PROVIDING THE CLARITY TO IMPROVE OUTCOMES AND PERFORMANCE

INTEGRATION DISCOVERY

TRUVEN HEALTH ANALYTICS
WHEN CLINICAL INTEGRATION AND PERFORMANCE IMPROVEMENT COME TOGETHER, THE BENEFITS ARE PROFOUND

For providers, the need to securely integrate and standardize clinical and administrative data from disparate sources across the care continuum is unprecedented. Legislative regulations focused on improving quality while containing costs are bringing new reimbursement models and transparency around clinical performance into sharper focus. To successfully embrace these challenges, your hospital, health system, or integrated delivery network will need to improve operating performance by enhancing clinical integration, expanding service and process coordination with affiliates, and optimizing resource utilization.
Truven Health Analytics℠ has partnered with CareEvolution, Inc., a leading software vendor of secure interoperability solutions, to develop Truven Integration Discovery — a system-wide, configurable off-the-shelf (COTS) solution that enables rapid and efficient integration of disparate clinical data sources, secure data interoperability, and simple ongoing maintenance.

With access to relevant information (clinical and administrative) when and where they need it, your clinicians can make better decisions around individual patient care, care coordination with other clinicians, and quality compliance measures such as Meaningful Use. These improvements will result in lower costs, improved efficiencies, and reduced service duplications for your organization.

By leveraging integrated data from disparate clinical sources, you can achieve better alignment between hospitals, health plans, physician practices, and other affiliated groups, such as labs and pharmacies. This puts providers in a better position to manage changing delivery and payment models. All of these benefits lead to the ultimate goals of healthier patient outcomes and improved performance.
Core Interoperability Services
To address the complexities of individual workflow and physician alignment, Integration Discovery is vendor-agnostic so participants can connect their chosen systems’ data sources to the interoperability platform. Integration Discovery’s technology platform employs a robust service-oriented architecture to enable data sources to share information in a secure, standards-based, and reliable manner.

Distinct components such as identity management, record location, data integration, audit and logging, data persistence, visualization, terminology, and data mining can be adopted individually or as a comprehensive technology platform. This ability to adapt to the system of choice for different participants allows your network to serve its individual and unique workflow needs, while allowing the information to flow freely around the network. It also creates a cost-efficient and scalable solution as new participants join the organization.

Point-of-Care Decision Support
Clinically integrated data offer an unprecedented opportunity and vantage point for improving the delivery of healthcare at your organization. From this ubiquitous flow of clinical and administrative data, we create a virtual Single Patient Record (vSPR) that allows a clinician to have a longitudinal view of the patient across multiple care settings and over time.

This multisourced information is organized in a provider-centric manner utilizing grouping technology to organize pertinent events into episodes of care for easy interpretation and integration into the clinical workflow. Interactive work screens encourage care coordination and clinical collaboration. In addition, they provide optional capabilities to support data sharing with smaller offices that may not have resources to invest in a full EMR solution.

Hot-Spot Surveillance
Clinician systems are often designed to help manage that day’s patient worklist. But a physician may struggle with keeping track of the patients they are not scheduled to see that day, especially those with immediate needs. With customizable criteria for identifying patients and configurability to track a wide array of relevant information in the exchange, Integration Discovery enables point-of-care surveillance for your clinicians to monitor emerging areas of concern, such as:

Emergent Conditions
- Catheter infections/HAI
- C. Diff Cultures
- Sepsis
- Diabetes (high/medium risk)
Predictive Indicators
• Braden Score
• Fall Risk
• Glycemic Control
• Hyperkalemia
• Pain Management
• Abnormal Lipids

In addition, self-managed, relevant alerts help clinicians track gaps in care, failure to seek follow up, and other situations that affect their ability to manage the health of their population.

Risk Management and Population Health Analytics
Supported by our world-class healthcare decision support services, the Integration Discovery platform aggregates clinical and administrative data and applies data standardization to make it ready for monitoring progress and performance over time. You can access reliable measures for evaluating and demonstrating Meaningful Use, measuring quality outcomes, and validating cost savings.

Integration Discovery offers analytical applications that translate integrated intelligence to improved performance reporting, including:

• Advanced measures engines
• Proven methods for disease staging, severity adjustment, and episode creation
• Benchmark reporting
• Rules and alerting
• Standard and ad-hoc reporting tools

Health Information Data Sources
By integrating disparate clinical and administrative data sources in real-time with Integration Discovery, you can improve clinical performance, better manage service lines, and coordinate patient care across all settings.

“Information about practice patterns and quality of care can help physicians and their patients make better healthcare decisions.”

Barbara Mooring
Project Director, Medical Society of New Jersey

WHY CHOOSE INTEGRATION DISCOVERY?

EMR Vendor Neutral
Integration Discovery enables rapid integration with the EMR system you are using, avoiding costly, resource-intensive system consolidation or migration. Because your facility may use multiple systems, our adapters are designed to interface with any pre-existing technology such that data flows between facilities in a meaningful manner. EMR integration can be configured to receive small datasets (e.g., Continuity of Care Document) or with tight integration for deep data extraction.

Proven, Highly Scalable Platform
Integration Discovery is a flexible, scalable interoperability platform that can serve as the backbone for your clinical integration initiative. The system expands up and out with your needs, so it’s ideal for small-scale deployment and phasing. Plus, you’ll make maximum use of your initial hardware investments as the system grows.

Current Standard Compliance
Integration Discovery uses a federated data model and pulls your patient information from disparate data sources into a single unified view. The system’s interoperability and terminology standards comply with IHE, NwHIN, ARRA HITECH, and other industry-leading standards, and can be updated easily as new standards emerge.
Meaningful Use Requirement Integration
Because federal reimbursements are tied to Meaningful Use, your solution will be built to integrate clinical and administrative data for Meaningful Use analytics and reporting. Our Quality Measures Engine codifies integrated datasets into disparate quality, compliance, and financial measures to meet Meaningful Use requirements. Integration Discovery has been certified for 2011 and 2012 by the ONC.

World-Class Security and Privacy
Our advanced security techniques ensure patient data are safe. We use a hybrid architecture that combines advanced functionality with a centralized data repository. This highly secure system acts as a switchboard, so it has no “back doors” that could compromise privacy. Users query the system, which then goes out to disparate sources to find the data and deliver it back. In addition, our secure Record Locator Service and Master Patient Index use a blinded directory for centralized demographic data.

Flexible Data Approach
Integration Discovery can launch via a “broad but shallow” or “narrow but deep” data approach. We typically seed your exchange with available data such as UB04 or other sources covering a wide patient population with a shallow depth of information. Simultaneously, we integrate with deeper clinical assets to supplement this data.

Cost-Effective Implementation and Maintenance
Integration Discovery has been designed with COTS architecture, so your implementation costs are manageable. There’s no need to invest in expensive consulting, project design, and custom development. And the COTS architecture facilitates cost-effective, ongoing maintenance as you introduce new systems and requirements.
## Key Components of Integration Discovery

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<th>Component</th>
<th>Description</th>
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<td><strong>Master Patient Index (MPI) and Record Locator Service (RLS)</strong></td>
<td>Integration Discovery employs a robust service-oriented architecture to enable the sharing of clinical information in a secure, reliable, and incremental way. Our MPI is tightly integrated with the technology platform and serves as an index for all known patients within the exchange. If you already have an MPI, our service can be disabled or operate alongside the existing service. The RLS identifies the location of a patient's medical records across the participants in the exchange.</td>
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<td><strong>Security and Data Integrity Management</strong></td>
<td>Integration Discovery employs a broad array of security standards, encryption technologies, and secure implementation methodologies. CryptoRLS™, which offers a robust unmatched and overmatched review tool and comprehensive ATNA-compliant audit and logging services, is included as part of your base technology platform.</td>
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<td><strong>Terminology Management</strong></td>
<td>Comprehensive terminology services, where Integration Discovery components are utilized for clinical data persistence, advanced terminology management, and standardization services, are included.</td>
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<td><strong>Provider Directory</strong></td>
<td>Integration Discovery supports the creation of a provider directory that you can use for numerous clinical and administrative downstream processes.</td>
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<td><strong>External Gateway</strong></td>
<td>A highly flexible, standards-based gateway is included. It can push to entities such as regional health information organizations, local health information organizations, state backbones, and NwHIN to meet Meaningful Use requirements.</td>
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<td><strong>Virtual Single Patient Record</strong></td>
<td>Integration Discovery enables your clinicians, at the point of care, to view a longitudinal patient record (integrated from all available sources) across care episodes.</td>
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<td><strong>Care Coordination</strong></td>
<td>If your providers do not have an EMR, the Care Coordination module can be used to send messages across the spectrum of clinical touch points linked to the network, make physician referrals, generate federated inquiries, and perform ePrescribing.</td>
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<td><strong>Beacon Surveillance</strong></td>
<td>Included as part of the core product offering, Beacon Surveillance is a flexible rules engine that allows clinicians and administrators to identify high-risk patients within their system that need active intervention or monitoring. The criteria by which patients are identified are customizable and can be configured to track almost any information in the exchange.</td>
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### TRUVEN CAPABILITIES

With more than 30 years of experience, we are the nation’s largest integrator of health information warehouses and decision support systems. Our solutions are used by healthcare providers, hospitals, clinicians, employers, health plans, pharmaceutical companies, researchers, and the government — affecting 150 million U.S. lives.

We can serve as a clinical integration and performance improvement partner for any hospital, health system, or integrated delivery network — including business planning and development, technical planning and design, and implementation and operations support. We have a particular emphasis on data integration and security, clinical data extraction, interoperable data transport between providers and other stakeholders, and the application of data for clinical decision support. In addition, we have extensive experience in analytical and reporting services, including performance assessment.

At the foundation of everything we do are our core competencies:

- **Software Applications** — Our software solutions are constantly updated to support day-to-day decision making and are considered leading-edge in the industry. We have some of the largest and highest quality proprietary healthcare databases in the world to support benchmarking, modeling, strategic planning, and healthcare research.
- **Database Management** — From single sources of information to some of the largest, most complex databases in the industry, we have extensive experience in data integration and organization. We specialize in data aggregation and interpretation — making our data meaningful for use in decision making. Many of our analytic methods are the industry standard for enhancing the value of customer data.
- **Industry Expertise** — Our professional staff of 2,000+ experts has experience across healthcare and are some of the best and brightest in medicine, analysis, and technology. Our thought leaders are providing ground-breaking insights in high-priority areas including patient safety, disease management, and organizational effectiveness. Considered true partners by our customers, we offer exceptional customer service and support.
- **Objectivity** — As a neutral third party, Truven is an independent, objective source of intelligent information for healthcare stakeholders across the industry. More than 3,000 of the nation’s hospitals, healthcare systems, and integrated delivery networks rely on us for solutions and analyses that improve the quality of care while managing costs.
About CareEvolution, Inc.

CareEvolution is a leading provider of secure interoperability solutions. Its core offering, HIEBus™, is a proven, comprehensive suite of SOA technology solutions for healthcare interoperability. Standards-based core network services and certified Web-based applications enable healthcare providers, regional exchange initiatives, and health plans to implement patient-centric quality and efficiency initiatives across the care continuum.

ABOUT TRUIVEN HEALTH ANALYTICS

Truven Health Analytics delivers unbiased information, analytic tools, benchmarks, and services to the healthcare industry. Hospitals, government agencies, employers, health plans, clinicians, and life sciences companies have relied on us for more than 30 years. We combine our deep clinical, financial, and healthcare management expertise with innovative technology platforms and information assets to make healthcare better by collaborating with our customers to uncover and realize opportunities for improving quality, efficiency, and outcomes. With more than 2,000 employees, we have major offices in Ann Arbor, Michigan; Chicago; and Denver. Advantage Suite, Micromedex, ActionOI, MarketScan, and 100 Top Hospitals are registered trademarks of Truven Health Analytics.

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Integration Discovery is 2011/2012 compliant and has been certified by an ONC-ATCB in accordance with the applicable certification criteria adopted by the Secretary of Health and Human Services. This certification does not represent an endorsement by the U.S. Department of Health and Human Services or guarantee the receipt of incentive payments.