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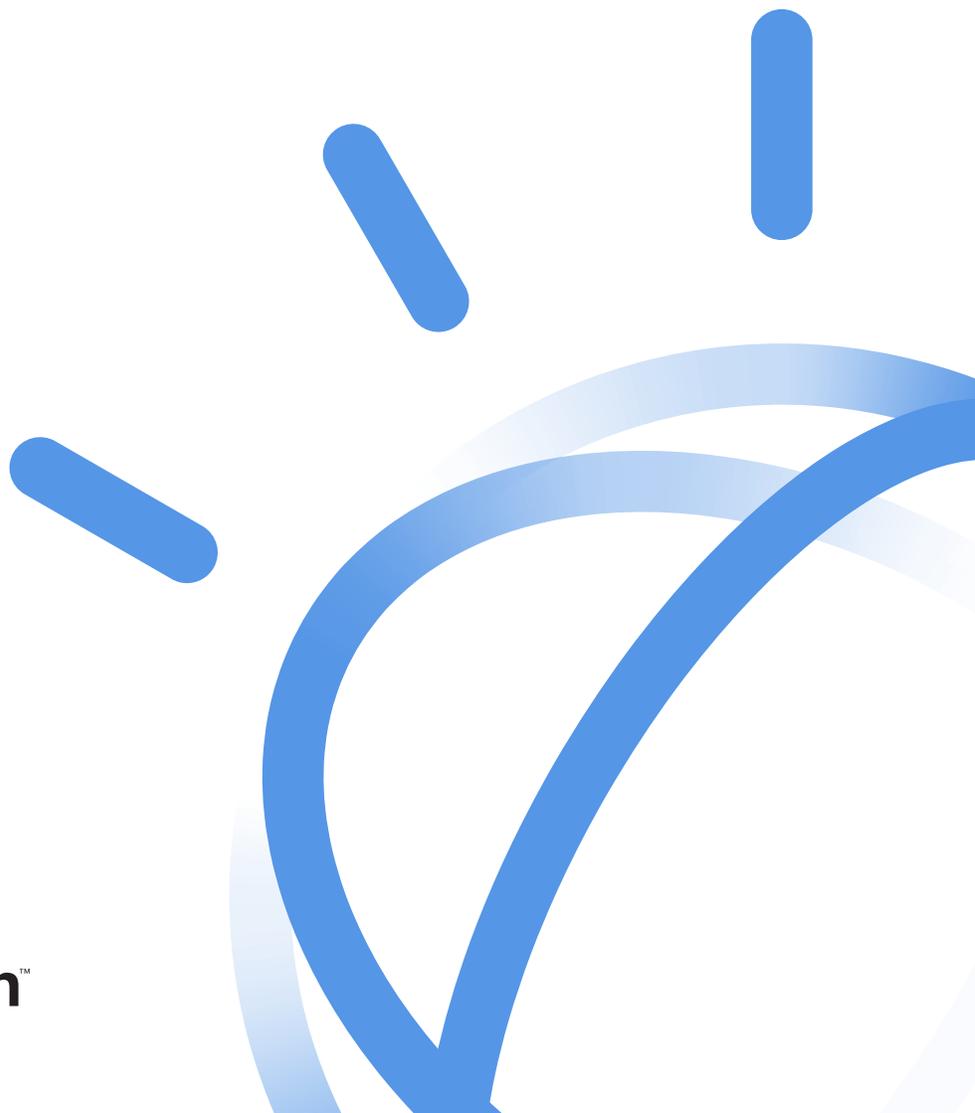
Carson Tahoe Health

CareDiscovery clinical performance improvement solution for service-line value development

IBM Watson Health™

Overview

The need

Carson Tahoe Health needed insights to convince its board that an outpatient palliative care program could help address its higher-than-average mortality rates and help decrease the risk of future financial impact from those rates

The solution

The healthcare system used CareDiscovery® to track and analyze end-stage patient mortality and related length of stay, readmissions, utilization and costs in key disease groups—by comparing those who participated in trial inpatient palliative care and those who did not

The benefit

The analysis was used to demonstrate to the system's board that an outpatient palliative care service line was viable in terms of both cost-savings and quality-of-care improvement

Truven Health Analytics® was acquired by IBM in 2016 to help form a new business, Watson Health™. Watson Health aspires to improve lives and give hope by delivering innovation to address the world's most pressing health challenges through data and cognitive insights.

Founded in 1949, Carson Tahoe Health is a comprehensive healthcare provider with two hospitals, three urgent care facilities and more than 15 medical support facilities focused on communities in northern Nevada and eastern California. Its services cover the continuum of care, including wellness, diagnostics, treatment, surgery, long-term acute care, after-care and support.

Understanding the connection between mortality rates and palliative care

When Carson Tahoe Health's mortality ratings for stroke, pneumonia and heart failure (HF) weren't meeting national averages, the quality team knew it was time to find out why. The answer, found in a concentrated chart review process, was that the majority of the patients who died in the system's care were at the end stage of their diseases.

To attempt to improve patient care and lower those mortality rates, the health system turned to the concept of palliative care—a service line that would likely be growing in importance as the industry continues to transition to episode-of-care and value-based payment models.

Peer-reviewed literature was already demonstrating the value of palliative care:

– 27 percent of Medicare expenditures were found to be used for 5 percent of dying enrollees[1]
– One study found that a palliative consultation within the first 10 days of a hospital stay equaled $2,696 in savings per live discharge[2]
– Evidence-based clinical outcomes of palliative care were showing increased overall patient and family satisfaction[3]
– Another study found palliative care was associated with lower length of stay, fewer days in intensive care, and reduced imaging and pharmaceutical costs[4]

To test the positive theories in its own environment, Carson Tahoe Health implemented an inpatient palliative care protocol in which hospitalists referred patients with end-of-life issues to a palliative care physician.

Truven Health Analytics, part of the IBM Watson Health™ business
Carson Tahoe Health

"To move the dial even further with improvement in our mortality data, we used CareDiscovery Advance to build and analyze population reports to review the potential ROI for an outpatient program."

– Mary J. Mang, MHA, RN, CPHQ, Systems
   Quality and Outcomes Management
   Director, Carson Tahoe Health

What is CareDiscovery?
The CareDiscovery clinical
performance improvement solution
provides insights into a hospital's or
health system's quality measures
and resource utilization to support
improvement with objective,
fact-based information. As the
industry transitions to value-
based care, CareDiscovery offers
important core measure metrics,
benchmarking and reporting tools
to help providers succeed over the
short and long term.

The solution consists of three
main components: The Transform
outcomes improvement module, the
Advance process-of-care solution
and a comprehensive dashboard for
stakeholder alignment.

Proving return on investment (ROI) value for a palliative service line

The quality team then turned to CareDiscovery to further analyze appropriate metrics, focusing on HF and chronic obstructive pulmonary disease (COPD) diagnosis-related groups in end stages of disease.

The solution would also help the team determine the effectiveness of delivering a more robust outpatient palliative care service. Of particular importance was the ability to track those patients who participated in the palliative care protocol and those who did not—so that cost, utilization, readmissions, length of stay and other comparisons could be made.

The clinical performance improvement solution provided some key insights:

– COPD patient utilization dropped from 177 total hospital emergency visits with inpatient admissions before the use of palliative care to just 13 after palliative care
– COPD outpatient lab and radiology procedure utilization dropped from 352 uses before palliative care protocol to 95 after, with 94 procedures incurred by only two patients
– HF emergency visits with inpatient admissions dropped from 134 before to 20 after palliative care consultations
– HF outpatient lab and radiology procedure utilization dropped from 492 uses before palliative care to 107 after, with 67 of those incurred by only one patient

The health system also used CareDiscovery for a baseline ROI service-line report—demonstrating the potential use of an outpatient palliative care clinic focused on HF and COPD end-stage patient populations. The analysis estimated the clinic could benefit from a seven-month referral base of more than 4,120 patients.

Results: Successful proposal and more

The information from CareDiscovery and the quality team's work was used in a successful outpatient palliative care service-line proposal to the board. The health system established a palliative care/HF chronic disease management clinic that now sees patients within five days of discharge.

The progress of the initiative is promising:

– Carson Tahoe Health's 30-day inpatient mortality rates for acute myocardial infarction, HF, COPD, pneumonia, stroke and coronary artery bypass graph surgery are now trending lower than the national average
– The acceptance of palliative care is growing in the communities the health system serves, as well as in the organization itself

Next steps

Carson Tahoe Health plans to expand its palliative care vision to include other chronic end-stage disease groupings in the future. There are also plans to add palliative care in-home and skilled nursing facility patient visits and increased family counseling services.

Get connected

Email providersolutions@truvenhealth.com, call 800-525-9083 option 4 or visit truvenhealth.com

About Truven Health Analytics, part of the IBM Watson Health business

Truven Health Analytics®, part of the IBM Watson Health™ business, provides market-leading performance improvement solutions built on data integrity, advanced analytics and domain expertise. For more than 40 years, our insights and solutions have been providing hospitals and clinicians, employers and health plans, state and federal government agencies, life sciences companies and policymakers the facts they need to make confident decisions that directly affect the health and well-being of people and organizations in the US and around the world. The company was acquired by IBM in 2016 to help form a new business, Watson Health. Watson Health aspires to improve lives and give hope by delivering innovation to address the world's most pressing health challenges through data and cognitive insights.

Truven Health Analytics owns some of the most trusted brands in healthcare, such as MarketScan®, 100 Top Hospitals®, Advantage Suite®, Micromedex®, Simpler® and ActionOI®. Truven Health has its principal offices in Ann Arbor, MI, Chicago, IL and Denver, CO.

For more information, please visit truvenhealth.com

Footnotes

1 Kirch R. Archives of Internal Medicine, Palliative Care and Quality of Life: Patient-Centered Care Case Study, 2012 Aug 13; Vol. 172 (15), pp. 1170-2.

2 McCarthy IM, Robinson C, Huq S, Philastre M, Fine RL. Health Services Research, Cost Savings from Palliative Care Teams and Guidance for a Financially Viable Palliative Care Program, 2015 Feb: Vol 50 (1), pp. 217-236.

3 White KR, et al. Journal of Healthcare Management, Nonclinical Outcomes of Hospital-Based Palliative Care, 2006 Jul-Aug; Vol 51 (4), pp. 260-73.

4 Brown SB, Hospitals & Health Networks, Palliative Care Saves Hospitals Money, 2009 Jan; Vol 83 (1), p. 46.

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