

Applying artificial intelligence and machine learning to transform health care supply chain

July 8 2016, by Christine Douglass

In an effort to apply data-driven insights to one of the most fundamental aspects of running a health care system, UPMC announced today that it has formed Pensiamo, an independent company that aims to help hospitals improve supply chain performance through a comprehensive source-to-pay offering, including cognitive analytics with IBM Watson Health technologies. IBM is a minority owner of Pensiamo.

Supply chain costs are the second-largest and fastest-growing expense behind labor costs for [health care](#) providers. The Institute of Medicine estimates that nearly one-third of [health care spending](#) is waste. In today's dynamic environment, providers face mounting pressure to improve the effectiveness of patient care while controlling costs. Increasingly, providers need to understand their costs at a patient-specific level to succeed under performance-based payment systems. Yet today, few can derive such insights.

"At a time when patients are demanding higher quality and value, traditional approaches to providing health care supply chain services are no longer sufficient," said James Szilagy, who will transition from his current role as chief supply chain officer for UPMC to chief executive officer at Pensiamo. "The new company will combine the best of UPMC's health care supply chain experience with IBM's expertise in non-medical procurement services, as well as IBM Watson capabilities infused with UPMC's domain expertise. The aim is to offer providers a

[supply chain management](#) approach tailored to each institution's specialties, patient population and other unique needs, and which will learn and respond over time to the changing needs of the business."

One of the nation's largest integrated health care delivery and financing systems, with \$12 billion in revenue, UPMC will own a majority of the new Pittsburgh-based company and be the initial customer under a long-term contract. UPMC is widely recognized for creating one of the nation's most efficient and effective health care supply chains. The entity regularly ranks among Gartner's annual list of top 25 health care supply chain organizations based on leadership in improving patient outcomes and lowering costs.

"IBM brings substantial experience providing procurement services and applying Watson technology to clinical care and research. Through this partnership, Pensiamo will offer a new category of cognitive supply chain services. This is a breakthrough the industry has been waiting for—unlocking new insights from the volumes of structured and unstructured data existing on medical products and treatments—and will drive better decisions across the purchasing process," said Jesus Mantas, general manager, Business Consulting, IBM Global Business Services.

IBM is a leader in managing supply chain spend and operations across several industries, with more than \$57 billion of spending under its management. On behalf of itself and its clients, IBM routinely manages procurement with key suppliers in such categories as travel, technology, construction, telecommunications, facilities and contingent labor.

UPMC and IBM have a long history of working together to improve the efficiency of health care operations, including dramatically lowering the cost and improving the performance of UPMC's own data infrastructure. At the same time, UPMC has developed a number of successful [supply chain](#) ventures that also serve outside customers, including Prodigio

Solutions, Health Care Pharmacy Central and BioTronics, all part of the health system's strategy of commercializing innovation.

Provided by IBM

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