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## Advances in analytics: What your current data are trying to tell you?

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The unprecedented changes in healthcare are being accompanied by a dizzying array of new technologies. The Cloud, Big Data, business intelligence, and ACA-driven mandates to control costs and quality challenge not only the status quo, but leadership's ability to assimilate and employ effective tools. McKinsey & Company estimated that using big data could reduce healthcare spending by \$300 billion to \$450 billion – 12% to 17% of the \$2.6 trillion annual U.S. healthcare spending. A fundamental challenge is to effectively examine the expanding spectrum of patient-centric data, which includes demographics, diagnostics, patient encounter history, outcomes, costs, and reimbursement. Traditional business intelligence burdens the user to navigate complex data environments. The user must have a preconception of what is being sought or be knowledgeable in advanced analytics and statistics to create an effective discovery strategy. This makes the analytical experience time-consuming and expensive. It also introduces bias. Attributional analytics offer insights into the factors that impact performance. Patterns identify combinations of factors that drive outcomes; organizing experiential knowledge as a basis for decision making. The ability to discover patterns can facilitate decision making in an ever-competitive and fast-moving world. Pattern discovery identifies informative and relevant data subsets that signal systemic behavior in sub-populations. The patterns describe the nature of the key relationships and their relevance, importance and dominance of the sub-populations. Pattern based analysis is both flexible and scalable, and can be integrated into a variety of data environments to provide a differentiating strategic analytics capability for any healthcare provider.

### Biography

Donald A Donahue is managing partner of Diogenec Group, a professional services firm. He previously served as Director of Health Policy & Preparedness Programs, Potomac Institute for Policy Studies; Vice President with Jefferson Consulting Group; Senior Marketing Manager for Merit Behavioral Care; consultant for New York City Health and Hospitals Corporation; and Deputy Surgeon for Plans and Fiscal Administration for the Army Reserve. He is a Fellow of the American College of Healthcare Executives and the University of Pittsburgh Center for National Preparedness. He holds a BS in Sociology and Political Science, an MBA, and a Doctorate in Health Education.

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