2019 Annual Trend Report

MedImpact

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Positive Transformation | Positive Impact

With an ever-changing healthcare landscape, positive transformation is dependent upon our ability to analyze where we've been and where we're heading. Such analysis requires careful consideration of clients and members and the ways in which we can positively impact their outcomes.

A variety of factors influence the prescription drug costs for payers across the nation, including pharmaceutical companies' pricing strategies, costs of cutting-edge therapies, the small number of individuals that some orphan drugs treat, and competition from generics and other therapies.

In 2019, the impact of these forces was apparent in the introduction of Zolgensma, the most expensive drug ever approved by the FDA and a gene therapy for the treatment of spinal muscular dystrophy, with a cost of approximately $2.1 million for a single course. Other extremely high-cost, cutting-edge medications to treat cancer, lymphoma, and rare diseases are expected to be approved in 2020 and 2021. These factors are placing unprecedented upward pressure on drug costs for healthcare payers.

To help clients navigate this environment, MedImpact provides the insights, analytics, and solutions to identify new opportunities to rein in drug spend, while improving member health and creating an improved consumer experience.

2019 Trend Report Highlights

In 2019, MedImpact employed numerous key strategies to control client costs and drive improved results. We implemented a High-Cost Generics Program to help drive members to lower cost alternatives. To date, the cumulative savings for all participating clients in this program has exceeded $45 million. New clients implementing our Clinical Trend Management Point-of-Service Programs achieved blended ingredient cost savings of $6.67 per member per month, representing 6.2% of total ingredient cost drug spend.

When applied to specialty medications, our UM programs resulted in $2.74 per member per month of the total $6.67 (41%) ingredient cost savings during this period. Our Specialty Spend Management Program offers multiple ways to manage clients' medical spend. Interventions are identified and performed on a retrospective basis that conservatively provide a 2:1 return-on-investment and on a prospective basis that conservatively provide a 3+:1 return-on-investment.

Of equal importance are our members and foundational to MedImpact's mission to use clinical expertise, advanced technology, and innovative thinking to engage and help empower people to lead healthier lives. Our Choice90Rx Optimization Program identifies eligible members filling a 30-day supply of oral diabetes agents, hypertension (ACE/ARB/DRI), and hypercholesterolemia (statins) medications at a 90-day retail pharmacy.

From 2018 to 2019 (over a one-year period), clients participating in this program realized an average 15-point increase in extended fill prescriptions, translating to nearly $370,000 in member cost savings. From a payer perspective, the associated medical cost offsets for participating clients was approximately $10.3 million annually as a result of improved adherence.

We're also improving member care through our MedJourney Specialty Clinical Programs. Through MedJourney, the member's care path begins with an in-depth clinical conversation with a specialty pharmacy clinician who discusses their new medication, disease state, and important information on managing their disease.

Members and caregivers are provided a single point-of-contact at the pharmacy, with the clinician contacting the care manager or provider, as needed. There is frequent evaluation of disease-related conditions to assess therapy efficacy or side effects.

MedImpact is also advancing additional cost-saving strategies, such as Contracting Strategies to Achieve Increased Savings to protect pharmacy access and produce substantive savings, with less perceived disruption than with therapy modifications. In addition, we're successfully identifying and preventing fraud, waste, and abuse (FWA) through our Enhanced FWA Program by applying advanced statistical analysis and machine learning to analyze data across pharmacies, prescribers, and members.

MedImpact remains focused on improving STAR ratings with our Star Ratings Clinical Package, which comprises member, prescriber, and pharmacy-directed solutions for key Part D clinical measures. During the 2019 benefit year (2020 Star Ratings), among all CMS contracts with a rating, MedImpact had a larger percentage of Part D client contracts attaining 4 or 5 Stars for our Part D Summary Rating (62%), compared to non-MedImpact contracts (56%). These results represent a 5% increase over the prior year's performance.

We're intensifying our focus on market-specific health trends that continue to impact our industry. In the commercial market, inflammatory disease, asthma and COPD, and multiple sclerosis (among others) were all notable trends. Noteworthy trends in the Medicare market include diabetes, oncology, and hematological disorders. In the Medicaid market, HIV, Hepatitis C, and pain management/opioid reduction are among the leading trends we are working to positively impact.

As we look to the future, MedImpact is focusing on:

- Enhanced healthcare interoperability and provider workflow integration
- Consumer access and control
- Increased use of cash card discounts
- Social determinants of health
- Digital therapeutics
- Quality performance trends
- Outcomes-based contracts, value-based payments, and pay-for-performance

Our efforts and achieved results in 2019, coupled with advancing new and innovative strategies and solutions moving forward, demonstrate our dedication and commitment to the clients and members we serve. Together, we will continue our important work to positively transform and impact healthcare for all.

Empowering members and providers — When members arrive at the pharmacy counter and are surprised by the high out-of-pocket cost of a medication, the likelihood they will not have the script filled is high. The likelihood they will be frustrated by the experience is even higher.

MedImpact's Real-Time Benefit Check Solution provides member-specific cost and coverage details, including lower-cost therapeutic alternatives and preferred pharmacies, at point-of-care. This enables providers to make improved prescribing decisions and discuss actual costs and alternatives with the member.

Providers can view and prescribe the most cost-effective medications for the member and plan. Individuals are more likely to adhere to their treatment plans and require fewer follow-up visits or emergency room admissions, and both the member and provider experience is improved.

Reducing member costs — Prescription discount programs continue to increase in popularity with consumers. Offered by third-party companies, these cards and applications reduce the cost of on-and off-formulary medications for members. However, when the prescription discount program is not linked to the member's benefit, the member's plan has no visibility into these claims and they are unable to track critical adherence or identify potential drug interactions.

MedImpact saw a unique opportunity to reduce member out-of-pocket costs and provide plans with new streams of data and tools to manage costs, and to monitor and improve member health. In 2019, we launched America's Pharmacy, a fully integrated discount program that provides significant savings to the consumer, while providing the plan real-time visibility into claims purchased outside the funded benefit.

We used similarly bold thinking to identify and reduce the cost of high-cost generics, provide doctors and individuals with detailed coverage information to promote improved, more cost-effective decisions at the point of prescribing, and to help plans and communities combat rising costs.

Personalizing healthcare — For several years, healthcare providers have attempted to use genetic tests to predict how an individual will respond to a single medicine prescribed by a single physician. MedImpact had a different vision.

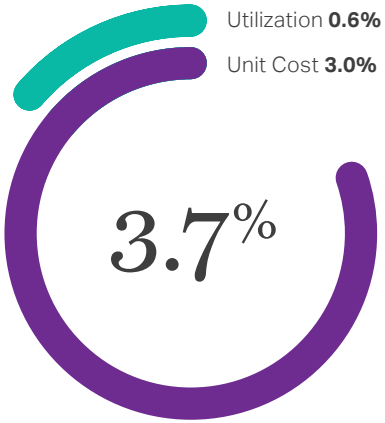
Our clinical experts developed the industry's first 'any drug, any provider, any time' Pharmacogenomics Program that protects clients' members from adverse effects or ineffective results from nearly 300 prescription medications, regardless of the prescriber. This program helps to ensure individuals are placed on the appropriate drug faster, and it reduces hospitalizations, medication waste, and costs.

Moving Forward

Our efforts and achieved results in 2019, coupled with advancing new and innovative strategies and solutions moving forward, demonstrate MedImpact's dedication and commitment to the clients and members we serve. Together, we will continue our important work to positively transform and impact healthcare for all.

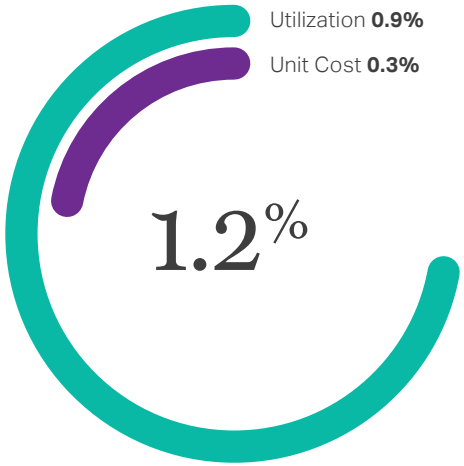
Impact 2019: Market Trends

Commercial



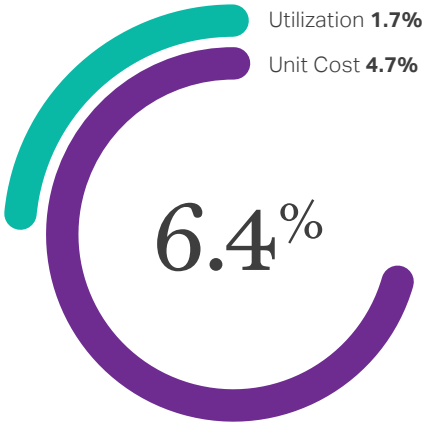
Drug	Utilization	Unit Cost	Total
Traditional	0.6%	0.3%	0.9%
Specialty	5.1%	4.4%	9.5%
Overall	**0.6%**	**3.0%**	**3.7%**

Medicare



Drug	Utilization	Unit Cost	Total
Traditional	0.9%	-1.7%	-0.8%
Specialty	4.0%	1.9%	5.9%
Overall	**0.9%**	**0.3%**	**1.2%**

Medicaid



Drug	Utilization	Unit Cost	Total
Traditional	1.7%	0.5%	2.2%
Specialty	4.5%	7.7%	12.2%
Overall	**1.7%**	**4.7%**	**6.4%**

WHO WE SERVE

Client Impact

In 2019, MedImpact implemented several key programs to control client costs and drive improved results for all clients.

Over the past five years, prices on nearly 400 generic drugs have skyrocketed more than 1,000%.

High-Cost Generics Program

Over the past five years, prices on nearly 400 generic drugs have skyrocketed more than 1,000%.[1] A variety of factors have contributed to this trend, including limited generic manufacturers due to industry consolidation resulting in lack of competition, raw material shortage, and other factors.

Plans can lower their overall plan spend by reducing high-cost generic drug use using incentives to help drive members to lower cost alternatives. Plans can also exclude select high-cost generic medications from coverage provided there is a therapeutically equivalent generic product available on the market. Proactive engagement and efforts for members, providers, and pharmacies are also necessary to increase awareness and drive savings.

MedImpact offers a comprehensive High-Cost Generics Program to address these issues. To date, the cumulative savings for all participating clients has exceeded $45 million. In 2019 alone, participating clients in our High-Cost Generics Program experienced $14.8 million in total direct savings. The average client return on investment was 7:1, with a range between 4:1 and 12:1.

$45M

To date, the cumulative savings for all participating clients has exceeded $45M.

$14.8M

In 2019 alone, participating clients in our High-Cost Generics Program experienced $14.8M in total direct savings.

7:1

The average client return on investment was 7:1, with a range between 4:1 and 12:1.

Significant cost trend increases in pharmacy benefit programs continue across the nation as a result of increased utilization, increased costs for high-utilization medications, and increased utilization of high-cost specialty medications.

CLIENT IMPACT

Clinical Trend Management Point-of-Service Programs

MedImpact delivers clinical trend management point-of-service UM programs to assist clients in effectively addressing cost trend increases, while maintaining a quality program for members. These programs include step therapy, quantity limit, dose optimization, concurrent use, and prior authorization edits that deny claims whenever clinical criteria are not met. Clients that implement our clinical trend management point-of-service UM programs achieve significant cost savings in the management of traditional and specialty medications within their pharmacy benefit programs, which block payment of medications where clinical criteria are not met and shift utilization to equivalent and more cost-effective alternatives.

In 2019, new clients transitioning from other PBMs to MedImpact that implemented our clinical trend management point-of-service UM programs achieved blended ingredient cost savings of $6.67 per member per month, representing 6.2% of total ingredient cost drug spend. When applied to specialty medications, our UM programs resulted in $2.74 per member per month of the total $6.67 (41%) ingredient cost savings during this period.

$6.67
Blended ingredient cost savings per member per month

6.2%
Total ingredient cost drug spend

$2.74
Specialty total ingredient cost savings per member per month

CLIENT IMPACT

Specialty Spend Management

Specialty spend is now 40% to 60% of overall drug spend and continues to rise for plan sponsors and employer groups, even with lower utilization, compared to traditional medications, due to the higher costs per medication. Selected disease states with a higher number of affected individuals are driving a moderately higher spend per member.

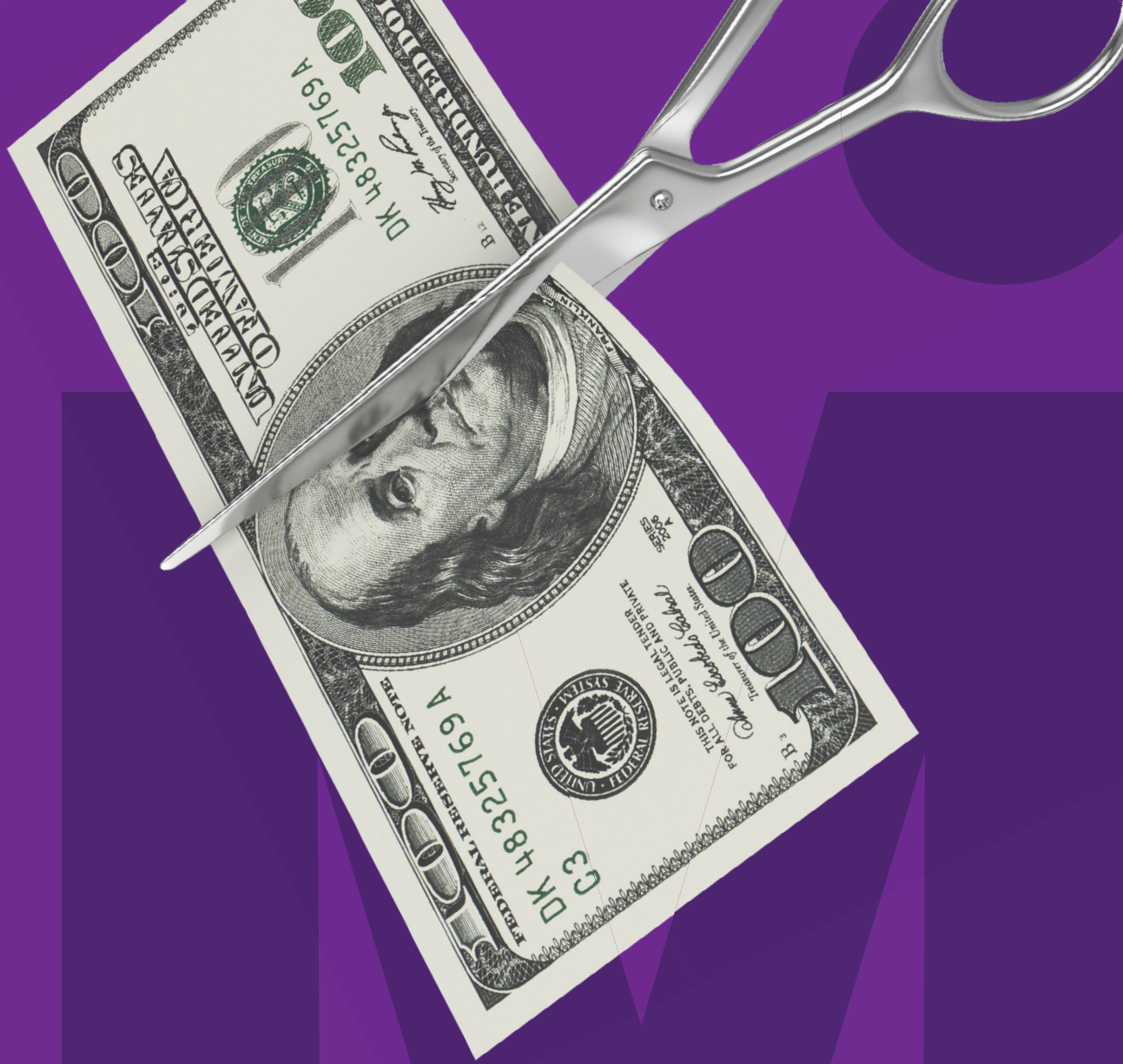
Additional increases are due to rare/orphan diseases where the number of affected members is very low but spend per member can be extremely high. Because of the variability across specialty medications, it is important to manage specialty spend on multiple levels, including network, medical benefit, and pharmacy benefit copay assistance.

40% to 60%

Specialty spend of overall drug spend[2]

$550 Billion

Increase in specialty spending projected by 2023[3]



Specialty Network

MedImpact's specialty network solution delivers value on clients' investment in specialty medications, with improved care at a lower cost.

- **Competitive pricing** — We maintain a narrow preferred specialty pharmacy network to offer competitive rates. MedImpact has developed a limited distribution drug program with contracted pricing to provide access to 100% of those medications.
- **Improved care** — Our specialty pharmacies adhere to leading disease-specific clinical care management protocols, with a focus on hemophilia, cystic fibrosis, oncology, and others. Receipt of daily clinical data enables us to report actionable clinical information to our clients on both a disease population and member level. We oversee our pharmacies' performance.
- **Reduced waste** — Because MedImpact does not own any specialty pharmacies, there is no conflict of interest that can result in overfilling of prescriptions. Our pharmacies do not auto-ship refills; instead, they contact members prior to every fill to help ensure they are stable and not experiencing adverse events, and to provide drug supply management. Because these medications are so expensive, reducing one unnecessary fill per year can result in significant savings. Adherence rates rise and waste is reduced when clients switch to the MedImpact Direct Specialty network.

In 2019, MedImpact Direct's oversight of preferred network specialty pharmacies reduced medication waste by 75%, compared to nonpreferred providers.*

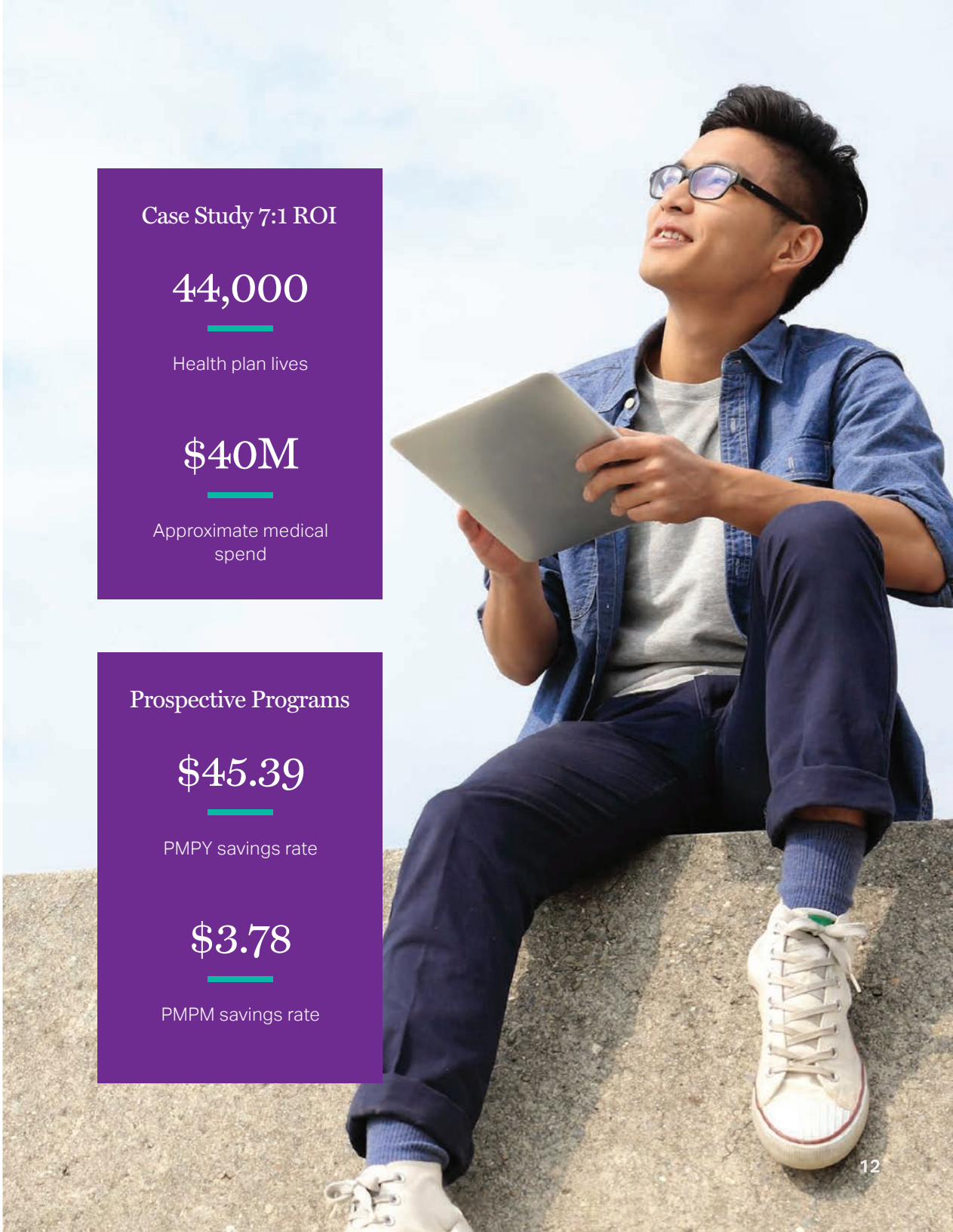
* MedImpact Direct Specialty 2019 book of business data. Waste is measured as days' supply > 110% of treatment duration measured by capped Medication Possession Ratio (MPR).

CLIENT IMPACT

MedIntegrate™ Medical Management Program

When managing the rising cost of specialty drugs, it's important to remember that nearly half of specialty drug spend occurs in the medical benefit. MedImpact offers medical specialty management solutions tailored to managed care clients and employer groups. We integrate clients' pharmacy and medical data to gain insight into their entire specialty spend, and identify opportunities using advanced data analytics to reduce costs and improve outcomes across benefits, such as claims editing, duplicate billing, site of care, prior authorization, and retrospective drug utilization.

MedImpact offers multiple ways to manage clients' medical spend. Interventions are identified and performed on a retrospective basis that conservatively provides a 2:1 return-on-investment and on a prospective basis that conservatively provides a >3:1 return-on-investment.



Case Study 7:1 ROI

44,000

Health plan lives

$40M

Approximate medical spend

Prospective Programs

$45.39

PMPY savings rate

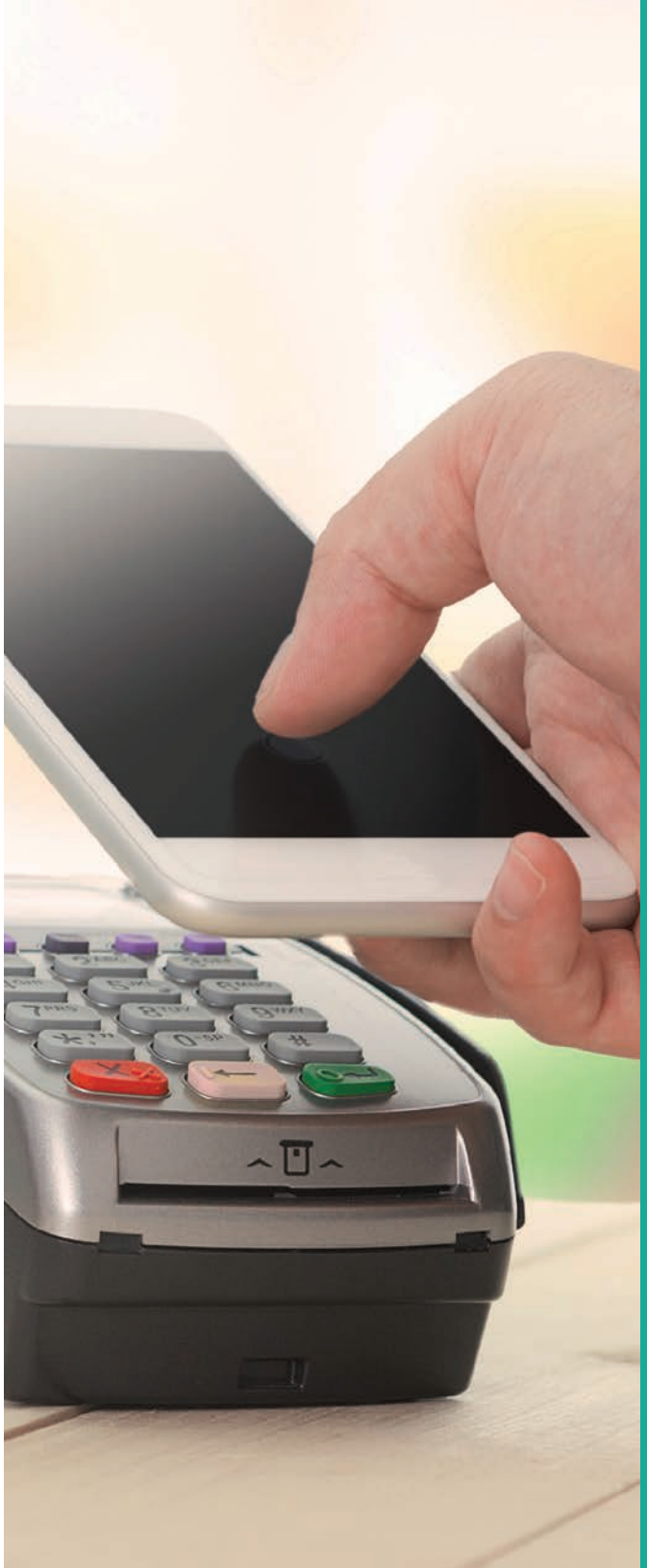
$3.78

PMPM savings rate

MedImpact Assist™ Copay Assistance Program

Pharmacy benefit design often has members paying a high cost share for specialty medications. Many members cannot afford the high cost of their specialty medications, which can result in non-adherence. Coordinating manufacturer coupon programs to help off-set the cost of therapy to members is one way in which we can assist members in receiving their treatments. When a coupon is available, the average member specialty drug cost share amount ranges from $0 to $25.00 per dispense, typically much lower than the standard benefit cost share.

The MedImpact Assist Copay Assistance Program provides two ways to manage specialty spend. First, we track members' accumulator and adjust it to reflect their out-of-pocket expense on specialty drugs where manufacturer coupons are used. Secondly, we maximize the value of manufacturers' copay assistance coupons with a variable copay and return that value to clients.



As of December 2019, 1.7 million members were covered by the program. The average return-on-investment of MedImpact Assist begins at 5:1 and can reach 10:1.

- Average client savings = $2.41 PMPM (per member per month)
- Average client savings = $202.93 PUPM (per utilizing member per month)
  - Accumulator = $163.39 PUPM
  - Variable Copay = $346.79 PUPM

The average total coupon share is equal to 8.3% of specialty drug ingredient costs for claims with coupons (both accumulator and variable copay components are implemented). The average variable copay coupon share is equal to 12.3% of specialty drug ingredient costs for claims with coupons (only variable copay component is implemented).

Member Impact

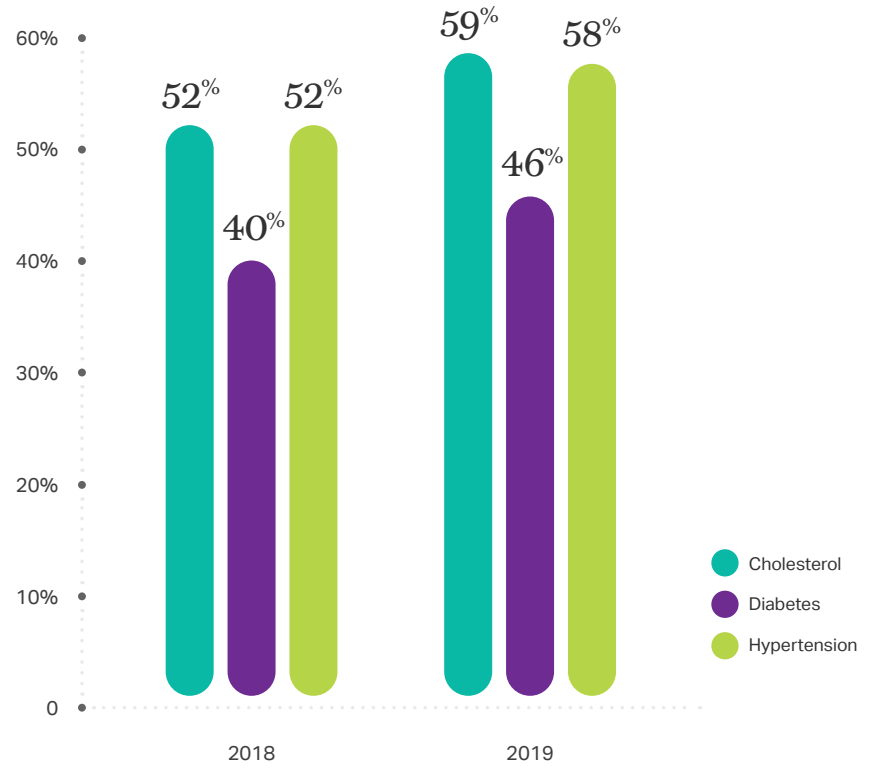
In 2019, MedImpact implemented several key strategies, resulting in positive outcomes for its members.

Choice90Rx® Optimization Program

Extended 90- and 100-day prescriptions result in fewer trips to the pharmacy. With transportation a frequent barrier for many senior citizens, the convenience associated with extended days of supply per fill increases medication access and promotes improved adherence. Many plans offer lower copays for this convenience that range from 17% to 40% off a typical 30-day fill.[4]

MedImpact's Choice90Rx® Optimization Program, a flexible automated point-of-sale intervention, helps to promote this critical member benefit by identifying eligible members filling a 30-day supply of oral diabetes agents, hypertension (ACE/ARB/DRI), and hypercholesterolemia (statins) medications at retail pharmacies. The promotion of extended fills increases medication access and adherence, reduces out-of-pocket costs, and helps to sustain supply during natural disasters.

From 2018 to 2019 (over a one-year period), clients participating in this program realized an average 15-point increase in extended fill prescriptions, translating to nearly $370,000 in member cost savings. From a payer perspective, the associated modeled medical cost offsets for participating clients was approximately $10.3 million annually as a result of improved adherence.



MEMBER IMPACT

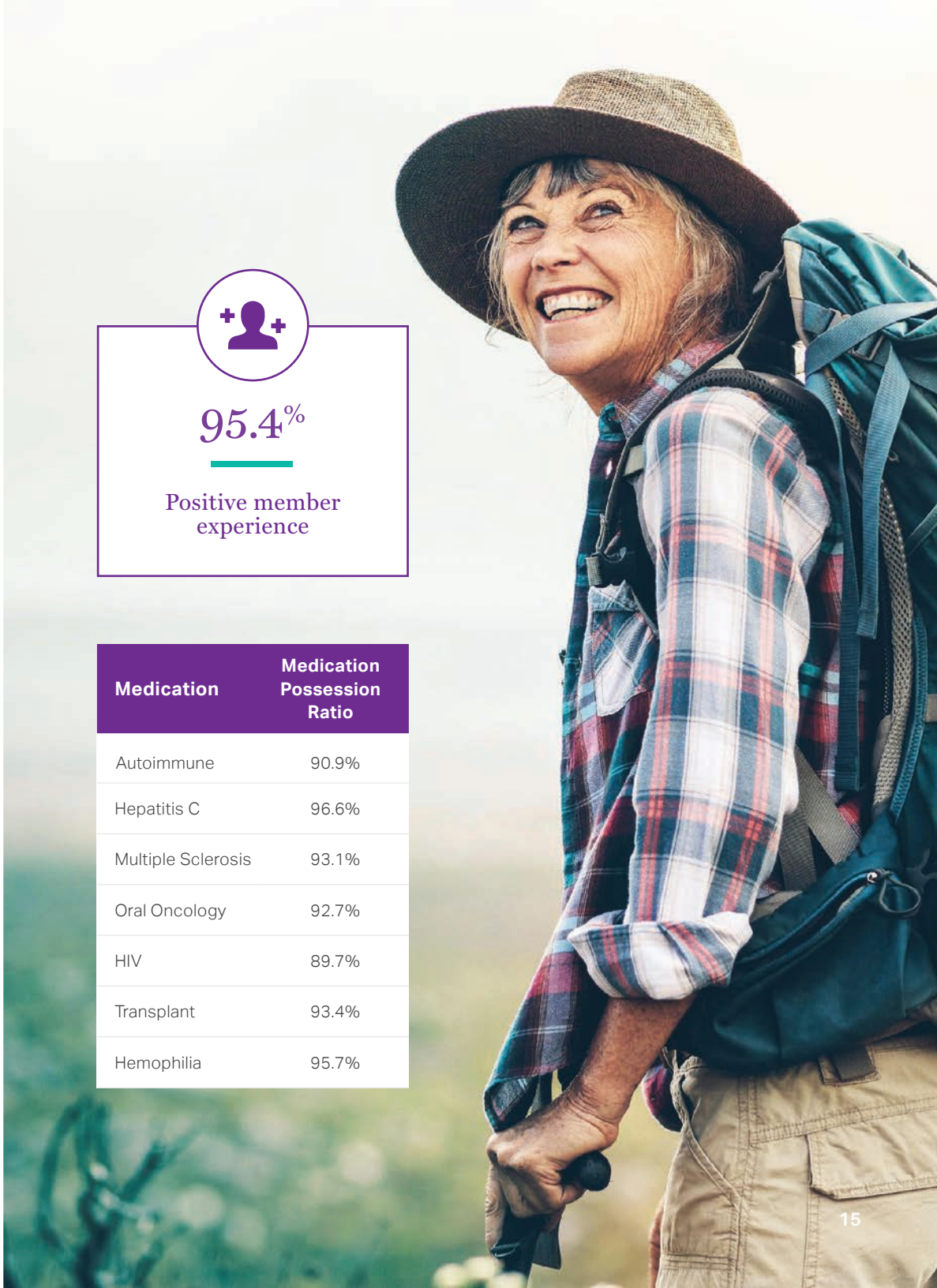
MedJourney™ Clinical Management Program

Specialty drug prescriptions are used to address clinically complex disease states, such as cancer, multiple sclerosis, cystic fibrosis, and many others. MedImpact helps members ensure members and their families successfully navigate an unfamiliar and complex pharmacy system.

We keep the member at the forefront of all we do and strive to make the member experience positive and straightforward. With easy access across channels, including all limited distribution drugs, members and prescribers access our specialty network. We utilize a unique, competitive model, contracting with a small number of providers that fulfill specialty orders to help members obtain their prescriptions. We maximize available funding assistance for members to reduce barriers to therapy. Our specialty pharmacy providers are required to follow our disease-specific clinical care management protocols.

Through MedJourney™, the member's care path begins with an in-depth clinical conversation with a specialty pharmacy clinician who discusses the new medication, disease state, and important information on managing the disease. Members and caregivers are provided a single point-of-contact at the pharmacy, with the clinician contacting the care manager or provider, as needed. There is frequent evaluation of disease-related conditions to assess therapy efficacy or side effects.

Comprehensive touch points help ensure members have the best therapy outcome possible. This is monitored through robust clinical and financial reporting for clients to measure and improve program performance and manage trend. High-touch therapy and supply management interventions by our preferred specialty pharmacies result in improved medication adherence and associated savings.



95.4%

Positive member experience

Medication	Medication Possession Ratio
Autoimmune	90.9%
Hepatitis C	96.6%
Multiple Sclerosis	93.1%
Oral Oncology	92.7%
HIV	89.7%
Transplant	93.4%
Hemophilia	95.7%

MEMBER IMPACT

MedJourney™ Clinical Management Program

Our model of frequent, high-touch member therapy and supply management interventions result in significant savings. For example, a specialty pharmacist recommended a therapy change for a member diagnosed with Hemophilia A. Since implementing the new therapy, the member has not experienced any bleeds and reports she is doing very well and pleased with the convenience associated with therapy administration. Savings resulting from this member intervention was $26,260 per month.

As another example, a specialty pharmacist recommended a reduction in drug dosage to a member with renal disease and rheumatoid arthritis to prevent an adverse event, which resulted in savings of $2,820 per month. The caregiver of another member with poorly managed cystic fibrosis and frequent hospitalizations discussed with the specialty pharmacist the member's disease and supply management. Following this discussion, the member's supply shipments were modified for five months based on inventory / drug on-hand, resulting in a one-time savings of $116,400.

MedImpact conducts annual Net Promoter Score (NPS) surveys to help ensure member satisfaction and to identify service gaps and areas for improvement. More than 79% of prescribers surveyed on our specialty services indicate they are 'satisfied' or 'very satisfied.'

Members consistently give MedImpact Direct Specialty services a high satisfaction rating. In 2019, 95.4% of members reported a positive experience with the program and received their medications on time. Our 2019 member net promotor score for specialty services was 46 (on a scale of -100 to +100) — higher than the NPS scores of our competitors, which range from -5 to 25.

Additional Cost-Saving Strategies

Contracting Strategies to Achieve Increased Savings

The retail pharmacy network offers significant savings opportunities in the management of drug trend on almost every claim. While nearly all well-managed client plans utilize a multi-tier formulary, prior authorization, and multiple benefit edits to control trend — all of which impact members' therapy choices — the vast majority of plans still offer members complete and open access on where to fill their prescriptions, presumably based on concerns over disruption, access, or both. Simple and readily implemented strategies that protect pharmacy access can result in substantive savings and less perceived disruption than therapy modifications.

In addition, given MedImpact's flexible network contracting strategy, plans can achieve equivalent or even increased savings associated with removing pharmacies from the network, while still offering access to all providers, by simply modifying copay in the same manner they do for their formulary.

MedImpact offers three key strategies for clients relative to the retail pharmacy network to drive meaningful savings, while providing significant member access:

- Achieving savings by removing at least one major chain from the network
- Achieving savings specific to 90-day volumes using a limited or exclusive 90-day network
- Achieving savings comparable or better than limiting the network by exposing at least one major chain to a copay differential of at least $6. If the copay amount is set at a level where fills at a non-preferred pharmacy offset the rate differential, savings are comparable to a limited network. If the copay amount is set at a level that more than off sets the rate differential, savings exceed those for a limited network.

As an example, a MedImpact health plan client was awarded fee-for-service Medicaid lives at the time of Medicaid expansion, with a challenging per member per month reimbursement rate. The plan investigated the implementation of a limited network strategy focused on removing a single major chain. MedImpact orchestrated a price competition between the two largest U.S. chain pharmacies to achieve an optimal anchor chain rate, with the network continuing to offer members broad access to nearly 55,000 pharmacies. The plan moved forward with the strategy, resulting in plan savings of nearly 2% of retail drug spend.

55,000

Broad access to nearly 55,000 pharmacies

2%

Resulting in plan savings of nearly 2% of retail drug spend

In our experience, network structure is an important lever to be considered when savings opportunities are paramount to plan/program success without compromising access to and quality of care. Network changes may result in member disruption; however, this is minimal and short-lived. Therefore, it's clear the savings opportunities afforded by implementing one or more of these strategies are too significant to be ignored.

Enhanced Fraud, Waste, and Abuse Program

Fraud, waste, and abuse (FWA) is a national crisis that costs our healthcare system up to $270 billion annually[5] — costs shared by all of us, including plans, employers, providers, and members. FWA results in higher healthcare costs, inappropriate clinical care, and taxes administrative resources. Those who engage in FWA are using increasingly sophisticated techniques; combatting it requires advanced use of data, smarter case management, and tailored clinical interventions.

To help reduce unnecessary spend, MedImpact partners with plan sponsors to identify, stop, and prevent FWA. More than 175 plans implemented MedImpact's first-of-its-kind integrated bundle of analytic and clinical services to help identify and combat FWA. Advanced statistical analysis and machine learning analyzed data across pharmacies, prescribers, and members to identify potential FWA by leveraging an integrated approach:

- **Claim scoring and real-time review** — MedImpact's real-time scoring engine identifies suspicious claims early based on the likelihood of inappropriate and fraudulent billing.
- **Provider scoring and profiling** — Our multi-variate outlier detection model scores pharmacies and prescribers based on their dispensing and prescribing patterns to identify those that may require more in-depth analyses and investigations.
- **Link analysis** — We investigate relationships and interactions between prescribers, pharmacies, and members to identify evidence of collusion to commit FWA.

Whenever MedImpact detects FWA at the pharmacy or prescriber level, we conduct a variety of analyses to understand the cause and report it to clients, including desk audits, onsite audits, and investigations. Based on our findings, we may notify law enforcement and government agencies; remove pharmacies from our network; communicate with providers; and work with and notify plan sponsors to implement safeguards.

MedImpact brings bold and innovative thought leadership to help clients overcome complex FWA challenges. By applying advanced statistical analysis and machine learning to analyze data across pharmacies, prescribers, and members, MedImpact is successfully identifying and preventing FWA.

In 2019, plans enrolled in MedImpact's enhanced FWA program saved an average of $0.58 per member per month and received more than $22.5 million in overpayment recoveries.

$65.8M	>$22.5M	$308
In paid amount audited	In overpayment recoveries	In average savings per claim

Enhanced FWA Clients	Enhanced FWA Savings	Prospective Review
Over 175 Plans 4.28M Lives	Plan Savings $6.95 PMPY	Total Savings $7.5M

Audit Type	Claim Count	Savings
Prospective	17,332	$7,542,855
Desk	17,743	$7,618,882
Onsite	38,112	$7,357,229
Estimated Future Cost Avoidance	14,637	$4,503,793
Total	**73,187**	**$27,022,759**

STAR Ratings Clinical Package

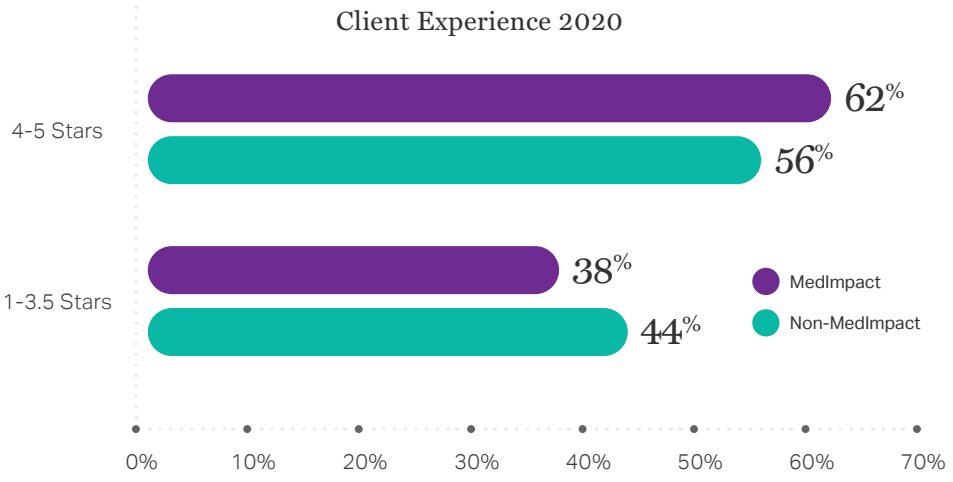
MedImpact's Star Ratings Clinical Package comprises member, prescriber, and pharmacy-directed solutions specifically designed to improve Star ratings for key Part D clinical measures. During the 2019 benefit year (2020 Star Ratings), among all CMS contracts with a rating, MedImpact had a larger percentage of Part D client contracts attaining 4 or 5 Stars for its Part D Summary Rating (62%), compared to non-MedImpact contracts (56%). These results represent a 5% increase over the prior year's performance.

Among plans that utilize MedImpact's Star Ratings Clinical Package, medication adherence rates increased an average 4% and associated Star ratings increased a respective 0.23, 1.05, and 0.75 Stars for the diabetes, hypertension, and cholesterol measures.

Program Adherence Outcomes

	Adherence		
	Diabetes	**Hypertension**	**Statins**
Before	3.50	2.75	3.25
After	3.75	4.25	4.0
Star Ratings Improvements	**+0.23**	**+1.05**	**+0.75**
Average Annualized Rate Change	**+4.0**	**+4.0**	**+4.0**

Client Experience 2020



Commercial Trends

Within MedImpact's commercial market, inflammatory disease, asthma and COPD, and multiple sclerosis all made our leading trends list for 2019.

Inflammatory Disease

In 2019, inflammatory disease continued as the number one therapeutic class for the commercial line of business and a top therapeutic area that will continue to drive spend. In 2019, five of the top 15 drugs were for inflammatory disease and the highest impact drugs have maintained their ranking, with Humira, Enbrel, and Stelara remaining in the top four. Together, Humira and Enbrel represent more than 60% of spend for inflammatory disease and will continue to dominate spend for several years, as biosimilars for these agents will not be available until at least 2023.

The ever-expanding labeling for existing biologics and FDA approvals of new entities continue to be a driver of increased spend for inflammatory conditions.

Stelara's significant growth in utilization (24.8%) and cost (10.7%) is likely a reflection of its label expansion for ulcerative colitis in October 2019. This new indication could result in continued growth through 2020.

Skyrizi, a new competitor for top biologics such as Stelara and Cosentyx, was approved for plaque psoriasis in April 2019 and had an impressive uptake, ranking 13th within branded agents for inflammatory diseases. Further growth is anticipated with potential label expansions in the upcoming year.

Xeljanz, the only oral agent within the top 15 drugs for inflammatory disease, had a significant 32.5% increase in utilization and 7.2% increase in cost for 2019. Xeljanz XR was approved for ulcerative colitis in December 2019 and may lead to continued growth in utilization for 2020. Although not available at this time, four tofacitinib generics have received tentative FDA approval; thus, lower cost alternatives to brand Xeljanz are on the horizon.

#1

Inflammatory disease continues to hold the top therapeutic class in 2019.

60%

percentage of 2019 inflammatory disease spend represented by Humira and Enbrel together

Taltz's new indication for ankylosing spondylitis and Tremfya's new one-press injector formulation likely contributed to >60% growth in utilization for both agents in 2019.

Remicade had a considerable decrease in utilization (21.1%) but its utilization remains more than double that of biosimilars such as Renflexis.

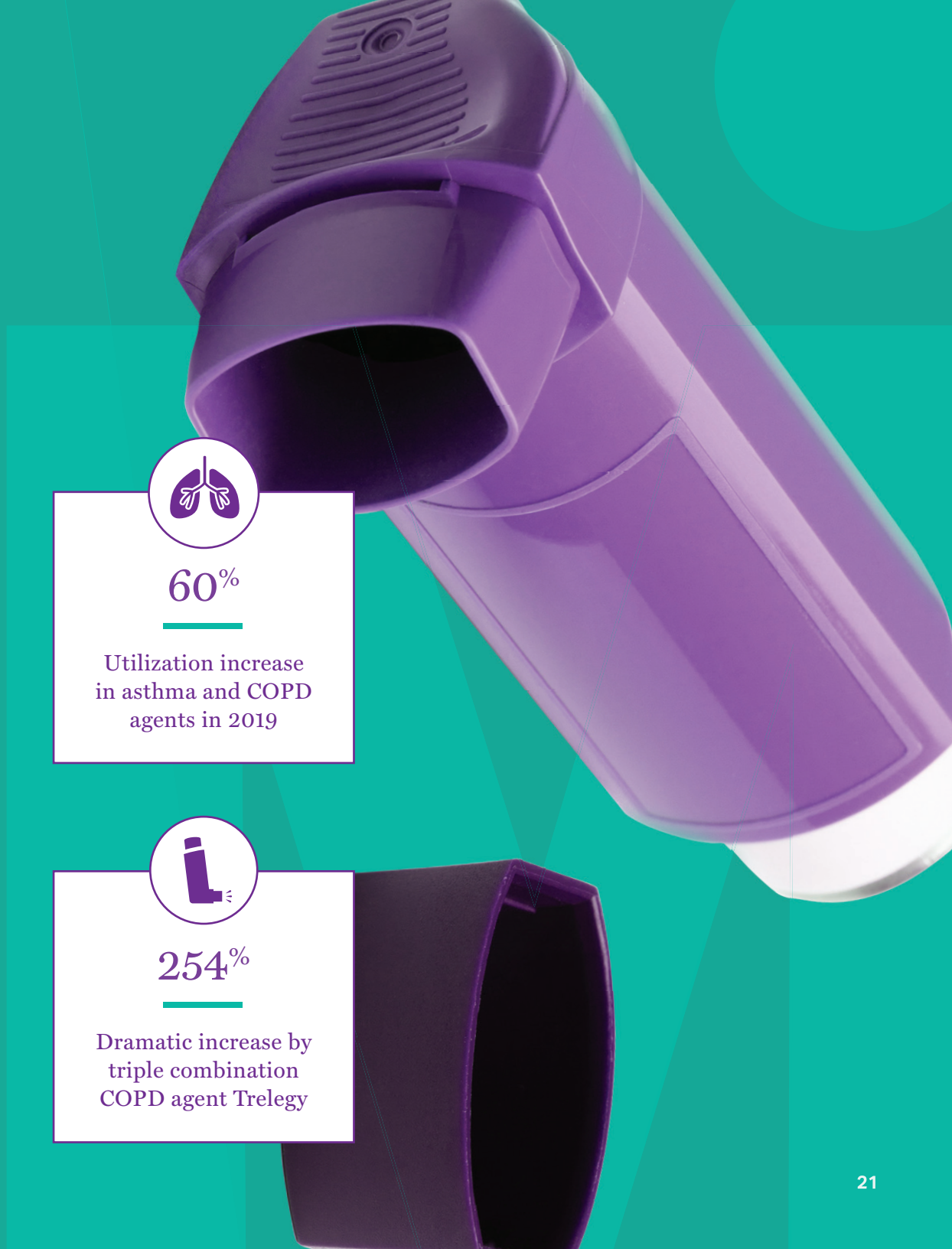
Medimpact continues to monitor pipeline agents, including new entities, label expansions and biosimilars for inflammatory disease. New products undergo a thorough P&T review prior to launch in order to select agents and apply utilization management that promotes low net cost.

Asthma and COPD

In 2019, asthma and COPD continued to rise within the top 10 therapeutic classes — now ranked 4th — with an increase in both utilization and unit cost. This was largely driven by changes in specialty trends, with more than a 60% increase in utilization and a slight increase in unit cost. Nucala, Dupixent, and Fasenra all experienced a utilization increase of more than 30%, with changes in FDA-labeling likely contributing to this trend. Nucala expanded its labeling to use of patients 6 years and older, which was previously limited to 12 years and older. In addition, Dupixent received approval for two new indications: atopic dermatitis and chronic rhinosinusitis with nasal polyposis. The new formulation of Fasenra enabled self-administration following adequate training, while previous formulations required administration by a healthcare provider. Dupixent, the second most utilized asthmatic agent in 2019, also realized a 3.3% unit cost increase.

In the non-specialty area, an increase in utilization and a decrease in unit cost was observed in the asthma and COPD category. The approval of an Advair generic (Mylan's Wixela Inhub), an Advair authorized generic, and several short-acting beta-agonist (SABA) authorized generics, likely contributed to the downward cost trend seen in 2019. Trelegy had a 254% increase in utilization. This may be due to Trelegy continuing to be the only triple combination agent approved for COPD, which provides ease of administration and may improve medication adherence for patients. While Advair remained the top branded agent, there was a 29% decrease in utilization and Advair's market share will likely continue to decrease as additional generics are expected this year. A similar trend is expected for Ventolin and ProAir (currently ranked 8 and 9, respectively, within the top branded agents), since an A-rated ProAir generic was recently approved in February of 2020.

MedImpact continues to review new generics, new formulations, and agents with new and expanded indications to present proposed utilization management strategies for P&T approval, allowing for a low net cost strategy and ensuring appropriate generics are used prior to branded agents.



60%

Utilization increase in asthma and COPD agents in 2019

254%

Dramatic increase by triple combination COPD agent Trelegy

Multiple Sclerosis

A multitude of drugs have launched more recently, including ones which represent new mechanisms of action. Generic competition has helped to improve price trend for a number of drugs and MedImpact's generic-focused formulary strategy and edits help to direct utilization to these, including the generics for Copaxone (Glatiramer). Brand Copaxone utilization was lowered by over one third year-over-year, with generic utilization up 10% (ending with more net utilization than the brand).

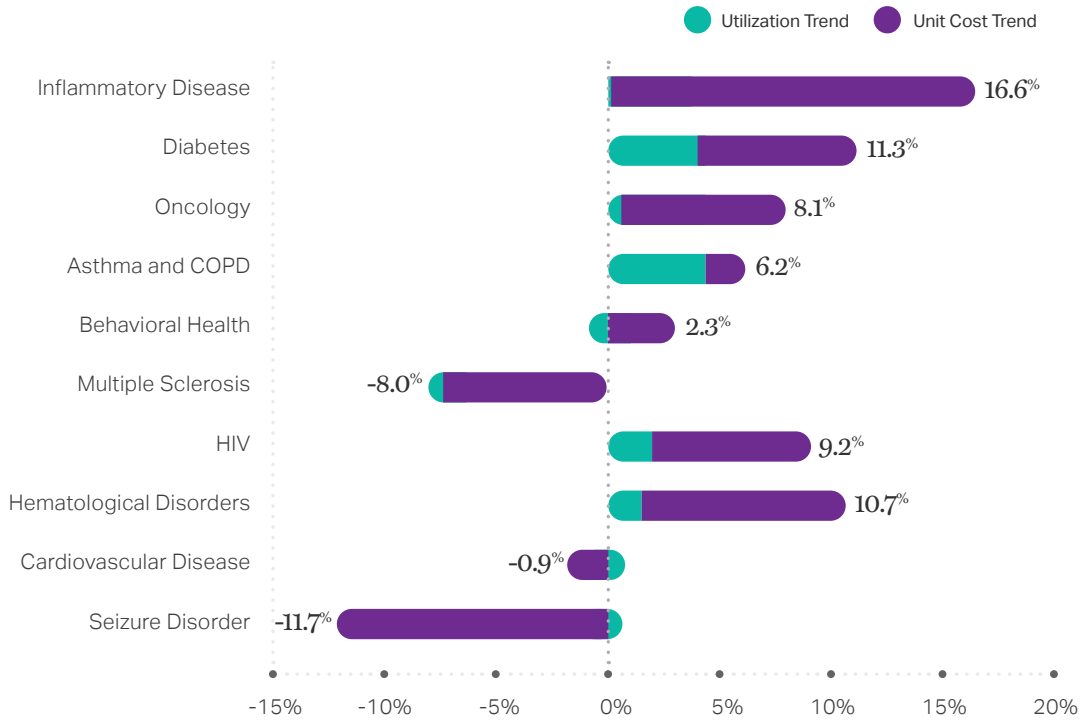
Tecfidera (Dimethyl Fumarate), currently placed as a first-line agent according to overarching formulary strategy, is anticipating a generic launch in the near future. Its manufacturer has designed a new prodrug of the same active chemical agent, known as Vumerity (Diroximel Fumarate), launched shortly before Tecfidera's generic availability. While Vumerity does appear to have a lower gastrointestinal side effect potential on initiation, it otherwise has no treatment benefit beyond Tecfidera. MedImpact has already reviewed Vumerity and enabled step-therapy requirements for prior trials of lower-cost MS drugs, including generic Tecfidera, as dictated by ongoing low net cost formulary strategy.

Additionally, Ocrevus (ocrelizumab) utilization has increased dramatically (over 700% year-over-year), despite being an IV drug (and thus automatically not covered by the majority of plans). In part, this is due to trends in current prescriber practice and fewer safety risks than similar IV high-efficacy options (such as Lemtrada and Tysabri). Ocrevus represents a very competitive price point per days' supply among its high-efficacy peers, and has excellent clinical outcomes, in addition to only requiring administration twice annually. For the benefit of patients (and without substantial cost increase), Ocrevus prior authorization criteria were refined in 2019, ensuring stringent controls for patients in whom it may not yet be merited, but also allowing more streamlined access for patients in whom it makes clinical sense.

Similarly, in the oral high-efficacy multiple sclerosis drug space, new entry Mavenclad (Cladribine oral tablets) represents another efficacious treatment modality, with low-pill-burden, infrequent dosing (two months out of the year for two years, then no treatment for two years), and at competitive pricing when adjusted for length of treatment effect. Mavenclad has also been reviewed to enable criteria on par with those for Ocrevus and is currently a preferred agent in the overarching formulary strategy.

2019 Commercial Therapeutic Trends

Therapeutic Class	Utilization Trend	Unit Cost Trend	Total Trend
Inflammatory Disease	0.2%	16.4%	16.6%
Diabetes	4.1%	7.2%	11.3%
Oncology	0.6%	7.5%	8.1%
Asthma and COPD	4.5%	1.8%	6.2%
Behavioral Health	-0.8%	3.1%	2.3%
Multiple Sclerosis	-7.4%	-0.7%	-8.0%
HIV	2.0%	7.2%	9.2%
Hematological Disorders	1.6%	9.1%	10.7%
Cardiovascular Disease	0.8%	-1.8%	-0.9%
Seizure Disorder	0.5%	-12.2%	-11.7%



Medicare Trends

Within MedImpact's Medicare market, diabetes, oncology, and hematological disorders made our notable trends list for 2019.

Diabetes

In 2019, the diabetes class took the top spot for Medicare total spend and continues to lead non-specialty spend. Among the top 15 medications for spend, 40% are diabetes agents. In 2019 GLP-1s (primarily Trulicity and Victoza) accounted for 30% of Medicare diabetes medication utilization and SGLT2s (primarily Jardiance) accounted for approximately 8%. These agents saw a striking ascent in rank, whereas the DPP-4 Januvia slightly dropped in rank. Insulins Lantus and Novolog remain virtually unchanged in rank from 2018, accounting for approximately 50% of Medicare diabetes medication use.

There are several reasons for the increased utilization of the GLP-1 and SGLT2 agents, notably the national guidelines pivoting to recommend their use irrespective of A1C. Guidelines now emphasize selecting second-/third-line options based on the presence of member comorbidities, such as heart failure, kidney disease, and cardiovascular risks, areas in which the FDA has awarded expanded labels in these classes. To date, several GLP-1 (Victoza, Ozempic, Trulicity) and SGLT2 agents (Jardiance, Invokana) have labels for reducing cardiovascular events. Additionally, Invokana is FDA-approved for use in kidney disease and heart failure and, for the first time, another SGLT2 (Farxiga) recently received FDA approval for heart failure in a non-diabetic population, further expanding the use of this class.

Furthermore, a new oral formulation of Semaglutide (Rybelsus) approved in 2019 grants additional patients access to the GLP-1s. Finally, GLP-1 and SGLT2 agents continue to be available only as branded products, leading to increased spend compared to other classes. In contrast, DPP-4 agents offer less A1C reduction and studies for cardiovascular benefits have been neutral, thus the FDA has not awarded expanded labels. The preferential use of a SGLT2 or GLP-1 second- and/or third-line delegates DPP-4 use to further down the line, potentially explaining only a slight decline in the utilization of DPP-4. The trends in these three diabetes classes are expected to continue.

Because insulin continues to account for approximately 50% of Medicare diabetes medication utilization, inflated insulin pricing has been a topic of scrutiny in recent years. Recently, manufacturers have released low-cost versions of their original brands, which in time may impact the overall spend. Examples include Basaglar, Humalog, Novolog, Novolog Mix, and (most recently) Humalog Mix. Additionally, recent U.S. legislation is focused on insulin affordability, especially for Medicare patients. However, by suggesting fixed copays, cost to plans will likely remain unchanged or increased. Some plans are moving to this copay structure for 2021 in the absence of a final law. Impacts on insulin pricing and affordability are expected to continue to be high points of interest moving forward.

MedImpact continues to focus on guideline updates, FDA labeling, and updates in practice to provide utilization management and low net cost options, where available.

#1

The diabetes class topped total Medicare spend in 2019.

50%

Insulin continues to account for half of Medicare diabetes utilization.

40%

of the top 15 medications contributing to Medicare spend are diabetes medications

30%

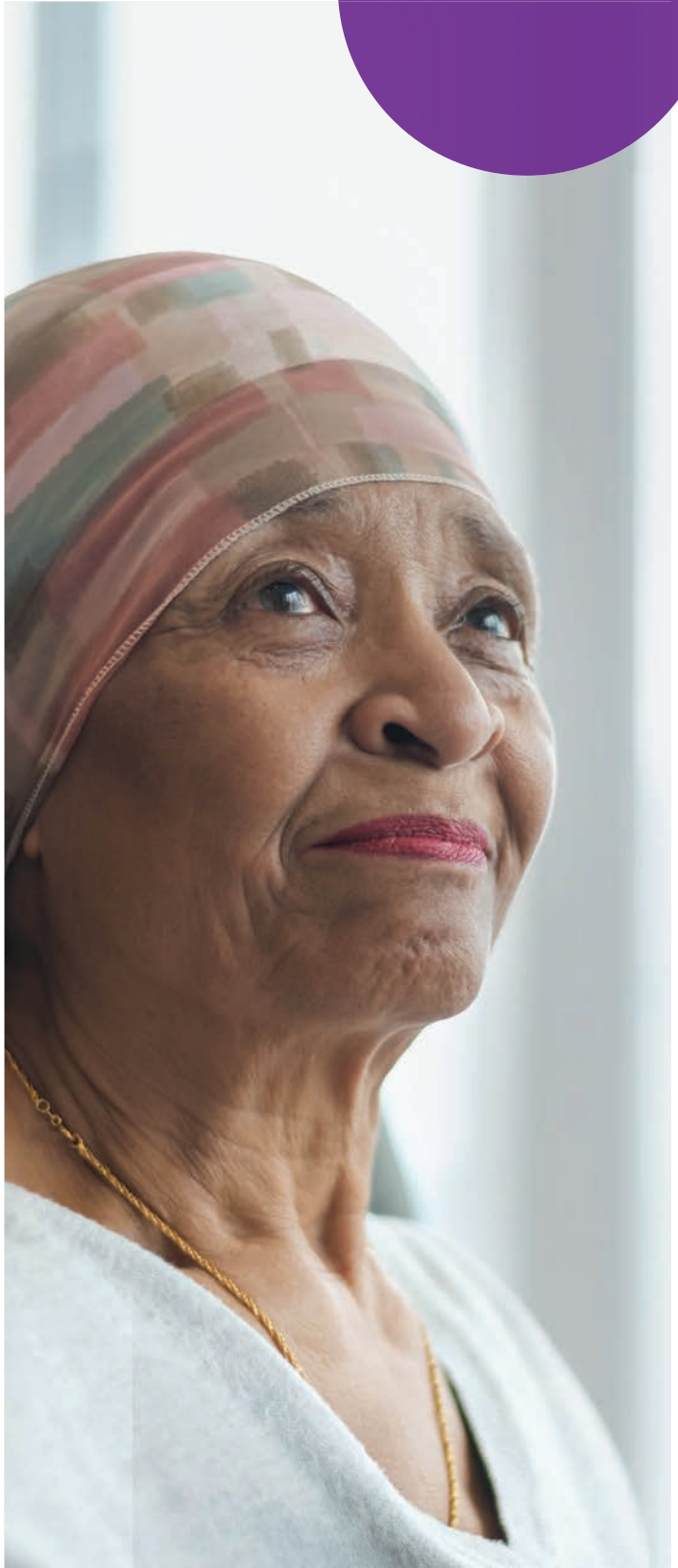
GLP-1s accounted for nearly one third of Medicare diabetes utilization in 2019.

Oncology

In 2019, the oncology drug class remained the leading area of drug spend among specialty drugs and the second highest area of spend overall for Medicare. Seven of the top 15 medications for specialty drug spend were oncology therapies, including Revlimid, Imbruvica, Ibrance, Xtandi, Jakafi, Zytiga, and Pomalyst. Of note, the top agent, Revlimid, accounted for 22% of oncology pharmacy spend. This dominance is expected to persist until a generic version of Revlimid is available, which is not anticipated until March 2022.

Substantial increases in oncology utilization are a result of additional FDA approved indications; this expands use of the agent to new tumor types, allows for prescribing in earlier lines of therapy, and/or expands use to broader patient populations. Of the top 15 agents for oncology spend, six had utilization increases of >15% (Xtandi, Jakafi, Tagrisso, Cabometyx, Venclexta, Lenvima); all of these increases can be explained by supplemental indication approvals by the FDA. Significant increases in utilization were exhibited by Venclexta, which increased 145% due to approvals in acute myeloid leukemia and first-line treatment of chronic lymphocytic leukemia, and Tagrisso, which increased 74% after receiving approval for first-line treatment in patients with a subset of lung cancer. Utilization is expected to continue to increase for these six agents and for other oncology drugs with recent indication expansions, including Lynparza, Erleada, Calquence, and Inlyta.

Alternatively, some agents experienced declines in utilization as new approvals of agents, with similar mechanisms of action increasing competition. A notable example is Imbruvica, with an 8.8% decline due to competition from Calquence and Brukinsa. Additionally, Zytiga brand market share eroded by nearly 39% due to the introduction of the generic medication in November 2018.



46.6%

7 of 15 Medicare specialty drugs were for oncology agents in 2019.

39%

Decline in Zytiga use due to generic introduction in late 2018

145%

Dramatic spike in Venclexta utilization in 2019

74%

Increase in Tagrisso after receiving approval for first-line treatment for a subset of lung cancer

Hematological Disorder

While hematologic disorders maintained the same rank as the previous 2018 report at the 4th highest total cost by drug class, there were significant changes among the agents within the class. Substantial utilization increases for both Eliquis (Apixaban) and Xarelto (Rivaroxaban) propelled these agents to rank 1 and 5, respectively, in total cost among all drugs. Eliquis saw a rise in utilization by 31.57%, making this single agent 55% of the total cost of the therapeutic class. The second highest cost agent, Xarelto, also had an increase in utilization by 9.68%, while long-standing generic agents such as Warfarin and Enoxaparin saw decreases by 11.1% and 13.19%, respectively.

The history of the direct oral anticoagulants (DOACs) has rapidly evolved in the past several years and is likely driving these changes. The American College of Chest Physicians published updated guidelines in 2016 with the DOACs now preferred over Warfarin for the treatment of acute venous thromboembolism (VTE), including deep vein thrombosis (DVT) or pulmonary embolism (PE). These guidelines further clarified that no DOAC was favored over another, and these were to be avoided in patients with severe renal disease, cancer, or pregnancy. In addition to these exclusions, the medical community still had safety concerns with the DOACs due to having only one reversal agent specifically for Pradaxa (Dabigatran). In 2018, however, this changed with the approval of Andexxa, which provides a reversal agent for two more DOACs, Eliquis and Xarelto. In addition, 2018 also provided the first two prospective clinical trial publications for the use of DOACs in cancer populations. In response to these trials, as well as previous subgroup analysis data, the National Comprehensive Cancer Network (NCCN) updated its guidelines (version 2.2018) to include the DOACs as potential first-line options. The pivotal trials for the DOACs uniformly excluded patients with advanced chronic kidney disease (CKD), but in 2018 an emergence of retrospective data became available suggesting similar efficacy and no increased bleeding risk with use of Eliquis, when compared to Warfarin, in patients with advanced CKD. This, coupled with the ease of dosing that does not require parenteral anticoagulant bridging, made Eliquis catapult to the top of its class.

More recent data released at the end of 2019 showed similar rates of VTE after six months in both the Eliquis and Dalteparin groups, without any impact on major bleeding events in a large randomized population with active cancer and VTE. This was in contrast to the previous 2018 studies that showed an excess number of clinically relevant non-major bleeds with Xarelto and higher rate of major bleeding with Savaysa (Edoxaban), particularly in patients with upper GI cancers. As such, NCCN updated its VTE guidelines in the first quarter of 2020 (version 1.2020) to now recommend Eliquis as a category 1 preferred agent for patients without gastric or gastroesophageal lesions. This higher level of recommendation, along with the FDA approval of the first generic Apixaban on Jan 10, 2020, predicts the utilization of this agent will continue to grow as practitioners incorporate new recommendation into their practice, while costs may decrease due to MedImpact's low net cost generic strategies.

55%

In 2019, Eliquis saw a rise in utilization by 31.57%, making this single agent 55% of the total cost of the therapeutic class.

9.68%

Xarelto had an increase in utilization by 9.68%, the second highest cost agent.

13.19%

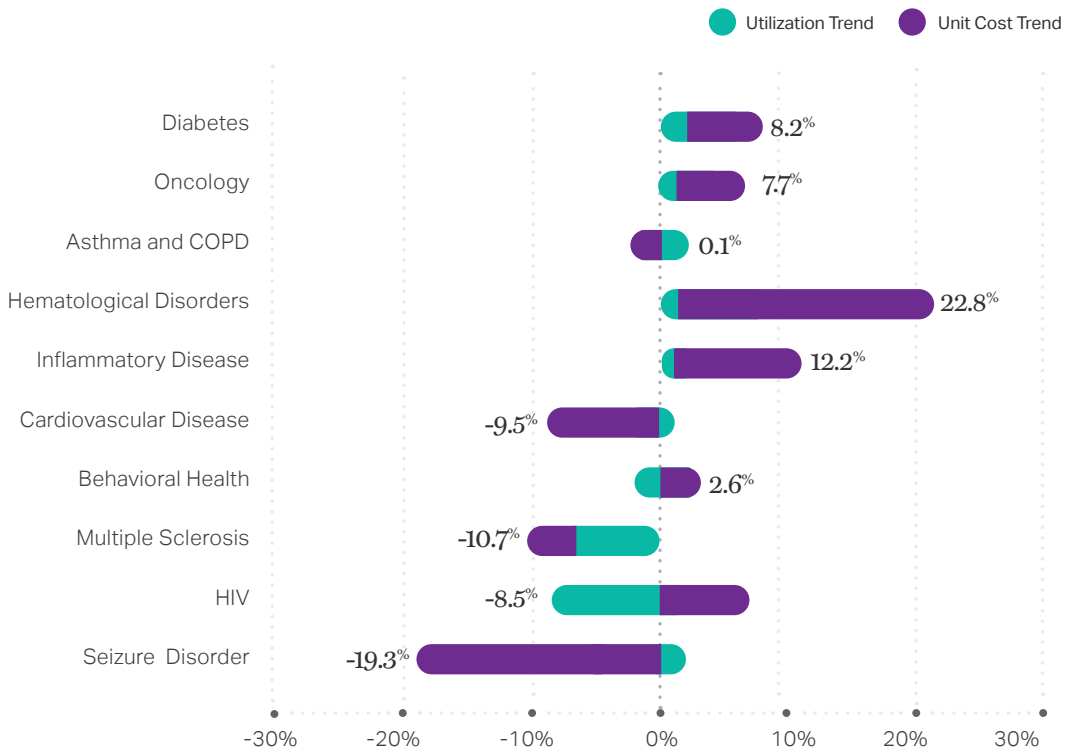
Decrease in utilization for long-standing generic Enoxaparin

11.1%

Decline in utilization for long-standing generic Warafin

2019 Medicare Therapeutic Trends

Therapeutic Class	Utilization Trend	Unit Cost Trend	Total Trend
Diabetes	2.0%	6.2%	8.2%
Oncology	0.8%	6.9%	7.7%
Asthma and COPD	3.7%	-3.6%	0.1%
Hematological Disorders	1.9%	20.9%	22.8%
Inflammatory Disease	0.8%	11.5%	12.2%
Cardiovascular Disease	0.6%	-10.1%	-9.5%
Behavioral Health	-2.8%	5.4%	2.6%
Multiple Sclerosis	-6.5%	-4.2%	-10.7%
HIV	-16.6%	8.1%	-8.5%
Seizure Disorder	3.5%	-22.7%	-19.3%



Medicaid Trends

Within MedImpact's Medicaid market, HIV, Hep C, and pain management/ opioid reduction made our notable trends list for 2019.

HIV

In 2019, HIV saw similar drug utilization, as compared to the previous year. Several HIV drugs are ranked among the top 15 drugs overall for spending. These include the INSTI-based, single-tablet regimen items Biktarvy, which rose to the top HIV spot after not being ranked last year, and Genvoya and Triumeq, which have fallen somewhat in the last year. It is not a surprise these are the most highly utilized HIV medications, as they are first line recommended options by the HHS guidelines for the management of HIV.

Collectively, Biktarvy, Genvoya, and Triumeq continue to command utilization, with a 50% share of spend among the top 25 HIV drugs in 2019. These INSTI-based regimens are preferred due to infrequent adverse effects and few drug-drug interactions. Alternatively, protease inhibitor (PI)-based regimens include a CYP-inhibitor, such as Cobicistat or Ritonavir, to boost concentrations, which also increases the potential for CYP interactions with other medications. Meanwhile, NNRTI-based regimens have a higher baseline resistance in the ART-naïve population. In addition, there is a pattern of preference for Tenofovir Alafenamide (TAF) products, such as Biktarvy and Genvoya, which were predicted to increase in utilization and replace Tenofovir Disoproxil Fumarate (TDF) products by industry analysts in 2016. Consider that Triumeq, which is decreasing in utilization, does not contain TAF (or TDF) and includes abacavir, which requires additional testing prior to use and is contraindicated in heart failure.

Truvada and Descovy both decreased in Medicaid utilization; while also FDA-approved for the prophylaxis of HIV, their decreases in use is likely secondary to the decrease in use as NRTI backbones in HIV treatment regimens due to movement toward single tablet regimens. Single-tablet regimens are preferred because they are associated with higher levels of adherence, which improves clinical outcomes and decreases the potential for development of drug resistance. Two complete two-drug single tablet regimens, Juluca and Dovato, were approved at the beginning of 2018. Historically, recommended antiretroviral regimens contain at least three drugs from at least two different classes to prevent resistance, so these two-drug regimens represent a paradigm shift in HIV management. In fact, Juluca utilization more than doubled from last year. Because these regimens contain fewer medications overall, they may have a lower side effect burden than three-drug alternatives. If long-term resistance data is positive, we can expect to see more utilization over time as physicians become more comfortable with the use of two-drug regimens. While not yet available, a generic version of Truvada (Emtricitabine/ TDF) has been approved by the FDA and is expected to release in 2020. Brand Truvada utilization is expected to decline once the generic is released as patients switch for both pre-exposure prophylaxis and as an NRTI backbone in HIV treatment regimens. Descovy utilization is also likely to decrease, as only the brand name product is available and occupies the same places in therapy as Truvada.

50%

Biktarvy, Genvoya, and Triumeq collectively dominated 2019 HIV utilization, capturing half the share of spend among the top 25 HIV drugs.

#1

Biktarvy made the dramatic rise to the top spot of the HIV Medicaid class after not ranking at all last year.

x2

Juluca utilization doubled in 2019. This two-drug single tablet regimen, along with Dovato, represents a paradigm shift in HIV care with potential lower side effects.

Hepatitis C

Among the top specialty drugs, antiviral treatments for both HIV and Hepatitis C continue to rank highly and compose half of the top 10 specialty drugs for Medicaid in 2019. Coming in at number two of all drugs, Mavyret remains the top contender among Hepatitis C treatments for this line of business. In 2019, Mavyret accounted for 64.5% of overall spend for Hepatitis C treatments and 9.5% for the top 15 drugs overall.

A 2019 supplemental approval from the FDA granted Mavyret a label update permitting the shortest eight-week treatment for all patients requiring first-time treatment, regardless of genotype or cirrhosis status. This approval extends the short, eight-week regimen to a larger population and offers a preferable option for patients who struggle with adherence compared to other Hepatitis C treatments that require a standard 12-week treatment.

In 2019 authorized generics for two of Gilead's Hepatitis C treatments launched, offering further competition as efficacious, cost-effective treatment options. Indeed, utilization of the sofosbuvir/ velpatasvir authorized generic has resulted in significant erosion of brand Epclusa utilization and now accounts for 83% of all Medicaid spend for sofosbuvir/velpatasvir products. This has pushed the authorized generic to ascend into the top 10 specialty drugs and it has become number two within the Hepatitis C space for this line of business in 2019.

As the rate of new infections increased each year from 2010 to 2017, Hepatitis C will likely continue to play a significant role in therapeutic trend for the Medicaid line of business. A new wave of Hepatitis C infections afflicts a new, younger population due to the ongoing opioid epidemic and associated injection drug use. A recent CDC analysis notes the highest rate of new Hepatitis C infections occurs in patients under the age of 40. The CDC previously limited screening recommendations to patients born 1945-1965 as well as those with risk factors; however, in 2020 the CDC has updated screening recommendations to offer one-time screening to all adults regardless of age. Overall utilization of Hepatitis C treatments increased nearly 9% in 2019, but MedImpact's strategy of low net cost with preference for cost-effective treatments has resulted in a negative price trend of 24%. Appropriate utilization of these cost-effective treatments will also reduce medical costs associated with the long-term complications of this curable disease.

While Hep C overall utilization increased in 2019 by

9%

MedImpact's low-net cost strategies resulted in a

-24%↓

decrease in Hep C price trend

64.5%

of Hep C trend was attributed to Mavyret.

In 2019, Mavyret accounted for

9.5%

for the top 15 drugs overall.

Pain Management/Opioid Reduction

For the second consecutive year, pain management trend remains a top therapeutic class in the Medicaid line of business. MedImpact currently offers drug management programs to help prevent and combat opioid overutilization. MedImpact's continued oversight of controlled substances and generic-focused strategies helped to decrease pain medication trend -3.3% overall. This is largely due to utilization decreasing -12.6% year-over-year in 2019. Much of this utilization reduction can also be attributed to shifting attitudes toward opioid use related to the U.S. opioid epidemic.

Pain management ranks at number five in MedImpact's traditional (non-specialty) therapeutic class rankings. Oxycodone and hydrocodone-acetaminophen hold the number three and four positions, respectively, for total spend in pain management, but observed significant reductions in overall trend (-31% and -24%) and utilization (-20% and -21%) in 2019. Across all generic formulations, Buprenorphine holds the top spend in its class. An increase in utilization of nearly 82% year-over-year is possibly due to its use in the treatment of opioid use disorder and pain. Sublocade (Buprenorphine subcutaneous syringe), also used for the treatment of opioid use disorder, has seen a substantial increase in trend (785%) and utilization (860%) in the past year, with no auxiliary use in pain control.

The introduction of calcitonin gene-related peptide (CGRP) inhibitors, agents used for migraines, have considerably increased trend and utilization in this space. Aimovig leads the highest spend in the CGRP market basket, with Emgality and Ajovy trailing not too far behind. No agent in this class has demonstrated superior efficacy, thus enabling flexibility in our utilization management strategies. While these injectable agents will compete with other recently approved CGRPs (oral Ubrelvy, oral Nurtec ODT, and IV Vyepti), CGRP utilization is expected to continue increasing this year and will be monitored for appropriate utilization. MedImpact continues to review each new agent and seek P&T approval of criteria to apply to help manage spend in this space, as part of an overarching low net cost strategy, and to help ensure appropriate generic options are tried first.

-3.3%

Reduction in 2019 pain management trend due to MedImpact's rigorous oversight of controlled substances and generic-focused strategies

-12.6%

Reduction in overall pain management utilization year-over-year

Trends in Opioid Treatment

82%

Increase in year-over-year utilization of Buprenorphine, which holds the top spend in its class

Sublocade

↑ **785%** trend increase
860% utilization increase

Oxycodone

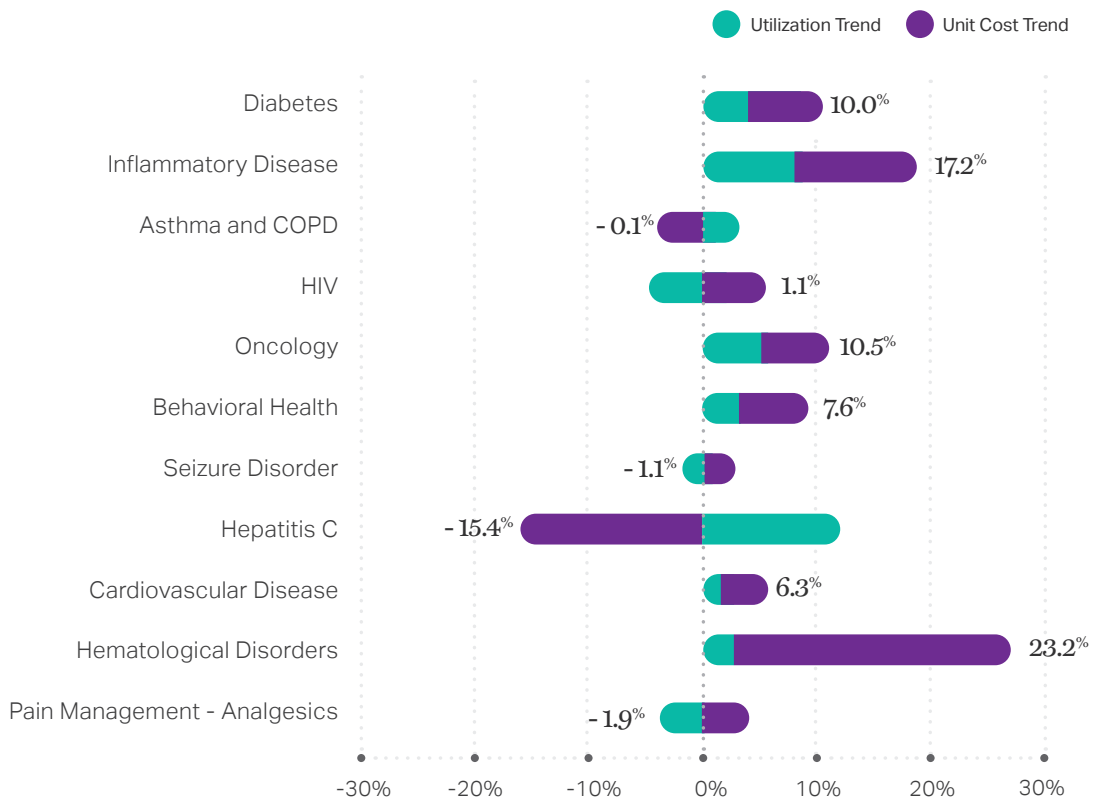
-31% reduction in trend
-20% in utilization ↓

Hydrocodone-acetaminophen

-24% reduction in trend
-21% in utilization ↓

2019 Medicaid Therapeutic Trends

Therapeutic Class	Utilization Trend	Unit Cost Trend	Total Trend
Diabetes	4.2%	5.9%	10.0%
Inflammatory Disease	-1.6%	18.8%	17.2%
Asthma and COPD	4.8%	-4.8%	-0.1%
HIV	-9.6%	10.6%	1.1%
Oncology	4.8%	5.7%	10.5%
Behavioral Health	3.2%	4.3%	7.6%
Seizure Disorder	2.1%	-3.2%	-1.1%
Hepatitis C	8.6%	-23.9%	-15.4%
Cardiovascular Disease	1.3%	5.1%	6.3%
Hematological Disorders	4.3%	18.9%	23.2%
Pain Management - Analgesics	-12.6%	10.7%	-1.9%



Looking to the Future: Responding to Market Trends

As we look to the future of pharmacy benefit management, MedImpact is working to develop key programs and solutions in response to market trends.

Enhanced healthcare interoperability and provider workflow integration

At long last, healthcare interoperability is more than just a goal. Standard work from groups, such as Health Level 7 (HL7), have focused on this topic for more than three decades, with file format standards that have experienced some success in allowing clinical records to be transferred between providers to support member care through Health Information Exchanges (HIEs), or to allow claims data to follow members that move to a new plan. The breakthrough, however, has been in real-time data access through Web services — application programming interfaces that allow one system to reach into and query or even update data in another organization's system.

The standard gaining traction — Fast Healthcare Interoperability Resource (FHIR) — first proposed by HL7 in 2013, has evolved, matured, and broadly implemented by Electronic Medical Records (EMR) vendors and health information technology solutions providers. By 2018, most major healthcare systems upgraded their software to versions in support of these efforts.

A broadly adopted technical standard alone is insufficient for the healthcare industry to actually share data for the benefit of members and patients. In 2019, policy finally arrived with the announcement of the final rules mandated by the 21st Century Cures Act of 2015, which made it illegal for organizations to withhold a patient or member's data from other organizations with a legitimate, authorized request under HIPAA. The need for such a law resulted from industry players that withheld data to maintain a competitive advantage, even if that advantage was detrimental to patients and members. With the final rules now in place that clearly define what does and does not constitute information blocking in healthcare, we can now be confident those days are behind us.

MedImpact is exploring technology solutions that leverage standards such as FHIR, as well as more traditional file-based data exchange that make healthcare interoperability possible. With the policy in place to help ensure clients can free up data, we are seeking innovation opportunities, such as streamlining prior authorizations, improving our predictive analytics for prescription quality and safety programs by incorporating clinical data, and more effectively identifying members who may benefit from programs such as pharmacogenomics and medication therapy management.

We have also taken a significant step toward more deeply and natively embedding our communications to physicians in the prescribing workflows within their EMR software. We are already seeing growth in use of our services to deliver formulary and medication history to the EMR, and now average 2.5m transactions weekly (up 2% year-over-year). We launched Real-Time Benefit Check (RTBC) in March of 2019 and processed over 856K transactions by year end. In 2019, MedImpact began a pilot effort to use the direct message standard to send secure messages directly to the EMR for programs such as Choice90, replacing facsimile and USPS letters historically used. In 2020, we will extend this pilot to send more of our prescriber outreach communications through this modality. Through this pilot, we have discovered that nearly half of the prescribers we are trying to reach have direct message addresses. Based on this information, MedImpact's goal is to reduce our use of facsimile by half by the end of 2021.

2019

MedImpact's pilot sent secure direct messages directly to the EMR for programs such as Choice90, replacing faxes and USPS letters.

2020

Extending the pilot and sending more prescriber outreach communications through secure direct messages

2021

MedImpact's goal is to reduce facsimile use by 50% before the end of the year.

MedImpact fundamentally believes that access and control of data empowers consumers and healthcare providers to make good, value-based decisions.

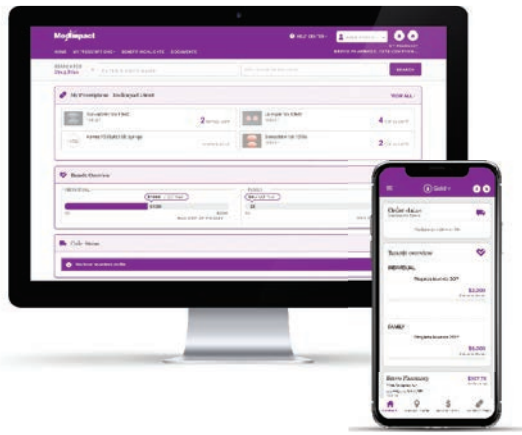
Consumer Access and Control

Given significant time and expense is spent on safeguarding consumers' Protected Health Information (PHI), it is important to emphasize that HIPAA also helps to ensure consumers' right to obtain that data. The trend over the last several years is not only that consumers have this right, but that they also specifically must be able to access their data in electronic form through an application programming interface and, perhaps most significantly, share it with an application of their choosing.

Beginning in 2018 with clinical data, CMS mandated that such access be provided to meet criteria for the Electronic Health Record Incentive Program (meaningful use). The industry responded — EMR vendors adopted the Health Level 7 standard called SMART on FHIR, and most large healthcare systems accelerated their upgrade cycles to get SMART on FHIR-enabled versions of their EMR software deployed in the field. Apple also provided a key component: consumers could connect the Apple health application to their records and keep them synced. Finally, they could access their records in an electronic form and choose to share it with Apple's health application, or even with third-party iOS applications from the App Store. In 2019, CMS raised the bar and released draft rules mandating that plans under its scope must provide that same kind of access for medical and pharmacy claims and encounter data. This data must, by July 2021, be available for consumers to share via the SMART on FHIR standard with an application of their choosing.

MedImpact is actively supporting clients that fall under the scope of the CMS rule because we believe a technology investment made by us as the PBM is a cost-effective way for all clients to comply, and because we fundamentally believe that access and control of data will empower consumers and their healthcare providers to help make good, value-based decisions. We fundamentally believe we must respect consumer preference and meet them where they want to be. Instead of forcing them to use our website or application to access their data, we're allowing them to easily decide which application they want to use and allowing them to safely and securely bring their data to that application.

Our consumer portal and mobile application provides a superior experience and many will choose to access their data in that context, and perhaps even choose to share their medical claims or clinical data with our application. As such, MedImpact continues to invest in its consumer offering in parallel with fully embracing clients' right to take their data where they want to be. As part of our commitment, MedImpact is proud to be a member of the CARIN Alliance, a bipartisan, multi-sector collaborative working to advance consumer-directed exchange of health information.

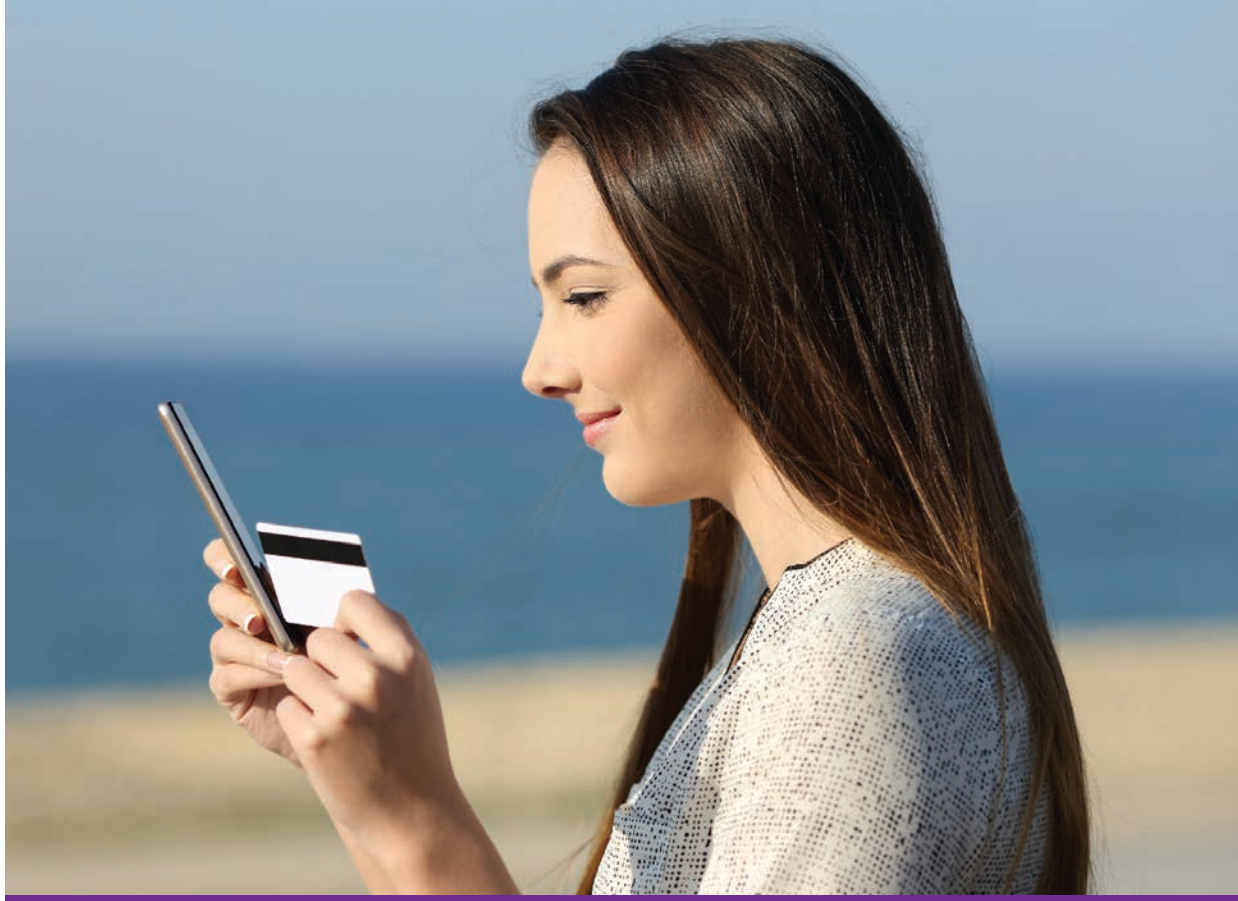


Increased Use of Cash Card Discounts

With consumers seeking savings at the pharmacy counter and prescription discount cards, cash cards are increasing in use. Traditionally, these cards were offered to the uninsured, often by the pharmacy staff at the point-of-sale. Today, these cards are often virtual (application-based) and allow consumers to compare the discount they can receive at nearby pharmacies before they decide where to fill their prescriptions. Consumers are using discounts when they are uninsured but also when they are filling prescriptions during their deductible phase or when filling non-formulary prescriptions. In 2019, we saw a historic high in the enrollment of large-company workers in high-deductible plans — 60% of these employers now offer these plans and 47% of their employees are enrolled in them (up from 35% in 2018 and 28% in 2017).[6]

The increasing use of cash discounts is attributed to growth in availability, use of high-deductible plans, and the current employment trends where more workers are in contract roles that offer limited or no benefits. But plan sponsors lose visibility of when their members refill, or even what medications their members are taking when those members use a cash discount card, MedImpact provides a solution to integrated cash claims with funded claims by offering our PBM clients a co-brandable cash discount card from America's Pharmacy for their members to use. America's Pharmacy offers discounts for members as high as 80%.

MedImpact also gives plan sponsors the option of automatically applying their members' America's Pharmacy cash card prescription purchases to their deductibles, giving their members a frictionless, convenient way to obtain savings during the deductible phase. When cash claims are integrated with funded claims, our clients have the full picture: more accurate adherence rates, and a complete medication list to drive advanced analytics for quality and safety programs that detect drug-to-drug or overutilization issues.



HDHP

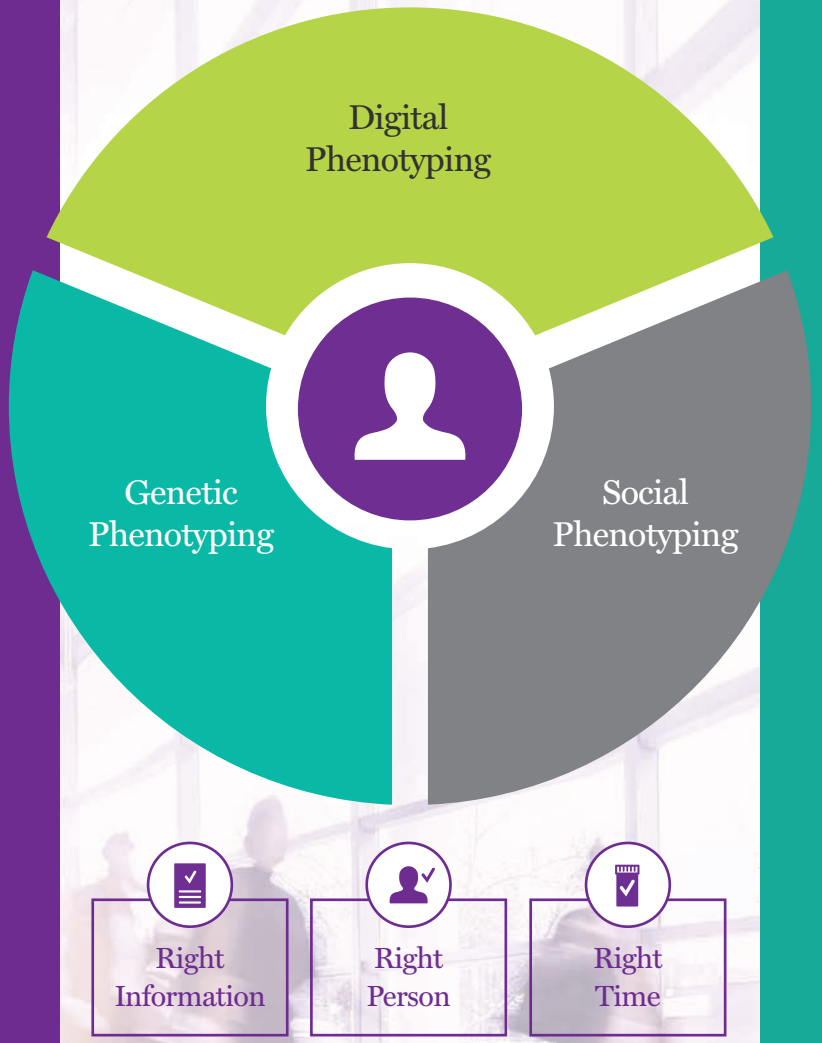
In a historic rise, 60% of large-company employers now offer a HDHP and 47% of employees are enrolled in them.

80% savings

Our prescription savings card offers discounts for members as high as 80% on FDA-approved medications.

Social Determinants of Health

MedImpact is committed to addressing social determinants of health and resulting health inequities, aligning with our goal of providing more personalized prescription benefits for clients' members. The first step in addressing social determinants is to collect information about a person's evolving needs (such as transportation, health literacy, food insecurity, and more), and we recognize our own data can tell us a lot about those specific needs. Our clinical program teams are working to identify potential underlying issues that may negatively impact quality of care measures within our preexisting program offerings. In recent months, our medication therapy and nutrition management programs have also begun collecting and identifying various social determinant health information about users so that we can flag members for possible needs and interventions.



The second step in addressing social determinants is connecting members with pre-existing community resources and identifying ways to quickly align resources to specific member needs. Social determinants have a direct and immediate impact on aspects of care, including adherence and access to quality care. To address these more specifically, we are building additional capabilities to provide increased, more affordable access to new types of care, such as digital medicine. We are also developing new tools that give members more information about their healthcare benefits. This 360-degree view of the member translates to fuller integration of our data into the larger healthcare delivery system, and we are actively working to connect our data to new consumer tools and member medical records.

Digital Therapeutics

Consistent, effective management of chronic diseases and conditions continues to challenge healthcare providers and payers. Disease management contributes to rising costs, often without realizing improved population outcomes. Digital therapeutics is a promising solution to today's fragmented and highly variable care. By delivering therapies/intervention programs through clinically evidenced software programs, digital therapeutics offers the potential for increased access to care, lower overall cost of care, and more measurable evidence-based and outcomes-driven programs and, in some instances, replacing traditional therapies altogether for certain disease states.

MedImpact is evaluating the rise of digital therapeutics and believes there are a number of quality solutions that meet high standards of clinical efficacy and safety. The FDA is currently building pathways for this new class of therapeutics. We anticipate coverage of these digital therapeutics solutions under the pharmacy benefit is a natural next step. MedImpact is currently exploring solutions to address some of the early challenges related to the ordering and prescribing of digital therapeutics, the ways in which they will be digitally "dispensed," and how outcomes tracking and reimbursement models can be supported.

MedImpact is also working to connect healthcare providers to a range of therapeutic tools.

Our model affords plan providers flexibility when selecting digital therapeutics for their members. In some cases, therapeutics can be used as stand-alone disease management tools. In others, digital therapeutics can serve as complimentary therapies to traditional pharmaceutical protocols.

We are also working to use digital therapeutics to augment many of our clinical program and MTM offerings. In addition, MedImpact is analyzing data to assess the efficacy of digital therapeutics programs, measure outcomes, and assess the degree to which digital therapeutics can reduce or avoid overall healthcare spend.

Digital Health and Wellness

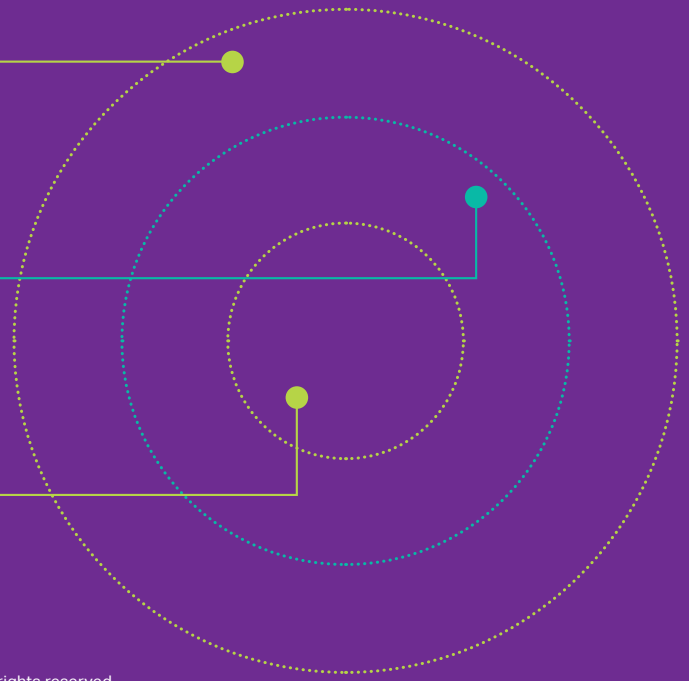
Digital lifestyle, wellness, and health-related tools that help consumers take control of their health

Digital Medicine

Clinical evidence-based care that combines traditional medicine with digital aspects

Digital Therapies

Targeted clinical evidence-based interventions to manage, treat, or prevent a specific condition, combined with real world outcomes



Our model affords plan providers flexibility when selecting digital therapeutics for their members. In some cases, therapeutics can be used as stand-alone disease management tools. In others, digital therapeutics can serve as complementary therapies to traditional pharmaceutical protocols.

Quality Performance Trends

National quality organizations, such as NCQA, Pharmacy Quality Alliance, National Quality Forum, and CMS, continue to demand improved quality performance from health plan sponsors. Leveraging industry standards and evidence-based guidelines from these national quality performance sources, MedImpact's Quality Performance Monitoring Program platform provides quarterly summary dashboards with book-of-business benchmarking and monthly member and claims-level predictive data for mid- to end-of-year targeting to prioritize and improve plan performance.

Opioid overutilization is a national epidemic that affects every part of the nation and nearly every demographic. The U.S. healthcare system continues to develop and implement solutions to combat this epidemic. MedImpact offers an integrated suite of services to identify high-risk members, intervene at the point-of-sale, engage prescribers, and promote Naloxone access to improve member safety. Our Opioid Overutilization and Safety Control programs include point-of-sale and retrospective intervention programs to prevent and address concurrent use of opioids and benzodiazepines. Based on our performance for CMS/PQA's concurrent opioid-benzodiazepine safety measure, clients experienced a 2, 3, and 4 percentage point decrease for the commercial, Medicare, and Medicaid populations, respectively, from 2018 to 2019.

2, 3, and 4%

Based on our performance for CMS/PQA's concurrent opioid-benzodiazepine safety measure, clients experienced a 2, 3, and 4 percentage point decrease for the commercial, Medicare, and Medicaid populations, respectively, from 2018 to 2019.

From 2018 to 2019, this program identified increases in key adherence measures among our entire commercial, Medicaid, and Medicare populations:

- Anti-hypertensive medication adherence increased an average 1.65 percentage points
- Non-insulin diabetes medication adherence increased an average 3 percentage points
- Statin medication adherence increased an average 2 percentage points

Based on medical cost offset models, the above adherence improvements correspond to $218, $327, and $209, respectively, of annualized savings per member per condition.

Outcomes-based contracts, value-based payments, and pay-for-performance

As the cost of innovative therapies continues to rise, payers are demanding value for their drug spend. Partnering with manufacturers to help ensure therapy success and having manufacturers take risk when therapies fail is the next logical step. While a number of outcomes-based and value-based contract arrangements have been implemented over the past decade to secure manufacturers' acceptance of risk for drug failure, meaningful yet administratively feasible metrics have proven a barrier to widespread adoption of these contract types. The sharing of risk for drug performance is not always equitable either, with the Medicaid best price being an unintended but real cap on manufacturers' ability to financially stand behind their product.

Today's novel treatments are accompanied by exceedingly high price tags, making outcomes-based contracting imperative. MedImpact offers a portfolio of outcomes-based contracts in top therapeutic areas of financial concern, such as diabetes, asthma, and gene therapy — another example of the ways in which we are working to ensure clients receive value from their pharmacy and medical specialty spend. The resources of MedImpact's network of specialty pharmacies, coupled with our MedIntegrate program, support clients with the addition of outcomes-based contracts.

MedImpact provides unique outcomes-based financial arrangements relative to the retail pharmacy network to clients. In a marketplace where buyers are forced to choose between pass-through or traditional PBM pricing arrangements, where performance rarely, if ever, exceeds network guarantees and the incremental benefits of the network flow solely to the PBM, MedImpact offers clients pay-for-performance pricing as an alternative. In this model, we assume the risk to deliver incremental network performance that achieves higher guaranteed rates. In return, clients agree to share in any upside performance, up to 100%, but more frequently 50/50 as an incentive. Quarterly reporting demonstrates achievement of guarantees and the value of any incremental shared savings. This win/win model is foundational to aligned objectives and full disclosure.

MedImpact offers a portfolio of outcomes-based contracts in top therapeutic areas of financial concern, such as diabetes, asthma, and gene therapy — another example of the ways in which we are working to help ensure clients receive value from their pharmacy and medical specialty spend. The resources of MedImpact's network of specialty pharmacies, coupled with the MedIntegrate program, support clients with the addition of outcomes-based contracts.

Spotlight: Adopting Genetic Solutions

DNA sequencing technology has changed the practice of medicine for patient diagnostics, treatment, and health risk prediction. Today, increased treatment options are shifting from treating the average member to addressing genetic differences, with examples in both clinical and pharmacy settings. The FDA maintains a website listing more than 300 genetically impacted medications. According to MedImpact's clinical pipeline, there are 29 genetically based cell and gene therapies that may be approved by 2022.

At a practical level, it is important to understand what human genome sequencing means to health benefit managers. MedImpact recognizes three cutting-edge ways it can address genetic advances to positively impact its clients:

Focus on the use of genetic information to improve safety and lower costs with a unique implementation of pharmacogenomics

Combine internal and external resources to inform the development of clinical use criteria and outcomes-based contracts

Explore solutions for the financial impacts of gene and cell therapies, supporting clients in the assessment of their risk for high-cost gene therapies

The future health benefit will require a strategy to manage the cost of genetic differences. Key to the strategy is pharmaceuticals, paid as either pharmacy or medical benefits.

In 2019, MedImpact developed two solutions to support clients in the adoption of genetic solutions: a personalized formulary based on pharmacogenomics and access to curative therapies.

29

Genetically based cell and gene therapies may be approved by 2022

300+

Genetically impacted medications are listed by the FDA

Personalized Formulary Based on Pharmacogenomics

Depending upon drug mix within a population, return on investment is estimated between 1.9 and 2.7, based upon drug expenditure and medical cost avoidance.

MedImpact introduced a personalized formulary in 2019. The first of its kind, this formulary is based on pharmacogenomics or the genetic differences that change the ways in which a member responds to a medication. The knowledge of differences in a member's genetic composition can support prescribers' medication treatment decisions. Genetic differences may result in adverse drug reactions. Annually, it is estimated that 5% to 7% of the U.S. population experiences an adverse drug reaction.[7] A personalized formulary alerts physicians of the need to lower doses or change drugs, reducing the member's potential for an adverse event.

Genetic composition may also change the effectiveness of a medication. Twenty-three of thirty commonly prescribed medications for depression are less effective for some due to genetics. Pharmacogenomics provides insights into drug selection and dosages prescribed to help resolve depression more quickly.

MedImpact's program identifies those most at risk for harm or lack of effectiveness concerns. Once tested, results are shared with all prescribers of current medications where drug-gene interactions are identified. In the pilot year of the program, 65% of prescribers acted on or provided feedback on the medication guidance provided. All future claims processed by MedImpact for these members are now reviewed against the test results and communicated to the prescriber.

Depending upon drug mix within a population, return on investment is estimated between 1.9 and 2.7, based upon drug expenditure and medical cost avoidance. The return is ongoing, as claims are reviewed against the pharmacogenomics results for every claim.

65%

of prescribers acted on or provided feedback on medication guidance

1.9-2.7 ROI

based upon drug expenditure and medical cost avoidance

Access to Curative Therapies

A curative therapy gained FDA approval in 2019, correcting the genetic error that results in spinal muscular atrophy (SMA) type 1. This innovation in care is one of multiple gene therapies anticipated in the future; however, the industry challenge is to find a means to make these cures financially feasible. Currently, a one dose therapy for SMA is more than $2 million, with prices more than $1 million anticipated for future gene therapies.

Throughout 2019, MedImpact's Emerging Therapeutics team communicated the pipeline of gene and cell therapies. With more than 20 therapies anticipated for approval by 2023, clients have questions of coverage criteria, durability of therapies, and payment options. MedImpact's focus in 2019 centered on supporting clients in their risk evaluation of gene therapy. In addition to budget impact modeling found in the pipeline reports, MedImpact supports the development of the publicly available toolkit, www.payingforcures.org/toolkit. The site provides alternative payment models for high-cost gene therapies, regulatory review of payment models, and risk assessment worksheets for the potential to incur a gene or cell therapy claim.

With reviews for the third and fourth gene therapies in the FDA pipeline scheduled for completion in 2020, MedImpact is preparing to launch solutions to lower a payer's risk associated with select gene therapies. As these orphan disease therapies are launched based on data from clinical trials of limited size and duration, outcomes-based contracts are essential to balance the risk between payer and manufacturer. MedImpact anticipates offering a range of such arrangements through rebates and warranty offerings.

Assessment of risk and development of therapy failure safeguards are ultimately followed by determining how to pay for the therapy when the time comes. MedImpact is exploring multiple options for clients, including facilitation of clients' review of their stop loss or reinsurance policies for coverage. Announcements for financial products are anticipated in late 2020.

Healthcare innovations based upon genetics will continue to bring changes to individualizing care and the ways in which it is financed. Whether pharmacogenomics or gene therapy, MedImpact is building functionality to evolve with personalized care.

$2 Million

A one dose therapy for SMA is more than $2M, with prices more than $1M anticipated for future gene therapies.

20

With more than 20 therapies anticipated for approval by 2023, clients have questions of coverage criteria, durability of therapies, and payment options.

FDA Approvals and Drug Pipeline

In 2019, there were 48 novel drug approvals — down from a record-breaking 59 drug approvals in 2018. FDA approvals remained above the decade average, with 44% designated as orphan products. In addition, 10 biosimilars, 7 biologic products, and 1,014 generics were approved.

In the past year, FDA approvals have come at an increasingly rapid pace, with 58% of approved novel drugs receiving a shortened priority review and some breakthrough oncology agents approved months in advance of scheduled decision dates.

2019 FDA Approvals: By the Numbers

48

Novel drug approvals, down from a record-breaking 59 in 2018

44%

Designated as orphan products

58%

Novel drugs received shortened priority review

10

Biosimilars

7

Biologic products

1,014

Generics

2019 High-Trend / High-Spend Disease State Drug Approvals

It is expected that FDA approvals in high-cost specialty areas, such as oncology, will continue to dominate in 2020. Many upcoming approvals are anticipated for drugs to treat orphan and rare diseases with niche indications, as well as gene and cell therapies using complex technologies that may offer advancements in the treatment of diseases, such as lymphoma and hemophilia.

Inflammatory Conditions	• Rinvoq — JAK inhibitor approved for rheumatoid arthritis • Skyrizi — Interleukin-23 antagonist indicated for the treatment of moderate-to-severe plaque psoriasisv
Oncology	• Nubeqa — Competes with Erleada and Xtandi for the treatment of a subtype of prostate cancer • Enhertu — Antibody-drug conjugate indicated for HER2-positive metastatic breast cancer • Inrebic — Competes with Jakafi to treat myelofibrosis
Multiple Sclerosis	• Mayzent — Joined Gilenya as the second S1P receptor modulator approved for relapsing forms of multiple sclerosis
Hematological Disorders	• Adakveo and Oxbryta—Used to treat patients with sickle cell disease • Reblozyl — Used to treat patients with beta thalassemia
Orphan/Rare Diseases	• Zolgensma — One-time gene therapy for spinal muscular atrophy • Trikafta — Triple combination therapy for cystic fibrosis, which has already gained the majority of market share in this disease state

Pipeline Therapies Under FDA Review with Anticipated Indications and Decision Dates

Inflammatory Conditions

- Filgotinib - rheumatoid arthritis 8/2020
- Voclosporin - lupus nephritis 1/2021

Multiple Sclerosis

- Ofatumumab 9/2020
- Ponesimod 3/2021

Orphan/Rare Diseases

- Risdiplam - spinal muscular atrophy 8/2020
- Berotralstat - hereditary angioedema 12/2020, 1/2021

Oncology

- KTE-X19* - mantle cell lymphoma 8/2020
- Liso-cel* - large B-cell lymphoma 11/2020
- Pralsetinib - lung cancer 11/2020

Hematological Disorders

- Roctavian* - hemophilia A 8/2020

*gene/cell therapies in development

SOURCES

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Investing Today for a Better Tomorrow

Founded more than 30 years ago, MedImpact serves many of the largest and most recognizable health plans, employer groups, and government programs across the nation. As a leading pharmacy benefit administration and management organization, we are proud of the unbounded thinking of our team and excited by the healthcare solutions in which we are investing and innovating.

With each passing year, the future of healthcare grows more complex and uncertain. Consistent changes challenge every PBM to reconsider and innovate around new business and financial risks. As an independent company, MedImpact is driven to serve its clients. We do not compete with our clients; instead, we remain committed to helping them succeed and grow. And because we are fulfillment-neutral, we are perfectly aligned with our clients' goal of keeping drug costs low.

MedImpact is making investments today for a better tomorrow, with millions of dollars aimed at clinical programs, technology, analytics operations, continual reinvention, and more.

We're excited about the future — we're running toward it and investing in it.

Trend Calculation Methodology

Data used in this report is composed of MedImpact's primary benchmarks: Commercial (including health plans and self-funded employers), Medicaid, and Medicare Part D. Plans were excluded from the sample data set if they:

- Lacked 24 months of continuous claims and eligibility data
- Experienced a change in enrollment of more than 20%
- Were designed as cash card discount programs
- Had no eligible or utilizing members

Total trend measures the change in total year-over-year cost per-member-per-year (PMPY). Total cost includes ingredient cost, discounts, taxes, and dispensing fees, and is net of rebates (in which rebate data is available when MedImpact provides rebate contracting services). Inflation measures the year-over-year change in unit cost (total cost per day supply) and net of rebates. Utilization measures the year-over-year change in days' supply PMPY.

MedImpact's 2019 Annual Trend Report includes analysis of both traditional and specialty medications. Specialty drugs are high-cost medications typically injected, infused, or that require close monitoring by clinicians to treat chronic, complex conditions.

About Medimpact

MedImpact is the PBM that puts clients and consumers first. For 30 years, we have had a single mission: To help make pharmacy benefits affordable, understandable, and transparent. Today, our team and technology serve many large employers and plans and more than 55 million consumers in the U.S. and around the world. We are an independent company that answers to our clients, consumers, pharmacy partners, and employees, not Wall Street. We are passionate about providing access to the lowest cost prescriptions. Learn more at pbm.medimpact.com.

Contact Us To Learn More

Please contact your MedImpact representative to learn more on how we can help you lower costs through effective trend management. If you don't have an account, email us at info@medimpact.com. You can also learn more at medimpact.com.

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