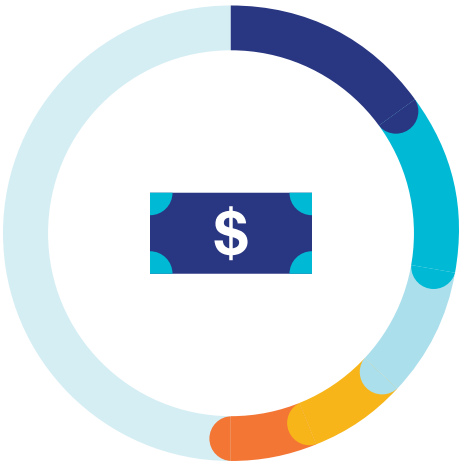
Costly conditions: Identifying and addressing top clinical cost drivers

For our fifth annual white paper, Health Action Council and UnitedHealth Group have brought together data from UnitedHealthcare, UMR and Optum to reveal Health Action Council's most costly conditions, identify the top cost drivers and analyze why each is so expensive.

Health Action Council spend by condition



Cancer	15%
Musculoskeletal	13%
Cardiovascular	9%
Gastrointestinal	7%
Neurological	6%
Other conditions	50%

~50%

of Health Action Council's 320,000+ covered lives had claims for 1 or more of these conditions

$1.9B

is the estimated total these conditions cost Health Action Council plan sponsors

What makes these so costly?

This white paper compares the 5 conditions and offers insights into why they differ across demographics, geography, treatments and social determinants of health (SDoH). Understanding and addressing these conditions helps improve employee well-being and mitigates plan sponsor costs.

As Health Action Council and UnitedHealth Group have been sharing with employers through white papers for 5 years, *community matters*. Where your employees live not only affects their health, it also affects provider billing patterns and ultimately, employer spend for these conditions.

United Healthcare

Cancer

$553M paid by employers

103K cancer claims

Patient profile

Gender and age – The female population has a **52%** higher prevalence than the male population to have a cancer claim, which is driven by breast cancer. Overall cancer claims are higher in older populations.

Income – Cancer claims are higher in individuals with incomes >$75K. This disproportionate share could be correlated to older claimants who are further along in their careers.[1]

Geography – Health Action Council members' highest rates of cancer are in areas with significant membership. There are also concentrations in North Carolina, Los Angeles and Phoenix. Coastal and Sun Belt regions have higher rates of skin cancer.[2]

Cost drivers

There are more than 200 types of cancer, with an average total cost of $100K–$200K.[3] Costs vary widely based on clinical circumstances and the number of services needed, including the following:

- Diagnostic tests
- Outpatient procedures
- Hospital admissions
- **Chemotherapy (specialty drug therapies)**
- Prescriptions
- Radiation therapy
- Follow-up scans

Community variances: Total cost of care and billing patterns

- Treatment expenses vary significantly in the top markets due to differences in health systems, clinical circumstances and chemotherapy required.
- Provider billing also varies widely by community. For example, in Atlanta and Phoenix, the average billed for chemotherapy administration is 3 times higher than Milwaukee.

The photography in this white paper consists of stock images used for illustrative purposes only.

Employer guidance: Cancer patients at work

- During and after treatment, employees may require modification to their work responsibilities or schedule.
- Some cancer patients experience side effects such as fatigue, memory loss, nerve or cardiovascular problems requiring ongoing treatment or accommodations.[4]

Top-ranked cancer common condition comorbidities

1. Hypertension
2. Back disorders
3. Diabetes
4. High lipids
5. Osteoarthritis

Worth noting: Depression was #6, indicating that cancer providers are skilled at anticipating and treating mental health issues.

Primary cost driver: Chemotherapy

18% of the cancer total

$74K average per-patient cost

Expert insights: Why is chemotherapy so expensive?

"Continued innovation in cancer drug therapies along with the mark-up on these drugs by large academic cancer centers are major cost drivers behind cancer care costs. These exciting scientific advances are producing new therapies at a rate not seen before, resulting in meaningful improvements in survival but at great financial cost."

– **Dr. Jennifer Malin,** Oncologist, Senior Vice President and Chief Medical Officer, Optum Health Solutions[5]

Musculoskeletal (MSK)

$477M paid by employers

317K MSK claims

Patient profile

Gender and age – The female population has a **22%** higher prevalence. MSK claims are higher in children 13–17 years old (likely sports injuries). Adult claims consistently rise with age.

Income – Health Action Council members' MSK claims show no variance by income level.[1]

Geography – Health Action Council members' MSK rates are consistent across geographic locations.

Typical diagnoses

- Joint wear and tear
- Torn rotator cuff
- Hip pain
- Lower back pain
- Knee injury
- Neck pain
- Plantar fasciitis

The obesity and joint replacement connection

- Approximately 11% of Health Action Council covered lives with MSK claims are obese (body mass index [BMI] >30 coded). Compare this to the total population obesity rate of 42%.[6] The need to have a joint replaced is 9 to 33 times higher for those with a BMI >30.[7]
- A high BMI also increases surgical complications such as increased blood loss and difficulties with the implanted joint.[7]
- Weight loss can decrease stress on joints and increase overall health, which may lead to decreased MSK costs.

Community variances: Total cost of care and billing patterns

- Spend for knee osteoarthritis is highly variable by community and may not correlate to knee replacement surgery.
- Billing also varies widely by location. In Dallas, Houston and San Antonio, the average billed by providers for knee imaging is 5 times higher than Cleveland or Pittsburgh for the same diagnostics.

Employer guidance: Return to work after joint replacement

- Employers anticipate that around 98% of knee replacement[8] and 94% of hip replacement[9] patients return to work within 3 months.
- 89% return to the same intensity of work they did before surgery.[8]
- Successful return-to-work indicators are having <30 sick-leave days prior to surgery, higher occupational position and a BMI <30.[9]

Primary cost driver:

Knee osteoarthritis

8% of the MSK total

Expert insights: Why is knee osteoarthritis so expensive?

"The prevalence of obesity has increased, which is associated with the incidence and progression of osteoarthritis to weight-bearing joints.[6] Technological advancement in knee replacement implants has created greater durability of components that have resulted in younger patient populations undergoing knee arthroplasty. Another factor is the aging population with prior knee arthroplasty that will require a second operation."

– **Dr. Michael Bess,** Vice President of Healthcare Strategies, UnitedHealthcare Dedicated Medical Director for Health Action Council[5]

Cardiovascular disease

$357M paid by employers

169K cardiovascular claims

Patient profile

Gender and age – Males have a **6%** higher prevalence. Cardiovascular claims consistently rise with age.

Income – Individuals with income levels <$75K have a higher percentage of cardiovascular claimants than the total population. This disproportionate share may reflect higher rates of cardiac risk among lower-income claimants.[1]

Geography – Health Action Council members' highest rates of cardiovascular disease are in areas with significant membership. There are also concentrations in North Carolina, Greenville and Atlanta. Areas in the South rank higher for cardiovascular conditions, driven by obesity and lack of physical activity.[10]

Typical diagnoses

- Heart rhythm issues
- Stroke
- Clogged arteries
- Heart attack
- Chest pain
- Heart failure

Risk factors[11]

- Hypertension
- Smoking
- Obesity
- High cholesterol
- High triglycerides
- Inactivity
- Poor diet

The diabetes connection

Three or more of the following conditions can indicate metabolic syndrome, which can lead to heart disease, diabetes, stroke and other health problems. Costs to Health Action Council plan sponsors increase dramatically as metabolic conditions progress.

- High blood sugar
- Low levels of good cholesterol
- High triglycerides
- Large waist circumference
- High blood pressure[12]

Employer guidance: Return to work after cardiovascular procedures

Return-to-work times vary based on factors such as severity of illness and type of work.

- Cardiac catheterization – 2 to 3 days[13]
- Pacemaker – 1 to 2 weeks[14]
- Angioplasty and stent – 1 to 2 weeks[15, 16]
- Coronary artery bypass grafting (CABG) surgery – 4 to 6 weeks[17]

Not all procedures can be avoided, but both employees and plan sponsors may benefit from wellness programming that encourages cardiovascular health to reduce lost productivity.

Primary cost driver:

Treatment of abnormal heart rhythms

10% of the cardiovascular total

Expert insights: Why are abnormal heart rhythms so expensive?

"The global increase in atrial fibrillation is largely attributable to aging and population growth. In addition to the increased incidence and prevalence of atrial fibrillation, there have been significant developments in the diagnosis and management of all types of arrhythmias. The applicability, efficacy, availability and cost of medications and procedures has led to a notable increase in the cost of managing arrhythmias."

– **Dr. Michael J. Menen,** Cardiologist, Optum Population Health Solutions Senior Medical Director[5]

Gastrointestinal (GI)

$284M paid by employers

136K GI claims

Patient profile

Gender and age – The female population has a **17%** higher prevalence. GI claims are higher in infants, driven by reflux and colic. Adult claims consistently rise with age.

Income – Health Action Council members' GI claims align with the total population at all incomes.[1]

Geography – Health Action Council members' GI rates are consistent across geographic locations.

Typical diagnoses

- Colitis
- Crohn's disease
- Pancreatitis
- Celiac disease
- Hernias
- Gallbladder attack
- Irritable bowel syndrome (IBS)

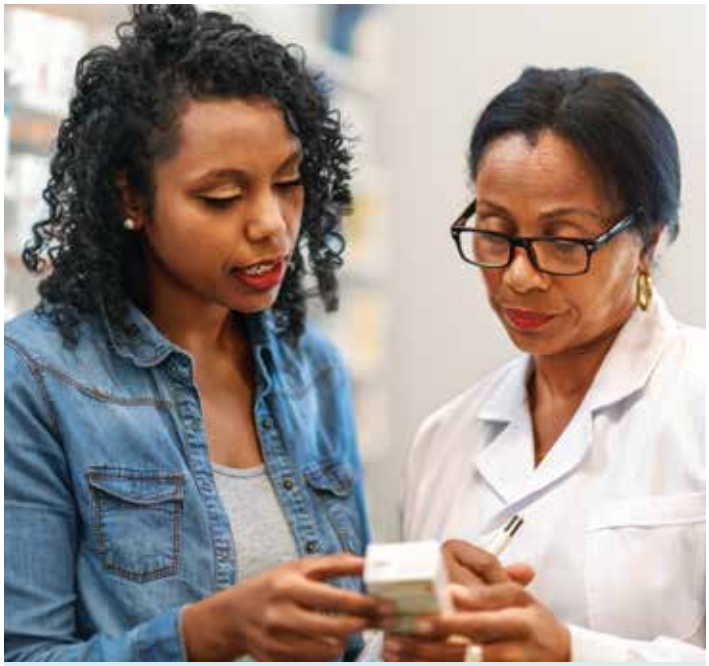
Employer guidance: GI issues in the workplace

Studies show:

- 87% of employees with IBS miss work due to symptoms, including not only GI but fatigue. Many experience anxiety related to their productivity and absenteeism.[18]
- Employees with celiac disease, an autoimmune disorder caused by the consumption of gluten, may be unintentionally isolated from typical employee engagement and morale-building functions such as potlucks and special snacks.[19]
- Honest conversations between employees and management or HR staff can alleviate some workplace challenges.

Top-ranked GI common condition comorbidities

1. Hypertension
2. Back disorders
3. Diabetes
4. High lipids
5. Depression (particularly for those with IBS and Crohn's)



Primary cost driver:

Immunosuppressive drugs

12% of the GI total

Expert insights: Why are immunosuppressive drugs so expensive?

"The utilization of immunosuppressive biologic specialty drugs is driving cost. Unlike traditional drugs, the expense to manufacture the drug and a lack of generics are the major reasons behind the high cost of biologic specialty drugs. In addition, for provider-administered drugs, where the drug is purchased and treatment location can also impact cost.

Despite these trend pressures, there are now several lower-cost alternatives called biosimilars that compete in the marketplace and may help drive down costs."

– **Tracy Okolo,** Director, Clinical Account Executive Pharmacist (CAEP), UnitedHealthcare Employer and Individual[5]

Neurological conditions

$225M paid by employers

240K neurological claims

Patient profile

Gender and age – The female population has a **28%** higher prevalence. Neurological claims, driven by spinal cord and seizure conditions, are slightly higher for children under 12. Adult claims consistently rise with age.

Income – There is a disproportionate share of claims at income levels <$75K and >$200K. Lower-income individuals have a lower percentage of neurologic claimants than the total population. Those at higher incomes have a higher percentage. This may indicate those with greater income seek treatment from neurology specialists more frequently.[1]

Geography – Health Action Council members' neurological rates are consistent across its geographic locations.

Typical diagnoses

- Carpal tunnel syndrome
- Parkinson's disease
- Migraines and headaches
- Multiple sclerosis
- Epilepsy

Community variances: Total cost of care and billing patterns

- Spend for neurological treatment differs greatly by location. For example, patients in Greensboro are 8 times more likely to have carpal tunnel surgery than patients in Phoenix.
- Billed charges also vary widely. The Los Angeles average billed by providers is 4 times higher than Philadelphia for the same procedure code.

Employer guidance: Multiple sclerosis in the workplace

- The most common issue for employees with multiple sclerosis is fatigue.
- The National Multiple Sclerosis Society is a trusted resource for patient advocacy and provides employers with guidance for accommodations.[20]

Top-ranked neurological comorbidities

1. Back disorders
2. Hypertension
3. Diabetes
4. High lipids
5. Depression (particularly for those with multiple sclerosis and epilepsy)

Primary cost driver:

Multiple sclerosis medications

13% of the neurological total

Expert insights: Why are multiple sclerosis medications so expensive?

"The pharmaceutical industry states research and development cause high drug prices for multiple sclerosis. There is some merit to this as there are many unknowns, including individual genetic predisposition to the disease and/or response to therapies.

As scientific advances in the treatment of MS continue with new and ideally curative therapies, there should be positive health improvement or slower disease progression for patients as well as economic benefits for families, the health care system and society. The economic impact of identifying an effect treatment for MS cannot be overstated. That said, these treatments must be affordable."

– **Laura Sprinkle,** BS, Pharm.D., Director, Clinical Account Executive, UnitedHealthcare National Accounts[5]

Conclusion

Mitigating measures to control employer costs

Although these 5 conditions may be the most expensive, there are ways to improve employee well-being and your bottom line. Here are 9 ideas that may inspire action:

1. **Be mindful of the normal aging process** as full retirement age increases. This includes disease onset, cognitive and psychological changes, social and environmental changes, and evolving individual goals and/or values. Increase awareness of this population's health and wellness needs. Encourage diets high in protein and low in sugar, saturated fats and sodium. Advocate for regular physical activity and socialization.
2. **Add elements of a cardiovascular health program** to your current employee engagement and wellness programming to support undiagnosed and/or untreated conditions. Topics could include diet, moving in 10-minute intervals, smoking/vaping cessation, stress management, sleep quality and dental care.
3. **When clinically appropriate, add genetic testing to your plan** to help employees receive the care and pharmacological interventions that may positively impact their quality of life and treatment outcomes.
4. **Provide tools for employees to help evaluate and measure treatment options** with their quality-of-life goals. This may include teaching employees to be discerning when reading research, studies and stories; using journaling to document emotions and experiences; and sharing the value of disease-specific support groups.
5. **Introduce pharmacy step therapies** to help support the use of high-quality, lower-cost solutions (i.e., generics or biosimilars) before other higher-cost solutions.
6. **Look for differences in practice patterns by geographic region** (over- and undertreating; low adoption of best practices) when targeting higher-cost conditions. Work with your third-party administrator to conduct provider outreach to help improve the quality of care. Also consider adding referral incentives or regional Centers of Excellence to your plan.
7. **Use cost-per-episode** to measure how successful evidence-based care management protocols are being adopted and utilized.
8. **Review your palliative care and hospice benefits.** Educate employees about these services.
9. **Support employees by adding movement** to their daily lives. As the data demonstrates, body weight impacts overall health.

How can you turn costs into savings for these conditions? Through activation.

The UnitedHealthcare Health Activation Index® (HAI®) score captures employee engagement (activation) to help optimize health plans and incentives. The HAI tool evaluates 53 evidence-based decisions as well as life-stage, demographic and socio-economic factors and identifies underengaged individuals/groups.[21]

Highly activated patients are significantly less costly than those low on the activation scale.

When HAI scores increase by 1%, medical costs decrease by

.56%

Ready for more?

There is a wealth of data beyond what is shared here. Learn more by contacting Patty Starr of Health Action Council or Craig Kurtzweil of the UnitedHealthcare Center for Advanced Analytics®.

About Health Action Council – Health Action Council is a not-for-profit organization representing large employers that enhances human and economic health through thought leadership, innovative services and collaboration. We provide value to our members by facilitating projects that help to improve quality, lower costs and enhance individual experiences, and by collaborating with key stakeholders to help build a culture of health.

About UnitedHealthcare – UnitedHealthcare is dedicated to **helping people live healthier lives®** by simplifying the health care experience, meeting consumer health and wellness needs, and sustaining trusted relationships with care providers. The company offers the full spectrum of health benefit programs for individuals, employers, military service members, retirees and their families, and Medicare and Medicaid beneficiaries, and contracts directly with more than 1 million physicians and care professionals and 6,000 hospitals and other care facilities nationwide. UnitedHealthcare is one of the businesses of UnitedHealth Group (NYSE: UNH), a diversified Fortune 50 health and well-being company.

About Optum – Optum is a leading information and technology-enabled health services business dedicated to helping make the health system work better for everyone. With more than 100,000 people worldwide, Optum delivers intelligent, integrated solutions that help to modernize the health system and improve overall population health. Optum is part of UnitedHealth Group (NYSE:UNH). For more information, visit **optum.com.**

About UMR – UMR is the third-party administrator (TPA) line of business for UnitedHealthcare, providing customized solutions, cost-effective provider networks, dedicated customer service and member engagement solutions to self-funded medical, dental, vision and disability plans. We work closely with our clients to lower their medical costs, improve the health of their employee populations and help them achieve their benefits goals. Now serving 5.7 million members with custom plan designs, cost-containment solutions and innovative services, our 70-plus-year legacy of lasting relationships and customer retention speaks for itself.

The COVID-19 effect

To diminish the influence of COVID-19 on the study, the researchers reviewed as much data as possible by extending their data gathering and analysis to cover 36 months instead of 24.

United Healthcare | health action council Enhancing Business. Enlightening Lives. Enriching Communities. | Optum | UMR

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[21] From UnitedHealthcare Health Activation Index Overview 2021—UnitedHealthcare National Accounts Book of Business, 2019. Geographic and risk-adjusted study.