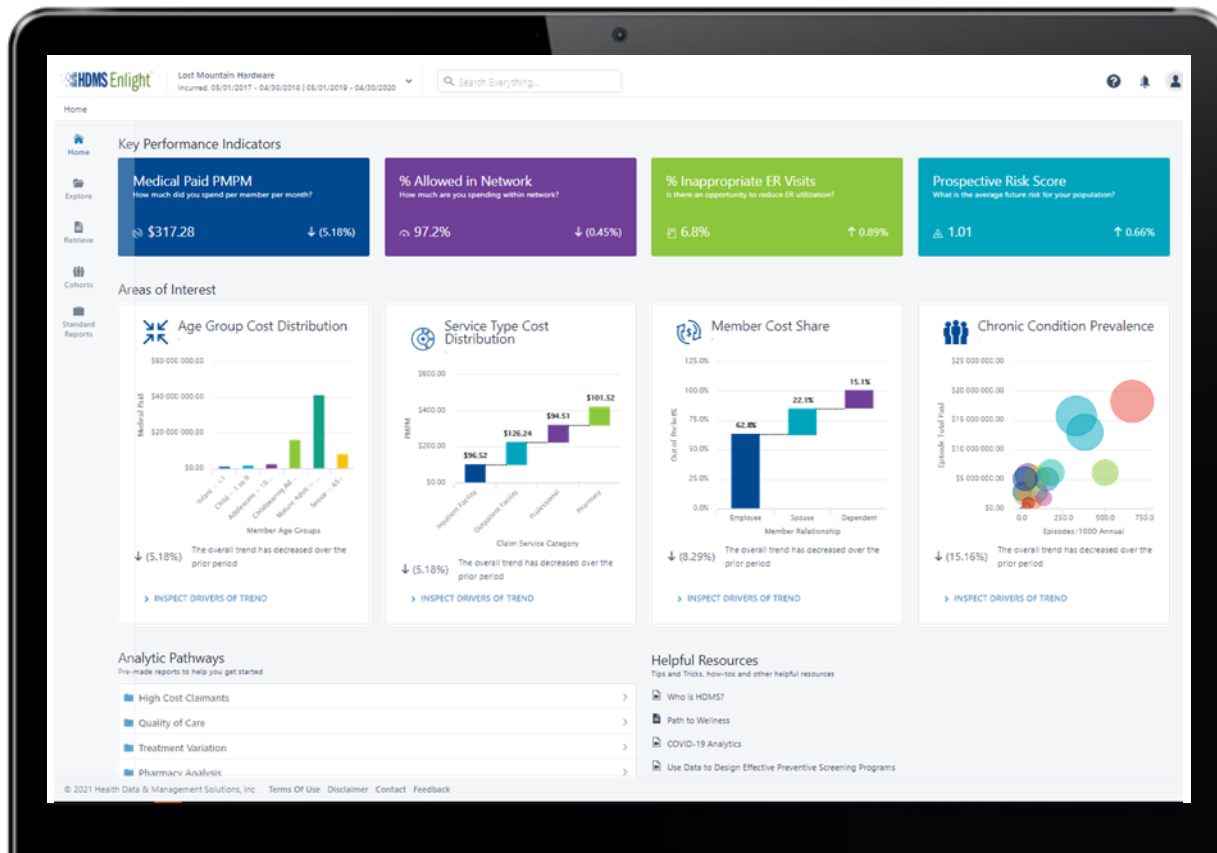


— HDMS Enlight



HDMS Enlight™

Self-service analytics provide easy access to interactive investigations of integrated health & wellbeing



Easy to use, powerful, secure, flexible

Actionable insights, immediate value

Overall book-of-business, roll-ups of similar entities, each individual company

Connected health processing, the data backbone

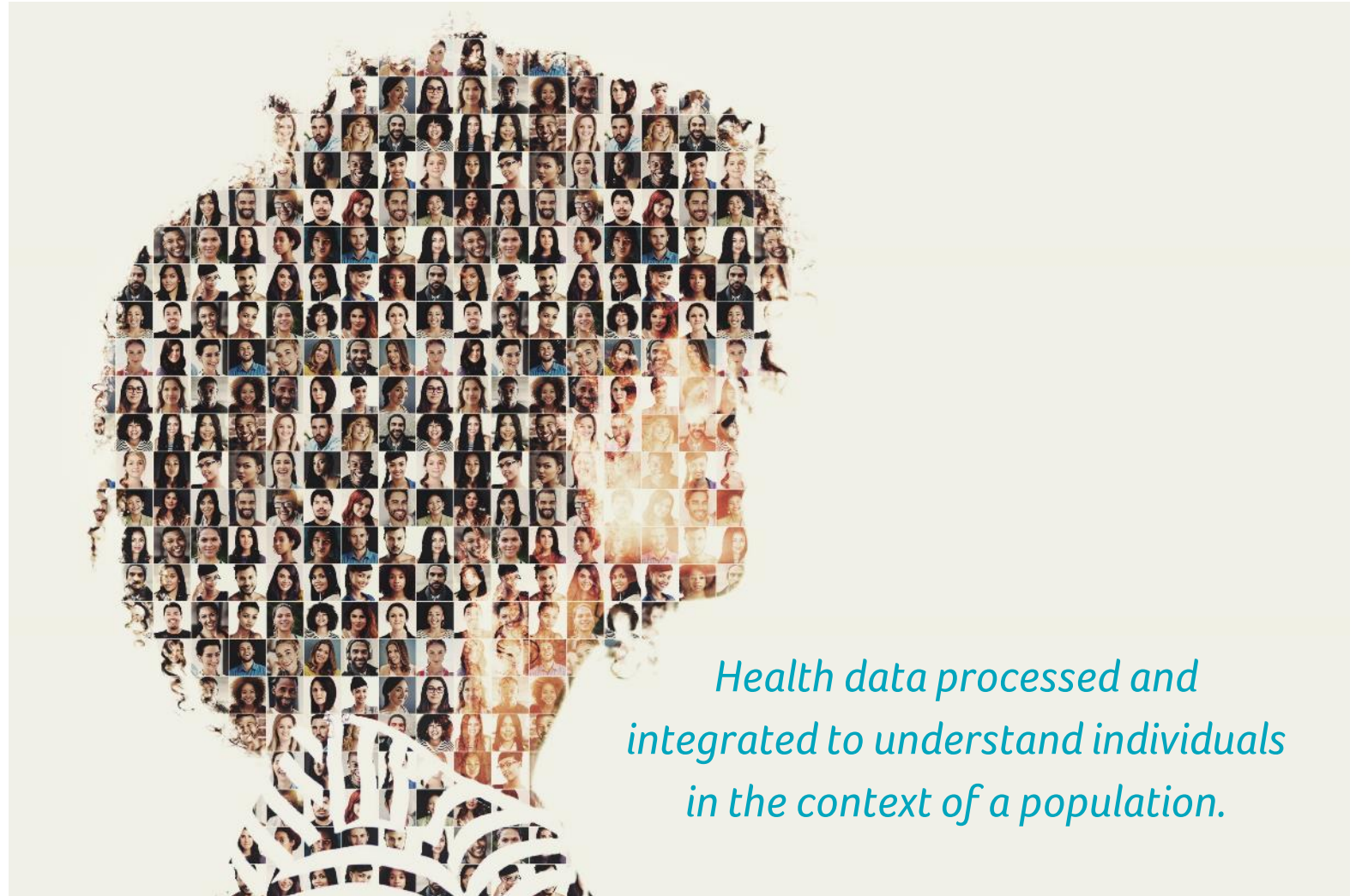
Source Data

- 1 Ingest & Aggregate
- 2 Normalize and standardize
- 3 Connect and relate
- 4 Enrich and expand
- 5 Assess and govern quality

Integrated insights.

What's your data telling you?

What are you going to do about it?



Health data processed and integrated to understand individuals in the context of a population.

Functions of HDMS Data Operations

The HDMS Data Operations team is the technical foundation for the development of your **trusted health, benefits and wellbeing data** warehouse.



Data Quality Defined

Timeliness – Production data released on a timely basis.

Completeness – Reconciliation to controls & reporting. Data is not missing.

Conformity – HDMS will confirm that incoming data layouts and fields meet expected specifications.

Consistency – Trend testing of record counts, financial amounts over time. Relationships between fields.

Accuracy – Check for valid values, data within acceptable threshold tolerance ranges.

Reasonability – Checks that the story your data tells is not only reasonable within the context of healthcare, but also makes sense within the context of your population.



Connected Health Model

- Optimizes data for discovery analytics
- Enhances standard dimensions and measures
- Creates consistency in standard (and custom) content
- Empowers risk management reporting and productivity analysis
- Allows reporting across several units of analysis
 - Member centric analysis
 - Provider centric analysis
 - Claims or event (procedure) based analysis
 - Episode based analysis
 - Admission based analysis
- Scales ETL and data processing



Data Types & Customization

Health Risk Assessment (HRA) Employee Assistance Program (EAP)
Biometric Screening Lab Lifestyle Management
Incentive Programs Smoking Cessation Onsite Clinic
Absence Disease Management FMLA
Disability (STD, LTD) Workers Compensation
Case Management Fitness Center

Vast experience
with **employee
benefits data**

Custom fields
are included
for all sources
of data

- Store Number
- Region
- Job Classification
- Union Code
- Expat Status
- Participation Indicator
- Exempt/Non-exempt indicator
- Pay Type (hourly/salary, FT, PT)
- Diversity Indicator
- Performance Score
- Over Max Amount
- Spousal Surcharge
- HRA Amount
- Travel Expenses
- Monthly Contribution

| Data enhancements | Methodologies |
|--|---|
| Episodes | <ul style="list-style-type: none"> • Episode Treatment Groups • Episode Risk Groups |
| Illness Burden/Severity | <ul style="list-style-type: none"> • Episode Treatment Groups • Episode Risk Groups • AHRQ: Prevention Quality Indicator • NYU: Avoidable ER visits • AH: Spectrum of Health • HealthPartners Total Cost of Care • HHS Hierarchical Condition Categories, HCCs |
| Clinical Quality and Related Guidelines | <ul style="list-style-type: none"> • HEDIS screening and selected procedures • Other National Standard guidelines (in addition to HEDIS) like CMS, PQA, AHRQ, Symmetry [via CareShield] • Readmissions including CMS all cause readmissions • Evidence Based Guidelines • Dartmouth Atlas Preference-sensitive conditions and procedures • Dartmouth Atlas Supply Sensitive Procedures • Low Value Care (JAMA) |
| Predictive Modeling | <ul style="list-style-type: none"> • Episode Treatment Groups • Episode Risk Groups • High-Cost Claimant analytics (HDMS) • Opioid Analytics (HDMS) |

Examples of Using HDMS Data Enhancements

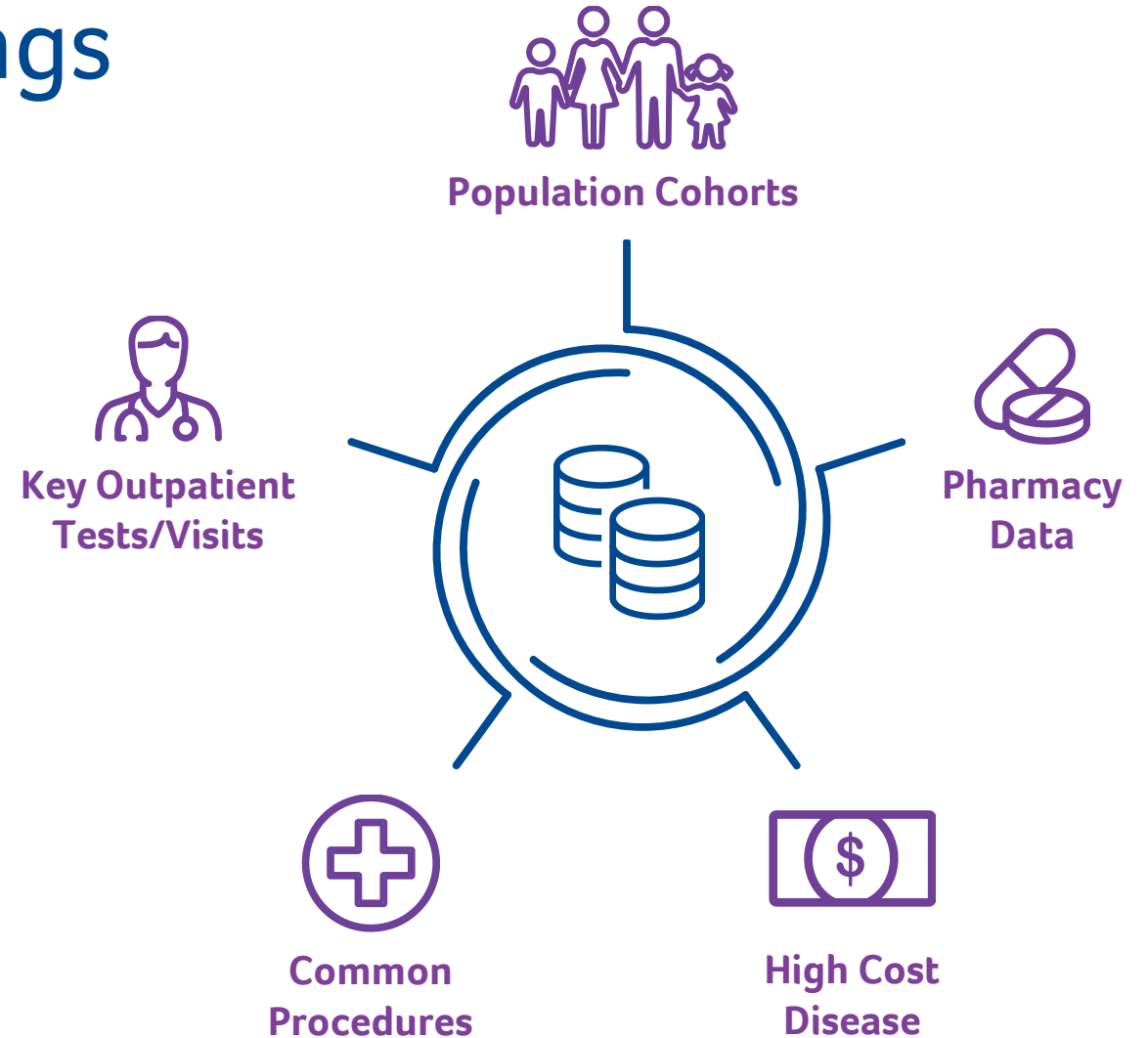
| Business Question | Methodologies |
|--|--|
| What is the disease prevalence for specific conditions like Diabetes or Asthma? | Episode Treatment Groups (ETGs) |
| “Which members have higher probability of being more resource intensive next year?” | Episode Risk Groups (ERGs) |
| What are my potentially preventable inpatient admissions? | AHRQ Prevention Quality Indicator (PQI) |
| Where does lack of access to primary/urgent care contribute to higher non-emergent ER use? | NYU ER Algorithm |
| Which inpatient facilities have high readmission rate? | CMS All Cause Readmissions |
| Where are the highest variations cost and utilization? | HealthPartners Total Cost of Care |
| Where are higher variations in use of inpatient care for specific surgical procedures? | Dartmouth Preference & Supply Sensitive Conditions |
| Which providers have higher rate of providing low value service? | Low Value Care |
| Who are my members with gaps for outreach and intervention? | CareShield Clinical Quality Guidelines |

HDMS Benchmark Offerings

42.5 Million Lives Included

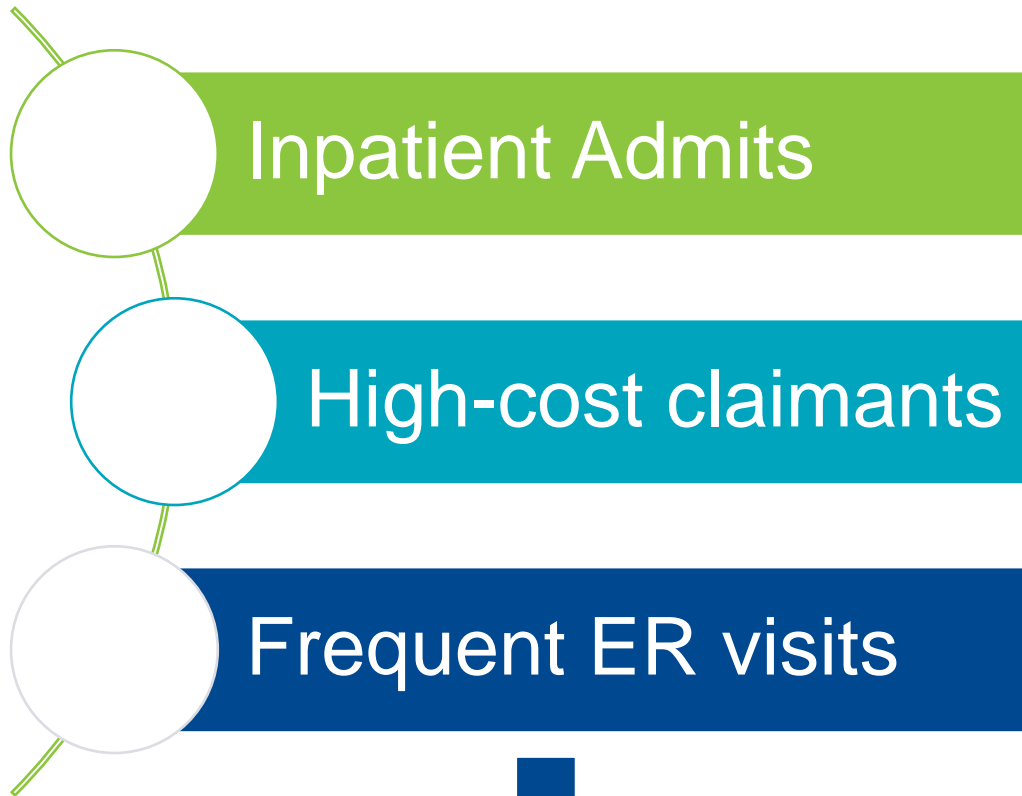
- IBM Market Scan (15M)
- HDMS employer BoB (5M)
- National – IQVIA (7.5M)
- Symmetry ETG/Careshield (15M)

Benchmark can be filtered by Product, Region, Industry and more



Relevant applications of Predictive Analytics

What can we control, influence, or help?



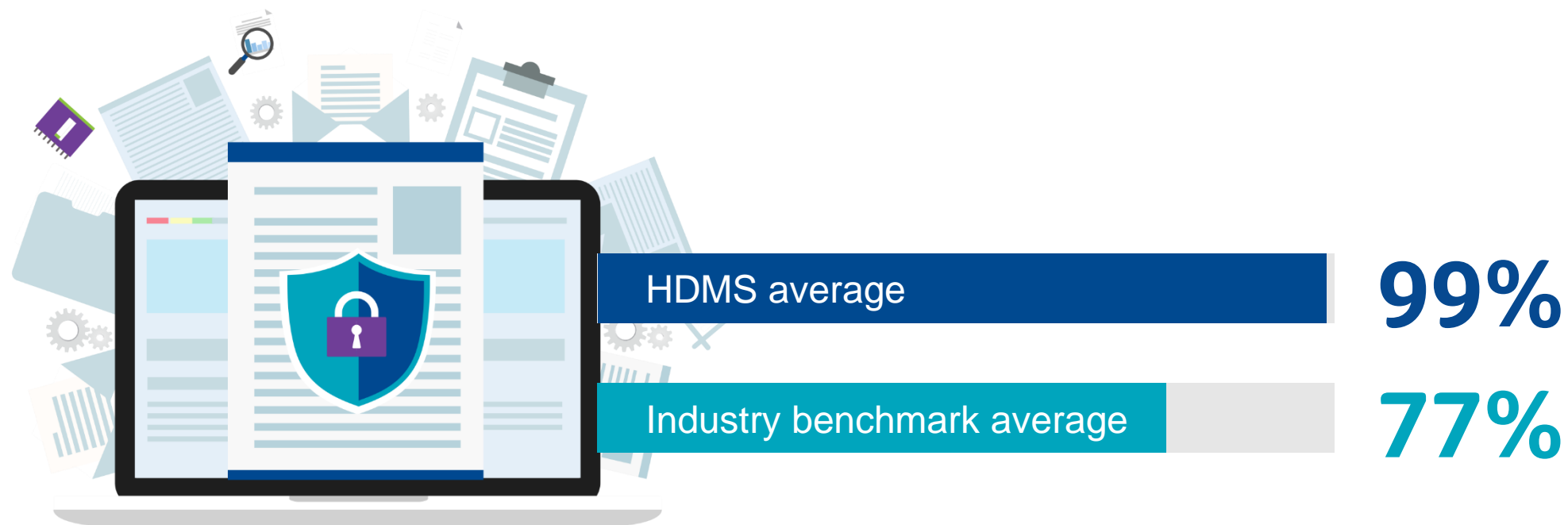
- ✓ Anticipate the probability of member/s ending up in one of these situations
- ✓ Based on patterns of past healthcare consumption experience

What are the actions and treatments we can offer to disrupt the predicted outcome?

— Security



Security and privacy done right!



HDMS consistently scores an average of 99% on [Security Scoreboard](#) – a third party security assessment.
*This is the highest possible score on this **award-winning real-time security monitoring platform**.*

World-class Data Security and Privacy program

Certifications / Audit

- Annual SSAE16 SOC II
- Internal Pen Testing & Static Code Scanning
- Third Party Pen Testing & Vulnerability Scanning
- Internal Security Auditing
- NIST 800-53 compliant CMS QECP – recertified in August 2017
- HIPAA Compliant



SecurityScorecard

Security Scorecard provides a daily analysis of the security posture of our organization, industry, competitors and Third Parties.



99

NETWORK SECURITY

Detecting insecure network settings



99

APPLICATION SECURITY

Detecting common website application vulnerabilities



99

DNS HEALTH

Detecting DNS insecure configurations and vulnerabilities



99

CUBIT SCORE

Proprietary algorithms checking for implementation of common security best practices



99

PATCHING CADENCE

Out of date company assets which may contain vulnerabilities or risks



99

HACKER CHATTER

Monitoring hacker sites for chatter about your company



99

ENDPOINT SECURITY

Measuring security level of employee workstations and mobile devices



99

INFORMATION LEAK

Potentially confidential company information which may have been inadvertently leaked



99

IP REPUTATION

Detecting suspicious activity, such as malware or spam, within your company network



99

SOCIAL ENGINEERING

Measuring company awareness to a social engineering or phishing attack

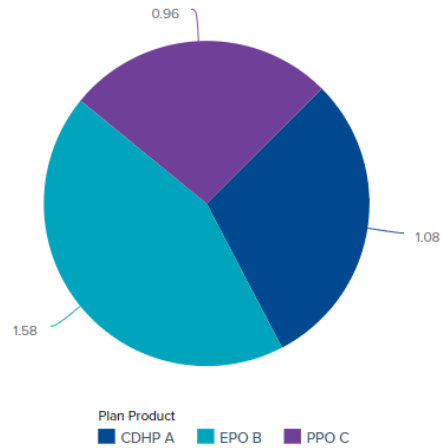
— Enlight Dashboard Examples

Executive Summary

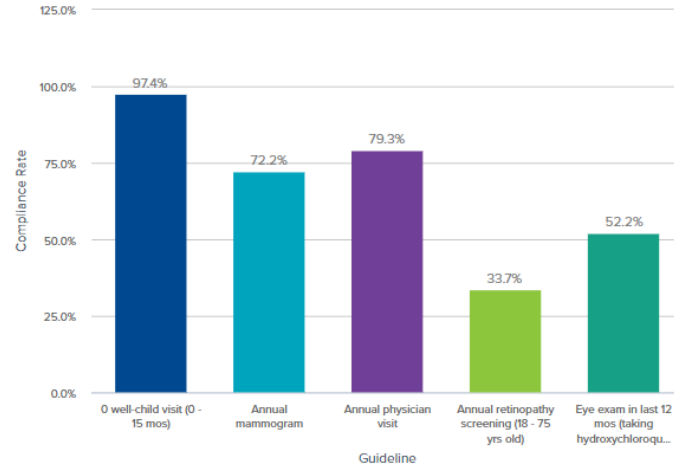
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Next Item: [Enrollment Summary](#) Jump To: Maintain Filters

How Are My Plans Performing?



Compliance Summary



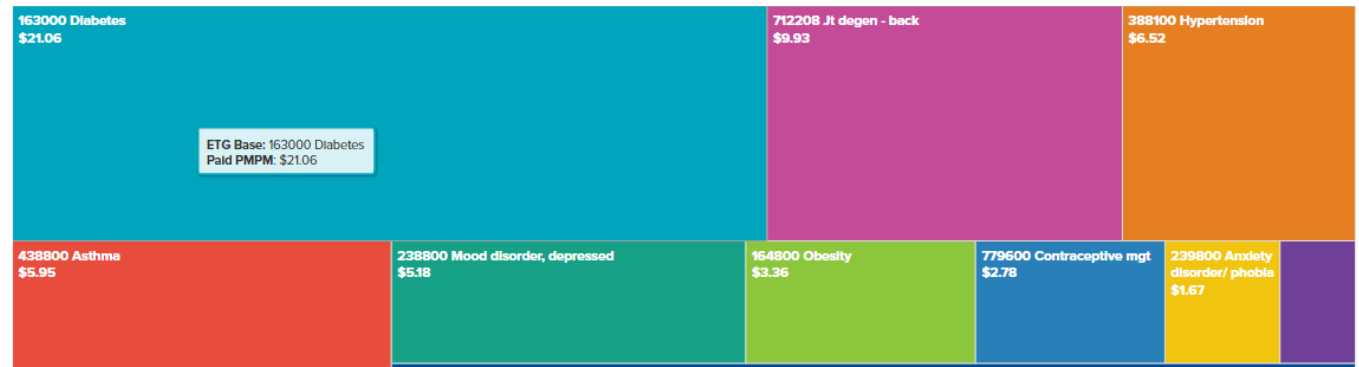
KPI Summary

| Reporting Period | May '17-Apr '18 | May '18-Apr '19 | May '19-Apr '20 | Summary | Trend |
|-----------------------|-----------------|-----------------|-----------------|----------|--------|
| Allowed PMPM | \$582.72 | \$565.28 | \$542.04 | \$562.97 | 3.1% |
| Deductible PMPM | \$37.29 | \$38.71 | \$38.05 | \$38.02 | (3.7%) |
| In-Network Services % | 82.6% | 86.5% | 87.1% | 85.4% | (4.5%) |
| Services/1000 | 27,538.7 | 26,794.1 | 26,184.2 | 26,826.3 | 2.8% |
| Days/1000 | 341.3 | 305.9 | 264.5 | 303.2 | 11.6% |
| Average Subscribers | 49,683 | 52,151 | 54,292 | 52,042 | (4.7%) |
| Average Contract Size | 194 | 1.91 | 1.88 | 1.91 | 1.9% |
| Average Age | 37.3 | 37.3 | 37.2 | 37.3 | (0.1%) |
| Retrospective Risk | 1.19 | 1.19 | 1.15 | 1.18 | 0.5% |
| Prospective Risk | 1.16 | 1.13 | 1.13 | 1.14 | 2.6% |

Claimant Banding Summary

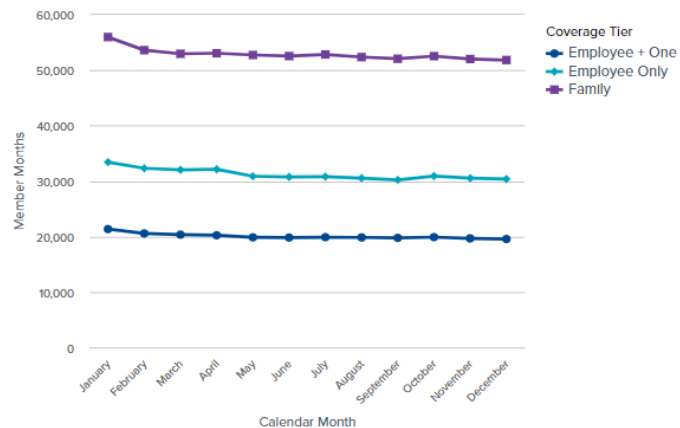
| Reporting Period | May '19-Apr '20 | | | |
|-----------------------|-----------------|-------------|---------------|-----------|
| Claimant Banding | Claimants | Claimants % | Allowed | Allowed % |
| \$0 - \$29,999 | 85,329 | 88% | \$196,605,857 | 29.8% |
| \$30,000 - \$49,999 | 4,632 | 5% | \$73,624,635 | 11.2% |
| \$50,000 - \$79,999 | 2,628 | 3% | \$65,391,178 | 9.9% |
| \$80,000 - \$99,999 | 957 | 1% | \$34,911,275 | 5.3% |
| \$100,000 and greater | 3,054 | 3% | \$289,013,492 | 43.8% |
| Summary | 96,600 | 100% | \$659,546,437 | 100.0% |

Top 10 Chronic Conditions Summary

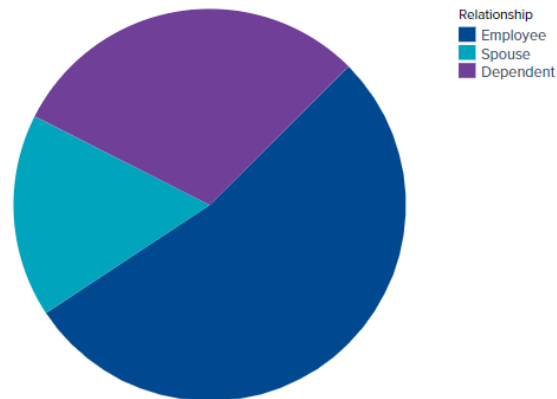


Enrollment Summary

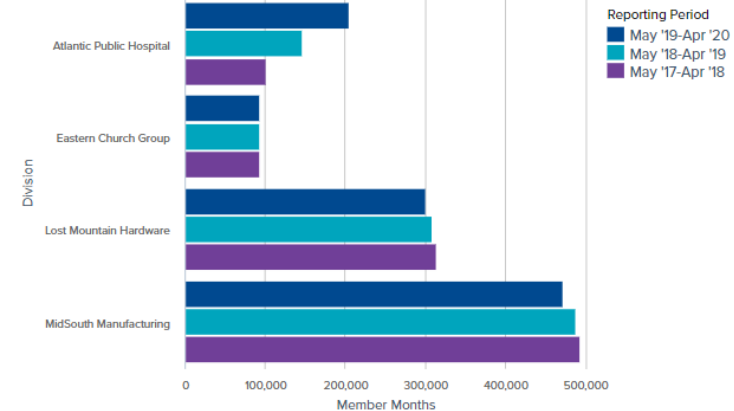
Enrollment by Coverage Tier



Enrollment by Plan Relationship



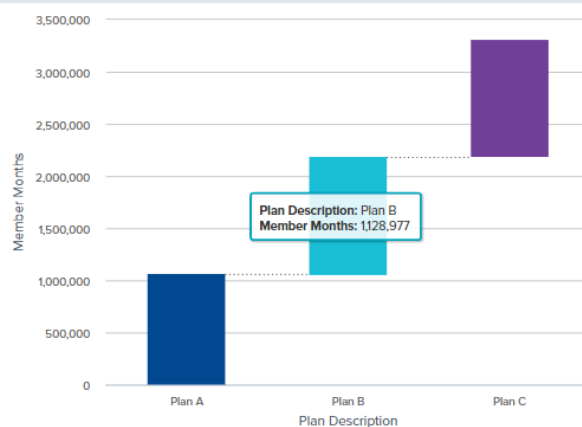
Enrollment by Division



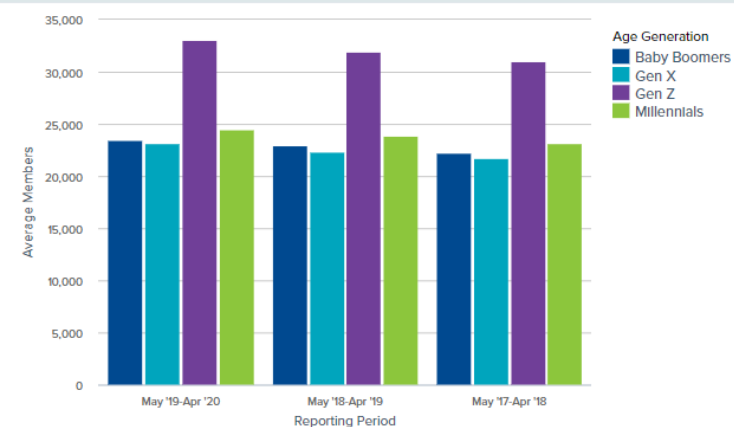
Enrollment by Benefit

| Reporting Period | May '19-Apr '20 | May '18-Apr '19 | May '17-Apr '18 | Trend |
|------------------------------|-----------------|-----------------|-----------------|-------|
| Average Members | 104,182 | 101,129 | 98,176 | 3.0% |
| Average Subscribers | 55,450 | 53,044 | 50,540 | 4.5% |
| Average Medical Members | 93,170 | 90,126 | 87,167 | 3.4% |
| Average Medical Subscribers | 49,026 | 46,569 | 44,296 | 5.3% |
| Average Pharmacy Members | 99,651 | 97,094 | 94,214 | 2.6% |
| Average Pharmacy Subscribers | 53,770 | 51,681 | 49,237 | 4.0% |
| Average Dental Members | 43,813 | 43,588 | 42,970 | 0.5% |
| Average Dental Subscribers | 18,346 | 17,847 | 17,281 | 2.8% |

Enrollment by Plan

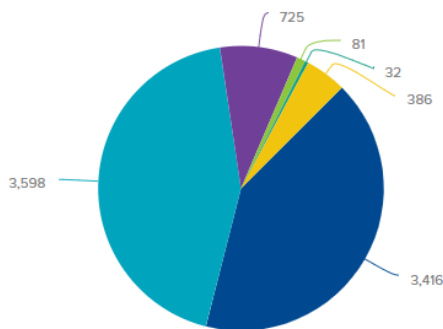


Enrollment by Custom Age Band



Methodology: NYU ER Algorithm

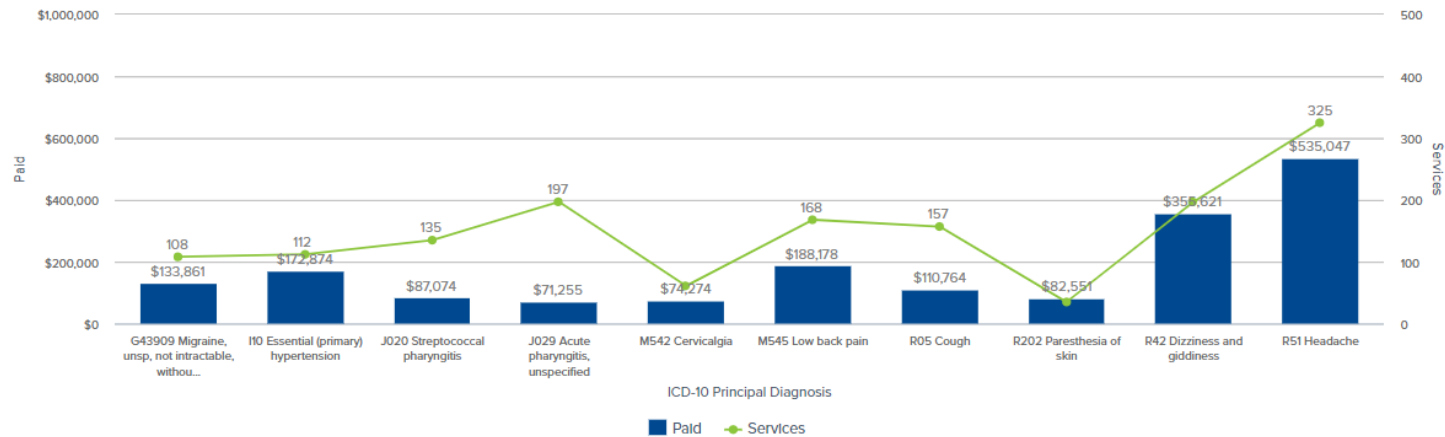
ER Visits: Summary



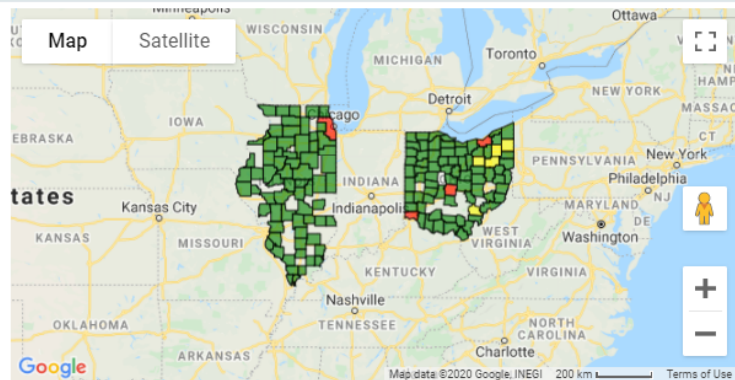
NYU Emergent Status

- Non-Emergent
- Primary Care Appropriate
- Preventable / Avoidable
- Alcohol Abuse
- Drug Abuse
- Behavioral Health

Principal Dx: Summary



ER Visits: By Geography



Services: 1-8 9-15 16-23

Multiple ER Visits: Member Detail

| Encrypted Member ID | Provider Name | Relationship | Plan Description | Services | Billed | Allowed | Paid | Deductible | Copayment |
|---------------------|---------------------------------|--------------|------------------|----------|-----------|----------|----------|------------|-----------|
| GOOXec9tCV | MELROSE PARK HEALTH CARE CENTER | Employee | Plan B | 9 | \$87,567 | \$57,768 | \$57,768 | \$0 | \$0 |
| | PLAINFIELD HEALTH CENTER | Employee | Plan B | 6 | \$96,548 | \$62,756 | \$60,080 | \$2,676 | \$0 |
| dNONF5pdFp5NdN | CLEVELAND HEIGHTS HOSPITAL | Spouse | Plan B | 14 | \$40,147 | \$20,350 | \$17,808 | \$1,449 | \$600 |
| y8ELEQhQLQA | VERNON HILLS GENERAL HOSPITAL | Employee | Plan A | 6 | \$24,936 | \$13,715 | \$12,323 | \$0 | \$150 |
| | FREEPORT HOSPITAL | Employee | Plan A | 5 | \$64,410 | \$15,648 | \$15,648 | \$0 | \$0 |
| | ILLINOIS HEALTH CENTER | Employee | Plan A | 3 | \$12,250 | \$4,987 | \$4,873 | \$0 | \$114 |
| 1JPIeRIqq3R | NAPERVILLE CARE CENTER | Employee | Plan C | 13 | \$61,701 | \$44,386 | \$41,024 | \$2,022 | \$0 |
| 6A699ymq96N | Sanchez, Gregory X. | Employee | Plan A | 8 | \$67,830 | \$35,783 | \$32,807 | \$273 | \$0 |
| HHwFuFF9uF9 | PLAINFIELD GENERAL HOSPITAL | Employee | Plan C | 5 | \$20,540 | \$7,548 | \$7,548 | \$0 | \$0 |
| | Edwards, Harold F. | Employee | Plan C | 3 | \$6,331 | \$4,359 | \$4,359 | \$0 | \$0 |
| QFw0uu93F9HHu0 | SPRINGFIELD HEALTH CARE CENTER | Employee | Plan B | 8 | \$126,208 | \$37,793 | \$28,750 | \$0 | \$9,044 |
| 9wKwbTMbhtvdh | PARMA COMMUNITY HOSPITAL | Employee | Plan A | 7 | \$26,038 | \$3,248 | \$2,401 | \$0 | \$847 |
| FFxF9xbl9cxJb9 | KETTERING CARE CENTER | Employee | Plan A | 4 | \$40,127 | \$8,735 | \$8,735 | \$0 | \$0 |

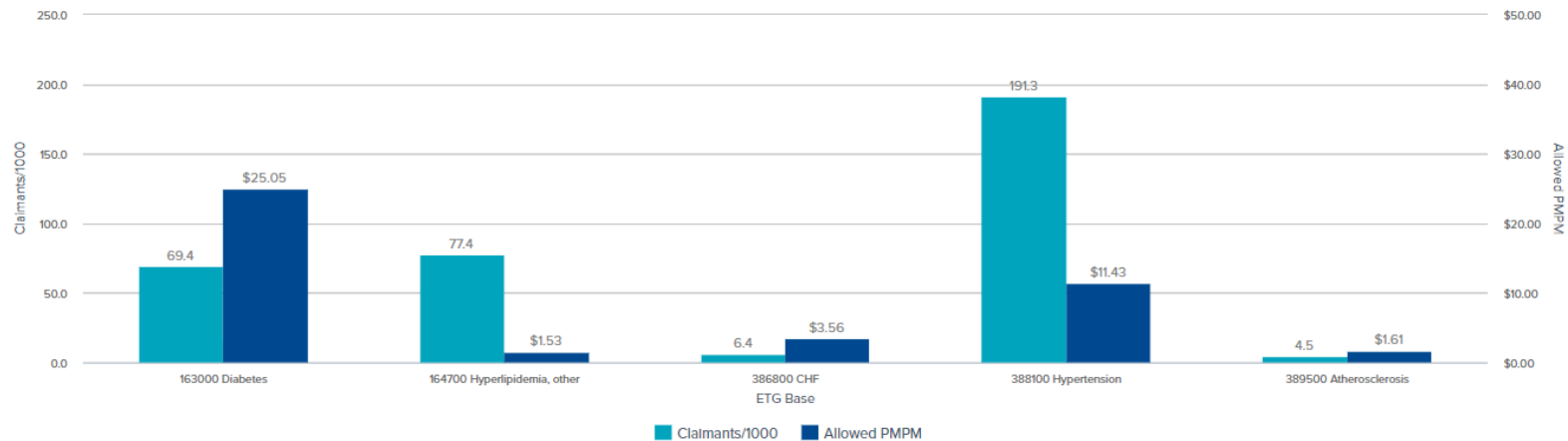
What about the outliers?

Rare Diseases

8
Total Claimants

\$438,803
Total Allowed

Prevalence & Cost



Benchmark Comparison

| Reporting Period | May '19-Apr '20 | | | | | | May '18-Apr '19 | | | | | |
|------------------------------|-----------------|----------------|-------------------------|----------------|-----------------------|----------------|-----------------|----------------|-------------------------|----------------|-----------------------|----------------|
| | Primary | | MarketScan ETG Severity | | % Variance MarketScan | | Primary | | MarketScan ETG Severity | | % Variance MarketScan | |
| | ETG Base | Claimants/1000 | Allowed PMPM | Claimants/1000 | Allowed PMPM | Claimants/1000 | Allowed PMPM | Claimants/1000 | Allowed PMPM | Claimants/1000 | Allowed PMPM | Claimants/1000 |
| 163000 Diabetes | 69.4 | \$25.05 | 44.0 | \$10.07 | 57.65% | 148.85% | 70.4 | \$24.51 | 58.3 | \$19.18 | 20.91% | 27.79% |
| 164700 Hyperlipidemia, other | 77.4 | \$1.53 | 60.0 | \$0.97 | 29.00% | 57.45% | 73.2 | \$1.59 | 73.1 | \$1.52 | 0.23% | 4.78% |
| 386800 CHF | 6.4 | \$3.56 | 2.1 | \$0.74 | 201.70% | 382.35% | 6.5 | \$3.98 | 2.9 | \$1.37 | 128.52% | 190.07% |
| 388100 Hypertension | 191.3 | \$11.43 | 116.9 | \$4.53 | 63.70% | 152.06% | 196.9 | \$12.68 | 153.8 | \$8.29 | 28.01% | 52.94% |
| 389500 Atherosclerosis | 4.5 | \$1.61 | 2.0 | \$0.84 | 128.30% | 91.61% | 4.6 | \$2.23 | 2.5 | \$1.32 | 82.26% | 69.01% |
| Summary | 2417 | \$43.19 | 169.8 | \$19.47 | 42.36% | 121.86% | 245.2 | \$44.99 | 212.8 | \$34.93 | 15.22% | 28.80% |