Business Intelligence Solutions for Healthcare Payers
Business Intelligence (BI)

The process of transforming raw data into meaningful information to enable more effective business insight and decision-making

MicroStrategy, Incorporated (NASDAQ: MSTR)

- Founded in 1989
- Leading independent business intelligence software vendor
- Over 1 million business users at over 3,000 organizations
- Direct operations in 42 cities in 23 countries around the world
- Over 70 patents pending or issued
Providing Insight into Benefit Costs and Business Intelligence
Best Practices

Founded in 1938, the Hawaii Medical Service Association (HMSA) is a nonprofit, mutual benefit society and a member of the Blue Cross and Blue Shield Association. Nationally, HMSA and 38 other Blue Cross and Blue Shield plans provide worldwide coverage to more than 98 million members. Standardized on MicroStrategy since 2001, HMSA is expanding its MicroStrategy deployment to include MicroStrategy Report Services™ and has purchased a new subscription to MicroStrategy's Technical Advisory Services, a program that enables its subscribers to tap into best practices in business intelligence. Against a multi-terabyte IBM DB2 database, healthcare and financial analysts utilize the MicroStrategy platform to track and assess business data across clinical and financial areas to provide users with greater insight into the company’s benefit costs.

Offering Transparency into Medicare Spending Data on 40 Million Hospital Admissions

The new information dashboard recently launched by the Centers for Medicare & Medicaid Services (CMS) is powered by MicroStrategy. The new CMS dashboard offers an exciting tool in support of President Obama's initiative for transparency and open government. In addition to providing the American public with detailed insights into Medicare spending, the dashboard data can be used by government and industry to assess health care policies, improve the management of health care, and identify areas for change. With data from over 40 million Medicare hospital admissions, the dashboard enables the public to view the relationships between cost and volume of Medicare admissions by State, starting in January 2006. Every month, the data will be updated with nearly one million more admissions.

Flexible Reporting for Cost-Containment Solutions

Formed in 1976 and based in Tampa, Fla., PMSI-Tmesys is one of the nation’s leading providers of cost-containment solutions for pharmacy and specialty services in the workers’ compensation and catastrophic injury markets. PMSI-Tmesys clients can generate user-friendly reports on medications prescribed to a particular claimant, top-prescribed drugs, top dispensing pharmacies, and payer-specific savings, among other criteria. Using MicroStrategy, the users have the flexibility to drill down into the data, analyze it, export it, customize it, and present it in a number of different ways. Previously, PMSI-Tmesys clients received monthly reports via e-mail, with little control over the frequency and appearance of the reports.

Enhanced Visibility Into Financial, Operational, and Clinical Performance

The Advisory Board Company is the leading worldwide health care research and professional services firm serving more than 2,600 hospitals, health systems, and healthcare insurers. The Advisory Board provides multiple, hosted business intelligence applications, each focusing on a distinct area critical to hospital margin and clinical improvement and each leveraging the Advisory Board’s deep industry expertise. There are currently thousands of individual users – from CFOs to business analysts – accessing the applications on a daily basis.
The Challenge
Harvard Pilgrim Health Care provides a variety of benefit options and funding arrangements to more than one million members throughout Massachusetts, Maine and New Hampshire. Its mission is to improve the health of the people they serve and the health of society. Harvard Pilgrim is the #1 private health plan in America according to an annual ranking of the nation’s best health plans by the National Committee for Quality Assurance (NCQA)*. Harvard Pilgrim is the only private health plan in the nation to be named #1 for member satisfaction and quality of care for seven consecutive years.**

Prior to building a comprehensive and robust Enterprise Data Warehouse, Harvard Pilgrim’s reporting requirements were met through a claim centric data warehouse and the use of SAS and SQL data access tools. Finance’s 60 analysts were the only business unit that had access to the warehouse. Other departments made requests for information to the Finance Department or relied on production reports that were scheduled. Analysts were able to change parameters but lacked ad hoc query capability.

The Process
Harvard Pilgrim convened a cross-enterprise committee to assess BI technology. Membership on that committee included finance, provider and network relations, customer service, and care management departments, as well as representatives from the technical architecture and EDW staffs. The committee identified evaluation criteria, including ability to access multiple data sources, richness of data presentation capabilities, ease of use, and technical reliability. MicroStrategy (www.microstrategy.com) was the preferred solution on the part of both business and technical representatives.

Implementation
The initial implementation was for Employer Analytics which includes both external and internal access to the EDW. Employer Analytics has been available for 18 months and between 2,000 and 2,500 reports are run weekly. Employers and brokers are using the data to watch their medical utilization and costs which helps them to budget their medical expenses (most large employers are self-insured) and make decisions on what care and wellness programs might be beneficial to their employees. Harvard Pilgrim has deployed the MicroStrategy technology to five internal departments and has two additional business units awaiting implementation.

Future Focus
Harvard Pilgrim has two future objectives. The first is to continue meeting the analytic needs of existing departments as well as expand the capability into other departments. The second priority is to move the company closer to identifying key performance indicators which will be used to populate dashboards and more effectively use visualization tools. Having a strong and maturing BI capability within Harvard Pilgrim positions the company to move rapidly toward more sophisticated tools and analyses.

Within a few months Harvard Pilgrim will deploy a provider dashboard which will be available to providers as well as to internal analysts. This deployment will be the first initiative to use dashboards and will lead the way to future use of complex analytic methodologies.

Harvard Pilgrim’s investment in BI technology infrastructure, domain expertise and an ever expanding number of stakeholders with access to critical information positions the company for future competitive differentiation.

* NCQA's Health Insurance Plan Rankings 2010-11 – Private
MicroStrategy Enables Insight & Action Across the Payer Enterprise

MicroStrategy Healthcare Solution Map

**Member Solutions**
- Enrollment
- Claim Status
- Personal Health Record
- Disease Management
- E-Billing
- Benefit Selection
- Gaps in Care
- Prevention Screening

**Hospital and Physician**
- E-Billing
- Eligibility
- Authorization
- Performance Analysis
- Claim Status
- Gaps in Care
- Disease Management
- HEDIS

**Physician**

**Employer Solutions**
- Benefit Design
- E-Billing & Payment
- Enrollment
- Employer Analysis
- Enrollment Reconciliation
- Health & Wellness
- Disease Management

**Health Plan Solutions**
- Cost of Care
- Marketing & Sales
- Enrollment
- Medicare Reconciliation
- Provider Data
- Reimbursement Modeling
- Contract Management
- Claims Analysis
- Member Management
- Rating & Underwriting
- E-Claims
- Benefits Modeling
- Fraud & Abuse
- Portals
- Medical Budget
- Health Risk Assessment
- HEDIS
- Performance Measurement
- Gaps in Care
- Disease Management
- Personal Health Record
- Member Engagement
- Appeals and Grievance
- Member Satisfaction
- Care Management
- Health & Wellness
- Commissions Management
- Purchaser Management
- CRM
- E-Billing
- Network Management
- Patient Centered Medical Home

**Corporate Solutions**
- GAPP Financial Reporting
- Corporate Performance
- Enterprise Risk Management
- PR / Investor Relations
- Regulatory / Compliance
- HR / IT
- Real Estate Planning
- Accounting
Cost of Care Analysis

Actionable Insights to Manage Medical Costs

Health plans must always monitor their key medical expense trends. MicroStrategy, with Talon Analytics, can rapidly enable mobile and web analytics. This enables your health plan to monitor expenses at the member, group, and disease grouping level, and take action.

Mobile access to these key indicators allows executives to always be in step with utilization and expense variations. From their mobile device, users can easily drill into clinical categories (groupers) to identify the providers and members claim level detail. Plans can also embed predictive risk scores, at the member level, to enable clinical interventions and support member engagement.
Solutions for Healthcare Payers – Claims Performance Management

Claims Performance Management

Mobile Access to Manage Your Cost Ratios During the ICD10 Transaction

Claims management is critical to managing a health plan’s administrative expense. Quick and efficient claims processing increases provider and member satisfaction, optimizes settlements, and minimizes expenses. Analyzing and proactively managing the end-to-end process across regions, claim systems, product lines, and business units helps insurance companies better understand their most critical components in operational effectiveness and member retention.
Care Management & Member 360

Comprehensive Access to Member Data

Care management programs are created to appropriately manage health resources and improve member wellness.

Successful Care Management programs depend on a health plans ability to connect data sources across organizational boundaries. MicroStrategy enables the health plan to bring together these data sets – medical and pharmacy claims, membership and eligibility data, contracts, case management and health risk assessment. This allows a plan to monitor chronic disease programs as well as achieve a 360° view of their members.
Patient Centered Medical Home

Mobile Access to Quality Measures for your providers and your network teams.

The PCMH model stands to be a crucial part of healthcare reform – one that rewards quality, not quantity, of care. Successful PCMHs have the ability to monitor and report on key quality measures around access to and effectiveness of care, physician engagement and appropriate use of services.

MicroStrategy enables the PCMH team to efficiently and effectively manage their patient population by providing access to accurate and updated patient data across care settings and over time. This allows providers to take actions that result in decreased duplication of services, lowered hospitalization rates, and improved quality of care and patient outcomes.
Why Do Tier One Healthcare Payers Turn to MicroStrategy?

Only MicroStrategy Provides Healthcare Payers with Solutions that are Comprehensive, Accessible, and Actionable.
MicroStrategy Mobile Business Intelligence

**FASTER TO DEVELOP** — Quickly design apps that offer a superior user experience, knowing that infrastructure code such as networking, security, data management, and sensor integration is already built-in.

**NO CODE REQUIRED** — Customize the look, feel, and behavior of your app using an array of finely-designed, iPhone-optimized displays and controls. MicroStrategy’s intuitive point-and-click interface makes configuration easy.

**EASIER TO MAINTAIN** — Accelerate deployment of new apps and stream app updates with the MicroStrategy Mobile application platform, so users always have easy access to the latest, most up-to-date information.

MicroStrategy’s Extensive Platform Experience Conveys Directly to Mobile BI

The MicroStrategy platform is built on one unified, organically-developed architecture. This platform provides a number of critical capabilities to ensure that it is truly enterprise-class:

- **Rapid Development and Deployment** using WYSIWYG point-and-click design in the MicroStrategy integrated development environment.
- **High Scale and High Performance** across user scale, data scale, and application scale on the fastest, highest performing business intelligence server.
- **Economies of Scale** as the system grows with the minimum number of IT personnel and the fewest servers.
- **'Write once, run anywhere' Flexibility** from a single service-orientated architecture to satisfy multiple devices and clients without additional integration or device-specific translation.
- **Openness and Extensibility** via MicroStrategy’s SDK and extensive library of APIs.
- **Secure Data Access Model** designed to provide robust data protection using a full range of technologies and security models.
- **Comprehensive Administrative Control** consistent with mission-critical system operation.
- **Unmatched Analytical Power** against entire data warehouses using data mining, predictive, statistical, financial, and mathematical analyses.
**Business Intelligence**

- Analytics, Grids, & Graphs
- Data Visualizations & Exploration

**Transactions**

- Mobile front-end to ERP/CRM
- Sell products and schedule services

**Content Delivery**

- Mobile Information Channels
- MultiMedia Libraries and Delivery
Snap Barcodes to Use as Inputs for Your Analysis

Camera

Scan patients' identification and insurance information

Track medications and medical supplies

Visualize Patterns and Trends in Your Data

An Extensive Library of Graphs

- Bubble Chart
- Bar and Line Chart
- 3D Bar Graph
- Gantt Chart
- Radar Chart
- BoxPlot
- Area and Line Chart
- Histogram
- Line Chart
- Waterfall Chart

Mobile Apps Combine Three Core Capabilities
MicroStrategy Visual Insight™

1. Explore Data Visually
2. Save Visual Analyses
3. Share with Colleagues

With Visual Insight, Everyone can Become an Information Publisher
MicroStrategy Visual Insight™

Providing answers 100x faster than traditional BI by reducing the need for IT support is a powerful business capability. Changing the Way People get answers by allowing all users to upload and analyze business data takes that power to a new level.

Get the Business Answers You Want Immediately.

1. Extremely Fast To Generate Business Answers
2. Highly Visual Data Presentation
3. Powerful and Simple Exploration
4. All Business Data (Enterprise, Department, or Personal)
5. Save and Share Insights
6. Available on Web and Mobile Devices

Visual Insight

Data to Insight in Minutes

- 30 Minutes
- 5 Mins
- 25 Mins
- 30 Mins

Traditional BI

Data to Insight in Months

- 30 Days
- 7 Days
- 10 Days
- 2 Days
- 5 Days
- 5 Days
- 1 Day
- 30 Days
Monitoring your organization’s performance in the palm of your hand is a powerful business capability. Interacting with that information to approve requests, submit orders, change plans, and capture information at the moment of insight takes that power to a new level.

**Don’t Just Analyze Data, Take Action.**

MicroStrategy Transaction Services lets plan employees and members act on business information from a mobile device such as the iPad and iPhone, as well as from a dashboard on any web browser.

For example, Transaction Services enables the provider to dispute any patient level quality measures (e.g. if the plan does not have record of a lab test, or recommended preventative screening, the physician can note this using transaction services on his or her mobile device).

By allowing the physician to respond to the payer when providing care, disagreements can be settled quicker and care can be better monitored. This allows for the necessary adjustments to be made by both parties.

**Document** physician and member clinical notes in the field requiring your action

**Approve** requests based on information presented

**Deny** requests at the tap of a button

**Reassess** ongoing requests by asking the requestor for more information
**MicroStrategy Transaction Services™**

**Mobile Transactional Apps Enhance and Extend Existing Transaction Systems**

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<tr>
<th>Feature</th>
<th>Benefits</th>
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<tr>
<td>Always Available</td>
<td>Approve purchase orders while you wait for the elevator.</td>
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<tr>
<td>Secure</td>
<td>Authenticate who you are, wipe access if lost or stolen.</td>
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<td>Context Aware</td>
<td>Incorporate GPS, bar code, location awareness, NFC.</td>
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<td>Auditable</td>
<td>360 activity record, provides an audit trail.</td>
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**Mobile**
- Always Available
- Secure
- Content Aware
- Auditable

**Web**
- Tethered
- Limit Use

**ERP / CRM Operational Systems**
Strong Partnerships with Over 200 World-Class Providers

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Helping Payers Reach Top Tier Performance

“Ours research shows that top performing organizations separate themselves from their peers by their ability to quickly diagnose the root cause of recurring problems and issues and spend time not on diagnosis but on driving to solutions. Our business intelligence membership programs -- which include our distinctive business intelligence tools on MicroStrategy’s platform as well as our best practice research and domain expertise to drive ongoing improvement -- really help our member hospitals reach and maintain the top tier of performance.”

- The Advisory Board

Better, More Insightful Research In the Fight Against Cancer

“We selected MicroStrategy because of its exceptional scalability, core reporting, and analytic functionality. MicroStrategy positions is to provide better quality and more timely information to our clients, giving them critical insights to make analytically based decisions.”

- PMSI-Tmesys

Creating Applications for Quick Decision Making

“Our experience selecting MicroStrategy and working with them to build the app has been fantastic.”

- Novation