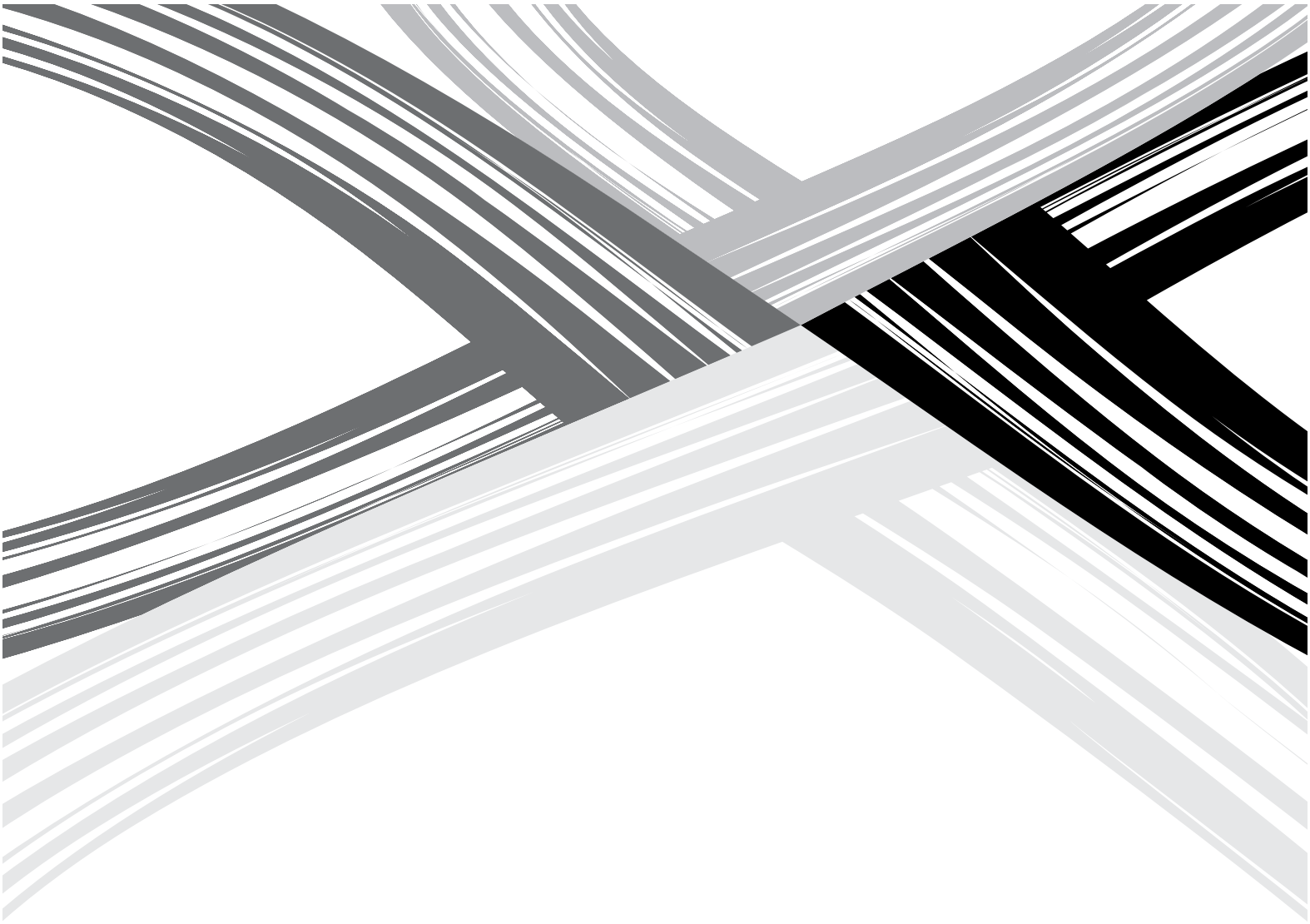

Fall 2010 IDN Summit and Expo

Peer-to-Peer Learning Exchange Research Report

Service-line Analytics: Harnessing the Power of Data to Achieve Cost Efficiencies in the Supply Chain

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AND EXPO

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Introduction

Efforts to reduce supply utilization traditionally have met with resistance from physicians and from the very nature of medical care, which was heavily influenced by the fee-for-service mentality. More spending has usually produced better reimbursement.

We know from a range of research that medical care produces different hospitalization rates, diagnostic-testing rates, surgical procedure rates and variances in virtually every other measure of services, whether one looks across regions of the country, across a hospital enterprise or even among physicians in a single hospital department. Adjusting for case mix and severity shows that the different rates of medical intensity are not due to differences in the patients themselves; what's left is to conclude that there is little correlation between the amount of services provided and the care outcomes achieved.

And yet, those are global findings across the U.S. When it comes to supply spending control, what has been lacking is a scientifically rigorous means of providing data that isolate cost and quality at either the facility or individual physician level by accounting for differences in severity, labor costs and other factors unrelated to a fair assessment of a health care provider's track record.

Within the past year, however, a powerful new tool has been added to the arsenal of supply chain management. It uses information technology to aggregate vast quantities of data on resource use to greatly enhance the ability to identify cost savings opportunities at the service line level. It is not simply data analytics; many GPOs and a number of non-GPO companies provide versions of that product. Those are significant weapons in the war on healthcare supply spending, but they don't focus on the service line and physician levels.

To be sure, service-line analytics is such a new discipline that it has neither an agreed-upon nomenclature nor a hard and fast definition. For the purposes of this report and for simplicity's sake, we are using the generic version of MedAssets' first-to-market solution, at least in terms of products aimed specifically at supply chain issues. A number of other entities, including Data Advantage and the The Advisory Board Co.'s Crimson Initiative, predate MedAsset's offering. Those services target resource utilization and outcomes at the physician level, but are not supply-chain-centric.

Other GPOs and some non-GPO companies offer a variety of data analytics products. Premier's ValueConnect, Amerinet's DataBay Resources and VHA's SupplyLYNX offerings all offer aspects of the MedAssets tool, which was launched in September 2009. We will discuss the Amerinet and Premier offerings merely as examples of what other data analytics products can provide, while focusing primarily on the unique MedAssets product.

Clearly, a new field is emerging. The question remains, what is it, exactly?

It is part value analysis, in that one of the main goals of these products is to reduce the cost of products, particularly physician preference items. Thus they harness the power of information technology to evaluate clinical products and capital equipment for efficacy and cost-effectiveness. But as they also target resource and supply utilization, a broader definition is in order.

The following might be a working definition, at least for the purposes of this report: "The use of software to link data on resource use, clinical outcomes and costs across a service line in an effort to optimize utilization of supplies, labor and capital equipment."

Service-line analytics aggregates data that are already available in isolation – the cost of utilization, clinical outcomes, lengths of stay, adjustment for severity and reimbursement – into a compelling case for a decision that can be implemented. A supply chain executive can go to a meeting with a physician armed with a load of severity-adjusted data to make a persuasive case that the doctor is out of kilter on costs, outcomes or both. It can also be used at the facility level or service line level to find out why within an IDN one hospital has consistently higher costs for a service line or elements within that line.

In product evaluation, service-line analytics has special relevance for high-cost areas where implants are prominent, such as cardiac rhythm management, clinical cardiology and orthopedics. It is also relevant where high-volume physician preference items are concerned, such as sterile gloves, sponges and surgical cement. Service-line analytics helps to identify areas where utilization can be targeted to save money without simply basing decisions on price.

Service-line analytics is a process-driven tool. The data have to be simple, understandable, measurable and repeatable in order to make the powerful case for change to a facility or a physician. Used correctly, it allows supply chain departments to go to providers with results that are scientifically sound and compelling.

The Case Grows Stronger

The Patient Protection and Accountable Care Act of 2010 – more commonly called healthcare reform – may present the strongest possible rationale for investing in service-line analytics. The new law carries with it fundamental changes in how hospitals and physicians are paid. Reimbursement is increasingly uncertain, particularly for physicians, driving many to consider hospital employment or to join larger medical groups within IDNs, which gives hospitals huge new leverage in controlling costs. And new payment methodologies, particularly bundled payment, will force physicians to work more closely with hospitals. Sharing a single payment for an episode of care calls into question any process that involves excessive spending.

There is a natural synergy between bundled payment and service-line analytics. The kinds of procedures involved in bundled payment follow a service-line model, such as cardiac care from initial diagnosis to stent insertion to follow-up care in the physician office. Where in the past cost per patient may have been the subject of discussion, even cajoling, between a hospital and a physician, there will now be a new incentive on both sides to find ways to keep costs as low as possible.

Health reform has other elements that will aid the process of data analytics. Almost every provider of care will be subject to pay for performance under Medicare and Medicaid, under which a portion of payment is withheld and providers can earn back full reimbursement by showing the greatest improvement or the having the highest scores on measures of clinical quality and patient satisfaction.

Beginning in fiscal 2015, hospitals in the top 25th percentile of rates for health care-acquired conditions for high-cost and common conditions are subject to a payment penalty of 1% across the board.

And starting in fiscal year 2012, inpatient hospitals will have their payment reduced based on their potentially preventable Medicare readmissions for three conditions endorsed by the National Quality Forum and for another four measures to be identified by the Medicare Payment Advisory Commission. Other measures may be added in the future.

Each of those changes will make controlling costs while keeping quality high a part of every decision made by hospitals and physicians.

MedAsset's entry

MedAssets' Service Line Analytics offering combines new software with the clinical utilization expertise of MedAssets' Aspen Healthcare Metrics subsidiary to gather, interpret and report on clinical, financial and supply cost data by clinical service line and Medicare DRG.

Data gathered include discharge information, such as patient demographics, procedure codes with dates of procedures; names of attending, consulting and procedural physicians; discharge destination and payer. It simultaneously looks at line-item charge detail for each patient in a sample, cost information for each line item charge and reimbursement for each patient. Once the data are received, Aspen's decision support methodology combines, cleanses and validates it to produce service-line reports.

The key features of the service include:

- Analysis of optimal supply spend based on the nature of the patient population
- Measuring price and utilization of supplies by Medicare DRG and by physician at the service line, physician and patient level with accurate quality and supply cost information
- Benchmarks for progress in achieving cost-savings opportunities and maintaining gains
- A roadmap for how to implement the changes needed to secure cost reductions
- Clinical consulting to implement change management

Service Line Analytics marks a major shift in adjusting for patient population, eschewing the Medicare Case Mix Index. Given regional differences in reimbursement and other operating expenses, particularly labor costs, the use of that metric is ineffective, MedAssets contends. Case weights are designed to measure overall resource consumption, (labor, technology, etc.) not just supplies. Therefore as an indicator to measure where a hospital's supply spend should be, MedAssets uses the Supply Intensity Metric (SIM). That metric reflects the supply intensity of a patient population, which does not always correlate with the clinical severity or high-level resource utilization that are parts of the traditional methods of looking at supply costs. SIM does this by targeting a hospital's projected supply expenses based on the actual mix of patients seen and procedures performed. It then compares a hospital's overall supply expense profile to that of similar facilities to gauge cost performance versus best practice.

Again, there are other data analytics products in the market that offer aspects of what the MedAssets product provides. Here is a look at two of them:

Premier
Premier has tried quite a different approach through its ValueConnect product. It essentially uses the sourcing database of the GPO and a collection of member expertise to provide a web-based, highly automated value analysis process for products and treatment options.

ValueAdvisor, the cornerstone of ValueConnect, is an online application geared toward the management of requests, access to comprehensive information to support evaluations and goal-oriented measurement of results.

On the website, an analysis tab captures the financial impact of a spending request both categorically (quality, supply chain, operational and reimbursement) and in total.

Other features of ValueAdvisor:

- A landing page tracks data such as project and decisions status
- A downloadable .PDF synopsis of a project request to include survey questions
- Basic reporting by enabling the export of 18 data points for each request, from the ValueAdvisor database into Excel, including financial impact data
- Tracking of decisions made by project to provide users a reference into where a project is in the evaluation process
- The ability to select multiple products per request to account for variation within the same product (lengths, widths, flavors, colors, etc.)
- E-mail notifications to alert users when new projects are added to the system and when projects are assigned to committees
- Monitoring support for evaluations and trials allowing organizations to set goals and track the results of decisions
- Resource integration focused on other Premier products such as Supply Chain Advisor, SpendAdvisor, QualityAdvisor OperationsAdvisor and SafetySurveillor
- Collaboration with other users to capitalize on shared knowledge, minimize redundancies and make more informed decisions

Amerinet
Amerinet's DataBay Resources subsidiary offers a product that allows facilities to benchmark against the market by examining market share, payer mix, trends and population/patient demographics at an overall level and at the service line level of detail. Where the data are available, it also provides a concise view of a physician's or surgeon's discharge patterns (by facility and geography), payer mix and top clinical codes treated.

Reports are provided either on-demand or through a subscription service, where a predetermined set of reports, graphs and maps (selected by the client) is updated as new data become available, typically on a quarterly basis.

In clinical areas, analysis includes patient demographics, clinical code distribution, refined DRG and discharge status.

DataBay also provides a range of consulting services, including planning analysis and support.

Peer-to-Peer Exchange questions

1. Data analytics has been around for a while, but service-line analytics is a relatively new concept. Do you see service-line analytics as a major leap forward in helping to control supply spending, or is it simply a new means of examining spending trends using data analytics?

2. Discuss each of these potential uses for service-line analytics in terms of its optimal application:

- Working with individual physicians to curb resource use
- Helping product evaluation committees make a persuasive case for product standardization and consolidation
- Cutting costs across a service line
- Cutting costs at the individual hospital level
- Improving quality of care generally

3. What are some of the limitations of service-line analytics?

4. How could data analytics be improved/expanded upon to better serve the health care supply chain?