

Accountable Treatment and Outcome Organization (ATOO's)

Optum PXPXP for Life Sciences

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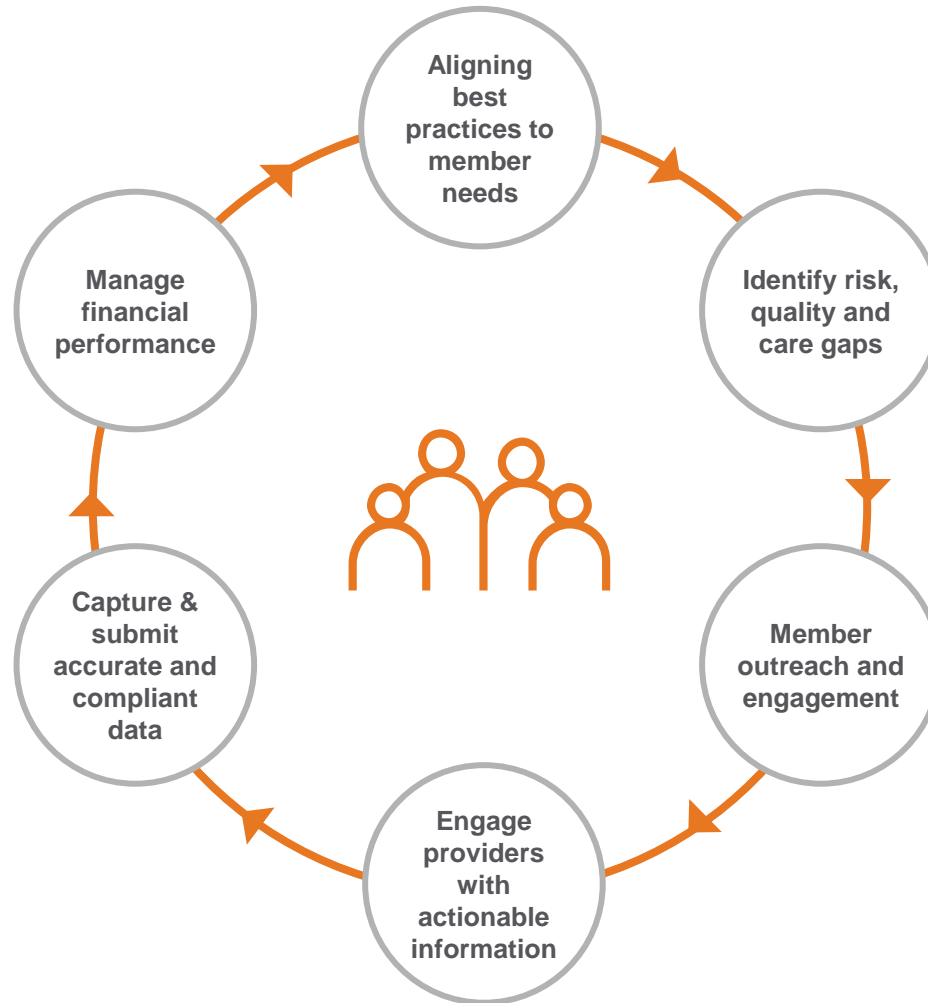


*The search for static security — in the law and elsewhere — is misguided. The fact is **security can only be achieved through constant change, adapting old ideas that have outlived their usefulness to current facts.***

– Sir William Osler

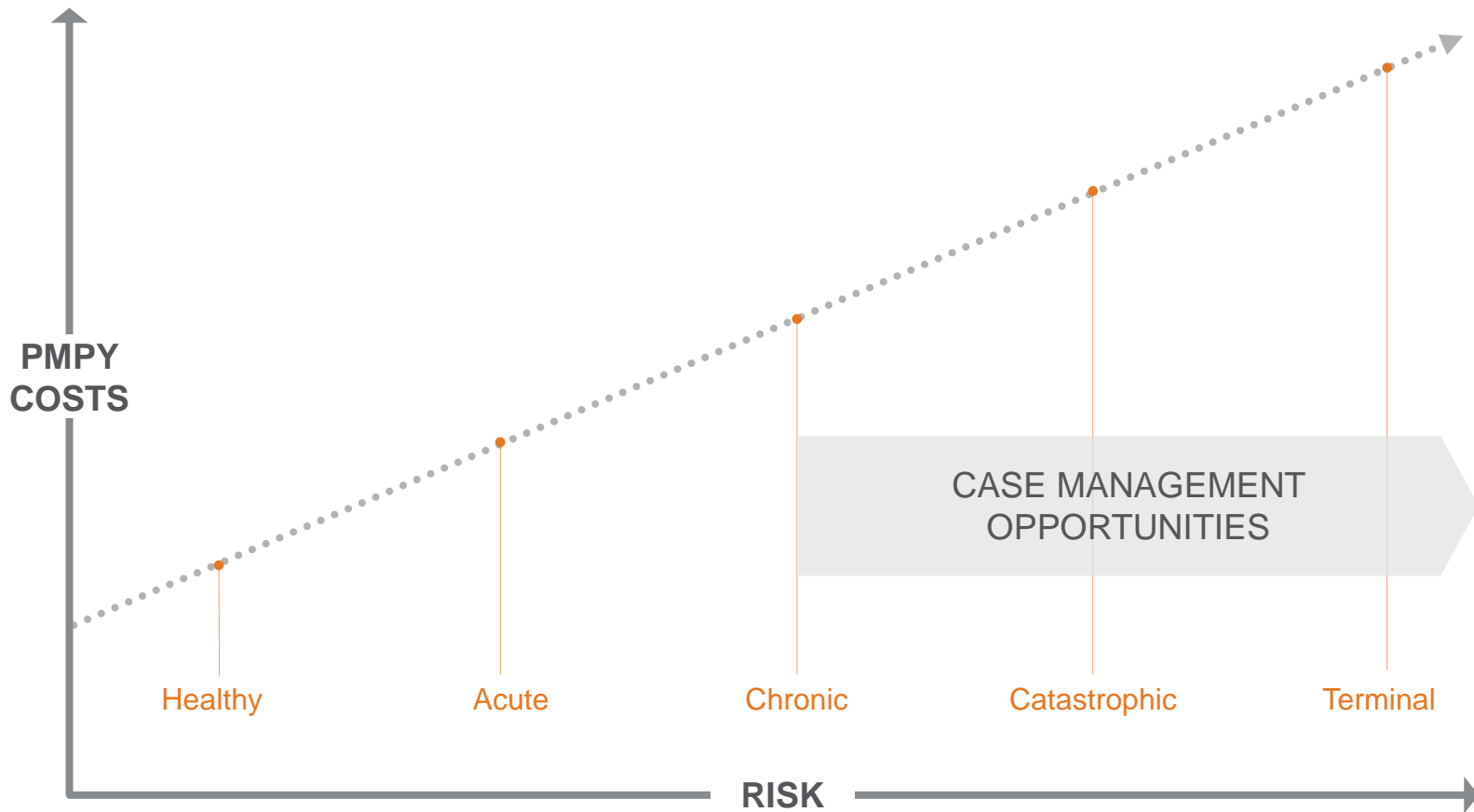
Population Health Management:

Systematic and integrated approach to improving member health



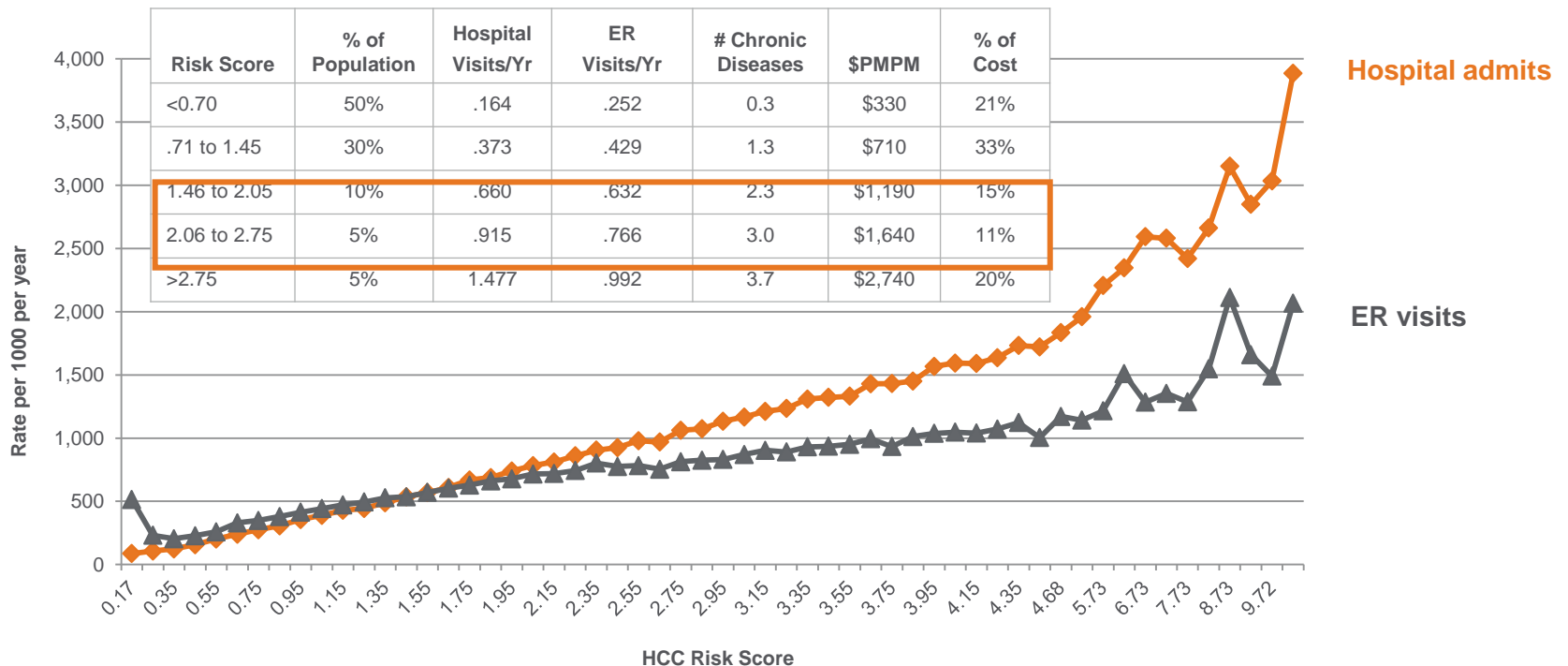
Optum approach

Mutually exclusive segmented approach to the HP Population using a Health Continuum Model with associated PMPY costs



Medicare eligible consumers as a population

- Consider the unique demographics of your plan population
- 10% of the population averages at least one hospital visit per year and accounts for 30% of the spend



Source: Nationwide Medicare 5% Sample

Optum approach – patient attributes used in modeling

- Conditions and comorbidities – both physical and behavioral
- Relative risk for predicted future cost and use
 - Overall cost of care including risk model
 - Probability of an IP stay
- Gaps in care relative to evidence-based medicine
- Strength of member-provider relationship
- Prior use of acute care, including inpatient and ER

Health continuum categories

| Category | Criteria |
|---|--|
| 1: Healthy | Low risk, without Chronic dx, gaps, ER/IP (last 12 mos). |
| 2: Healthy: Acute (IP or ER) | Without Chronic dx, with 1+ ER/IP – e.g. NICU, High Risk Pregnancy, Fertility Treatment |
| 3: No Chronics: Close Gaps/Reduce Risk | Without Chronic dx (all others), Some gaps or moderate risk |
| 4a: Chronic Big 5: Stable | Diabetes, CHF, CAD, COPD/Asthma , moderate risk, limited gaps, without ER/IP |
| 4b: Behavioral Health Only: Stable | BH, without other chronic conditions, moderate risk, limited gaps, without ER/IP |
| 4c: Chronic Other: Stable | Chronic dx (excluding Big 5), moderate risk, limited gaps, without ER/IP |
| 5a: Chronic Big 5: Interventional | Diabetes, CHF, CAD, COPD, Asthma, <u>with</u> higher risk or gaps or ER/IP |
| 5b: BH Only: Interventional | BH dx only, with gaps or ER/IP or higher risk |
| 5c: Chronic Other: Interventional | Chronic dx (excluding Big 5), with gaps or ER/IP or higher risk |

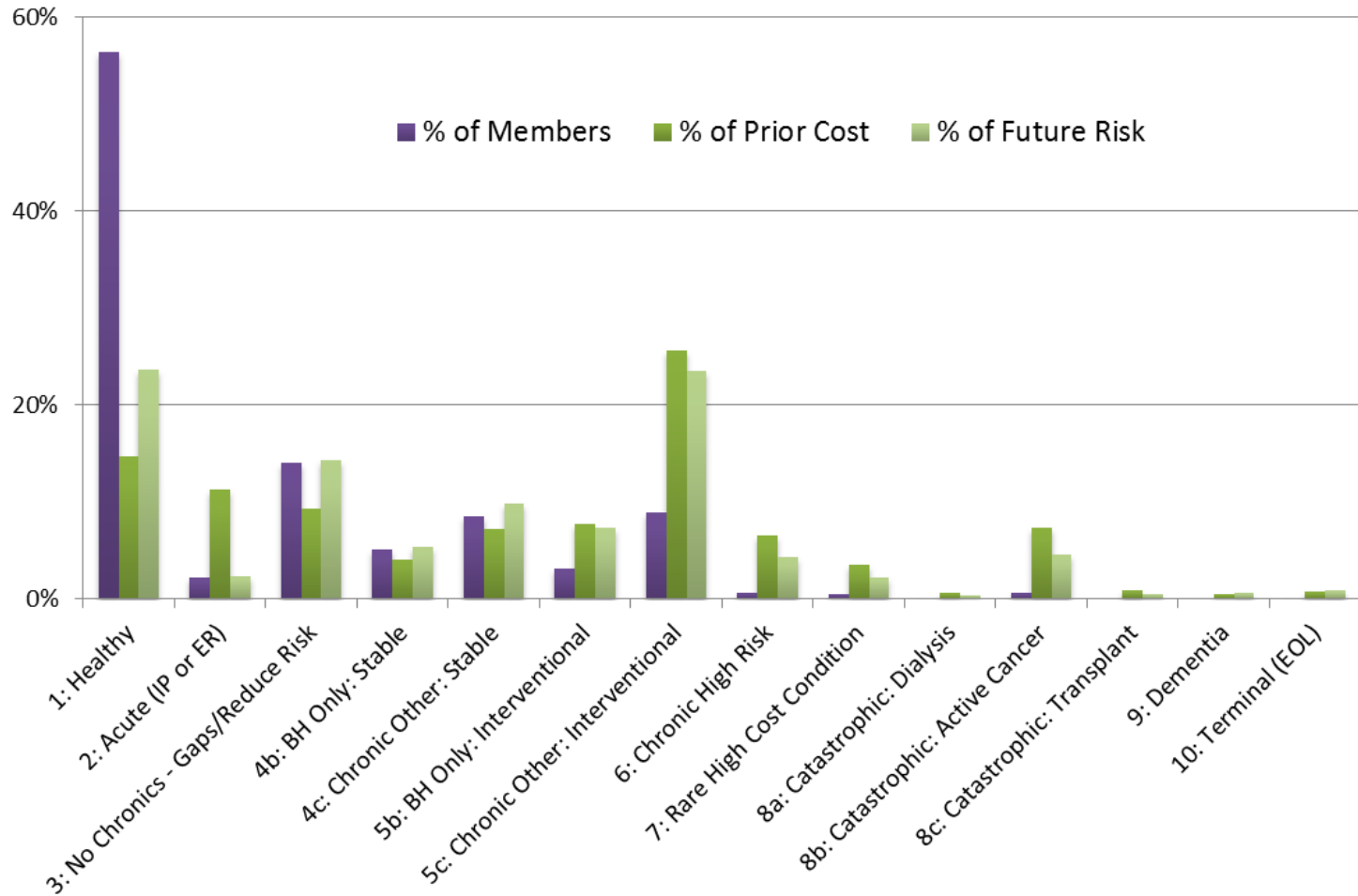
Health continuum categories

| Category | Criteria |
|--|--|
| 6: Chronic High Risk | Significant risk: Cost risk >15 (seniors), >10 (adult/peds) <u>OR</u> IP probability risk >50% or PRG risk >10 |
| 7: Rare High Cost Condition | CF, MS, ALS, Gaucher's, Parkinson's, Myasthenia Gravis, RA, Lupus, Sickle Cell, Hemophilia, Dermatomyositis, Polymyositis, Scleroderma |
| 8a: Catastrophic: Active Cancer | Cancer with active treatment (chemo, radiation, etc) |
| 8b: Catastrophic: Transplant | Solid organ and soft tissue |
| 8c: Catastrophic: Dialysis | Hemo- or peritoneal dialysis |
| 9: Dementia | Dementia |
| 10: Terminal (EOL) | Hospice or metastatic cancer |

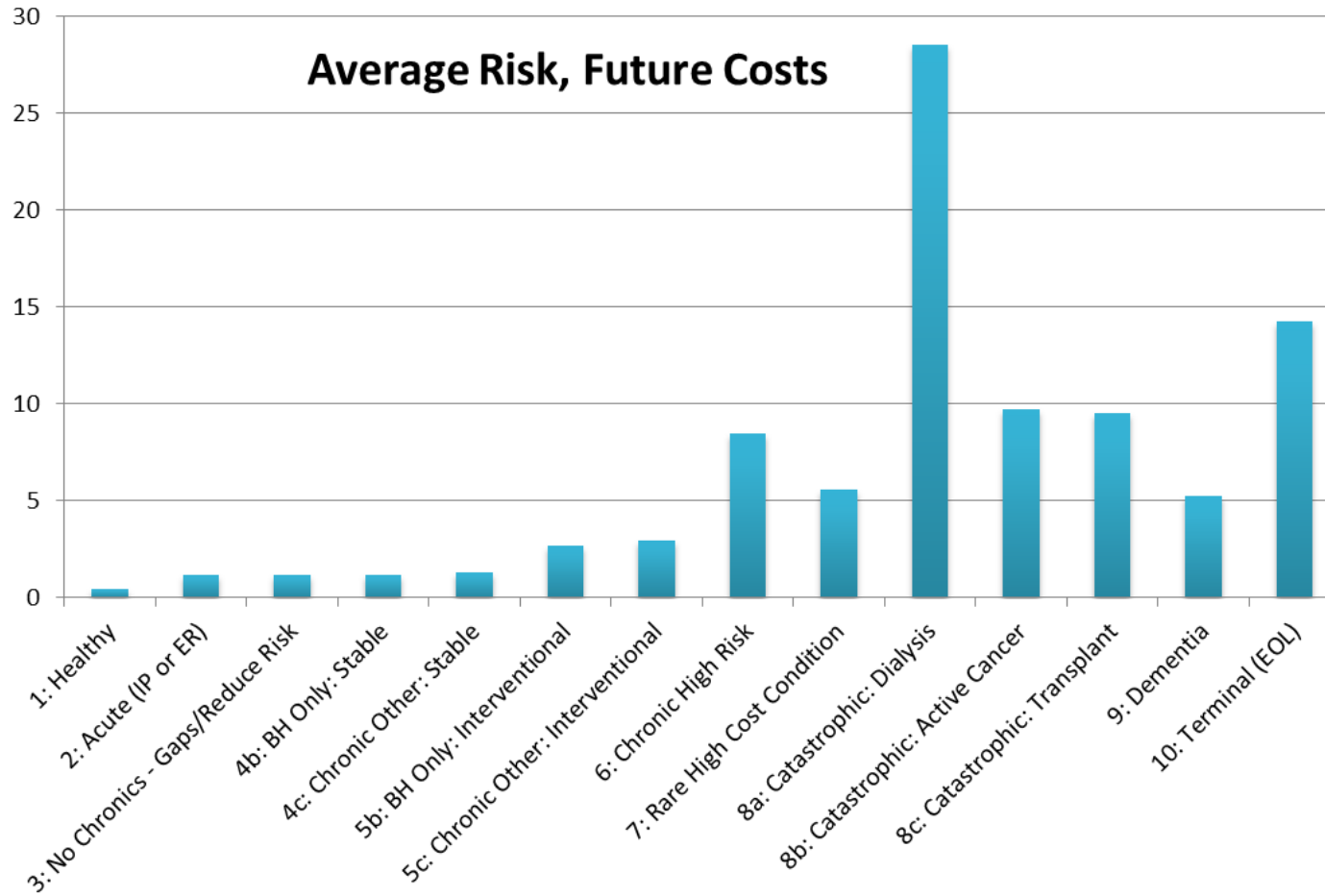
Member segmentation detail (Big 5 excluded)

| Health Continuum Category | Member Count | % of Members | Prior Cost Total (mills) | Prior Cost % | Prior Cost PMPY | Avg Risk, Costs | Avg Risk, Inpt |
|-----------------------------------|------------------|---------------|--------------------------|---------------|-----------------|-----------------|----------------|
| 1: Healthy | 742,278 | 56.4% | \$ 640.2 | 14.7% | \$ 862 | 0.47 | 1.7% |
| 2: Acute (IP or ER) | 29,510 | 2.2% | 490.5 | 11.3% | 16,621 | 1.15 | 2.9% |
| 3: No Chronic - Gaps/Reduce Risk | 183,779 | 14.0% | 404.9 | 9.3% | 2,203 | 1.15 | 2.9% |
| 4b: BH Only: Stable | 67,131 | 5.1% | 176.2 | 4.0% | 2,624 | 1.17 | 3.0% |
| 4c: Chronic Other: Stable | 111,297 | 8.5% | 313.8 | 7.2% | 2,820 | 1.31 | 3.5% |
| 5b: BH Only: Interventional | 40,211 | 3.1% | 336.9 | 7.7% | 8,379 | 2.69 | 7.2% |
| 5c: Chronic Other: Interventional | 116,956 | 8.9% | 1,114.4 | 25.6% | 9,528 | 2.96 | 7.6% |
| 6: Chronic High Risk | 7,618 | 0.6% | 281.3 | 6.5% | 36,928 | 8.47 | 23.4% |
| 7: Rare High Cost Condition | 5,953 | 0.5% | 150.7 | 3.5% | 25,317 | 5.58 | 10.5% |
| 8a: Catastrophic: Dialysis | 214 | 0.0% | 27.1 | 0.6% | 126,654 | 28.53 | 34.0% |
| 8b: Catastrophic: Active Cancer | 6969 | 0.6% | 322.1 | 7.4% | 46,224 | 9.71 | 12.7% |
| 8c: Catastrophic: Transplant | 830 | 0.1% | 41.0 | 0.9% | 49,449 | 9.52 | 17.2% |
| 9: Dementia | 1797 | 0.1% | 22.6 | 0.5% | 12,584 | 5.23 | 16.0% |
| 10: Terminal (EOL) | 981 | 0.1% | 36.3 | 0.8% | 36,993 | 14.26 | 20.3% |
| Grand Total | 1,315,524 | 100.0% | \$4,358.0 | 100.0% | \$3,313 | 1.12 | 3.1% |

Member segmentation detail (Big 5 excluded)



Member segmentation detail (Big 5 excluded)



Summary of recommendations for impactable members

(mutually exclusive hierarchy)

| | Total Member Count | Total Prior Costs (mills) | PMPY |
|---|--------------------|---------------------------|-----------------|
| a: Pre-dialysis | 504 | \$ 7.4 | \$14,629 |
| b: Drug safety | 6,167 | 53.4 | 8,656 |
| c: High ER Use (5+ ER visits) | 1,327 | 64.8 | 48,794 |
| d: Moderate ER and Limited/No Provider Relationship | 1,269 | 11.2 | 8,826 |
| e: High Medication Adherence Issues (3+ gaps) | 890 | 7.8 | 8,798 |
| f: Moderate Med Adherence Issues and Limited/No Provider Relationship | 633 | 1.0 | 1,622 |
| g: Multiple Chronic Conditions, including BH | 116 | 3.3 | 28,588 |
| h: Emerging Cost: Future Cost \$25,000+ higher than Prior Cost | 640 | 11.4 | 17,849 |
| i: New Transplants in last 12 mos | 66 | 21.9 | 36,714 |
| j: Terminal (EOL) – Metastatic Cancer and advanced age | 279 | 7.4 | 26,562 |
| Total | 11,891 | \$ 189.6 | \$15,945 |

b: Drug safety

Rationale/Potential Impact: Represent significant interactions that should be addressed by pharmacist (PBM does not have lab data and majority of the triggers)

| | Member Count | Total Prior Cost | Prior PMPY |
|---|--------------|---------------------|----------------|
| 2: Acute (IP or ER) | 73 | \$1,514,091 | \$20,741 |
| 3: No Chronics - Close Gaps/Reduce Risk | 468 | 1,533,844 | 3,277 |
| 5b: BH Only: Interventional | 1,642 | 9,161,533 | 5,579 |
| 5c: Chronic Other: Interventional | 3,519 | 29,819,939 | 8,474 |
| 6: Chronic High Risk | 310 | 8,263,100 | 26,655 |
| 7: Rare High Cost Condition | 155 | 3,088,449 | 19,925 |
| Grand Total | 6,167 | \$53,380,956 | \$8,656 |

Findings:

- Widespread distribution across groups with lower risk members having higher propensity of contraindicated med regimens likely due to less coordination of care
- Majority of the triggers are High Risk Meds in the Elderly that are associated with longer half lives and high potential for falls.
- Other triggers are primarily associated with lab values that might not be realized by all treating providers

b: Drug safety – interventions and prioritization

[\(link\)](#)

| | Member Count | Total Prior Cost | Prior PMPY |
|---|--------------|---------------------|----------------|
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Interventions:

- For High Risk meds in Elderly, consider integrating CM with Formulary management (prior auth/higher tiering/non-formulary); in some circumstances these are essential in care
- Determine # of prescribing providers for each patient
 - If multiple, coordinate drug regimen across providers – may not be aware of lab results
- Discuss interactions with primary prescriber(s)
 - Determine if substitutions or discontinuation is plausible
- Monitor lab tests – Insure labs are being done? Results still within normal range?

Prioritization:

- Chronic High Risk group and then IP stay probability

e: High medication adherence issues (3+ gaps)

Rationale/Potential Impact:

- Without consistently following a prescribed drug regimen, member's condition is likely to exacerbate causing avoidable utilization including IP or ER visits.

| | Member Count | Total Prior Cost | Prior PMPY |
|---|--------------|--------------------|----------------|
| 2: Acute (IP or ER) | | | |
| 3: No Chronics - Close Gaps/Reduce Risk | 4 | \$15,087 | \$3,772 |
| 5b: BH Only: Interventional | 114 | \$705,745 | \$6,191 |
| 5c: Chronic Other: Interventional | 715 | \$5,265,879 | \$7,365 |
| 6: Chronic High Risk | 48 | \$1,547,340 | \$32,236 |
| 7: Rare High Cost Condition | 9 | \$296,419 | \$32,935 |
| Grand Total | 890 | \$7,830,469 | \$8,798 |

Findings:

- Heavy concentration in members in the moderate risk group (5c: Chronic Other Interventional). This is a good group to prioritize as a proper drug regimen may keep them from moving into the Chronic High Risk Group in future

Walmart and Target now report most \$4 generics to PBMs after accepting national pricing of these generics

e: High medication adherence issues: interventions and priorities [\(link\)](#)

| | Member Count | Total Prior Cost | Prior PMPY |
|---|--------------|--------------------|----------------|
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Interventions:

- Determine if member has a strong or optimal relationship with a provider
 - If so, discuss issue with primary provider (doctor likely unaware lack of refills)
 - Consider mobile or web application drug refill reminders
- Make outreach call to member to determine why they are not filling drugs
 - Financial – Tiered drugs; non formulary, \$4 generics, switch to lower cost drug
 - Conduct analysis on current formularies and medication adherence patterns
 - Side effects – talk to provider about switching to another drug; substitutions
 - Identify members w co-morbid BH concerns as adherence sign. decreases
 - Engage member with medical social worker especially for members with support and financial issues
- Prioritization: Chronic Interventional, High Risk, Rare group and then IP stay probability

f: Moderate med adherence issues and limited or no provider relationship

Rationale/Potential Impact:

- Without consistently following a prescribed drug regimen, member's condition is likely to exacerbate causing unneeded utilization including IP or ER visits. Provider reinforcement is often necessary to make member aware of importance of consistently taking prescribed drugs.

| | Member Count | Total Prior Cost | Prior PMPY |
|---|--------------|--------------------|----------------|
| 2: Acute (IP or ER) | 2 | \$34,479 | \$17,239 |
| 3: No Chronics - Close Gaps/Reduce Risk | 117 | 181,184 | 1,549 |
| 5b: BH Only: Interventional | 135 | 348,123 | 2,579 |
| 5c: Chronic Other: Interventional | 377 | 431,297 | 1,144 |
| 6: Chronic High Risk | 1 | 2,804 | 2,804 |
| 7: Rare High Cost Condition | 1 | 28,591 | 28,591 |
| Grand Total | 633 | \$1,026,478 | \$1,622 |

Findings:

- Heavy concentration in members in the moderate risk group (5c: Chronic Other Interventional). Again, this is a good group to prioritize as a proper drug regimen may keep them from moving into the Chronic High Risk Group in future

f: Moderate med adherence issues limited/no provider: interventions and prioritization [\(link\)](#)

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| 6: Chronic High Risk | 1 | 2,804 | 2,804 |
| 7: Rare High Cost Condition | 1 | 28,591 | 28,591 |
| Grand Total | 633 | \$1,026,478 | \$1,622 |

Interventions:

- Connect member with a PCP (using high performing list from II) to establish a member-provider relationship
- Consider mobile or web application drug refill reminders

Prioritization:

- Chronic Interventional group and then IP stay probability

Rare diseases

Rationale/Potential Impact:

- Rare diseases have high costs usually from pharmacy

| | Member Count | Total Prior Cost | Prior PMPY |
|--------------------------------------|--------------|------------------|------------|
| Rare High Costs | 5,953 | \$150,710,171 | \$25,317 |
| Multiple Sclerosis | 2191 | | |
| Parkinson's Disease | 1340 | | |
| Lupus - Systemic Lupus Erythematosus | 822 | | |
| Scleroderma | 518 | | |
| Myasthenia Gravis | 122 | | |
| Polymyositis | 101 | | |
| Cystic Fibrosis | 98 | | |
| Arthropathy - Adult Rheumatoid | 89 | | |
| Dermatomyositis | 85 | | |
| Von Willebrand's Disease | 70 | | |
| ALS | 65 | | |
| Gaucher's Disease | 51 | | |

Findings:

- High cost disease state driven by pharmacy

Interventions:

- Consider pharmacist review of medication and contracting especially for Gaucher's Disease; Multiple Sclerosis; Cystic Fibrosis identify advanced Parkinson's;

Members with physical and behavioral health conditions

| Member Count | Big 5 | No Big 5 | Total |
|-----------------------------------|---------------|---------------|---------------|
| 4a: Chronic Big 5: Stable | 2,168 | | 2,168 |
| 4c: Chronic Other: Stable | | 10,885 | 10,885 |
| 5a: Chronic Big 5: Interventional | 24,074 | | 24,074 |
| 5c: Chronic Other: Interventional | | 26,589 | 26,589 |
| 6: Chronic High Risk | 6,288 | 3,090 | 9,378 |
| 7: Rare High Cost Condition | 954 | 2,120 | 3,074 |
| 8a: Catastrophic: Dialysis | 157 | 58 | 215 |
| 8b: Catastrophic: Active Cancer | 843 | 1,529 | 2,372 |
| 8c: Catastrophic: Transplant | 210 | 199 | 409 |
| 9: Dementia | 871 | 1,070 | 1,941 |
| 10: EOL | 235 | 212 | 447 |
| Grand Total | 35,800 | 45,752 | 81,552 |

| Top BH Conditions | Member Count |
|--------------------------------|--------------|
| Mood Disorder, Bipolar | 10,224 |
| Schizophrenia | 10,100 |
| Alcoholism and Alcohol Abuse | 5,888 |
| Drug Use and Abuse | 4,702 |
| Post Traumatic Stress Disorder | 4,393 |
| Psychotic States | 2,153 |

Optum Spotlight for Life Sciences

Analytics and
Reporting Example:
HCC 096 – Specified Heart
Arrhythmias



Optum Spotlight for Life Sciences:

Find what you need fast

Spotlight for Life Sciences: Powered by Optum's industry leading data & analytics

Optum Spotlight is a configurable, extensible end-user reporting tool sitting on top of industry leading data sets and analytics, giving users the ability to drill in to populations and find what matters most



Robust Data Acquisition

- ✓ Expert data translation team
- ✓ Largest MA dataset
- ✓ Claims, Lab, Rx, geo, member



Optum Advanced Gap-Level Analytics

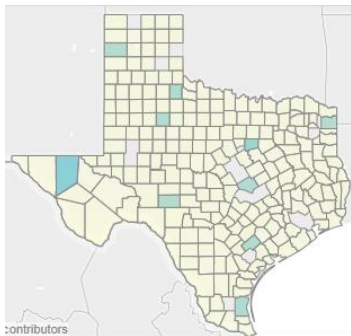
- ✓ Run at the Care-Gap & diagnosis level
- ✓ Industry scale suspecting, targeting
- ✓ Iterative and extensible based on use



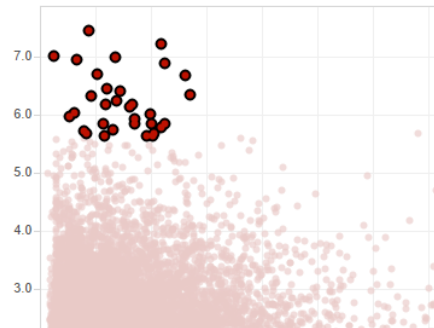
Optum Spotlight for Life Sciences

- ✓ Rapid configuration & customization
- ✓ Cloud-based, PHI-secure, mobile use
- ✓ Data visualization, exportable output

Search by Geo, e.g county



Find grouping, e.g Diagnosis



Reveal detail, e.g Diagnosis & Rx

Line Susp Grp: 1
Prev Coded:
Suspect Detail: Rx-WARFARIN SODIUM ORAL (COUMADIN) Related DX-415.19
Other Suspect: Related DX
Mbr Name: LASTNAME, FIRSTNAME
PCP: REDAL, LEIF A
Group Name: BOULDER COMMUNITY HEALTH
HCC: 108
HCC Description: Vascular Disease
Lab:
Mem ID: 440670
Rx: Y
County: Denver
Mbr Susp Grp: 1
DOB: 01/01/1976
Factor: 0.282

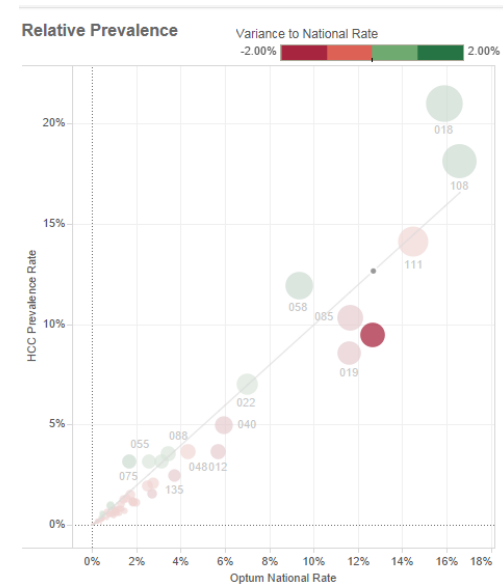
Reporting example:

HCC 096 – specified heart arrhythmias

Find the Outlier Conditions: What conditions are prevalent and potentially under-treated?

To locate performance gaps, first isolate specific conditions and disease prevalence by state and look to variances in the data, guided by Optum's benchmarks, that could indicate a performance gap

| Prevalence Comparison | | | | Population Selected | |
|-----------------------|---|---------|----------------|---------------------|---------------------------|
| | | | | 44,977 | |
| HCC | HCC Description | Members | HCC Prevalence | Optum National Rate | Variance to National Rate |
| 107 | Vascular Disease With Complications | 5,399 | 1.13% | 1.84% | -0.71% |
| 108 | Vascular Disease | 86,425 | 18.15% | 16.59% | 1.55% |
| 017 | Diabetes With Acute Complications | 883 | 0.19% | 0.32% | -0.13% |
| 018 | Diabetes With Chronic Complications | 99,947 | 20.98% | 15.90% | 5.08% |
| 019 | Diabetes Without Complication | 40,778 | 8.56% | 11.62% | -3.06% |
| 122 | Prolif Diabetic Retinopathy & Vitreous .. | 4,499 | 0.94% | 0.83% | 0.11% |
| 021 | Protein-Calorie Malnutrition | 7,250 | 1.52% | 1.74% | -0.22% |
| 085 | Congestive Heart Failure | 49,220 | 10.33% | 11.63% | -1.30% |
| 096 | Specified Heart Arrhythmias | 44,977 | 9.44% | 12.68% | -3.23% |
| 111 | COPD | 67,231 | 14.12% | 14.51% | -0.40% |
| 134 | Dialysis Status | 394 | 0.08% | 0.12% | -0.04% |



HCC 096 may be under diagnosed

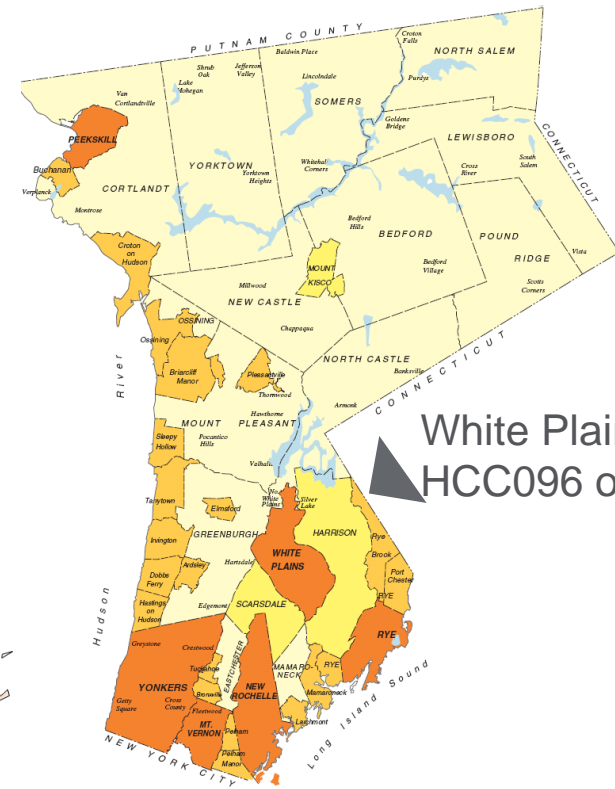
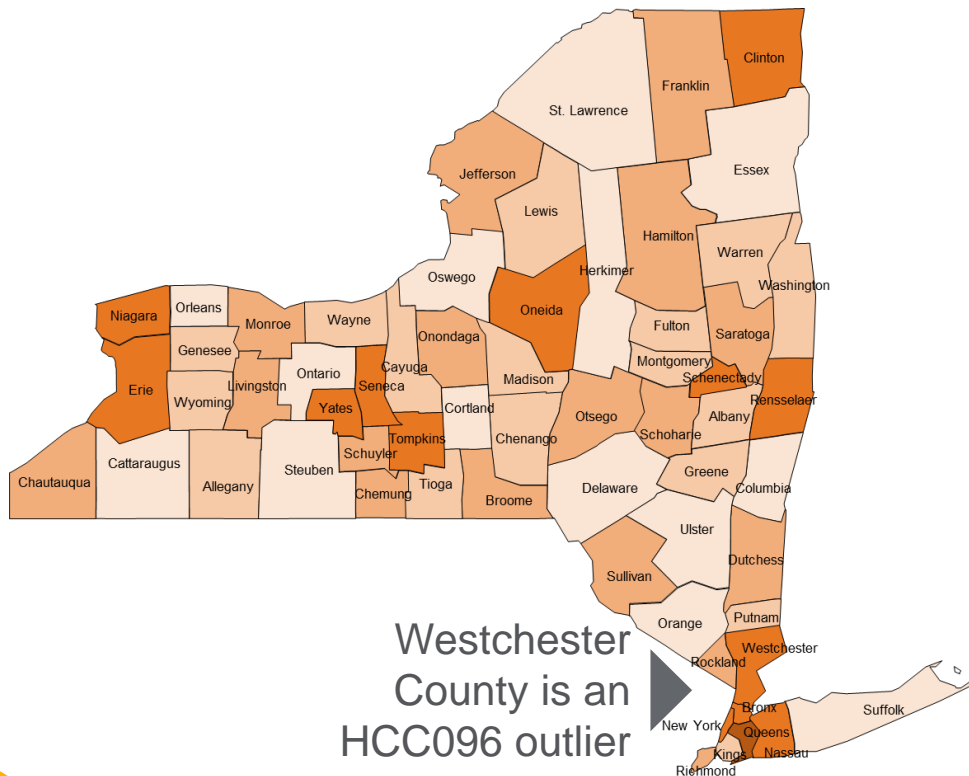
HCC096 is one of the largest outliers

Reporting example:

HCC 096 – specified heart arrhythmias

Drill into Prevalence Regionally: Are there specific areas in the state driving the data outlier?

Optum's data is at both the member and condition level as well as down to the geo-address level – that means it's quick and easy to find not only which members, but which providers may be driving outliers

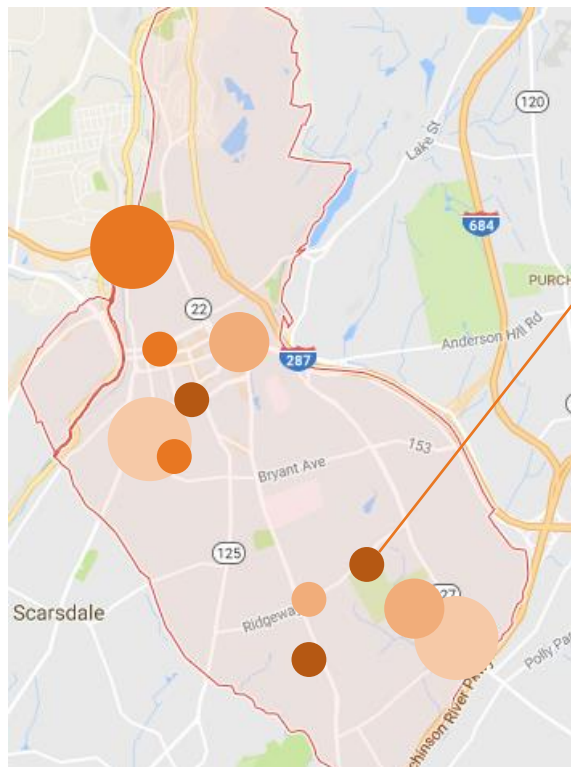


Reporting example:

HCC 096 – specified heart arrhythmias

Drill Down to Providers: Are there specific providers in the city driving the data outlier?

Optum Spotlight utilizes OpenStreetMaps to provide easy map navigation and up-to-date accuracy, allowing for heat-mapping across multiple dimensions, configurable as needed



Provider Density

| Group Name | Provider Name | Members | Prev % | HCC |
|----------------|---------------|---------|--------|-----|
| 1rst Health PA | John Doe | 26 | 18% | 096 |
| 1rst Health PA | Jane Jolly | 18 | 22% | 096 |
| 1rst Health PA | Mary Zang | 15 | 12% | 096 |
| Cadena Health | Frank Franz | 14 | 16% | 096 |

Rx Density

| Provider Name | Member Name | Rx | RAF | HCC |
|---------------|-------------------|------------------|-------|-----|
| Frank Franz | Ed Leither | Eliquis ORAL | 0.253 | 096 |
| Frank Franz | Scott Christenson | Rivaroxaban ORAL | 0.573 | 096 |
| Frank Franz | Kent Rahne | - | 0.731 | 096 |
| Frank Franz | Ted Johnston | Coumadin ORAL | 0.363 | 096 |

ED Admits

| Rx | Provider Group | Provider | Members | ED Admits |
|----------|----------------|----------------|---------|-----------|
| Coumadin | Cadena Health | Frank Franz | 5 | 2 |
| Eliquis | Cadena Health | Frank Franz | 8 | 4 |
| Eliquis | Cadena Health | John Ellertson | 2 | 1 |
| Warfarin | 1rst Health PA | Phil Venkman | 7 | 1 |

Optum Provider Engagement

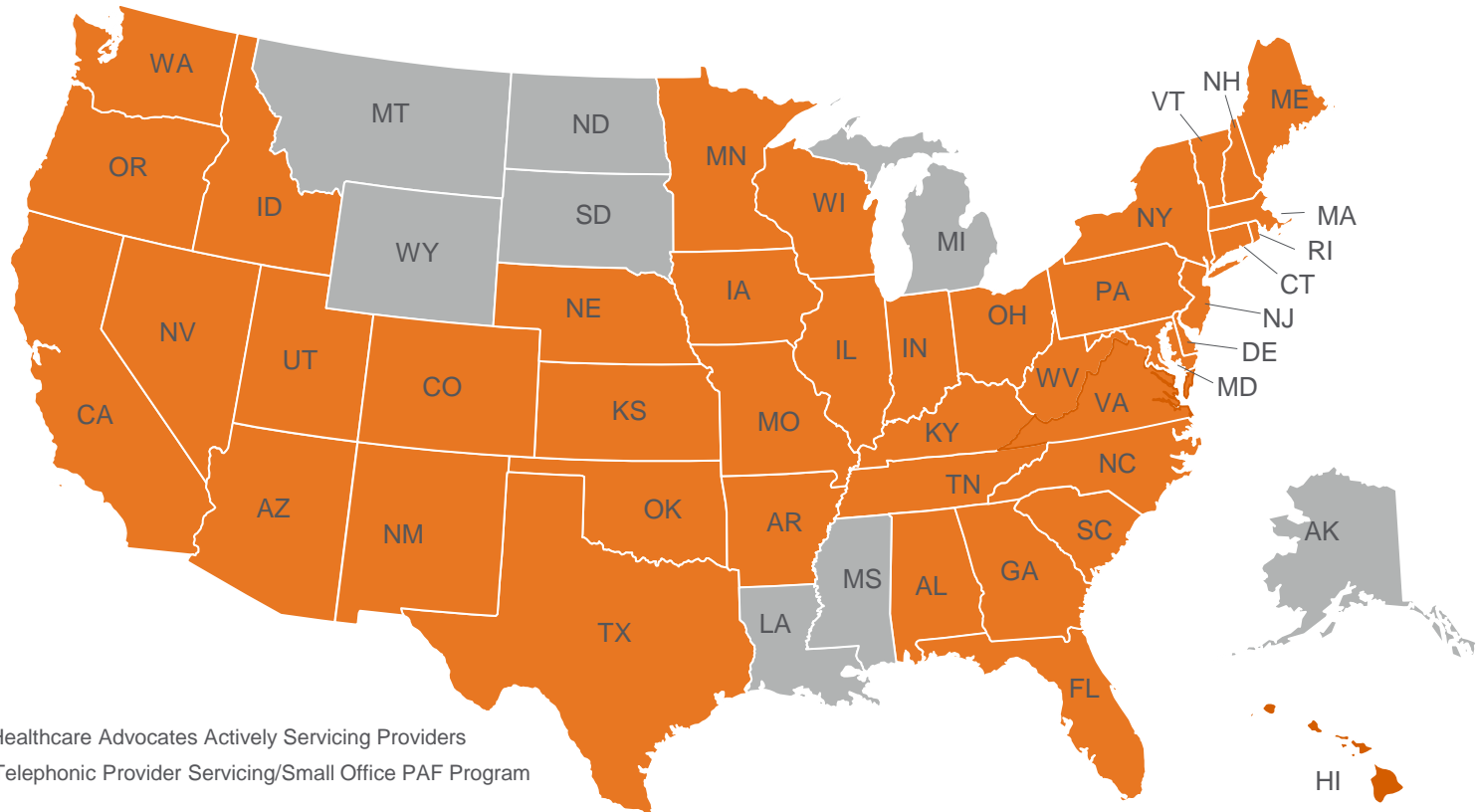
Field Team Example:
HCC 096 – Specified Heart
Arrhythmias



Engagement example:

HCC 096 – specified heart arrhythmias

Prospective Field Engagement: Optum utilizes a multi-modal In-Office Assessment Program
Optum's Prospective Field Engagement team is over 750 staff of educators, coders, and market consultants engaged with 3000+ medical groups, servicing 600,000 MA members nationwide



Engagement example:

HCC 096 – specified heart arrhythmias


In-Office Assessments: Actionable patient information delivered how the provider prefers
 Optum's In-Office program is a multi-modal method of delivering actionable patient information directly to the provider, which is then able to reviewed in person by Optum's familiar field team

| | | | | | |
|--|---|--|--------------------------|--------------------------|--------------------------|
| ▶ Early Detection of Chronic Illness | | Indicate if at-risk illness(es) were considered and confirm in progress note(s). | | | |
| Chronic Illness(es) to Consider | Risk Factors or Co-morbid Conditions | Yes | No | | |
| Chronic Kidney Disease | Family History Kidney Disease (V18.61) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Peripheral Arterial Disease | History of Smoking (V15.82) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Diabetic Neuropathy | Lower Extremity Ulcer (707.1) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Chronic Obstructive Pulmonary Disease | Chronic Bronchitis (491) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Major Depression | Depressive disorder, not elsewhere classified (311) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Diabetes Mellitus | Chronic Pancreatitis (577.1) | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Protein Calorie Malnutrition | Cystic Fibrosis (277.0), BMI <20 | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Depression | Screening using tool such as PHQ-9® | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Cognitive Function | Screening using tool such as 6CIT® | <input type="checkbox"/> | <input type="checkbox"/> | | |
| ▶ Preventive Medicine Screening | | Complete screening/referral(s). Detail in progress note and return with form. | | | |
| The following screening(s) are due or overdue, as indicated by HEDIS & health plan data. Results, referrals, and exclusions must be documented in progress notes and returned with H | | | | | |
| Screenings to Consider | ▶ Ongoing Assessment & Evaluation | | | | |
| Breast Cancer Screening | Indicate if condition(s) persist. Detail in progress note and return with form. | | | | |
| Colorectal Cancer Screening <i>Indicate type of screening performed</i> | Potential Diagnosis | Risk Factors or Co-morbid Conditions | Last Reported | Yes | No |
| Glaucoma Screening | Morbid Obesity | BMI >40 | | <input type="checkbox"/> | <input type="checkbox"/> |
| Adult Body Mass Index (BMI) | Diabetes without Complication (250.0x and V58.67) | Family History Kidney Disease (V18.61) | 2009 | <input type="checkbox"/> | <input type="checkbox"/> |
| Cardiovascular Care – Cholesterol Screening <i>Date of cardiac event xx/xx/xxxx</i> | Renal Failure (403.x1, 404.x2, 404.x3, 584.x, 585.x, 586, and 753.14) | GFR test value was 57.9 | 2009 | <input type="checkbox"/> | <input type="checkbox"/> |
| | Supply Indicating Diagnosis in Progress Note | Patient is taking BONIVA TAB 150 MG | 2010 | <input type="checkbox"/> | <input type="checkbox"/> |
| | Vascular Disease w/Complications | Vascular Disease w/Complications | 2010 | <input type="checkbox"/> | <input type="checkbox"/> |
| | ▶ Managing Chronic Illness | | | | |
| | Indicate if suggested actions were completed. Detail in progress note and return with form. | | | | |
| | Condition(s) | Suggested Action | Yes | No | N/A |
| | Chronic Obstructive Pulmonary Disease | Spirometry Test | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Controlled Blood Pressure | Blood Pressure Evaluation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | Nephropathy Screening | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | Diabetic Eye Exam | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | Blood Pressure | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | LDL-C Screening | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Diabetes Mellitus | HbA1c Testing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Engagement example:

HCC 096 – specified heart arrhythmias

| Office Visits | | | | ER Visits | | Hospitalizations | |
|--|---------------|--------|------------|------------------------------|-------------|---------------------------|--|
| 2 or more visits in past 24 months | | | | Past 24 months, no admission | | Past 36 months | |
| Physician | Specialty | Visits | Last Visit | Date | Admit | Discharge | |
| John Jones, MD | Annual Exam* | 1 | 02/25/2012 | 01/01/2012 | 08/01/2010 | 08/05/2010 | |
| Jane Smith, MD | Endocrinology | 3 | 05/15/2012 | 07/04/2012 | 11/01/2010 | 11/08/2010 | |
| Margaret Elizabeth Murkowski-Doe, MD | Cardiology | 2 | 07/15/2013 | 09/07/2012 | 11/23/2010* | 11/27/2010 | |
| * Optum identified as date of last annual exam | | | | | | *Readmission w/in 30 days | |

| Three-Year Condition List | | | | | | |
|--|----------|---|----------|--|-------------|--|
| Place of Service Legend | | | | | | |
| Chronic | |  | | | Non-Chronic | |
| Diagnosis Coded | Year | Diagnosis Coded | Year | | | |
| HCC if applicable | 12 11 10 | HCC if applicable | 12 11 10 | | | |
| 250.00 DB W/O COMP TYPE II/UNS NOT UNCNTL 019 Diabetes without Complication | ● ● ● | 374.87 DERMATOCHALASIS | ● ● ● | | | |
| 250.02 DB W/O COMP TYPE II/UNS UNCNTL 019 Diabetes without Complication | ● ● ● | 375.15 UNSPECIFIED TEAR FILM INSUFFICIENCY | ● ● ● | | | |
| 272.4 OTHER&UNSPECIFIED HYPERLIPIDEMIA | ● ● ● | 401.1 ESSENTIAL HYPERTENSION, BENIGN | ● ● ● | | | |
| 281.9 UNSPECIFIED DEFICIENCY ANEMIA | ● ● ● | 401.9 UNSPECIFIED ESSENTIAL HYPERTENSION | ● ● ● | | | |
| 285.9 UNSPECIFIED ANEMIA | ● ● ● | 558.9 UNS NONINF GASTROENTERIT&COLITIS | ● ● ● | | | |
| 374.30 UNSPECIFIED PTOSIS OF EYELID | ● ● ● | 562.10 DIVERTICULOSIS OF COLON | ● ● ● | | | |
| 557.0 ACUTE VASCULAR INSUFF INTESTINE 107 Vascular Disease w/Complications | ● ● ● | 569.3 HEMORRHAGE OF RECTUM AND ANUS | ● ● ● | | | |
| | | 578.1 BLOOD IN STOOL | ● ● ● | | | |
| | | 578.9 UNSPEC HEMORRHAGE GI TRACT | ● ● ● | | | |
| | | 599.0 UTI SITE NOT SPECIFIED | ● ● ● | | | |
| | | 787.01 NAUSEA WITH VOMITING | ● ● ● | | | |
| | | 788.41 URINARY FREQUENCY | ● ● ● | | | |
| | | 789.00 ABDOMINAL PAIN, UNSPECIFIED SITE | ● ● ● | | | |
| | | 789.09 ABDOMINAL PAIN OTHER SPECIFIED SITE | ● ● ● | | | |
| | | 847.0 NECK SPRAIN AND STRAIN | ● ● ● | | | |
| | | V43.1 LENS REPLACED BY OTHER MEANS | ● ● ● | | | |
| | | V72.31 ROUTINE GYNECOLOGICAL EXAMINATION | ● ● ● | | | |

Example: Januvia and Sinemet

Delivering Results: Bringing together the data, the field staff, the incentive

By combining stratification analytics, targeting, engagement programs, and our field team Optum can find the most efficient, effective solution for each member and provider based on script

| Suspect Detail | HCC Description | Factor |
|---|--|--------|
| | COPD | 0.288 |
| Related CPT-43760 | Artificial Openings For Feeding Or Elimination | 0.473 |
| Rx-SITAGLIPTIN PHOSPHATE ORAL (JANUVIA) | Diabetes With Chronic Complications | 0.417 |
| | Intestinal Obstruction/Perforation | 0.317 |
| Rx-CARBIDOPA + LEVODOPA (SINEMET) | Parkinson's And Huntington's Diseases | 0.137 |
| | Vascular Disease | 0.089 |



Optum Spotlight for Life Sciences

- ✓ Member has HCC018, and an A1c value > 8
- ✓ Member is taking **Januvia** and **Sinemet**
- ✓ Provider's rate of high A1c > 30%
- ✓ Optum Field Team reports provider is engaged

▶ Ongoing Assessment & Evaluation If applicable, indicate if condition(s) persist. Detail in progress

Optum Field teams have engaged the provider

| Potential Diagnosis | Risk Factors or Co-morbid Conditions |
|---|--|
| Morbid Obesity (278.01) | Morbid Obesity (278.01) |
| Diabetes with Chronic Complications | HbA1c value was 8.1 |
| Renal Failure (403.x1, 404.x2, 404.x3, 584.x, 585.x, 586, & 753.14) | GFR test value was 57.9 |
| Congestive Heart Failure (428.0) | Patient is ACE/ARBS, Diuretic, Alpha-beta blockers |



With **structured provider incentives** Optum's field team can train and coach the provider to ensure this member has a **therapeutic-level treatment** program

Practice transformation

Moving from

Accountable Care
Organization
(ACO)

To

Accountable Treatment
and Outcome Organization
(ATOOs)

Payer perspective on treatment and outcome organizations ATOOs

- ATOOs that are incorporating Outcomes are becoming more common in the US as manufacturers and payers move towards value and costs
- Medicare Innovation centers are looking for ways to address cost in a market based solution
- Cost transparency and operation challenges have been barriers but there are growing resources that can now address these challenges

ATOOs and conditions being pursued

Payers and Providers are pursuing ATOO's

- Majority of Payers have ATOOs and more emphasis is on treatment and outcomes
- VBCs and treatment and outcomes is viewed positively by Payers
- Payers that have ATOOs in place plan on expanding
 - Conditions groups that are most common treatment and outcomes
 - Endocrine—Diabetes
 - Infectious Disease- Hepatitis C, HIV
 - Cardiovascular CHF, A-Fib
 - Respiratory- COPD/ Asthma
 - Oncology
 - Orthopedics
 - Conditions requiring Biologics

Lay of the land

- Current atmosphere is optimal for Payer and manufacturer engagement
- Payers are positive on treatment/outcomes and willing to expand
- Challenges involve upside and downside risks for Pharma
- Payers may see value with Pharma taking on risk
- CMS Innovation may pave ways for future models

Advantages and disadvantages for treatment/outcome contracting



- Outcome improvement
- Cost savings
- Products work as reported EBM
- Real-time analytics
- Improvement in management



- Cost savings not demonstrated
- Complicated
- IT issues and reporting
- Administrative burden high
- Cost benefit analysis
- Difficult to measure outcomes



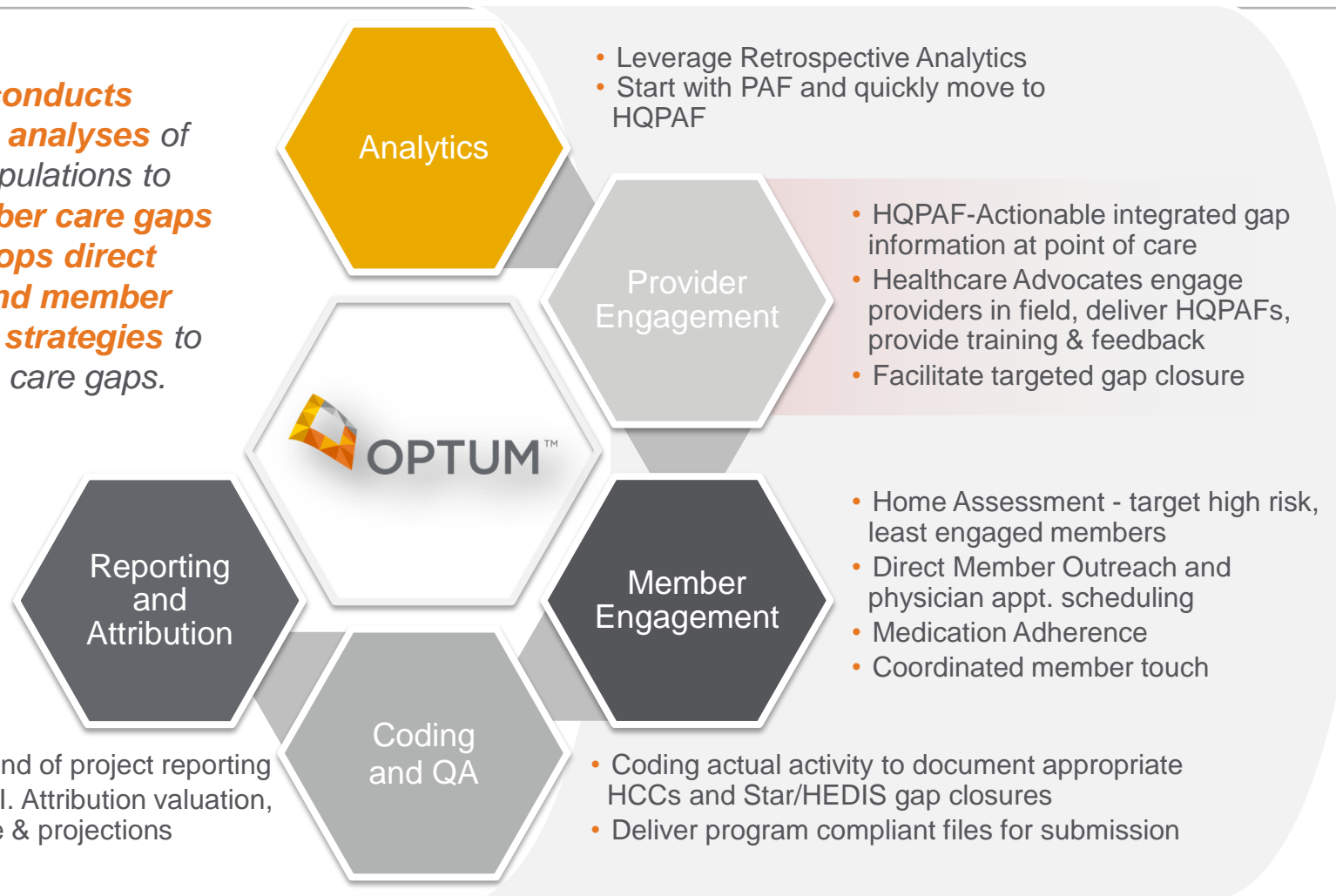
- Health plan and manufacture wary of taking on risk

Appendix



Optum's comprehensive prospective program

Optum conducts prospective analyses of member populations to **identify member care gaps** and **develops direct provider and member engagement strategies** to close these care gaps.



Managed analytics as a service:

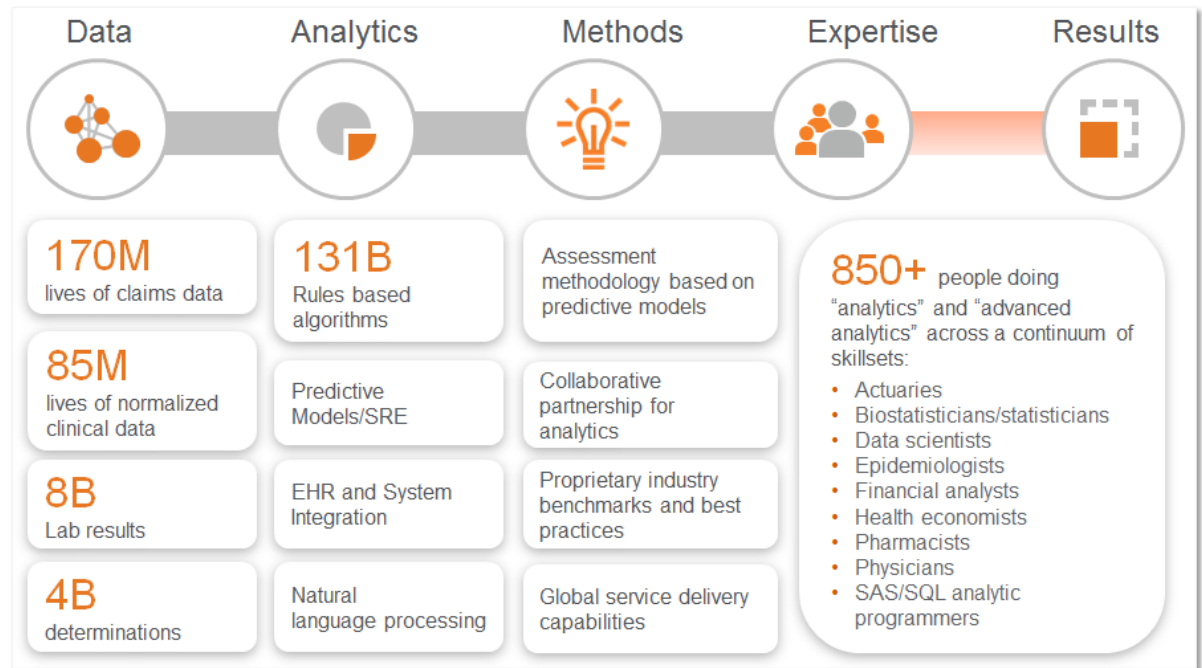
Actionable insights

The Challenge:

- Creating actionable population health analytics is challenging with multiple carriers, vendors, and programs
- Experience has shown that standalone or fragmented analytic technologies do not drive full value to network performance and clinical programs for employers

Managed Analytics:

- Optum's service leverages a deep bench of experts, an extensive library of algorithms, rules, and experience in execution to create a full plan and population view across core value levers such as: Network Performance and Clinical Program Effectiveness



*This model provides the foundation for **analytics-derived, actionable insights for high-performing providers & risk-bearing entities***