

ENABLING SUPERIOR OUTCOMES IN HEALTHCARE WITH SELF-SERVICE ANALYTICS

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AGENDA

A blue-tinted photograph of a hand wearing a blue nitrile glove, holding a small glass test tube. The hand is positioned over a white microplate with multiple wells. The background is slightly blurred, showing more of the lab equipment. The entire image is overlaid with a semi-transparent blue filter.

- 1) Data Analytics Usage in Healthcare Trends
- 2) Healthcare Vision, Strategy and Direction
- 3) Customer Success Stories
- 4) Demo Showcase
- 5) Q&A

DATA ANALYTICS

USAGE IN HEALTHCARE TRENDS



“DATA ANALYTICS USAGE IN HEALTHCARE”

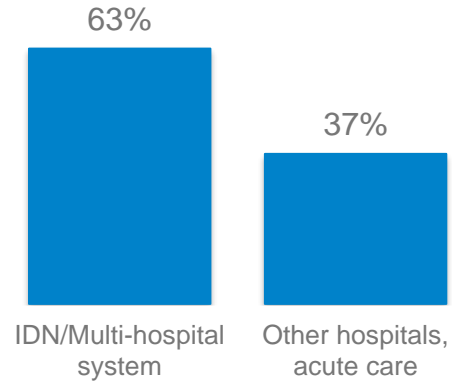
Research Study by HIMSS Media



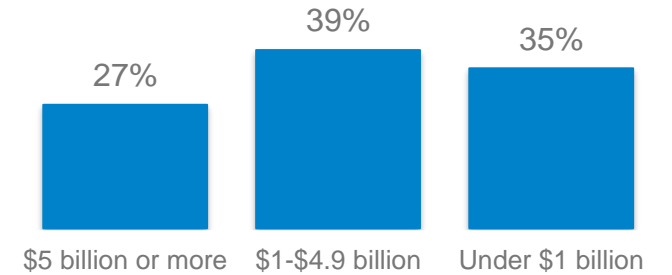
- HIMSS Media conducted this survey in January 2019, on behalf of Alteryx, to better understand data analytics usage in healthcare.
- A total of 101 qualified respondents completed the survey.
- This research was conducted online among U.S. hospitals and acute care facilities.
- This was a blind data collection effort. Alteryx was not identified as the sponsor of the research.

RESPONDENT PROFILE

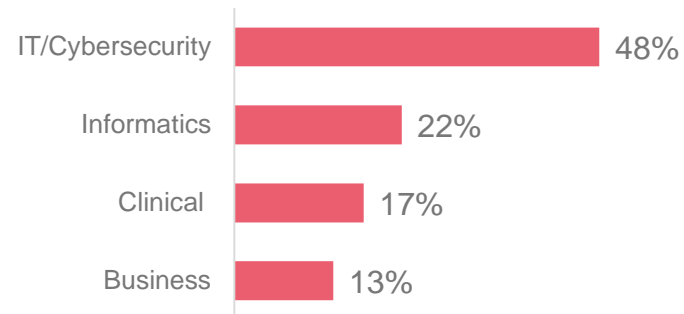
Organization Type



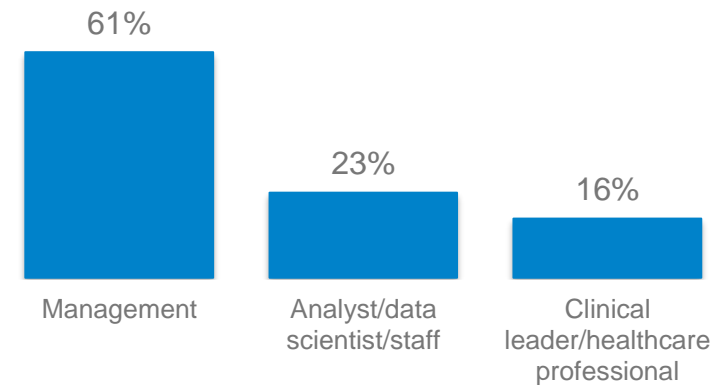
Annual Revenue \$3.9 billion average



Job Function



Job Level



KEY DATA AND ANALYTICS CHALLENGES CONFRONTING HEALTHCARE PROVIDERS

Only 3/10 hospitals successful in democratizing data; at least 6 data sources needed for meaningful analytics

Integrating EHRs with operations, supply chain, finance and HR is imperative

Accessing / integrating multiple data sources, and time invested blending and prepping data for analytics is expensive and time consuming

Higher confidence with Descriptive Analytics vs. Predictive or Prescriptive Analytics

Delivering higher quality of care cost-effectively, identifying at-risk patients early, and lowering 30 day re-admission rates are priorities

‘Data Analytics in Healthcare Research Study’, HIMSS Media, January 2019

PROVIDER STEPS ADVANCING ANALYTIC CAPABILITIES

58
PERCENT

Investing in more self-service
data analytics tools

48
PERCENT

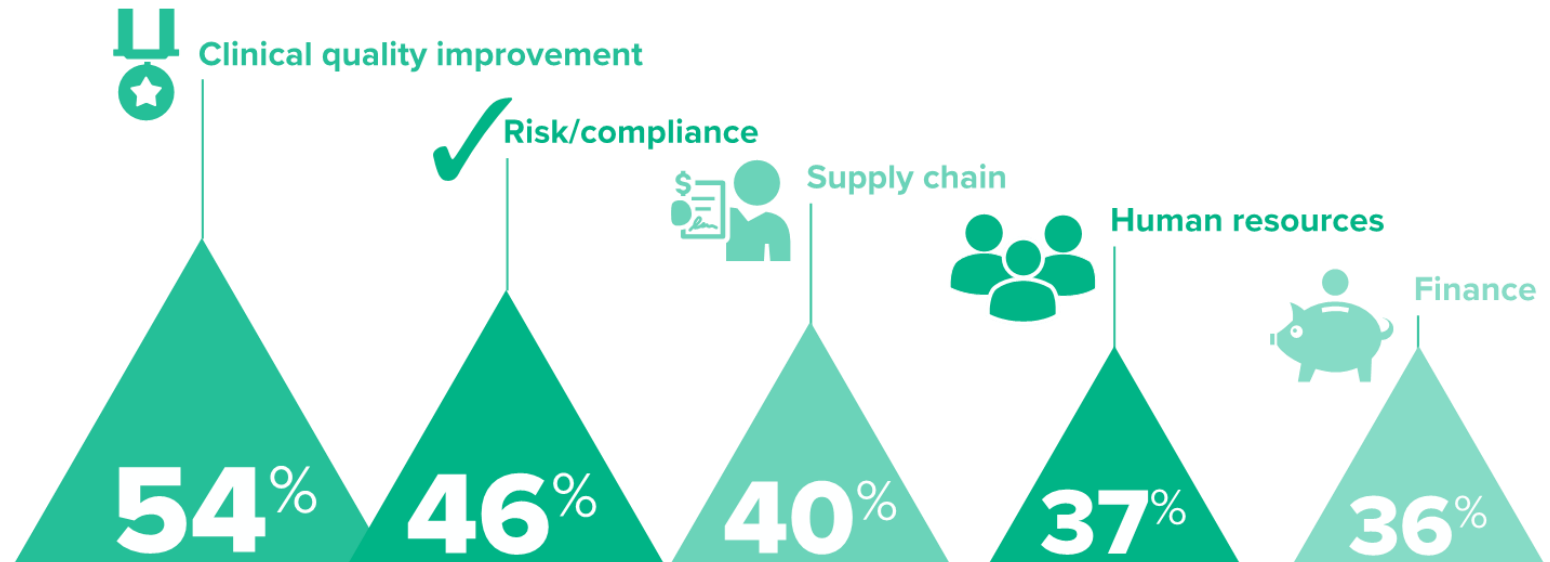
Moving toward an integrated
EHR platform

41
PERCENT

Making analytics models
operational for other
applications/departments

PRIORITY DEPARTMENTS DATA FOR EHR INTEGRATION

Q. Which departments' data do you wish you could more easily integrate with your EHR data?



3 TOP DATA ANALYTICS PRIORITIES

86% Reducing Hospital Readmission Rates

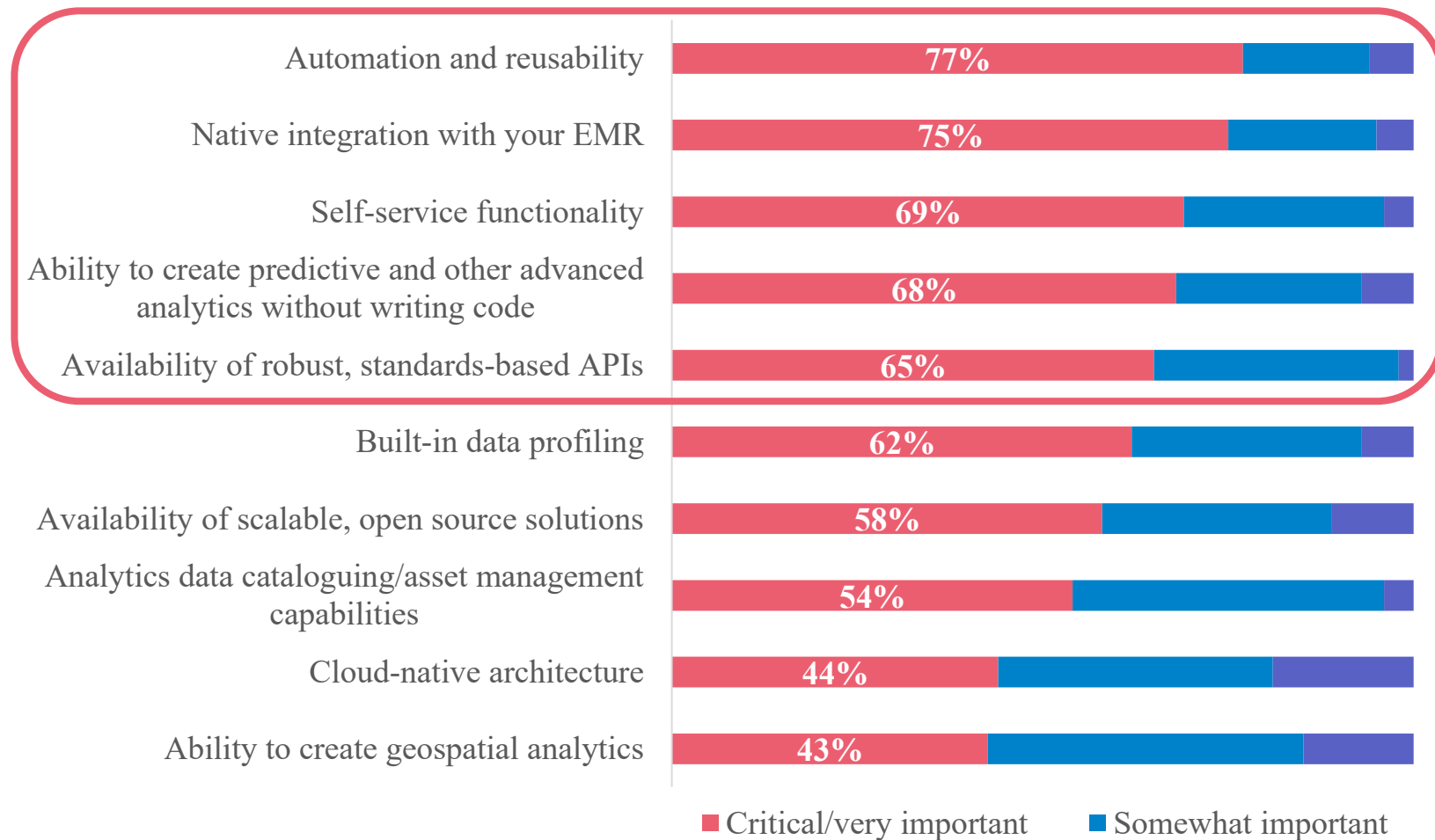
85% Delivering More Cost-effective Care

83% Identifying Patients At Risk For Adverse Health Events



SELECTION CRITERIA FOR DATA ANALYTICS PLATFORMS

Q. How important are the following capabilities when selecting a data analytics platform for your organization?



ALTERYX FOR HEALTHCARE

VISION, STRATEGY, DIRECTION

ALTERYX FOR HEALTHCARE

Alteryx captures, preps, blends, and analyzes data from multiple data sources to enable actionable insights at scale, for superior business, clinical, and patient outcomes in Healthcare.

HOW DOES ALTERYX ENABLE SUPERIOR BUSINESS, CLINICAL, AND PATIENT OUTCOMES IN HEALTHCARE?

Operations, Assets, Procurement, Sourcing & Supply Chain Management (SCM)

- ED & OR Utilization & Patient Throughput Improvement
- Length of Stay (LOS) & 30 day Re-admissions Management
- Strategic Sourcing & Spend Analysis
- Procurement improvement thru lower Maverick Buying
- Supply & Inventory Forecasting, Planning & Optimization
- Supplier Score-carding & Performance Improvement
- Imaging & Radiology Utilization

Finance & Revenue Cycle Management (RCM)

- Audit & Tax Analytics
- Planning, Budgeting, Forecasting & Cashflow Analysis
- Accounts Receivables (A/R) & Collections Management
- Billing, Contracts, Claims & Denials Management
- Patient Accounting & Patient Risk Management
- Billing Consolidation for Higher Patient Satisfaction
- Pay-for-Performance and Total Cost-of-Care Analytics



Strategic Planning & Human Capital Management (HCM)

- Strategic Planning, Market Analysis & Insights
- Locating the next Healthcare facility
- Governance, Risk & Compliance Mgmt.
- Marketing Campaign Analysis, Customer Outreach & Improvement
- Human Resources & Payroll Management
- Time & Attendance Management
- Talent & Performance Mgmt.
- Labor Productivity
- User Credentialing Access & Monitoring
- Managing Employee Satisfaction including Physician Burnout

Clinical & Population Health Management (PHM)

- Population Health Segmentation & Risk Stratification
- Quality & Safety / Hospital acquired Conditions (HACs)
- Sepsis Monitoring & Infection Tracking
- Accountable Care Orgs., Pop. Health Metrics & Performance Mgmt.
- Physician Engagement, Score-carding & Performance Mgmt.
- Care Coordination across the Continuum of Care
- Precision Medicine & Outcomes Analysis
- Patient Engagement, Education & Relationship Mgmt.

Enterprise IT & Cross Line of Business (LOBs)

- Data Extraction from Electronic Health Records (EHRs) with Data Prep and Blending with other Healthcare IT (HIT) Systems (Lawson, Kronos, Press Ganey)
- Predictive & Prescriptive Analytics / Data Science Initiatives with Machine Learning (ML) and Artificial Intelligence (AI) while empowering Data Scientists
- Enabling and Sustaining Digital Health Initiatives across the Organization

ANALYTICS VALUE MAP (AVM)

Strategic Planning & Regulatory Compliance	Operations, Asset & Supply Chain Management	Finance & Revenue Cycle Management	Clinical & Population Health Management	Human Capital Management
<p>Market Analysis + Insights</p> <p>Strategic Planning + Insights thereof</p> <p>Locating the next Healthcare facility to serve underserved Patient Populations</p> <p>Governance, Risk + Regulatory Compliance</p> <p>Marketing Campaign Analysis Customer Outreach + Improvement</p> <p>Demand Forecasting*</p> <p>Targeting the most Promising Segments and Markets by Therapeutic Area</p> <p><i>* Predictive & Prescriptive Analytics Potential</i></p>	<p>ED & OR Utilization + Patient Throughput Improvement*</p> <p>Length of Stay (LOS) + 30 Day Re-admissions Management*</p> <p>Strategic Sourcing + Spend Analysis* (Stanford Health)</p> <p>Lower Maverick (off-contract) buying for Procurement Improvement*</p> <p>Supply and Inventory Forecasting, Planning + Optimization*</p> <p>Supplier Quality, Score-carding + Performance Improvement*</p> <p>Imaging / Radiology Utilization + Performance</p>	<p>Audit and Tax Analytics</p> <p>Planning, Budgeting, Forecasting + Cash Flow Analysis*</p> <p>Accounts Receivables + Collections Management*</p> <p>Billing, Contracts, Claims + Denials Management*</p> <p>Patient Accounting + Payment Risk Management*</p> <p>Billing consolidation for higher Patient Satisfaction</p> <p>Pay-for-Performance + Total Cost of Care Analytics</p>	<p>Population Health Segmentation</p> <p>Population Risk Stratification*</p> <p>Quality + Safety/ Hospital-acquired Conditions *</p> <p>Sepsis Monitoring + Infection Tracking*</p> <p>Accountable Care Organizations</p> <p>Population Health Metrics + Performance Management*</p> <p>Physician Engagement, Scorecarding + Performance Management*</p> <p>Care Coordination across the Continuum of Care, Metrics & Performance*</p> <p>Precision Medicine + Outcomes Analysis*</p> <p>Patient Engagement, Education + Relationship Management (Patient Satisfaction)</p>	<p>HR + Payroll Management</p> <p>Time + Attendance Management</p> <p>Talent + Performance Management</p> <p>Labor Productivity - overtime + agency costs monitoring</p> <p>User Credentialing Access + Monitoring</p> <p>Managing Employee Satisfaction including Physician Burnout*</p>

Automated Data Extraction from EHRs (Epic, Cerner, AllScripts etc.) and Data Prep and Blending with other Healthcare IT Systems (Lawson, Press Ganey, Kronos etc.)

Enabling, Monitoring and Scaling Predictive and Prescriptive Analytics Initiatives with Machine Learning and AI, while empowering Data Scientists

Enabling Digital Health Initiatives across the Organization

Enhancing Supply Chain Performance with Actionable Analytics at SCL Health



SCL HEALTH

SCL Health is an Integrated Delivery

Network (IDN) comprising:

- 8 acute care hospitals
- 500+ employed providers
- 100+ physician clinics
- 5 accountable care organizations (ACOs)
- \$2.54 billion in operating revenue
- \$1 billion in non-labor operating spend
- \$203 million in capital expenditures

Analytics and Reporting Challenges

- Integrate the supply chain with clinician priorities
- Deliver \$ 15 – 20 M in annual savings
- Reduce clinical and business practice variations
- Get accurate daily visibility into inventory levels
- Share right time insights with various stakeholders – hospital leadership, clinicians and physicians



Enhancing Supply Chain Performance with Actionable Analytics at SCL Health



Automating Supply Chain Workflows & Reporting with Alteryx

Created key data sets first

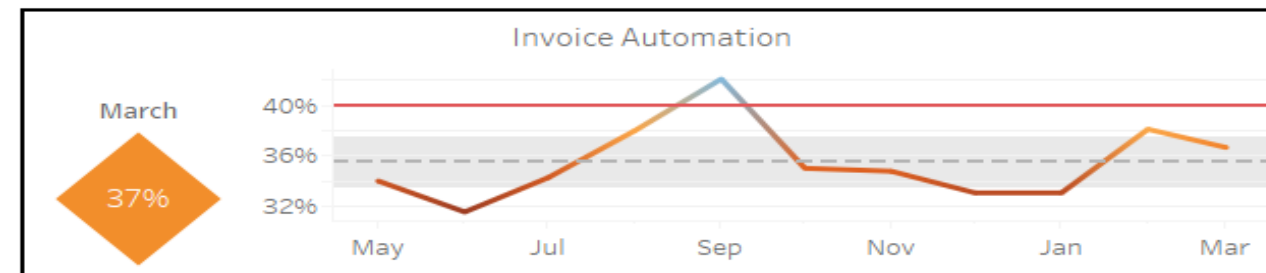
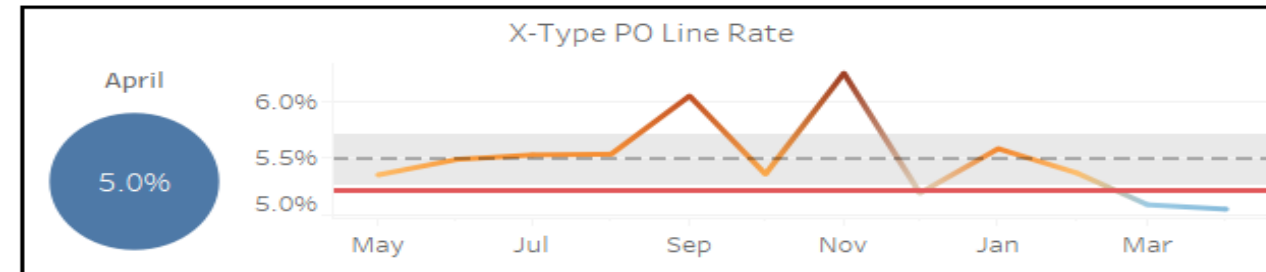
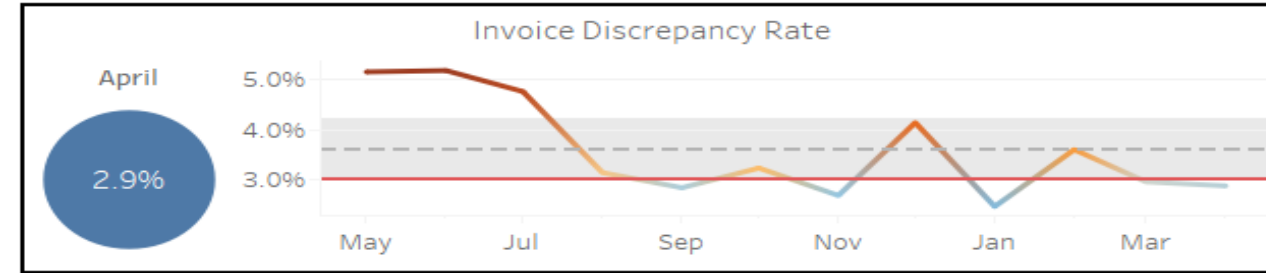
- Point-in-time data: items, vendors, par and inventory locations, contracts
- Transactional data: invoices, purchase orders, issues from a warehouse

Alteryx-derived data sets fuel Tableau-enabled visualizations

- Supply Chain KPIs
- OR Procedure Card KPIs
- Surgical supply and implant cost and utilization

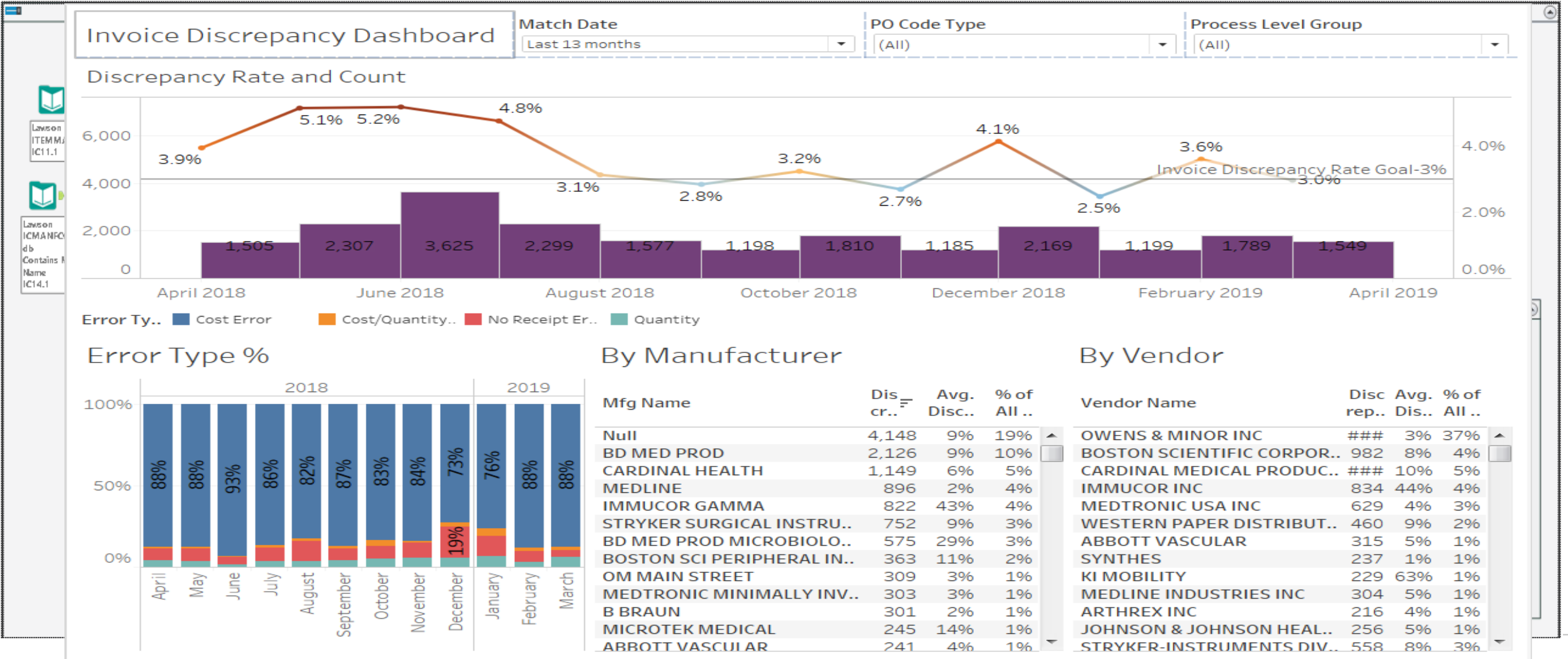
Supply Chain Metrics are now automated and refreshed daily with zero analyst time invested

P2P KPIs



Supply Chain Performance reports automatically refreshed on a daily basis

SCM Analytics Framework at SCL Health enabled by Alteryx



Enhancing Supply Chain Performance with Actionable Analytics at SCL Health



Next Steps with Alteryx

- Insights on supply, implant and pharma utilization
- Identify clinical variation and cost-per-patient opportunities
- Empower surgeons with actionable data to drive down costs while maintaining or improving patient care



With our Supply Chain Analytics we have:

- Eliminated unnecessary software subscription - saved **\$ 60K** annually
- Improved price load accuracy by **40%**
- Increased spend under contract by **7%**
- Reduced invoice discrepancies by 17% - saved **\$100,000** annually

- Kris Walker, SCL Health
(Presented at Inspire 2019)





Customer Success Story: Eliminating Predatory Pharmacy Fraud at Scan Health





ELIMINATING PREDATORY PHARMACY FRAUD AT SCAN HEALTH



SCAN HEALTH PLAN

- Not-for-profit Health plan founded in 1977 in California focused on Medicare Advantage Programs for Seniors
- Mission to improve access to care and services for ~ 200,000 Seniors in Southern California
- Multiple divisions and services including SCAN Health Plan, Independence at Home and other community services



ANALYTICS + REPORTING CHALLENGES



SCAN HEALTH PLAN

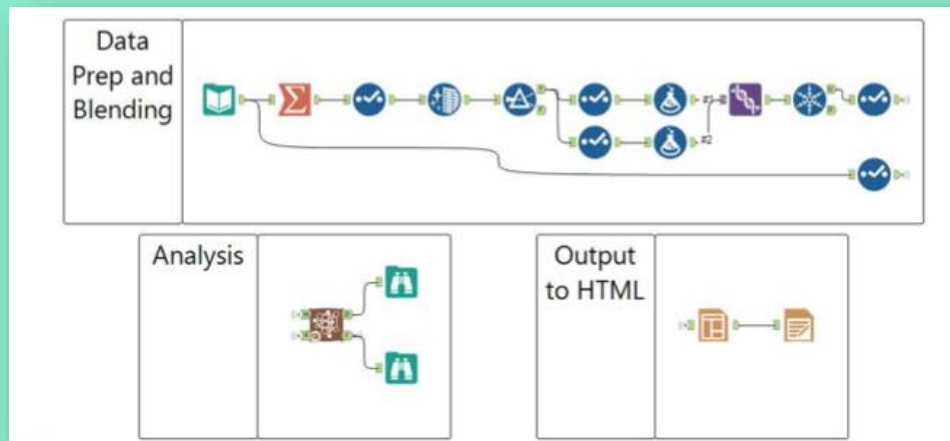
- Special Investigations Unit (SIU) formed to support Medicare fraud, waste and abuse program
- SCAN Health members began receiving large quantities of un-ordered Lidocaine in the mail
- SIU unit detected prescription claims for \$300, \$500 or \$1000 above prescription prices, in very large quantities above normal
- Historical analysis using Microsoft SQL could not scale to handle data volume



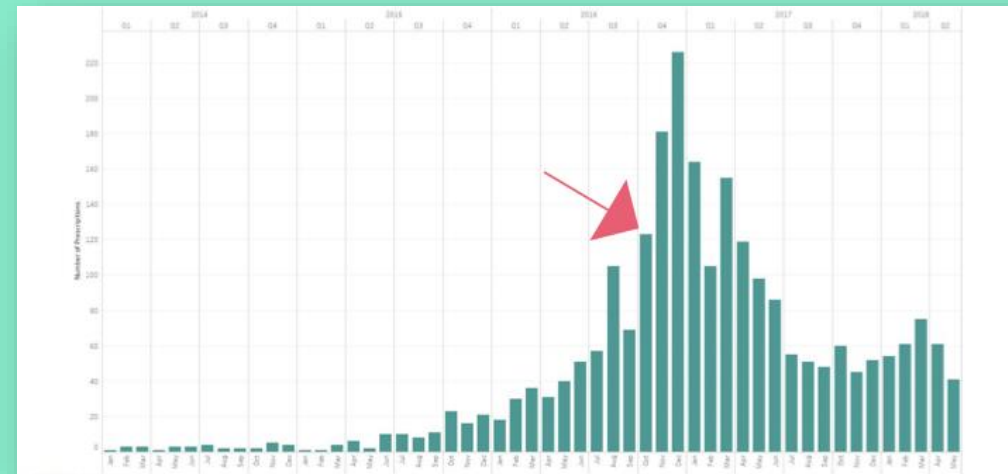
PROACTIVELY DETECTING FRAUD WITH ALTERYX

- ALTERYX selected to analyze network of Pharmacies fraudulently prescribing Lidocaine
- Leveraged data prep and blending, network analysis with data visualization and reporting

- Quickly identified outliers amongst clusters of pharmacies dispensing Lidocaine in the network
- SIU team intervened to stop the fraudulent distribution of Lidocaine to seniors



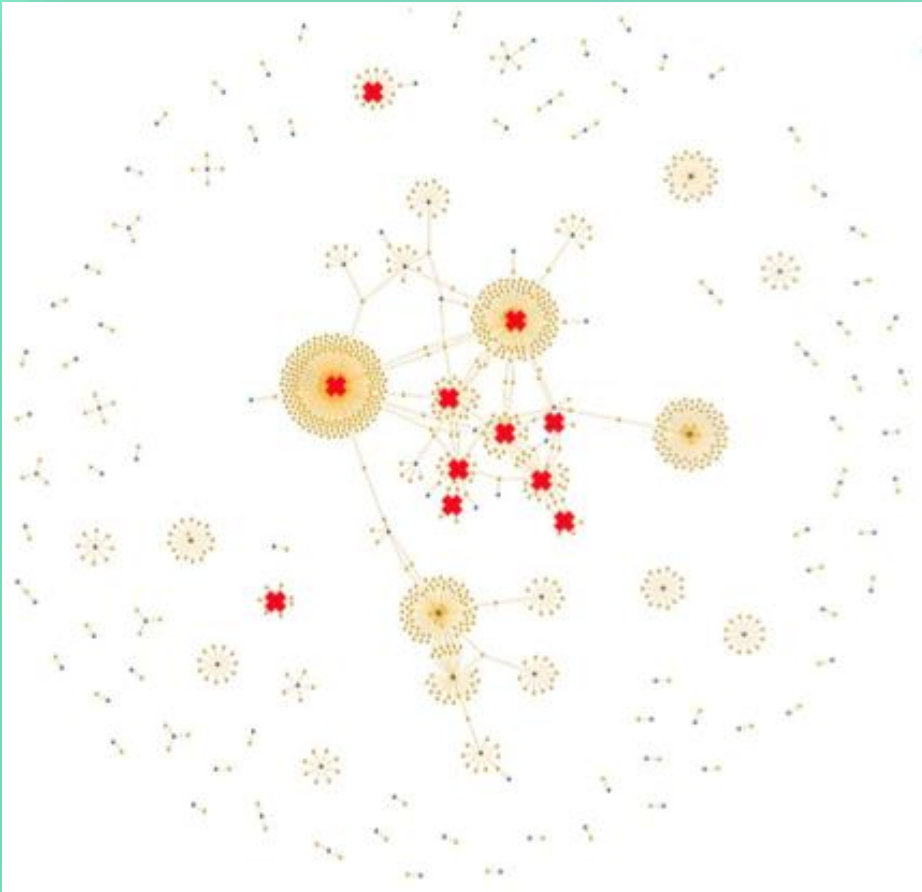
SCAN Health produced data prep, blending, network analysis and reporting workflow in Alteryx Designer



SCAN Health report showing Pharmacies dispensing disproportionate numbers of fraudulent Lidocaine prescriptions!



ELIMINATING PREDATORY PHARMACY FRAUD AT SCAN HEALTH



Geo-mapped network analysis calling out Pharmacies dispensing dis-proportionate numbers of fraudulent Lidocaine prescriptions!



The analysis helped us to proactively identify predatory pharmacies that were dispensing fraudulent Lidocaine prescriptions to our senior members, and stop payments to them, which saved us **\$1.5 MM in the very first year (2017)!**

- Katherine Yue, Senior Special Investigator
Cassandra Olson, Analyst
SCAN Health



ALTERYX FOR HEALTHCARE

CUSTOMER BENEFITS

Strategically locate new healthcare facilities to serve underserved patients

Improve clinical, patient, and population health outcomes across the enterprise

Proactively detect and minimize HACs to improve Quality and Safety

Deliver the right drugs and supplies to the right patient at the right time, while minimizing stockouts and expired supplies

Maximize utilization on your most expensive assets: Emergency Dept. (ED) and Operating Rooms (OR)

ALTERYX FOR HEALTHCARE

CUSTOMER BENEFITS

Increase revenue and accelerate claims-to-cash cycles

Proactively identify root causes of denials and address them to save \$ MM

Recognize, reward, and retain top talent to reduce employee churn

Improve labor productivity while reducing overtime and agency fraud, waste and abuse

Govern and manage compliance related risk to minimize fines and penalties

DEMO

Q & A



To learn more, visit:

[ALTERYX.COM/HEALTHCARE](https://www.alteryx.com/healthcare)