HealthCatalyst®

AI-Enabled Care Management Reduces Healthcare Spending by $32.2M

UnityPoint Health

$32.2M decrease in healthcare spending, the result of a **54.4 percent** relative reduction in hospital admissions, and a **39 percent** relative reduction in ED visits.

Patients gained **11,000+ more days at home** and had nearly **2,000 fewer ED visits**.

PRODUCTS

- Health Catalyst® Data Operating System (DOS™)

EXECUTIVE SUMMARY

Almost four trillion dollars is spent on healthcare each year in the U.S., with most expenditures going to patients with chronic health conditions. Patients with chronic health conditions often have a high number of unnecessary visits to the emergency department (ED) and unplanned hospital admissions.UnityPoint Health sought to reduce costs by identifying patients with chronic health conditions at a higher risk for overutilizing healthcare services. By leveraging its analytics platform and augmented intelligence (AI), UnityPoint Health has been able to efficiently identify patients that could benefit from enrollment in its care management program.

HIGH COST OF TREATING PATIENTS WITH CHRONIC CONDITIONS

More than 90 percent of the $3.8 trillion the U.S. spends annually on healthcare is for people with chronic health conditions.[1] Care management is key to decreasing unnecessary healthcare utilization, improving clinical outcomes, increasing quality of life, and lowering healthcare spending.[2]

IDENTIFYING PATIENTS MOST LIKELY TO OVERUSE HEALTHCARE SERVICES

UnityPoint Health recognized patients with complex chronic health conditions were overutilizing healthcare services, particularly when transitioning from hospital admission to an ambulatory care setting. Yet despite having access to large volumes of data, clinicians lacked timely insight into care provided across acute and ambulatory settings.

UnityPoint Health needed to be able to effectively identify patients with high or rising risk of worsening health conditions that often result in non-urgent ED visits or unplanned hospital admissions. Such visits and admissions limit the ability of its care management teams to intervene and provide the care patients needed. The organization desired to integrate AI into its analytics processes to predict which patients could benefit from enrollment in its care management program. The care management program enables care managers to intervene and prevent unnecessary healthcare utilization and reduce spending.

DATA OPTIMIZATION DECREASES UNNECESSARY HEALTHCARE UTILIZATION

UnityPoint Health established a framework for care coordination across acute and ambulatory care settings with integrated care management programs that share common goals and tools across the organization. The organization leverages the Health Catalyst® Data Operating System (DOS™) platform and a robust suite of analytics applications to establish a single source of truth across its disparate systems and gain powerful insight into patient characteristics and healthcare utilization patterns. The analytics team and acute and ambulatory clinicians collaborated to develop and enhance the organization's analytics tools, leveraging data to decrease unnecessary healthcare utilization and ensuring data are shared across care settings for care management program optimization and expansion.

AI TOOLS ENABLE EFFECTIVE CARE MANAGEMENT

UnityPoint Health uses numerous AI tools that incorporate chronic health data, social data, the probability of admission, and readmission risk after discharge from the hospital to risk-stratify patients and predict which patients are at high or rising risk for unnecessary healthcare utilization. The AI tools enable care managers to identify patients and prioritize them for care management engagement effectively. UnityPoint Health utilizes the following tools for efficient care management:

- **Readmission Heat Map:** risk-stratifies patients with inpatient and observation stays, identifying the risk of readmission within 30 days of discharge. The map indicates the specific days during which the patient is most at risk of requiring services. The insight provided by the Readmission Heat Map allows clinicians to visualize risk and act upon the information, adjusting the intensity and timing of interventions, ensuring the proper care is provided at the right time and in the right location to optimize outcomes.

- **Population Health Toolkit:** provides longitudinal details of the patient's care experience, including hospitalizations, recent discharges, upcoming appointments, and missed appointments. Clinicians can gain detailed information from the toolkit about patients who could benefit from enrollment in a care management program. Clinicians also use the Population Health Toolkit to manage patient panels. Clinicians can quickly review the patient's chronic conditions and recent ED visits or hospital admissions, allowing them to identify and address care gaps.

- **Leadership Dashboard:** provides a holistic view of care management operations and outcomes, including caseloads, enrollment rates, the total number of patients enrolled, graduation rates, and referral rates, allowing leaders to efficiently monitor the program each day.

ABOUT UNITYPOINT HEALTH

UnityPoint Health is one of the nation's most integrated health systems, providing care to metropolitan and rural communities across Iowa, western Illinois, and southern Wisconsin. It has relationships with more than 400 physician clinics, 20 regional and 19 community network hospitals, seven community mental health centers, four accredited colleges, and home care services throughout its nine regions. UnityPoint Health's more than 32,000 employees are dedicated to making it easier for people to live well.

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> *Using AI enables effective care management outreach, ensuring the right patients receive the right care, reducing unnecessary healthcare utilization. Patients gained 11,000 more days at home to do the things they love.*
>
> **Kristin McVay, MSN, MHA, RN, Executive Director Care Management, UnityPoint Health**

⊙ **Outcomes Analyzer:** enables real-time visibility into program outcomes, including system-level, region-level, and clinic-level performance. The organization can evaluate and compare the number of unnecessary ED visits and hospitalizations before patient enrollment in the care management program and after graduation. UnityPoint Health performs ongoing evaluations of program performance and quantifies patient outcomes and healthcare costs avoided

RESULTS

In the 30 months since the care management program's inception, UnityPoint Health has substantially decreased healthcare utilization and the costs of care for patients who complete the program. The organization has reduced healthcare spending by more than:

⊙ **$32.2M**, the result of a **54.4 percent relative reduction** in hospital admissions, and a **39 percent relative reduction** in ED visits.

⊙ Patients gained **11,000+ more days at home** and had nearly **2,000 fewer** ED visits.

WHAT'S NEXT

UnityPoint Health will continue its efforts to enhance and refine the care management program and plans to expand the use of AI and analytics to improve the care provided to its most vulnerable patients, improving outcomes while reducing unnecessary healthcare utilization and costs. 🔥

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Our successful partnerships leverage the strengths of clinicians and analysts. The team was empowered to build and enhance analytic tools that support the most vulnerable patients, reducing unnecessary utilization and decreasing healthcare spending by more than $32M.

Rhiannon Harms, Executive Director Strategic Analytics, UnityPoint Health

REFERENCES

1. Health and Economic Costs of Chronic Diseases. (2021). *Centers for Disease Control and Prevention.* Retrieved from https://www.cdc.gov/chronicdisease/about/costs/index.htm#ref1

2. Care Coordination. (2018). *Agency for Healthcare Research and Quality.* Retrieved from https://www.ahrq.gov/ncepcr/care/coordination.html

ABOUT HEALTH CATALYST

Health Catalyst is a leading provider of data and analytics technology and services to healthcare organizations, committed to being the catalyst for massive, measurable, data-informed healthcare improvement. Our customers leverage our cloud-based data platform—powered by data from more than 100 million patient records, and encompassing trillions of facts—as well as our analytics software and professional services expertise to make data-informed decisions and realize measurable clinical, fi nancial, and operational improvements. We envision a future in which all healthcare decisions are data informed.

Learn more at **www.healthcatalyst.com**, and follow us on **Twitter**, **LinkedIn**, and **Facebook**.