

## Accountable Care at the Frontlines

# Physician-Performance Analytics Bring Business and Clinical Intelligence to Demands for Quality

**Summary:** Revenue in the healthcare system is increasingly based on accountable, quality care, for which physician-performance analysis is essential. As part of solutions that integrate clinical and financial data, care analytics can show where and how to achieve savings. Reliable summary and graphic results drive a process in which physicians take ownership of improved services and resource use. The tools also enhance reporting and clinical-decision support, as they improve the revenue-positive position of service lines and create a culture of constant clinical and business improvement.

In October 2011, CMS released its final value-based purchasing rules for Accountable Care Organizations (ACOs), with a heavy emphasis on increased financial responsibility for healthcare providers, pegged to clinical performance. Hospitals and other ACOs — and their physician medical staffs — needed no greater illustration of the new reality, one in which they must keep costs down while maintaining good outcomes.

On this changing national landscape, a significant portion of the financial risk traditionally held by insurers shifts to providers. Responsibility for best use of resources has evolved in U.S. healthcare, now to be shared more equally by all stakeholders — with special emphasis on hospitals and their care providers. At issue is the hospital bottom line, and at play are quality measures driven by data analytics.

“Organizations that don’t have a view and a handle on this type of information are not prospering in the current environment. And that challenge will only get more difficult for them,” says Sanjay Udoshi, PhD, Physician Lead for Clinical Analytics & Decision Support at Geisinger Health System, which along with other forward-looking organizations is helping to set standards for use of physician-performance analytics. At the crux of this activity is the need for centers to measure, report, and improve quality indicators — all from data generated by or looping back to groups and individuals at the medical-staff level.

### Who should read on:

- chief quality leader and quality-management staff
- principal financial officers of providers and insurers and other revenue-cycle executives and staff
- analytics and informatics executives and staff
- medical directors and chief medical officers
- medical staff-office director and staff
- private insurer representatives working with hospitals
- VPs and directors of clinical quality
- care-management executives
- regulatory and policy executives and staff
- compliance executives and staff
- strategy and planning executives and staff
- patient-care services managers

## Change That's Good: Stepping Up to the New Environment

Hospitals and ambulatory care facilities that operate as business entities — and their staff physicians — are all now ACOs. While most have long embraced the managed-care principles automatically built into this role, all have a new distance to travel in the value-based environment. No matter their varying business configurations, ACOs have to take charge of the monitoring and reporting that will define this era, and that means becoming more knowledgeable about and involved in the care that their physicians deliver.

Just how productive are each one of an ACO's medical services? These organizations need to look beyond gross charges and revenue, and learn the newly defined reimbursement value associated with the care they provide. This may frequently mean adjusting care all the way down to the level of a specific doctor-patient interaction.

While physicians may sometimes chafe at oversight, they are never new to it. Grading of their performance has been a steady part of their professional world since their earliest interest in a medical track. And now, at the staff level the physician-evaluation process has gone far beyond the cursory reappointment review of yesterday.

For the all-important conversations that result, ACOs need tools to cut through the complexity in medical practice. New solutions available for this purpose do not require huge IT overhead or capital expenditures; they do require collecting and integrating data from a variety of sources and putting it to work.

**ACO.** A group of health care providers that are held jointly responsible for quality and that share in savings for treating their patients.

Risk Navigator Clinical®							
Home   Help   Logout   Change Password						Demo - Commercial -	
Home High Risk Members Movers Guideline Gaps Lab Alerts Custom Filters Physicians Groups Batch Reports Edit Guidelines						DMO 02/01/2007 - 01/31/2008	
Guideline Compliance Profile							
Active Filter							
Member Is Active AND Diagnosis Group IN (Diabetes)							
Show All Gap Diseases							Export Report
Guideline Compliance Information							
Disease	Guideline Gap	# Members Not Compliant	# Members Compliant	Compliance	Avg Forecasted Index	% Members w/Chronic Impact >= 95	% Members w/Acute Impact >= 95
Diabetes	Eye exam (retinal) performed	44465	21045	32.1%	3.32	41%	9.7%
	Hemoglobin A1c (HbA1c) testing	10018	55492	84.7%	3.32	41%	9.7%
	Influenza immunization	51590	13846	21.2%	3.32	41%	9.7%
	LDL-C screening performed	14791	50719	77.4%	3.32	41%	9.7%
	Lipid profile or all component testing (total cholesterol, LDL-C, HDL-C, triglycerides)	15220	50290	76.8%	3.32	41%	9.7%
	Medical attention for nephropathy: screening or evidence of nephropathy	22906	42604	65%	3.32	41%	9.7%
	Microalbuminuria	39510	19055	32.5%	2.98	41.5%	7.1%
	Plus CAD: Statin therapy	760	2842	78.9%	5.95	89.3%	36%
	With Hypertension: attention to blood pressure	2443	20138	89.2%	4.10	61.3%	13.7%
	With nephropathy: ACE-I or ARB	501	1461	74.5%	5.47	56.9%	26.8%

Simple, empirical, anecdotal, patient-by-patient practice models of the past are not adequate. ACOs must look across DRGs and service lines — and the care guidelines within them — to determine what areas of physician practice they want to examine more closely.

## Analytics Permit Views of Physician Activity

Hospitals and other ACOs sit atop an immense amount of invaluable data. Its sheer amount can seem intimidating and burdensome, with patients and their care providers generating data from different points in the system, around the clock daily. But this same information has the power to answer many of the questions of current healthcare delivery. With accessible claims data and with electronic medical records (EMRs) now in more ACOs, organizations have extensive information that points to areas of success and to needed adjustments.

To reveal and depict the findings in this data, ACOs need to use clinical and longitudinal financial information side by side in analytics that are built for new needs and that are able to range from the macro to micro level. These available informatics also serve national reporting requirements. They are able to look across an organization's system, hospitals, facilities, specialties, departments, units, or individual practitioners, to see clear comparisons and illustrate peer groups that serve to zero in on and reduce unwanted variation.

Says Udoshi of Geisinger's efforts, "We are attempting to create a platform with the help of our vendor, MEDai, that combines administrative and clinical data for consolidation of our analytic capability, so we will no longer just be relying on point solutions strictly for the payer side or primary-care side of our organization around population surveillance. Instead, we will actually have an integrated platform for the entire continuum of care."

## Deploy Analytics, Hone in at a Touch

The intense focus on quality and cost measures mandated by the Patient Protection and Affordable Care Act means adherence to guidelines. It requires comparing between service units and physicians on established measures to identify performance issues.

CMS has built its current measures partly on its incentivized, voluntary Physician Quality Reporting Initiative in place since 2007. In 2011, CMS renamed the program the Physician Quality Reporting System (PQRS), which offers medical practices the opportunity to report on a variety of quality measures. Sophisticated physician-performance analytics incorporate these and other evidence-based guidelines, including from professional organizations.

In best-designed physician-performance analytics, the result is hundreds of measures to select from in assessing activity. These systems also allow benchmarking to medical centers comparable in parameters such as size, geographic region, volume per specialty area, and other factors. But it all starts with aggregating and standardizing data from disparate systems in an ACO.

"Analyzing physician performance requires, as a first step, the ability to edit and clean up data, including identifying missing or invalid elements," says Sharon Montgomery, Director of Product Strategy at Elsevier/MEDai. Montgomery has helped to develop such state-of-the-science solutions as *Risk Navigator*® Performance and the *Pinpoint*® applications, with which ACOs can compare the

*Two major foci of hospital-related care are also driving the focus on physician performance:*

**Readmissions.** Discharge planning and transitional care now occupy the frontlines of healthcare reform. Care coordination and patient/care-giver coaching, among many other factors and strategies address both the human and medical elements of this challenge, not to mention the escalating cost realities.

Starting in fall 2012, for example, the government will cut Medicare reimbursements for hospitals with higher-than-expected 30-day readmission rates for heart failure and heart attack. A focus on transitions in this interest addresses quality and safety for these patients. And, maintaining continuity of information and care steps bolsters patient and family confidence in providers. These factors become vividly apparent in physician-performance indices such as readmission rates, home healthcare use, predischarge consults, post-discharge complications and other factors that analytics can highlight.

### **Co-management business models.**

Reimbursement reform is driving hospitals and physicians to align their interests. In a major trend, more hospitals are entering clinical co-management arrangements with large specialty-group practices. In these agreements, physicians allow their practices to be acquired in return for a compensated management role in a specific service line of the hospital, with both fixed and incentive remuneration. Meanwhile private insurers are also making incentive agreements with large providers, as care coordination becomes a national priority.

Physician analytics are essential to driving this model, which rewards doctors who advance activities that improve patient care and outcomes, generate cost efficiencies and make the clinical service more competitive. Physicians gain greater participation in, and financial payback for, strategic planning, budgeting, clinical program development, quality oversight and improvements that enhance the patient experience. This integrally involves them in measures of their own performance — and, sets the stage for innovation.

performance of physicians to get risk and efficiency indicators — and see dollar amounts of potential savings.

Such solutions adjust for which physicians treat higher-risk patients, incorporating case mix and concurrent risk measurement by illness burden for the patient set of a specialty or provider. This produces a balanced efficiency rating and fair comparison across entities or clinicians.

Providing data and graphic results on utilization and cost trends across networks and by individuals, these analytics allow ACOs to profile centers, offices, or practitioners to support pay-for-performance compensation. For greatest effectiveness, this type of analytics infrastructure means having a data repository in place and giving the analytic systems access to that data in as timely a fashion as possible — ideally for near real-time analysis of current patient care and trends.

## Grouping and Parsing: Results that Come Back to Encounter-Level Care

To graphically illustrate ongoing episode-of-care-based analysis, physician profiling looks at the most important care statistics. Related key indicators such as length of stay, mortality, complications, readmission rates, and total cost can also roll together into overall “Efficiency Index” scores that have high utility. Other performance variables can include intensive-care use, post-operative problems, reactions, hospital-acquired conditions, and patterns of use in pharmacy, laboratory, and radiology. ACOs with analytics technology can chose factors to evaluate across a comprehensive range of disease states.

Physician	Physician ID	Specialty	# Of Discharges	Case Mix	Average Severity	Efficiency Index	Overall Index	Length of Stay	Mortality	Complications	Total Cost	Readmit 30
BARD, RALEIGH	282287	Internal Medicine	68	1.36	2.82	0.93	1.25	0.94	2.96	1.26	0.93	1.18
BARR, DAVID	2812957584	Internal Medicine	1	1.07	1.00	1.15		3.00		0.00	1.13	
BARR, FABIAN	286667	Internal Medicine	572	1.20	2.56	0.00	0.92	0.90	1.05	0.77	0.01	0.90
BARRAS, DIRK	2812959541	Internal Medicine	96	0.54	1.95	0.54	0.50	0.86	0.55	0.23	0.54	0.42
BATH, ROMANTH	200420	Internal Medicine	412	1.00	2.44	1.29	1.05	0.99	1.14	0.90	1.29	1.14
BATHURST, ROGER	2812957439	Internal Medicine	48	1.81	1.96	0.78	1.15	1.21	2.60	0.60	0.78	1.81
BELDEN, ROMANTH	2812957843	Internal Medicine	2	1.21	3.00	0.56	1.15	1.23	0.00	0.00	0.56	2.84
BLAIR, FELIX	2812938558	Internal Medicine	14	0.75	2.29	0.17	1.17	0.72	0.94	0.00	0.37	0.91
BLAIR, ROGER	2812955993	Internal Medicine	2	0.73	1.50	0.58	0.41	1.31	0.00	0.00	0.58	0.70
BLISS, RYAN	2812957242	Internal Medicine	232	0.92	2.36	0.62	1.09	1.19	0.90	0.73	0.61	1.49
BORLAND, ROY	2812956273	Internal Medicine	93	0.83	2.15	0.59	1.35	1.04	1.23	0.88	0.59	2.18
BOTOLPH, RALPH	881638	Internal Medicine	1	0.45	2.00	1.97		1.64		0.00	1.97	0.00
BOWNE, DARIAN	282373	Internal Medicine	1									

The shift in goals at CMS to mandatory performance-conditional physician payment requires professional practice evaluation. To make those conversations credible takes first-rate analytics, supported by a knowledgeable solutions-vendor staff.

“Summary tables and graphical views can show which specialties represent the greatest potential for savings and which specialists in those areas are performing well or where they need assistance,” explains Montgomery. “In a specific diagnostic category, it becomes important to look at average per-patient variance from the target cost for each physician times number of cases to see which providers represent the greatest potential for savings. Then, we can show where these costs are coming from for each doctor.”

For a fair look, the physician-performance solutions allow users to identify patients who should be excluded due to special circumstances. They can also analyze consults that a physician requests. The profile can expand to include outpatient care, home healthcare, and equipment usage. The medical staff or quality officer gets graphic output to share with the physician. What’s more, these analytics support data submission requirements nationally and for specialty and ratings-and-rankings organizations — making compliance with CMS and the Joint Commission, among others, easier. The output from these solutions meet needs for, and enhances, Ongoing Professional Practice Evaluations (OPPE) and Focused Professional Practice Evaluation (FPPE) goals.

In the Elsevier/MEDai suite of *Pinpoint*® solutions, for example: *Pinpoint Compliance*® performs chart abstraction; *Pinpoint Quality*® provides the retrospective quality evaluation, including physician performance analytics, in addition to population analysis; and *Pinpoint Review*® offers real-time patient surveillance for clinical quality control. Such solutions allow medical and quality officers to track back from clinical events. If they notice, for instance, a high percentage of access bleeding among cardiac catheterization patients, they can identify the attending interventionalists in those cases and run analytics on their performance, and then work *with* the specialists to create new order sets. In this way, analytics give guidance and detail to corrective action plans.

Any well-conducted sharing of data about patient groups or outcomes will directly involve the physician with improvements.

The screenshot shows the 'Provider Performance Comparison - Providers' page in the Risk Navigator Performance software. The table displays performance metrics for 12 providers in the Endocrinology/Diabetes specialty. The benchmark used is: Region: All, Product: , Specialty: All, Benchmark Source: National ; Minimum # Episodes 10 ; Product(s): Commercial HMO; Role: Episode Primary ;Episode Status: Complete Outlier Status: Exclude ; ETG Group in Diabetes. Episode Begin Dates from 2/2006 through 1/2008 Member is Active;

Provider Last Name	Provider First Name	Specialty	# Patients	# Episodes	Average Patient Age	Concurrent Risk	Efficiency Index	Case Mix	Total Cost	Avg Cost Episode	Benchmark Avg Cost / Episode	Avg Cost Variance	Savings
OTZX	VTRXE	ENDOCRINOLOGY/DIABETES	28	28	51	1.39	2.70	3.72	\$208,943	\$7,462	\$2,767	\$4,695	\$131,467
WNSE	SGNLTR	ENDOCRINOLOGY/DIABETES	20	20	53	1.96	2.28	3.72	\$126,008	\$6,300	\$2,767	\$3,533	\$70,668
GTEXR	TMWQXT	ENDOCRINOLOGY/DIABETES	38	38	46	1.10	1.59	3.72	\$167,145	\$4,399	\$2,767	\$1,632	\$61,999
KTC IQ	CHKKHTL	ENDOCRINOLOGY/DIABETES	12	12	53	0.86	2.71	3.72	\$89,842	\$7,487	\$2,767	\$4,720	\$56,638
LNYYHSS	ZQXZQEQ	ENDOCRINOLOGY/DIABETES	19	19	53	1.74	2.00	3.72	\$104,907	\$5,521	\$2,767	\$2,754	\$52,334
QXXBXR	LHVGTXK	ENDOCRINOLOGY/DIABETES	31	31	52	1.40	1.58	3.72	\$135,843	\$4,382	\$2,767	\$1,615	\$50,066
ZGTCIH	LTGXQ	ENDOCRINOLOGY/DIABETES	18	18	49	1.67	1.92	3.72	\$95,393	\$5,300	\$2,767	\$2,533	\$45,587
LVVTLNLM	WTMHXK	ENDOCRINOLOGY/DIABETES	8	8	47	1.02	2.89	3.72	\$64,016	\$8,002	\$2,767	\$5,235	\$41,880
WTBHR	RSXOGXM	ENDOCRINOLOGY/DIABETES	21	21	47	0.57	1.68	3.72	\$97,439	\$4,640	\$2,767	\$1,873	\$39,332

Physician report cards on cost performance instantly highlight areas for savings through process improve  
 Volume times variance gives a product that equals potential savings with each doct

## The Result: Physicians Begin to Drive the Process Themselves

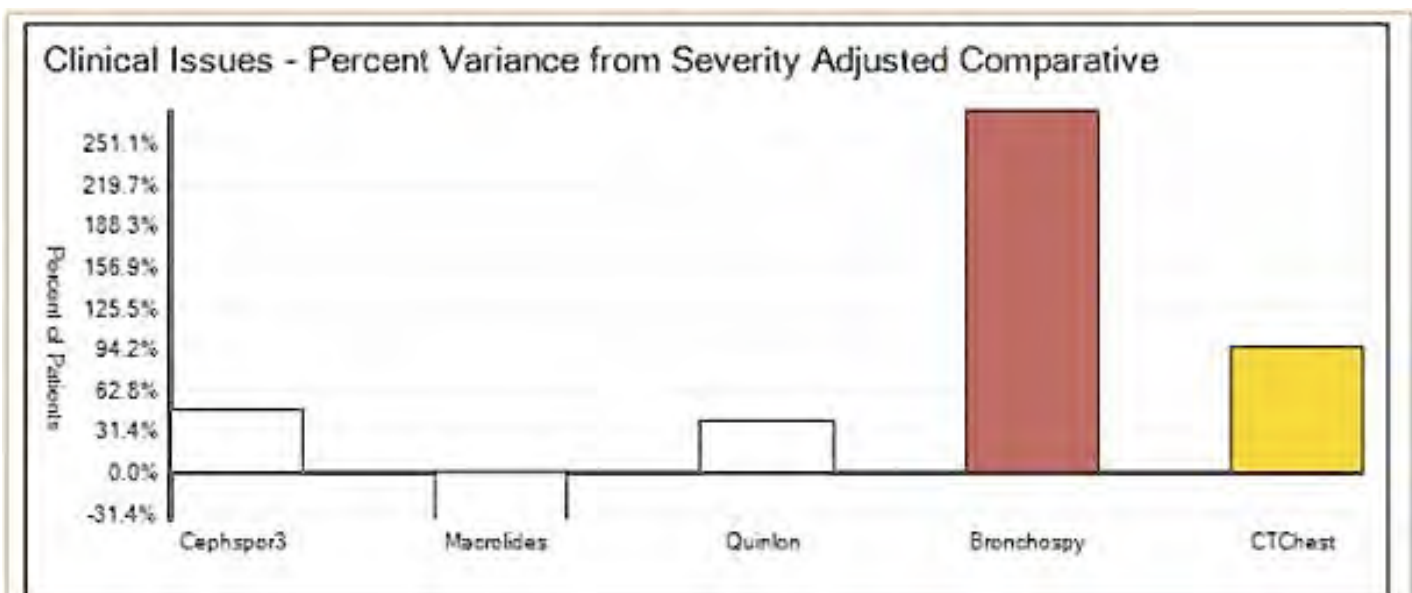
Market forces are changing healthcare to a degree not seen since employers began commonly offering healthcare insurance as a benefit, well over half a century ago. This means ACOs have to manage risk to achieve clinical, business, and financial goals.

Is an ACO protecting its revenue? Is a particular physician profitable? Asking these hard questions helps the organization to take control of and avoid unreimbursed care. That, in turn, improves contribution margin per case and across high-volume DRGS, and allows the ACO to take service lines with negative operating margins and achieve an operating surplus.

Reporting key performance indicators to healthcare executives, medical directors, and quality leaders, preferably in a management dashboard format, is essential. And, any well-conducted sharing of data about patient groups or outcomes will directly involve the physician with improvements. With analytics at their fingertips, administrators and doctors can drill down in the data and discuss care gaps and unsustainable practices.

For this, hospital executives must have analytic applications that they can stand behind so they can skip the disbelief and refutation stage, the defensive or revisionist stage in working with staff clinicians and instead move directly to motivating behavioral changes. Data from top-quality analytics makes it easier to have a medical staff officer as part of the team consulting with practitioners and to make physicians active partners. Using it rigorously puts the ACO's medical staff into a de facto status of ongoing evaluation.

"It's also important to create a portal that the individual physician can use to view this data, because physician analytics aren't just about notifying physicians who need to change practices but also about permitting them to self identify



Here, a simple chart (from MEDai's Pinpoint® applications) shows medication, intervention, and diagnostic steps used by an individual physician in caring for pneumonia patients. (Red indicates unfavorably high variance from expected level of use of a care step.) Easily understandable metrics and graphics such as these help to engage physicians and get them to champion changes needed for accountable care.

and to follow the data themselves on cost and quality problems,” says Montgomery. “Very quickly, you are influencing care while the patient is still hospitalized.”

James Lederer, MD, VP of Clinical Improvement at Novant Health relates this very experience: “When we needed to make improvements, we needed more data on the how and the why, not just the what. When I would go to a physician and say, ‘Your length of stay is long. It needs to be shorter,’ they would say to me, ‘Well, how? Help me. What is it about my care that makes it longer? What can you show me?’ So the clinical indicators within the tool set from MEDai really help us bring it home at a practice level.”

This is also where a complete suite of data solutions crosses over to the transactional system for physicians, preferably indicating performance in near real time. These tools have the daily practical benefit of safety alerts that flag abnormal results, adherence, follow-up and other areas.

“At Geisinger’s Clinical Innovations Center, we have built digital safety nets around abnormal results from imaging, pathology and biochemistry,” notes Udoshi.

Physicians directed by analytics to EMR-based point-of-care tools realize more of the long-sought promise of clinical-decision support. Within the Elsevier/MEDai suite, for example, *Risk Navigator Guidelines*® monitors member compliance with evidence-based guidelines, while *Risk Navigator Provider*® uses point-of-care data to improve physician-patient encounters. Real-time, predictive alerts, for instance, will signal risk around hospital-acquired infections, 30-day readmission, length of stay, mortality, and transfer to intensive or higher-level care units. With all of these types of functionality in place, the ACO distributes information to staff quickly and can promptly react to dynamic changes in reimbursement or best practices.

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Physician-performance analytics are the medium that permits the conversation, a way of not just embracing change but of making a compact around it.

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[additional Risk Navigator screen]

[caption]

## Making Analysis the Norm

Payment linked to excellence and efficiency of services induces accountable care, but not automatically. To take advantage of this cause and effect and stay on top of it, ACOs must have a plan. That means applying medical and business intelligence so that clinical and financial decision makers know the up-to-the-hour care reality across their enterprise, within a house staff, or at the level of the individual physician.

Untapped data or awareness of performance issues can no longer sit in uncomfortable silos. Instead, making the results of useable metrics available to everyone — the payer, the rating agency, the healthcare institution, and the clinician — creates transparency and visibility, so resources and activities can be adjusted to pursue the agreed-upon optimum.

Physicians who become accustomed to regular self-examination move the ACO into a culture where both they and administrators accept regular feedback as a desired and positive state — with the goal of influencing each physician's very next interaction with a patient. Physician-performance analytics are the medium that permits the conversation, a way of not just embracing change but of making a compact around it. A means of framing a common goal. In this atmosphere, physician-performance solutions and tools quickly become an engine for change.

### Additional resources

-- *Proposed Rule versus Final Rule for Accountable Care Organizations (ACOs) In the Medicare Shared Savings Program.*

[www.cms.gov/aco/downloads/Appendix-ACO-Table.pdf](http://www.cms.gov/aco/downloads/Appendix-ACO-Table.pdf)

-- *Leveraging Physician Performance Analytics to Drive Clinical Practice Change, Pay-for-Performance Initiatives and Quality Improvement Efforts*

a HealthcareWebSummit Event

Wednesday, August 31st, 2011

<http://www.healthwebsummit.com/medai083111.htm>

-- *Toward a Single Source of Patient Truth:*

*Predictive Analytics for Accountable Care*

ELSEVIER Clinical Decision Support whitepaper

[URL?]

-- *Foundations for Effective Healthcare Performance Management*

Jack Bates, MS, Director, Business Intelligence Service Line

Office of Information & Technology, Service Delivery and Engineering

Department of Veterans Affairs

[http://www.whitecloudanalytics.com/globalmedia/files/collateral/Foundations\\_For\\_Effective\\_Healthcare\\_Performance\\_Management.pdf](http://www.whitecloudanalytics.com/globalmedia/files/collateral/Foundations_For_Effective_Healthcare_Performance_Management.pdf)

-- Pinpoint Solutions

<http://www.medai.com/products/pinpoint-solutions/>

-- Risk Navigator Solutions

<http://www.medai.com/products/risk-navigator-solutions/>



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